

# “Going to the Gym Is Not Congolese’s Culture”

## Examining Attitudes Toward Physical Activity and Risk for Type 2 Diabetes Among Congolese Immigrants

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### Purpose

The purpose of this study was to explore perceptions and attitudes around physical activity among immigrants from the Democratic Republic of Congo and examine the influence of Congolese cultural beliefs on physical activity practice.

### Methods

In-depth interviews were conducted and augmented by photo-elicitation among 20 Congolese immigrants, distributed equally by gender, aged 35 years or older. The PEN-3 model was used as the cultural conceptual framework.

### Results

Using both the Relationships and Expectations dimension (Perceptions, Enablers, and Nurturers) and Cultural Empowerment dimension (Positive, Existential, and Negative) of the PEN-3 model, emergent themes were categorized around knowing the benefits of being physically active (perceptions), doctor encouragement to be more physically active (enablers), and the habit and local tradition of consuming beer after a soccer match (nurturers). Other emergent themes included Congolese loves to dance (positive), going to the gym is not Congolese culture (existential), and the challenge of increased physical activity (negative).

## Conclusions

Congolese have their intrinsic cultural perceptions and attitudes around types of physical activity. The study disclosed a much more pronounced willingness to dance (as a potential source of increased physical activity) than to go to a gym. As such, if one wants to advocate a regimen of increased physical activity to offset the risk for type 2 diabetes, dance is an alternative to consider among some immigrants.

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**G**enerally, research suggests the prevalence of chronic diseases (ie, type 2 diabetes) in immigrant populations increases significantly based on length of residency after settlement in host countries.<sup>1</sup> This epidemiologic pattern of disease among immigrants, which is linked to acculturation,<sup>2</sup> has been observed among various ethnic groups in the United States, including black Africans.<sup>3</sup> Despite their decreasing health status over time, US national statistics indicate that black immigrants from Africa have better health statuses than US-born black persons.<sup>4</sup>

This finding, however, is not universally true when discussing country-specific subpopulations of Africans. For instance, a recent study<sup>5</sup> found that the prevalence of type 2 diabetes was significantly higher among Somali participants compared with non-Somali participants. Given the different effects of acculturation on chronic disease risk factors among immigrant groups, researchers have argued for more studies among diverse immigrant populations (1) to better understand how cultural change affects health and (2) to identify risk, protective values, and practices in these groups.<sup>2</sup> Data from such investigations are not only necessary for delivery of group-specific interventions but could also prove useful for informing strategies to address health disparities experienced by most black Americans.

Among immigrants, lifestyle changes associated with resettlement and adaptation to new cultural environments in the United States may lead to reduced levels of daily physical activity.<sup>6,7</sup> The importance of this cultural context on physical activity levels among African immigrants was highlighted in a recent study.<sup>8</sup> In that study, Nigerian immigrants reported that their daily life activities when living in their native homeland included more

physical activity compared with their current daily life activities in the United States. This finding is especially relevant when addressing the issue of immigrant health. Physical inactivity is a major risk factor for type 2 diabetes<sup>9</sup> and is a behavior targeted in most interventions designed to reduce risk for chronic illnesses.<sup>10,11</sup> Other factors, such as competing priorities (eg, work obligations, family responsibilities, etc), the cost of using exercise facilities, and cultural taboos or embarrassment about exercise clothing have been noted as barriers to maintaining healthy physical activity habits among African immigrants in the United States.<sup>12</sup> Therefore, interventions to engage African immigrants in physical activity as a means of reducing their risk for type 2 diabetes or other chronic diseases should be culturally relevant.

Immigrants from the Democratic Republic of Congo (DRC) are a subgroup of Africans in the United States on whom research has minimal knowledge with regard to their cultural beliefs and behavioral practices that serve as risk or protective factors for chronic diseases. Approximately 11 000 Congolese refugees and immigrants from the DRC arrived in the United States over the past decade.<sup>13,14</sup> In addition, Congolese immigrants come from a country where diabetes is relatively prevalent, estimated at 5.3% in 2015.<sup>15</sup> According to the World Health Organization,<sup>16</sup> 25% of Congolese living in the DRC were physically inactive, and 21.9% were overweight or obese, which are risk factors for type 2 diabetes. Understanding the attitudes of Congolese immigrants toward physical activity is critical for developing culturally relevant type 2 diabetes preventative measures. The study (1) explores perceptions and attitudes around physical activity and risk for type 2 diabetes among Congolese immigrants and (2) evaluates the influence of Congolese cultural beliefs as they facilitate or create barriers to physical activity practice.

