I, Andrew G Funk, hereby submit this original work as part of the requirements for the degree of Master of Science in Health Education (Public & Community Health).

It is entitled:
Weight Status, Physical Activity Levels, Perceived Neighborhood Health, and Healthy Community Factors among Latinos in Greater Cincinnati

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Running Head: Community factors in Latino Health

Weight Status, Physical Activity Levels, Perceived Neighborhood Health, and Healthy Community Factors among Latinos in Greater Cincinnati

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ABSTRACT

AN ABSTRACT OF THE THESIS FOR THE MASTER OF SCIENCE DEGREE IN HEALTH PROMOTION AND EDUCATION, PRESENTED ON MARCH 16, 2016 AT THE UNIVERSITY OF CINCINNATI, CINCINNATI, OH

TITLE: Obesity, Physical Activity, and Healthy Community factors among Latinos in Greater Cincinnati

MASTERS COMMITTEE MEMBERS: Liliana Rojas-Guyler, PhD, CHES, (chair); Ashley Merianos, PhD, CHES

Background: Research indicates that a better understanding of the relationship between the health status of communities and weight status and physical activity level among Latinos would be beneficial in developing culturally appropriate health education programs for this community. Purpose: This study assessed the relationship between perceived neighborhood health and current weight status and physical activity levels among Latinos in the Greater Cincinnati Metropolitan Area. Further, it aimed to assess the extent to which weight status and physical activity levels differed based on healthy community factors. Methods: A secondary data analysis was conducted based on the 2013 Greater Cincinnati Community Health Status Survey (CHSS). A total of 251 randomly sampled Latino participants were interviewed by telephone. The CHSS included self-reported items that assessed four main concepts: general health status and access, weight status, physical activity, perceived neighborhood health and community
factors. Results: Results indicated that the majority (63%) of Latino participants reported unhealthy weight status and nearly one-third self-reported no physical activity within the past month. 29.2% rated the healthiness of the region as ‘fair’ or ‘poor’ and 16.1% rated their own living facilities as ‘fair’ or ‘poor’. Over 30% of participants reported a lack of walkable communities and between 18% and 24% reported not feeling secure, or as if they could not obtain help or depend on their communities. Non-overweight and non-obese Latino participants reported healthier community factors in comparison to their counterparts. Participants who engaged in physical activity scored higher than those who reported being physically inactive. Discussion: Study findings should be considered when creating health education programs that address these health indicators in the local Latino community.
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Introduction

The exponential growth of health disparities in the Latino population has gained considerable attention in the United States (U.S.). A particular health disparity of concern is the prevalence of obesity in this population. Since Latinos are the fastest growing ethnic group in the U.S., the relationship between obesity, physical activity and community factors in Latino communities should be further investigated.

Latinos in America

There are 48.4 million people of Latino origin currently living in the U.S., representing the nation’s largest ethnic or racial minority (Lee, Dancy, Florez, & Holm, 2013). Representing 16% of the total population, Latinos are expected to constitute 30% of the population by 2050 (Stokes-Brown, 2012). Recent research in “new-growth” Midwest communities, which are communities with a small but quickly growing Latino population, indicate that unique health challenges may exist and that research to understand and improve pervasive health disparities is needed (Valenzuela et al., 2013). Such pervasive health disparities include high levels of physical inactivity and obesity for the Latino population in the U.S.

As the U.S. Latino population expands, there is a dispersion of communities in which Latinos migrate to live and work. This rapid population growth has led to the emergence and presence of social and health disparities in Latino communities throughout the U.S. Undocumented status, limited health care access, disparities in education and health literacy, language barriers, and socioeconomic disparity are challenges within this population (Valenzuela et al., 2013).
Latino Health

Latinos are not receiving adequate medical care and about 33% are estimated to be uninsured (Warda, 2000). Furthermore, the U.S. Census Bureau tabulations show that the number of uninsured Latinos more than doubled, from 6.0 million in 1987 to 13.7 million in 2004 (Shah, & Carrasquillo, 2006). A review of the literature demonstrates that, in general, U.S. Latinos are less likely to seek and receive health care services, are less likely to follow healthy lifestyle behaviors, and are at high risk for diabetes, cardiovascular disease, and cancer mortality (Valenzuela et al., 2013).

