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Exploring the Cultural Perceptions of Physical Activity among Transnational Nigerian Immigrants

Kelechi D. Ibe-Lamberts, SUNY Cortland
Daudet Ilunga Tshiswaka, University of West Florida
Abi Fapohunda, University of Pittsburgh
Corresponding Author: Kelechi D. Ibe-Lamberts, kelechi.ibelamberts@cortland.edu

ABSTRACT

Background: Transnational Nigerian Immigrants, as other Transnational African Immigrants, are a subset of African immigrants with the unique ability to sustain multi-national ties. These ties could potentially affect health behavior choices and participation in physical activity. Physical Activity has the potential to improve health and prevent chronic diseases; however, there is a lack of literature regarding physical activity and its determinants within the Transnational African Immigrant population in general. This study investigated the cultural factors that shape Transnational Nigerian Immigrants' perceptions and attitudes towards physical activity.

Methods: Semi-structured individual interviews supported by photo-elicitation were conducted on 24 Transnational Nigerian Immigrants (11 males, 13 females) to collect rich data.

Results: Participants identified factors such as cultural differences, lack of education, and transnational responsibilities as influential to their choices for physical activity participation and called for culturally tailored approaches to their community.

Conclusion: Results of the study increased our understanding of the impact of transnational activities and identities towards potential health choices. It addresses the socio-cultural factors influencing physical activity behavior within the Transnational African Immigrant community and how it can inform future research on culturally diverse Black populations, further proving that there is not a one-size-fits all approach to addressing health disparities within the Black population

Keywords: Transnationalism; health; African immigrants; physical activity; culture; Nigeria; PEN-3

INTRODUCTION

Physical inactivity is a global pandemic; a critical risk factor associated with premature death and quality of life reduction worldwide. (Ding, Kolbe-Alexander, Nguyen, Katmarzyk, Pratt & Lawson 2017). Physical inactivity leads to increased risk for chronic diseases such as diabetes, cardiovascular ailments (Andersen, Mota & Di Pietro, 2016). Despite the benefits of physical activity (PA), approximately 30% of the world's population still does not obtain the recommended amount of it: 150 minutes of moderate (e.g. walking briskly, light bicycling)-to-vigorous (e.g. jogging, hiking, shoveling, soccer) intensity PA weekly (Hallal et al., 2012; Piggin & Baimer, 2016). When researching PA, factors such as weight and diet are usually associated as determinants of health in a positive or negative manner, however; there is little known evidence that focuses on the perceptions and attitudes of PA in African immigrant populations and its sub-populations (Turk et al., 2015).

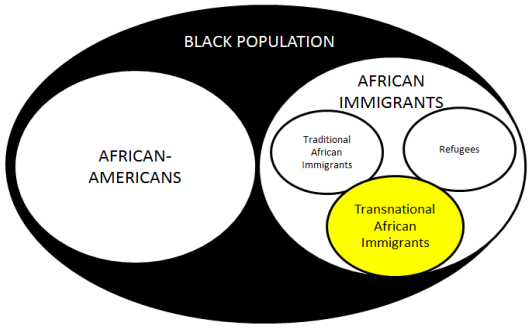
Generally, transnational immigrants are defined as a subset of immigrants who choose to maintain strong connections with both their native and current homeland: a form of dual-citizenship and connection to multiple nations (Guarnizo, Portes, & Haller, 2003, Morawska, 2017). The African immigrant population in the US has increased exponentially from 881,300 in 2000 to 1.6 million in 2010, representing the largest influx of foreign-born Blacks (Ilunga Tshiswaka & Ibe-Lamberts, 2014). Transnational African Immigrants choose to maintain multi-national ties that influence their practices and beliefs– sustaining their native African customs while also acculturating to their current land of resettlement. *Figure 1* illustrates the Black population in US, accounting for the respective subgroups mentioned (Ibe-Lamberts, Ilunga Tshiswaka, Osideko & Schwingel, 2016). Despite an increase in the African immigrant population in the US, there still remains a dearth in research regarding the health behaviors and attitudes of African immigrants towards health behaviors such as healthy eating or PA (Venters & Gany, 2011; Dover Wilson & Elgoghali, 2016). Due to their ability to sustain cultural practices from their native land, Transnational African Immigrants represent an unexplored group of immigrants—within the already underserved Black population—with unique practices and beliefs that potentially influence the practice and sustenance of healthy behaviors.