## Theoretical Framework

The PEN-3 model is a conceptual framework that emphasizes the role of culture in promoting health and understanding health behaviors.<sup>17,18</sup> An important characteristic of this model is its versatility and inclusivity of culture into a variety of other health behavioral theories. With respect to more prominent theoretical frameworks that are used in understanding and predicting health beliefs and health behavior in health (ie, health belief model, theory of reasoned action, and the PRECEDE/

PROCEED model), the PEN-3 theoretical framework aims to create a culture-centric model that can be used to assess health education and health beliefs. This model can be used in hopes of developing culturally relevant methods for promoting health within diverse and multi-cultural groups. The framework is composed of 3 dimensions that are interrelated and interdependent: Cultural Identity, Relationships and Expectations, and Cultural Empowerment.<sup>17</sup> Each dimension consists of 3 categories that all align with the acronym “PEN.”

The first dimension is Cultural Identity (Person, Extended Family, Neighborhood). This dimension focuses not only on the individual but also the extended families and surrounding attributes that can be influential to a person’s health beliefs and attitudes in a positive or negative manner.<sup>17</sup> The second dimension is Relationships and Expectations (Perceptions, Enablers, Nurturers). This dimension is geared toward assessing the knowledge, attitudes, and beliefs of an individual based on a topic of interests. It also assesses any barriers or facilitators that inhibit or motivate health behaviors; it assesses the external influences from friends, families, or ideologies that can affect the nurturing of particular behaviors.<sup>17</sup> The third dimension is Cultural Empowerment (Positive, Existential, Negative), which profiles positive characteristics in health attitudes, highlights unique qualities within a culture that should not necessarily be changed, and identifies beliefs and behaviors that may cause problems to one’s health. It seeks to find areas that need the most improvement when developing an intervention program.<sup>17</sup>

## Methods

### Research Design

The qualitative approach in this study enabled the collection, analysis, and interpretation of thematic elements that emerged from the attitudes toward physical activity and risk for type 2 diabetes via in-depth interviews, supported by a photo-elicitation technique. Interviews allow for the researcher to generate an understanding based on rather sensitive topics such as the participant’s experience with assimilation and acculturation, barriers in health behaviors, and existential behaviors that dissect the uniqueness of their cultural practices. In addition, to dig deeper into the relationships between both the person and the broader community and how they influence the

choices that are made by the individuals toward physical activity, this study also used a research technique known as photo-elicitation. Photo-elicitation is a qualitative approach aimed at collecting data via photos or pictures.<sup>19</sup> It allows researchers to investigate the relationship between an individual and her or his environment through photos or images. For this study, investigators provided pilot-tested pictures related to physical activity and type 2 diabetes risk as a tool for interviewing participants.

### Participants and Setting

The University of Illinois at Urbana–Champaign Institutional Review Board approved this study.

Twenty purposely selected participants (purposive sampling) were involved in this study, divided equally by gender. Participants who qualified for this study were men or women aged 35 years or older who have lived in the United States for at least 1 year to ensure that they are acculturated.<sup>20</sup> The American Heart Association<sup>21</sup> recommends beginning diabetes screening between the ages of 20 and 45 years. Recruited individuals were aged 35 years or older to ensure that they were more mature and of working age. Participants without diabetes were recruited because this study focused on physical activity and type 2 diabetes risk among people who do not have the disease. Specifically, participants self-reported their health status to inform us if they were diabetic or not. The study participants were either employed or unemployed and recruited by word of mouth at 2 local church services attended by Congolese members in Champaign, Illinois. Research has shown that faith-based institutions are prime places for recruitment because these spaces are perceived as places of solace and comfort.<sup>22,23</sup> For this particular study, it also serves as a place where most of our Congolese immigrants are present and accessible. Participants were approached and asked to fill out the selection forms (ie, being at least 35 years or older, without diabetes, male or female, time in the United States of at least 1 year, and employment status). Consent forms were obtained from selected participants.

### Data Collection

For this study, investigators provided pilot-tested pictures to physical activity and type 2 diabetes risk as a tool for interviewing participants. In particular, participants were provided photos and asked to explain the feelings

inspired by the photos regarding physical activity and the risks for type 2 diabetes.

The following questions were asked to participants: (1) Why do you think it is important to be physically active given type 2 diabetes? (2) What is your impression of physical environments such as parks or walking trails in the neighborhood you live in? (3) How does being a Congolese person affect being physically active? (4) Can you share examples of activities you perform to be active? (5) What do you see as strengths (or weaknesses) of the Congolese culture with regard to becoming physically active?