Alike other vulnerable populations, Latinos are more susceptible to innumerable diseases and illnesses such as: obesity, type 2 diabetes, cardiovascular disease, and HIV/AIDS. Latinos are also disproportionately affected by obesity and related cardiometabolic conditions (Qibin et al., 2015). This is alarming since cardiovascular disease is the major cause of death among U.S. Further, prevalence of obesity is higher among Latino Americans (29%) than non-Latino whites (21%) (Spieker et al., 2015). Research has also reported evidence on the behavioral-mental health and risks of the Latino population. U.S.-born Latinos are more likely to meet the diagnostic criteria for major depression and other psychiatric disorders compared to immigrant Latinos (Ai et al., 2012).

Mortality rates of the Latino population have been shown to be lower than the general population. Despite low levels of education and income, Latino mortality rates are comparable to, and often lower than, the more socioeconomically advantaged adult white population (Cantu, Hayward, Hummer, & Chiu, 2013). To identify the causality of negative health practices by the Latino population, their living environment must be taken into consideration.
Recent research has linked the built environment surrounding individuals’ residences to health outcomes such as obesity, hypertension, and cardiac heart disease (Deguzman, & Kulbok, 2012). Living in Latino enclaves has exhibited a mixed-impact on the residents’ weight-related behaviors; it corresponds to lower consumption of high-fat foods but also lower levels of physical activity among Latinos (Wen et al., 2011). Therefore, there has been a substantial increase in Latino obesity levels throughout the U.S.

**Obesity in Latinos**

According to the Centers for Disease Control and Prevention (2015), a body mass index (BMI) of 30.0 or higher falls within the obese range. The obesity-attributable medical costs in the U.S. average $147 billion per year and account for almost 10% of the total annual medical expenditures (Drieling, Jun, & Stafford, 2011). Obesity is also a major risk factor for several noncommunicable chronic diseases such as: cancer, heart disease, osteoarthritis, and diabetes.

The 51 million Latinos in the U.S. have disproportionately high BMIs, with 79% at least overweight and 39% obese (Rosas et al., 2015). Latinos aged 20 years and older have high rates of obesity (40.4%) compared to 32.4% of non-Latino whites (Martinez et al., 2012). This rate has increased in overtime; in 2010, approximately 31.9% of the Latino adult population was obese (Perez et al., 2013). This current trend of obesity will continue to rise due to the exponential Latino population growth within the U.S. Despite their diversity in origins and culture, national survey data do not present a clear picture of the burden of obesity and its risk factors among the various Latino groups other than those of Mexican origin (Isasi et al., 2015). Thus, current obesity interventions for the American Latino population must be evaluated in great detail.

An emphasis on community factors towards obesity prevention efforts have been taken into consideration for Latino populations in the U.S. A better understanding of demographic,
psychosocial, unhealthy neighborhood-level environmental factors (e.g., fast-food restaurant density and few safe places to exercise), and healthy community resources (e.g., nutrition and physical activity classes) associated with dietary habits and physical activity is important for tailoring weight-loss interventions (Drieling, Goldman Rosas, Ma, & Stafford, 2014). Residents of communities with more unhealthy environmental factors have higher rates of obesity, unhealthy dietary habits, and physical inactivity (Drieling et al., 2014). Individual factors such as income, and education also explain some of the observed racial/ethnic differences in obesity (Kirby, Liang, Chen, & Wang, 2012). However according to Drieling et al. (2014), there is limited research that simultaneously examines these factors among lower socioeconomic status (SES) Latinos who are at the greatest risk for obesity-related disease. Therefore, there is a need for research depicting the gap between individual-level and community-level characteristics towards the prevalence of obesity in the American Latino population.