Reports show that minoritized groups experience a higher rate of mortality and poorer health outcomes compared to the majority group (Williams, Priest & Anderson, 2016). Although immigrants often arrive into the receiving country in better health than the native population (i.e. migration selectivity hypothesis) (Palloni & Morenoff, 2001; Martinez, Aguayo-Tellez & Rangel-Gonzalez, 2015), research shows that immigrants' health begin to decline over the duration of residence in their new land (Mohamed, Hassan, Weis, Sia, & Wieland, 2014). This could be associated with acculturating to the host country's health behavior practices, which could increase the risks of producing similar health outcomes as those who are natives to that particular country.

There is a miniscule amount of work focusing on PA trends with African immigrants—especially Transnational African Immigrants—in the US (Turk, Fapohunda, & Zoucha, 2015). The authors found African immigrants faced barriers to PA with their busy lifestyles (employment demands, schools etc.) and limited time to engage in PA. Other research findings express that PA was viewed as secondary to factors such as employment, school and the pursuit of a better life (Mohamed et al., 2014). A study on PA and African immigrants in the US conveys most African immigrants reported to be physically inactive (Koya & Egede, 2007; Antecol & Bedard, 2015).

The purpose of our study was to explore the cultural perceptions of Transnational African Immigrants on PA and to investigate the various factors that influence attitudes and beliefs of Transnational African Immigrants towards PA based on their multi-national connections. When identifying the African immigrant population by country of origin, Nigeria represents the largest group of African immigrants in the US with an estimated 299,310 people (Gambino, Trevelyan, & Fitzwater, 2014). For the purpose of this study, only Transnational African Immigrants from Nigeria (i.e., Transnational Nigerian Immigrants) were the primary population discussed.

Figure 1



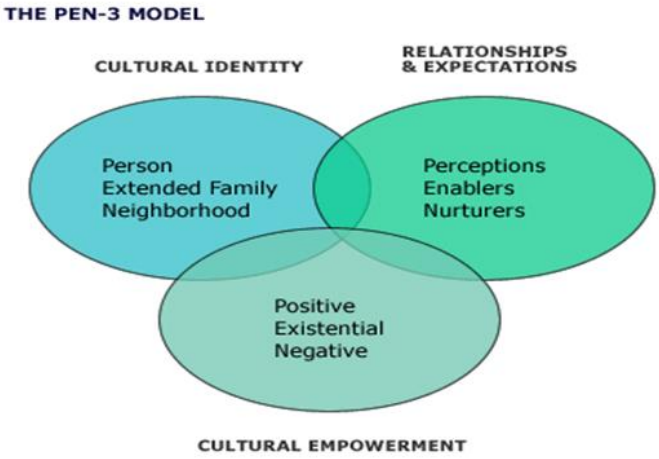
PEN-3 Cultural Model

The PEN-3 Cultural model is a framework utilized for health promotion and assessments that targets cultural sensitivity and appropriateness in health program development on both a macro (government, international, policy) and micro level (community, individual, family) (Airhihenbuwa, 1995: Airhihenbuwa, 2007; Ibe-Lamberts, Ilunga Tshiswaka, Osideko & Schwingel, 2016). An important characteristic of this model is its versatility and inclusivity of culture into a variety of other health behavior theories (Iwelunmor, Newsome & Airhihenbuwa, 2014). With respect to more prominent theoretical frameworks that is used in understanding and predicting health beliefs and health behavior in health (i.e. Health Belief Model, Theory of Reasoned Action, PRECEDE/PROCEED), the models aim to create a culture-centric model that can be used to assess health education and health beliefs in hopes of developing culturally relevant method of promoting health for diverse and multicultural groups. The framework is composed of three dimensions that are interrelated and interdependent: *Cultural Identity*, *Relationship and Expectations*, and *Cultural Empowerment*. Each dimension consists of three categories that all align with the acronym PEN. Figure 2 illustrates the dimensions of the PEN-3 model.

This study primary relied on the *Relationships and Expectations dimension* (Perceptions, Enablers, and Nurturers) of the PEN-3 model (Airhihenbuwa, 1995; Iwelunmor, Newsome & Airhihenbuwa, 2014). This dimension is geared at 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 of friends, families or ideologies on particular behaviors.

Figure 2



METHODS

The study aimed to satisfy the following research questions:

- What factors influence the perceptions and knowledge of PA among Transnational Nigerian Immigrants (TNIs)?
- How do TNIs daily activities affect health behaviors and their beliefs towards PA?
- What socio-cultural factors serve as motivators or inhibitors for PA among TNIs?