Both photo-elicitation and in-depth interviews were conducted in either French or Lingala; no participants preferred to interview in English. Interview transcripts were translated from English to French or Lingala (and the reverse) by independent translators to minimize the risk of researcher bias within the translations.<sup>17</sup> Interviews lasted approximately 90 minutes and were recorded, transcribed, and provided to participants to member-check them. Transcripts were then prepared for data analysis. NVivo 11 software was used for the qualitative analysis of data.

## Data Analysis

Deidentified data were analyzed through the PEN-3 theoretical framework to ground this study with theory-driven reasoning as it yields valid results.<sup>18,24</sup> The 2 domains of the PEN-3 model used in this study with their respective dimensions consist of Cultural Empowerment (Positive, Existential, Negative) and Relationships and Expectations (Perceptions, Enablers, Nurturers).<sup>24</sup> The Cultural Empowerment and Relationships and Expectations domains were used to assess the needs of Congolese immigrants in relation to their perception of physical activity with regard to type 2 diabetes risks. That is, the Cultural Identity domain—the third domain of the PEN-3 model that comprises Person, Extended Family, or Neighborhood points of entry for an intervention—was not used in the analysis.

## Results

### Sample Characteristics

Findings highlighted attitudes toward physical activity and risk for type 2 diabetes among Congolese immigrants. Table 1 outlines the demographic data of participants.

Emergent themes were categorized under the 2 domains of the PEN-3 model: (1) Relationships and Expectations and (2) Cultural Empowerment.

### Relationships and Expectations

The Relationships and Expectations domain refers to the construction and interpretation of behavior typically based on the interaction between the perceptions people have about the behavior.<sup>18</sup> It is also based on resources and institutional forces that encourage or discourage actions. This includes the influence of family and friends in nurturing a particular behavior. The following themes were categorized under 3 subdomains (Perceptions, Enablers, or Nurturers) of this domain:

**Physical activity benefits (Perception).** Participants expressed knowledge of the benefits of physical activity in relation to type 2 diabetes. Participants alluded to the fact that physical activity is essential in burning consumed calories. For instance, a participant mentioned the following:

You consume, but also need to burn what you consume. Physical activity helps us [person without diabetes] to do it. Physical activity is a consumption of extra calories because when you take too much sugar; you must get rid of it. (Male, 41 years, married)

Participants not only highlighted the benefits associated with physical activity—as a form of prevention—among people without diabetes, but they also underscored its salience in diabetes management. Another participant suggested the following:

A diabetic already has a very high sugar levels in the body and if s/he does physical activities . . . , physical exercise allows to burn some calories in the body. While walking is the easiest physical activity one can do, it decreases sugar levels in the body. (Female, 45 years, divorced)

**Doctors encourage us to be physically active (Enablers).** Findings showed that health care professionals reminded participants, particularly those with a family history of diabetes, about the importance of being physically active because it reduces the risk for type 2 diabetes. They shared the following:

My mom had diabetes and the doctor is aware of it. When I go to see him . . . he looked at my file and he

Table 1  
 Characteristics of Participants by Gender, Age, Education, Employment, Marital Status, and Immigration Status

Research Participants	Gender	Age	Education	Employment	Marital Status	Immigration Status
1	Male	47	AS	U	M	A
2	Male	40	BC	U	M	A
3	Male	42	BC	E	M	LR
4	Male	45	BC	E	M	LR
5	Male	35	AS	E	M	LR
6	Male	41	HS	E	M	LR
7	Male	38	HS	E	M	LR
8	Male	50	AS	E	M	LR
9	Male	41	BC	E	M	LR
10	Male	58	AS	U	M	LR
11	Female	45	HS	U	D	A
12	Female	42	HS	U	M	A
13	Female	42	AS	E	M	LR
14	Female	41	BC	E	M	LR
15	Female	46	VC	E	M	LR
16	Female	45	BC	E	M	LR
17	Female	56	HS	E	M	LR
18	Female	48	HS	E	D	LR
19	Female	35	HS	E	M	LR
20	Female	47	BC	E	M	LR

Abbreviations; A: Asylee; AS, associate degree; BC, bachelor degree; D, divorced; E, employed; HS, high school; LR, legal resident; M, married; U, unemployed; VC, vocational studies.

reminded me to be physically active. (Female, 46 years, married)

Every time when I go to the hospital, the doctor will say, “Sir, you need to be physically active, because your father has diabetes so you have to be active.” (Male, 35 years, married)