A qualitative design was employed. Semi-structured individual interviews were conducted and supplemented by using a photo elicitation technique (Harper, 2002)

Participants

Participants were self-identified TNI men and women between the ages 30–65 years, living in the US a minimum of 5 years. Recruitment occurred in community centers, community meetings and churches in the Chicago area through flyers and emails. A snowball sampling method was used in this study; allowing for recruiting participants who are conveniently available and created access to more participants with similar profiles that fit the study's criterion. Snowball sampling in an interview may lead to the referral from one participant to interview someone else (Beirnacki & Waldorf, 1981; Etikan, Alkassim & Abubakar, 2016), which may lead to another one, until it reaches saturation (when same information keeps recurring and nothing new is revealed). A total of 24 TNIs, 11 men and 13 women, were recruited to participate in the study.

Setting

All interviews and recruitment of participants took place within the Uptown area on the Northside of Chicago or the Chatham community area on the Southside area in the city of Chicago.

Instruments

This study employed a qualitative method, utilizing a two-part interviewing approach to explore the topic of perceptions of PA: semi-structured individual interviews supplemented with

a photo-elicitation session. Interview questions used were crafted with guidance from the PEN-3 model (i.e. Relationships and Expectations dimension). Photo elicitation allows the researcher to use images to evoke rich data from the participants (Harper, 2002; Reid, Elliot, Witayarat & Wilson-Smith, 2018). Both approaches allowed for insightful details to be shared by the participants on sensitive and complex topics such as the participant's experience with assimilation and acculturation, barriers in health behaviors and existential behaviors that dissect the uniqueness of TNI's cultural practices.

Procedure

Recruited participants were screened using questions regarding their transnational identity and activity (i.e. maintaining relationships with friends and families in native homeland, sustaining native cultural practices, and traveling back home). Participants in this study needed to meet the following inclusion criteria: (a) be men and women self-described as TNIs, and (b) must be born in and migrated from Nigeria. Those that satisfied the inclusion criteria were invited for an interview.

Pictures used for the photo-elicitation session were gathered by the researcher. To account for researcher's bias, a pilot process was implemented for the selection of pictures. Ten visuals representing PA collected from various sources (internet, health magazines & journals). Two community members (non-participants of the study), one from both sexes were recruited to select 5 out of 10 presented pictures that they perceived as germane to PA. The selected pictures assisted in prompting questions about PA in relation to the individual's (a) cultural identification, (b) family & friends, (c) daily life routines and (d) community/environment. Selected pictures that appear to be redundant for both members were chosen and used for the data collection process.

Before the interview process, a standard questionnaire was issued to collect descriptive information on the targeted population. The questionnaire asked for information on age range, marital status, country of origin, employment, length of stay in the US, and frequency of communication with native homeland (Nigeria). After providing consent forms and completing the demographic questionnaire, the two-part interview process began. Interviews lasted between 30-90 minutes: both parts occurred in one sitting. Once the one-on-one interviews began, questions were asked about the participants' attitudes towards PA. Examples of the questions asked were: (*a) "When you think of physical activity, what comes to mind?" (b) "Who or what influenced you to have those thoughts?" (c) "What do you and people in your household like to do during your free time?"*

After completion of the semi-structured interview, participants were then presented pictures selected from the aforementioned photo selection process. General questions about these pictures were asked to the participants to provoke deeper thoughts pertaining to PA*: (a) "What do you think about this picture?" (b) "How does it relate to your lifestyle?" (c) "Do you see yourself doing something like this? Why or why not?"*.

Participant recruitment and interviews were continually conducted until the data reached its point of saturation.

Data Analysis

The descriptive data from the socio-demographic questionnaire was produced using quantitative analysis software (SPSS 11). Interview questions and data analysis were guided by the PEN-3 Cultural model (Airhihenbuwa, 1995). The PEN-3 model has been used in other studies to assess

health education and health beliefs in hopes of developing culturally relevant method of promoting health for diverse and multicultural groups (Iwelunmor, Newsome & Airhihenbuwa, 2014; Chemuru & Srinivas, 2015). We used the model to organize themes developed from the qualitative analysis process.

The interview transcripts were independently coded then triangulated by a total of three researchers to determine credibility of the data. A sample of transcripts were distributed among three total researchers to analyze and code individually. The researchers reconvened to discuss individual initial codes. The codes were only then considered as final codes if a consensus was reached among the researchers. Codes that were not agreed upon with a consensus were discarded. After a consensus was reached, a codebook was created using the final codes agreed on by all three researchers. Another small selection of interviews was chosen to be coded completely by the researchers to ascertain the coding was used consistently and to ensure the credibility of the codebook. Following this process, minor clarifications were made to the codebook and it was used on all 24 interviews with NVivo 11 serving as an organizer. The data was then categorized into 29 individual categories (e.g. acculturation, weather, dancing, etc.). The analysis of these categories led to the development of several themes.

RESULTS

Descriptive Data and Demographics

Twenty-four (24) TNIs participated in this study, 13 were women and 11 were men. Table 1 shows the descriptive data of the participants.

Table 1. Participants demographic

	WOMEN (n=13)	MEN (n=11)	TOTAL (n=24)
AGE RANGE N (%)			
20-30	2(15%)	0(0)	2(9%)
31-40	0(0)	4 (36%)	4 (17%)
41-50	2 (15%)	2 (18%)	4 (17%)
51-60	6 (46)	3 (28)	9 (38)
Over 60yrs	3 (23)	2 (18)	5 (21)
LENGTH OF STAY Mean (SD)	23.6 yrs. (11.1 yrs.)	22.5 yrs. (14.1 yrs.)	23.1 yrs. (12.3 yrs.)
MARRIED N (%)			
Yes	8 (62%)	9 (82%)	17 (71%)
No	5(38%)	2(18%)	7(29%)
WITH CHILDREN N (%)			
Yes	11 (85%)	10 (91%)	21 (87)
No	2(15%)	1(9%)	3(13%)
EMPLOYMENT N (%)			
Employed	11 (85%)	9 (82%)	20 (83%)
Unemployed	1 (7%)	0(0)	1 (4%)
Retired	1 (7%)	2 (18%)	3 (13%)
FREQUENCY OF COMMUNICATION W/ TIES N (%)			
Everyday	5 (38%)	3 (27%)	9 (38%)
Quite often	2 (14%)	1 (9%)	3 (13%)
Often	6 (46%)	5 (45%)	11 (46%)
Moderately	0 (0)	2 (185)	2 (8%)
Never	0 (0)	0 (0)	0 (0)

Identifying Themes

The themes were categorized under one of the tenets of the PEN-3's *Relationships and Expectations* dimension of the model: Perceptions, which alludes to the individually held knowledge, attitudes, values or beliefs stated by participants that assist or inhibit their personal motivation and decisions to maintain or change a behavior (Airhihenbuwa, 1995). After data analysis, the following themes and sub-themes emerged:

"*We are not the same": Perceptions of self and knowledge towards PA*. This theme alludes to the participants' expressions that explained their cultural values and perceptions regarding PA. These perspectives were divvied into two subthemes: (a) Cultural identity and beliefs towards PA and (b) Transnational impact on PA perceptions.

Cultural identity and beliefs towards PA.

How Transnational Nigerian immigrants identify themselves can be an influencing factor to possible health behavior choices they make (Ibe-Lamberts, Ilunga Tshiswaka, Onyenekwu, Schwingel & Iwelunmor, 2017). Participants expressed they view themselves and their community as significantly different from the native African Americans communities despite living in the same areas or having the same skin color. This is headlined by their transnational connections to their African culture and their sustenance of it in the US. One participant mentioned:

> "*I have roots! I can go back (to Nigeria) and leave here… but I have a home here (In America) too…the land that I chose to be in. I wasn't brought here by force. I came on my own and I can leave on my own. African-Americans don't have that*." (Mr. I)

Participants also discussed the impact of acculturating to the US on their PA knowledge. The participants displayed a basic understanding of PA and its effects on the body physically because of their past experiences before arriving in the US. However, participants admit to not comprehending PA as a health tool for preventing chronic diseases while acculturating to the U.S.:

> "*Yeah you see, physical activity… Nigerians see it as not for health. Most people see it as 'I want to be skinny*". (Mr. O)

Additionally, participants saw chronic diseases as a topic not thoroughly discussed in their community—its genesis is not completely understood—and typically attribute it to supernatural causes. For example:

> "*A lot of Nigerians die because they don't know what is killing them…before they know it, heart attack! Because they don't care. Then the next day a person just drops dead and they say 'Oh it was poison'. Another person drops dead and someone will say 'they're cursed'… He simply had a heart attack! He didn't take care of himself*." (Mr. I)

Participants expressed a need for education in their community that is culturally sensitive and respective to them. A participant mentioned:

> "*We can use our own language and our culture to teach our people to learn and understand (PA), you know. Actually, breaking it down for them so that they would understand it…. for prevention … We can talk to them in our own way and use our cultural stuff to educate them.*" (Mrs. B)

Our findings suggest members of this population have knowledge on the physical benefits of PA due their past lifestyles in Nigeria. However, they remain uneducated about the benefits of PA as a way to prevent chronic diseases and improve health.

Transnational impact to PA perceptions

Our findings indicate that participants' transnational responsibility—the pursuit of affluence in order to provide for their families in both the US and Nigeria—influences attitudes towards PA. Participants expressed not having time for PA due to occupational demands. Providing for family members abroad who may be in need is viewed as a responsibility interwoven in their culture. One participant explains:

> "*You have to create time for it. Our people (TNIs) don't have time for it (PA). They believe they come to America to come to work and make money to send home family members waiting on them*." (Mr. I)

A sense of duty and accountability for their family members overseas influences their decision making.