***I deserve a treat (Nurturers).*** Having a “treat” after engaging in physical activity refers to a discouraging influence of families and friends on community events. This theme is exclusively related to male participants who, after soccer matches, rewarded themselves with a “treat” by gathering together to drink beer. (See Figure 1 for Congolese soccer players.) Comments on this topic, however, were not only shared by male participants; female

participants also shared comments regarding this behavior. For instance, participants mentioned the following:

There is one thing to go play soccer . . . and another thing to go drink beer right after the match. (Female, 42 years, married)

Well, the weakness I wanted to share . . . after a match, people will go and drink beer. It looks like they replace what they have spent. (Female, 45 years, married)

Male participants also mentioned the flaw of the Congolese immigrants’ practice of drinking beer after a soccer match. Moreover, some participants were even aware that alcohol could be a type 2 risk factor. Participants shared the following:



**Figure 1.** A team of soccer players from Kinshasa (Democratic Republic of Congo) getting ready to play soccer for fun.

After a soccer match, people are going to drink beer so they are replacing what they have burnt. So nothing changes! In short, this is our weak point. (Male, 41 year, marrieds)

Yes, I think there are sugar in other stuffs . . . I know things like . . . beer has sugar that causes diabetes. (Male, 41 years, married)

### Cultural Empowerment

The domain of Cultural Empowerment refers to cultural practices and beliefs as positive, existential, or negative. *Positive* refers to values and relationships that promote the health behavior of interest; *existential* is described as values and beliefs that are present in the culture and are harmless to health, and the *negative* refers to values and relationships that investigate the behavioral contexts to determine its negativity.<sup>18</sup>

***Dance is our physical activity (Positive).*** Participants mentioned that a specific way of being physically active in Congolese's culture is through the form of dance (ie, traditional dance) because they love to dance in settings such as churches, parties, and even for fun at home. Most participants mentioned they love to dance because it represents their cultural identity and is something they enjoy to do regularly. (See Figure 2 for Congolese leisure dance.) For instance, participants said,

For example, dance! We Congolese we have dance in our genes, me even at work when I am trying to work I sing and I dance, at home I can be in the process of

cooking and dancing at the same time, I can put a song over there on the computer I am trying to dance. (Female, 41 years, married)

We love to dance and sing, when we sing, we dance, it's really a regular daily activity. (Male, 47 years, married)

***Going to the gym is not Congolese's culture (Existential).*** Going to the gym does not relate to Congolese culture. Findings suggested that participants do not prioritize being physically active by joining or attending a gym. They do not see themselves regularly committing to a gym. However, some of them are reasonably aware of the consequences of failing to join a gym and the benefits of being physically active. For instance, participants mentioned the following:

It is true, it is even one of the big problems I have because the doctor asked me to join a gym . . . to be active but it is . . . it is a great problem because it is not our culture to go to the gym. (Female, 48 years, divorced)

Congolese [people] do not like to go to the gym. People who go to the gym, they started to go there since they were young. Being Congolese, we all suffer a negative impact in terms of physical activity. (Male, 38 years, married)

***Physical activity challenges (Negative).*** This theme stresses the challenges that Congolese immigrants encounter when it comes to being physically active: inclement weather, living condition, and frequent use of vehicles (sedentary lifestyle). The following quotes represents comments shared by participants to support these claims:

As we live in the apartments, we do not really have space . . ., for example, even for us parents to relax sometimes. A place where you can get some fresh air, as opposed to stay inside the apartment. . . . It's really important to enjoy being outside when the weather permits and especially in Champaign, we should take advantage of going for walk because the weather is not always favorable. (Male, 35 years, married)

We come here (and) we drive. We all have vehicle(s), I do not know if I can say that but . . . that's a weakness. We want comfort . . . we want so much comfort that prevents us from doing physical activities. (Female, 42 years, married)

Congolese immigrants are cognizant that certain controllable and uncontrollable factors, such as excessive use of



**Figure 2.** People from Kinshasa dancing Seben (a joyful Congolese music and dance) at a traditional wedding.

cars and the local environment, can contribute to sedentary lifestyle behaviors. All these aforementioned attitudes shape Congolese immigrant's perceptions of physical activity and risks for type 2 diabetes.

## Discussion

Results of the study are essential because they add to the limited literature about perceptions toward physical activity and its significance in maintaining health and preventing chronic diseases such as type 2 diabetes within various country-specific populations of African immigrants in the United States. In one recent study among Somali immigrants, the researchers<sup>12</sup> found that physical activity is not perceived as a priority for preserving health within this population. However, the study focused only on Somali men. The study likewise found that Congolese immigrants (both men and women) displayed a relative high level of awareness and knowledge pertaining to physical activity as tool for (1) preventing type 2 diabetes and (2) managing a healthy lifestyle for those who have diabetes. Findings also indicated that participants perceived health care providers as resources for health information about physical activity and type 2 diabetes prevention, noting that healthy communication with their doctor is essential.