Visualizing Physical Activity (Photo-elicitation). In the second part of the interviews, participants were asked to view and discuss some images of PA in relation to their daily lives. Out of the five images presented, the participants only spoke extensively about three of the images and had very little to say—or at times were dismissive of—the other two images. Nevertheless, this induced some interesting findings regarding how the participants visualize the practice of PA.

Some participants mentioned not engaging in some versions of PA because it is not accustomed to their cultural identity. For example, when discussing Image 1 a participant mentioned:

"I haven't seen any Africans running like this. I've never seen any Africans jogging. Culturally we just don't see it like that. We just wonder why people are running around like that. I see the white people doing that but not us." (Mr. I)

Participants mentioned that they do not relate to Image 1 because it is not associated to their own imaginings of engaging in PA. All participants, however, strongly expressed that a common activity in their lives is dancing, particularly their cultural dances:

"Dancing to me makes more sense to me than the family taking walks" (Mr. S)

One participant called for some form of dance-centered culturally tailored initiative:

"*I would say like a Zumba type of thing, but with the African music…. people would jump at it…. because it relates to them…their upbringing…especially if it's the African music that is incorporated into it. Then people will do it. I would do it.*" (Mrs. A)

Participants perceived dancing as innate to their cultural practices and experiences. It was practiced not to only sustain their cultural identity, but also to engage in PA: voluntary or involuntarily.

Participants also discussed activities such as yoga (Image 3). The participants do not view yoga as a form of PA they would choose to participate in. For example:

"*I saw a friend of mine on Facebook doing yoga and I nearly called her to see if she was okay because it (yoga) doesn't even look appealing to me. It looks like someone trying to worship something. If you find out the background of yoga you will see that's it's a spiritual thing.*" (Mr. BA)

The participants perceived yoga as a form of PA not appealing to them because it is perceived to be related to a form of spirituality, which could conflict with their personal spiritual beliefs and culture.

DISCUSSION

The prevalence of chronic diseases among diverse Black populations in the US strongly suggests the need for culturally tailored interventions to promote lifestyle changes, particularly in promoting PA. This is the first study to procure the perspectives of a diverse subset of the African immigrant population with multi-national ties.

The majority of TNIs live symbiotically with the native African Americans, a population that already faces a disparate burden of chronic diseases compared to other groups. African Americans report the lowest rates of PA participation, adding to the risk of negative long term health outcomes associated with physical inactivity (Lee et al., 2012; Donnelly et al., 2016). TNIs, despite similarity in complexion, represent a group of people who possess different cultural beliefs, traditions and practices different from their native counterparts: they possess a different perspective on health. Therefore, it cannot be assumed that the same health intervention approaches for African Americans can be applicable to TNIs (Ilunga Tshiswaka & Ibe-Lamberts, 2014). Our findings indicate a dissimilarity in how TNIs culturally identify themselves and how their identity impacts their perceptions on healthy behaviors—which ultimately shapes their health behavior choices and beliefs. These perceptions do not solely explain their identity in contrast to African Americans but it also reveals how their knowledge of PA and perceptions of PA may also differ. A critical note from our findings indicate that although our participants consider themselves "Black" by skin color, they do not identify or perceive themselves as African Americans; their beliefs and practices distinguish them from their native counterparts. With their identity established, the focus now shifts to how these innate differences impact health behaviors such as PA participation. If TNIs are distinguishing themselves from African Americans, it can also be

concluded that TNIs may not want to adopt health behaviors and tactics that African Americans might adopt to improve PA participation.

Our findings also specify the impact of acculturation and assimilation on PA knowledge. It denotes that TNIs do not perceive PA as a tool for chronic disease prevention. Although PA was a natural part of their former lifestyle in Nigeria, participants were not educated on PA as a tool for preventive health. They view it as a tool for physical fitness and physique. By acculturating to the US, the participants became exposed to information about chronic diseases; however, they do not recognize the connection between lifestyle behaviors and chronic diseases such as CVD, diabetes, cancer. Instead, our findings show that some TNIs may attribute chronic disease to supernatural or spiritual causes. This is consistent with suggestions derived from the seminal work of Kamya (1997) noting that African immigrant cultural beliefs and practices tend to defer to spirituality and supernatural beliefs, possessing a strong sense of religiousness. This highlights an important need for health education to be integrated in intervention that is culturally tailored for this community