Despite showing a relative high level of physical activity knowledge, participants also discussed facing cultural, physical, and environmental barriers that inhibit any motivation to participate in physical activity. This is consistent with a previous study<sup>8,25</sup> indicating that a high

level of physical activity knowledge is not implicit to a high level of physical activity participation. Factors such as cold and/or rainy weather, neighborhood safety, and frequent use of vehicles are known to serve as barriers to physical activity participation.<sup>26</sup> The study participants expressed that they did not culturally perceive going to the gym and exercising in the gym as intrinsic to their daily life practices. This is consistent with prior research findings that suggest that individuals are most likely to engage in forms of physical activity that they understand and find preferable and satisfactory.<sup>27,28</sup>

Perhaps the most insightful finding is that participants perceived dancing as a form of physical activity that is highly favorable and intertwined with their cultural constructs. Several studies have shown that there are psychological and physiological benefits for both old and young individuals who engage in dancing.<sup>29</sup> Dancing alleviates both cultural and environmental barriers to physical activity because it can be performed indoors, outdoors, leisurely with family, or even in community gatherings such as church events or cultural festivals. Thus, dancing appears to be a family-oriented practice that would be a useful component for any physical activity intervention program among Congolese immigrants in the United States.

It is important when promoting physical activity within this population to take a culturally competent approach by involving Congolese immigrant community members. Because our participants claimed to be very docile toward health care providers as health information sources, it is also critical for health care providers to take culturally sensitive methods to prescribe physical activity

in this community as a form of treatment. For example, the “Exercise Is Medicine” campaign is an initiative launched in 2007 by the American Medical Association and American College of Sports Medicine as a way to make physical activity a standard part of the medical paradigm for the prevention and treatment of noncommunicable diseases in health care systems.<sup>30,31</sup> Providers should adopt this concept and customize it for the prescription of culturally accepted physical activity practices, such as dancing, to members of the Congolese immigrant community.

Participants reported engaging in habits—such as the consumption of alcohol after playing soccer—that may not be complementary to the health benefits derived from physical activity participation. Such habits, encouraged and nurtured by friends and family members, are infused throughout the Congolese immigrant community. It is important for public health practitioners and health care providers to consider this practice when promoting physical activity in this community. Although alcohol consumption following soccer matches could be detrimental, soccer match gatherings could be a promising event for educating Congolese men about the importance of maintaining a healthy lifestyle. This can potentially lead to healthier practices that participants can engage in during their leisure time. Sustained over time, new lifestyle changes may lead to healthier outcomes.

### Study Limitations

This study contains strengths and weaknesses that are noteworthy. The study relied on a qualitative approach, using a photo-elicitation process to strengthen an in-depth interview process to capture rich data on a hard-to-reach population. The use of photo-elicitation for a topic within this population provided very rich, deep, and unique perspectives never explored in research in the format presented. A limitation of this study is that the study sample is not drawn from a representative sample of Congolese immigrants across the United States. This limits the generalizability of the results beyond the study population. In addition, some study participants knew the principal investigator. In a relatively small immigrant community, there is a possibility that social desirability bias—where participants may give responses that would please the investigator—could potentially influence the study findings. Nevertheless, questions specific to the researcher’s experience were asked to reduce ambiguous, socially desirable answers the participants may share. Indirect

questions were also asked to reduce the impact of social desirability. Member checking was also conducted in order for the participants to verify their responses.

### Conclusion

Studies have shown that physical activity is salient to preventing or managing the prevalence of chronic conditions such as type 2 diabetes, especially among people in high-risk populations. In addition, scholars suggested that physical activity participation could be culturally driven. Detriments when designing and/or promoting physical activity—such as overlooked cultural beliefs and attitudes—within communities such as the Congolese immigrant community explained the lack of participation on physical activity by members of this community. In this study, it was found that Congolese immigrants relied on health care professionals to obtain relevant information regarding the preventative roles played by physical activity toward type 2 diabetes. Conversely, participants did not subscribe to recommendations of “joining a gym” given by health care professionals; this was not culturally relevant to them. It was ultimately found that Congolese people accepted dance as a culturally appropriate way of being physically active. Therefore, encouraging minorities such as Congolese immigrants to dance could potentially provide them an opportunity to minimize the risks associated with chronic diseases such as type 2 diabetes and ultimately improve their long-term health outcomes.

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