Studies on PA show that a high-level understanding of PA does not always lead to behavior change (Dishman, 1982; Etnier, Karper, Park, Shih, Piepmeier & Wideman, 2017). A critical barrier for our participants were time constraints due to employment demands and transnational responsibilities. These employment demands are intertwined with the motivation of coming to the US by TNIs. Transnational responsibility alludes to the sense of responsibility participants felt towards their relatives in Nigeria and are more committed to working towards the pursuit of affluence and wealth compared to making time for PA. This is consistent with the findings by Horst (2004) on remittances by Somalians in Minnesota. Transnational responsibility proves to be critical because there is a level of expectation and dependency bestowed upon a TNI by family members and even friends that may be in need; TNIs decisions are influenced by both local issues overseas and international affairs. These TNIs feel the pressure to live up to these expectations and work multiple jobs in order to maintain a false image of achievement (Wong, 2006; Muruthi, Watkins, McCoy, Muruthi & Kiprono, 2017). This concept demonstrates that TNIs will choose overworking (i.e. working three jobs) over creating time for PA participation if given the opportunity to make a choice. The desire to attain enough wealth to take care of their family on a local and transnational level supersedes any other goals they may consider setting for themselves pertaining to PA and this applies to both men and women. Failure to uphold their transnational responsibilities can create the sense of failure to fulfill the purpose of what they came to the US for: to achieve enough wealth for the betterment of their family "over here" (in US) and "over there" (Nigeria). This notion proves to be congruent with barriers to physical activity faced by members of other populations (i.e. time and employment obligations) (Gobbi, Sebastião, Papini, Nakamura, Valdanha Netto, Gobbi, & Kokubun, 2012; Matthews et al., 2014); however, the distinguishing factor is the added responsibilities to family members overseas that influences TNIs towards creating time for PA participation.

The results of the photo elicitation process revealed that participants did not favor images displaying participation in forms of PA such as walking, jogging, or yoga were not activities they did perceive as preferable despite being acculturated to the US. However, our participants responded positively to images portraying PA activities that relate to their cultural and self-identity such as dancing. This finding is consistent with a study by Ibe-Lamberts et al. (2017) that revealed

promoting dancing through hometown associations or other ethnic organizations as a preferable strategy to promote health education and engage TNIs in physical activity participation. Research shows that dancing can have both psychological and physiological benefits for both the old and the young (Vahabi & Demba, 2015; Hui, Chui & Woo, 2009; Jain & Brown, 2001). Berry and Annis's (1974) monumental study on acculturation stated that an immigrant must face and answer two important questions when acculturating: 1) is the cultural identity of value to be retained? and 2) are the positive relations with the dominant culture worth seeking? (Sullivan & Kashbuck-West, 2015). The scarce literature on TNIs show their unique connection to their native homelands permits them to do both. They can acculturate to the dominant (host) culture for the purpose of adopting certain health behaviors that can be beneficial to themselves and their native land ties, but can also sustain their indigenous practices for the benefit of preserving their cultural identity in their new land (Itzigsohn & Saucedo, 2002; Ibe-Lamberts, Ilunga Tshiswaka, Onyenekwu, Schwingel & Iwelunmor, 2017).

Limitations

This study employed a sound qualitative approach involving photo-elicitation that complemented an in-depth interview process in order to amplify the viewpoints of PA among TNIs. This technique produced rich data and allowed for the participants to express their perspectives on PA. However, the findings from this study are subject to limitations and must be comprehended with practicality. This study was subjected to a small convenient, snowball sampling method and was not randomized, which begs the question as to whether the patterns that emerged would be different if an alternative approach was exercised. Furthermore, social desirability should also be considered. Participants may respond in ways that seem more favorable to society's expectations and not necessarily how they genuinely feel. The location of the participants should also be taken into consideration. TNIs that may live in areas that are consistently warm (e.g. Houston or Atlanta) may have different perspectives and environmental barriers than our participants who live in a mixed climate location like Chicago. The study also recognizes that there are several different types of TNIs who represent different countries in a large continent such as Africa. This study focused strictly on TNIs from an Anglophonic country such as Nigeria—which alleviates language barriers in an English-speaking country like the US— and did not account for TNIs that are from countries where English is not spoken.

CONCLUSION

The findings from this study highlight critical information often overlooked in health disparities research—culturally competent approaches must be applied when designing interventions in diverse Black populations such as the TNI population. This study is one of the few studies on that focuses on a population that is hard to reach and even harder to distinguish. The findings of this generate implications that can be useful for better understanding how to promote PA among TNIs. Taken these findings into account, intervention planners can 1) develop an understanding of the overarching Black population and its culturally diverse sub-populations and how to engage these groups; and b) apply more research efforts to explore the intra-racial relationships between native African Americans and Black immigrants—their cultural similarities and differences—with hopes to design culturally respective methods for promoting PA in these

communities. The overarching Black population is very complicated and diverse. PA is complicated and diverse. To effectively promote PA in this diverse population, the nuances need to be explored further.

REFERENCES

Airhihenbuwa, C. O. (1995). *Health and culture: Beyond the Western paradigm*: Sage.

Berry, J. W., & Annis, R. C. (1974). Acculturative stress the role of ecology, culture and differentiation. *Journal of cross-cultural psychology, 5*(4), 382-406.

Chemuru, N. R., & Srinivas, S. C. (2015). Application of the PEN-3 Cultural Model in Assessing Factors affecting Adolescent Pregnancies in Rural Eastern Cape, South Africa. *Int J Reprod Fertil Sex Health S, 1*, 01-08.

Dishman, R. K. (1982). Compliance/adherence in health-related exercise. *Health psychology, 1*(3), 237.

Donnelly, J. E., Hillman, C. H., Castelli, D., Etnier, J. L., Lee, S., Tomporowski, P., . . . Szabo-Reed, A. N. (2016). Physical activity, fitness, cognitive function, and academic achievement in children: a systematic review. *Medicine and science in sports and exercise, 48*(6), 1197.

Etnier, J. L., Karper, W. B., Park, S.-Y., Shih, C.-H., Piepmeier, A. T., & Wideman, L. (2017). Motivating mature adults to be physically active. *Journal of aging and physical activity, 25*(2), 325-331

Gambino, C. P., Trevelyan, E. N., & Fitzwater, J. T. (2014). *The foreign-born Population from Africa: 2008-2012*. Retrieved from US Census: https://www.census.gov/content/dam/Census/library/publications/2014/acs/acsbr12-16.pdf

Gobbi, S., Sebastião, E., Papini, C. B., Nakamura, P. M., Valdanha Netto, A., Gobbi, L. T. B., & Kokubun, E. (2012). Physical inactivity and related barriers: a study in a community dwelling of older brazilians. Journal of aging research, 2012.

Guarnizo, L. E., Portes, A., & Haller, W. (2003). Assimilation and Transnationalism: Determinants of Transnational Political Action among Contemporary Migrants1. *American journal of sociology, 108*(6), 1211-1248.

Hallal, P. C., Andersen, L. B., Bull, F. C., Guthold, R., Haskell, W., Ekelund, U., & Group, L. P. A. S. W. (2012). Global physical activity levels: surveillance progress, pitfalls, and prospects. *The Lancet, 380*(9838), 247-257.

Harper, D. (2002). Talking about pictures: A case for photo elicitation. *Visual studies, 17*(1), 13-26.

Horst, C. (2004). Money and mobility: transnational livelihood strategies of the Somali diaspora.

Hui, E., Chui, B. T. K., & Woo, J. (2009). Effects of dance on physical and psychological well-being in older persons. *Archives of gerontology and geriatrics, 49*(1), e45-e50.

Ilunga Tshiswaka, D., & Ibe-Lamberts, K. (2014). The interplay between transnationalism and health: the case of high blood pressure among African transnational migrants. *Transnational Social Review, 4*(2-3), 294-298.

Ibe-Lamberts, K., Ilunga Tshiswaka, D., Osideko, A. & Schwingel, A. (2016) "Understanding Transnational African Migrant Health Behavior and Risk of Chronic Diseases Related to Nutrition", Journal of Racial and Ethnic Disparities, 1-7

Ibe-Lamberts, K., Ilunga Tshiswaka, D., Onyenekwu, I., Schwingel, A & Iwelunmor, J. (2017) "Dance and Hometown Associations are Promising Strategies to Improve Physical Activity Participation among US Nigerian Transnational Immigrants" Journal of Racial and Ethnic Disparities, 1-8

Itzigsohn, J., & Saucedo, S. G. (2002). Immigrant incorporation and sociocultural transnationalism1. *International migration review*, *36*(3), 766-798.

Iwelunmor, J., Newsome, V., & Airhihenbuwa, C. O. (2014). Framing the impact of culture on health: a systematic review of the PEN-3 cultural model and its application in public health research and interventions. *Ethnicity & health*, *19*(1), 20-46.

Jain, S., & Brown, D. R. (2001). Cultural dance: An opportunity to encourage physical activity and health in communities. *Journal of Health Education*, *32*(4), 216-222.

Kamya, H. A. (1997). African immigrants in the United States: The challenge for research and practice. *Social Work, 42*(2), 154-165.

Koya, D. L., & Egede, L. E. (2007). Association between length of residence and cardiovascular disease risk factors among an ethnically diverse group of United States immigrants. *Journal of general internal medicine, 22*(6), 841-846.

Lee, I.-M., Shiroma, E. J., Lobelo, F., Puska, P., Blair, S. N., Katzmarzyk, P. T., & Group, L. P. A. S. W. (2012). Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *The Lancet, 380*(9838), 219-229.

Lloyd-Jones, D., Adams, R. J., Brown, T. M., Carnethon, M., Dai, S., De Simone, G., . . . Gillespie, C. (2010). Heart disease and stroke statistics—2010 update A report from the American Heart Association. *Circulation, 121*(7), e46-e215.

Martinez, J. N., Aguayo-Tellez, E., & Rangel-Gonzalez, E. (2015). Explaining the Mexican-American Health Paradox Using Selectivity Effects. *International Migration Review, 49*(4), 878-906.

Matthews, C. E., Cohen, S. S., Fowke, J. H., Han, X., Xiao, Q., Buchowski, M. S., . . . Blot, W. J. (2014). Physical activity, sedentary behavior, and cause-specific mortality in black and white adults in the southern community cohort study. American Journal of Epidemiology, 180(4), 394-405. doi:10.1093/aje/kwu142 [doi]

Mohamed, A. A., Hassan, A. M., Weis, J. A., Sia, I. G., & Wieland, M. L. (2014). Physical activity among Somali men in Minnesota barriers, facilitators, and recommendations. *American journal of men's health, 8*(1), 35-44.

Morawska, E. (2017). A Century of Transnationalism: Immigrants and Their Homeland Connections.

Muruthi, B., Watkins, K., McCoy, M., Muruthi, J. R., & Kiprono, F. J. (2017). " I Feel Happy that I Can be Useful to Others": Preliminary Study of East African Women and Their Remittance Behavior. *Journal of Family and Economic Issues, 38*(3), 315-326.

Palloni, A., & Morenoff, J. D. (2001). Interpreting the paradoxical in the Hispanic paradox. *Annals of the New York Academy of Sciences, 954*(1), 140-174.

Reid, K., Elliot, D., Witayarat, N., & Wilson-Smith, K. (2018). Reflecting on the use of photo-elicitation methods in IPA research. Enhancing the interpretative lens and re-balancing power back to the participant. A review of published studies.

Turk, M. T., Fapohunda, A., & Zoucha, R. (2015). Using Photovoice to Explore Nigerian Immigrants' Eating and Physical Activity in the United States. *Journal of Nursing Scholarship, 47*(1), 16-24.

Vahabi, M., & Damba, C. (2015). A feasibility study of a culturally and gender-specific dance to promote physical activity for South Asian immigrant women in the greater Toronto area. *Women's Health Issues*, *25*(1), 79-87.

Venters, H., & Gany, F. (2011). African immigrant health. *Journal of Immigrant and Minority Health*, *13*(2), 333-344.

Williams, D. R., Priest, N., & Anderson, N. B. (2016). Understanding associations among race, socioeconomic status, and health: Patterns and prospects. *Health Psychology*, *35*(4), 407.

Wong, M. (2006). The gendered politics of remittances in Ghanaian transnational families. *Economic Geography*, *82*(4), 355-381.

APPENDIX

Interview Guide (semi-structured)

Cultural identity (person, extended family, neighborhood)

- When you think of physical activity, what comes to mind?
- Who or what influenced you to have those thoughts?
- Have you and your family discussed physical activity?
- If not, why not?
- If yes, what do some of your family members think of physical activity?
- What do you and people your household like to do during your free time?
- Who do you go to when you have questions about being physically active?
- How can the community encourage people to be more physically active?

Relationships and expectations (perceptions, enablers, nurturers)

- When was the last time you received information on physical activity?
    - Where did you receive this information?
    - What did you think about this information?
- What do your friends/peers think of physical activity?
- What factors do you think influence those thoughts on physical activity?
- What is your impression of health facilities in the communities where you live?
- Do you talk to your doctor/health provider about being physically active?
- What do you think health facilities in your communities should do to encourage physical activity?
- What information on physical activity would be helpful for men and women in your community?

Cultural empowerment (positive, existential, negative)

- What do you think about the government's effort to encourage physical activity nationwide?
    - What appeals to you and what doesn't?
- What things, good or bad will influence your decision to participate in these types of initiatives?
- Does being a member of ethnic organization impact why you are physically active or not?
- What can your hometown association do to encourage members to be more physically active?

Part 2 (Photo presentation)

- What do you think about this picture?
- How does it relate to your lifestyle?
- Do you see yourself doing something like this?
    - Why?

    - If no, why not?
- Repeat these questions for each photo