**Physical Activity Levels among Latinos**

According to the *Journal of the American Medical Association* (JAMA) guidelines, all adults should set a long-term goal to accumulate at least 30 minutes or more of moderate-intensity physical activity on most, and preferably all, days of the week (Flegal, Carroll, Kit, & Ogden, 2012). Researchers and health professionals have attributed inadequate levels of physical activity to the growing obesity epidemic, and potential declines in life expectancy observed in the U.S. population (Larson, Whiting, Green, & Bowker, 2014). Adverse health effects associated with physical inactivity are especially problematic within low-income, racial, and ethnic minority groups (Larson et al., 2014). Most U.S. adults fail to meet national dietary and physical activity recommendations to achieve normal body weight, and Latinos meet these recommendations less often than whites (Drieling et al., 2014). Further, despite the numerous
physical and psychological benefits associated with regular leisure time physical activity, leisure
time inactivity rates among Latinos have been reported to be highest among all ethnic and racial
groups, independent of social class (Marquez, & McAuley, 2006). According to Stodolska,
Shine, & Li (2010), Latinos were one of the most sedentary segments of the American
population; in 2004, more than half (52.8%) of Latinos were inactive. Presumptively, Latinos are
at risk for diseases and illnesses based on their lack of participation in physical activity and
practicing healthy lifestyles. An argument can be made that while differences in recreation
patterns between mainstream whites and Latinos are something to be embraced, the lack of
participation in leisure time physical activity among members of this group might have serious
negative consequences on their physical and mental health (Stodolska et al., 2010). Barriers to
participating in physical activity have influenced the prevalence of these diseases and others
alike within the Latino population.

Studies indicate people’s physical activity levels could be improved through a holistic
approach to health promotion that emphasizes environmental surroundings as well as intra-
personal (e.g., internal beliefs and motivations) and interpersonal factors (e.g., social
relationships (Larson et al., 2014). Furthermore, an extensive literature review conducted by
Kaczynski et al. (2007), suggested that physical inactivity observed in low-income minority
neighborhoods may be mitigated by access to physical activity-related facilities and amenities.

Despite these recommendations, several community factors can tremendously effect
physical activity participation rates and access to recreational facilities for the American Latino
population. Therefore discussion of Latino communities and community factors are included in
the concluding section.
Perceived Neighborhood Health and Healthy Community Factors

To date, limited research has simultaneously examined the relationship between individual-level use of affordable educational community resources, sociodemographic and psychosocial factors, and diet and physical activity among low-SES Latino immigrants living in neighborhoods with unhealthy environmental factors (e.g., high fast-food restaurant density and few safe places to exercise) (Drieling et al., 2014). Only recent research suggests that community-level characteristics, such as the availability and accessibility of sidewalks, parks, and recreational facilities and food selection and cost, are related to obesity independent of individual characteristics (Kirby et al., 2012). According to Wen and Maloney (2011), the most modifiable environment features that could prevent weight gain and its associated problems would be the built environmental factors such as greenness, park access, and mixed land use.

Further, as a global measure of neighborhood resources, neighborhood SES has been most commonly examined to test residential contextual effects on health and behavior (Wen, & Maloney, 2011). Obesity rates are also significantly higher in violent, socially disordered areas—even when controlling for ethnicity and for individual and area-level SES due to the stress of residing there and having to stay indoors (Chang, Hillier, & Mehta, 2009). Recent studies in “new-growth” Midwest communities, communities with a small but quickly growing Latino population (also sometimes referred to as “emerging gateways”), indicate that unique health challenges may exist and that research to understand and improve pervasive health disparities is needed (Valenzuela et al., 2013).
Purpose of the Study

Health behaviors including physical activity and community factors are known to influence the obesity rate seen in the growing Latino population. There is a dearth of professional literature addressing the role of healthy community factors and obesity among Latinos in the Greater Cincinnati Area. This study contributes to the knowledge base for health educators who are tasked with designing programs that address obesity and physical activity in the local Latino community. Specifically, this study: a) identifies reported frequency and percent of unhealthy weight status [i.e., Obesity = BMI > 30 (CDC, 2015a)], physical activity levels (150 minutes of moderate-intensity aerobic activity per week and two or more occasions each week of muscle-strengthening activities (CDC, 2015b), and healthy community factors (i.e., presence of walkable communities, perceptions of neighborhood health, structural conditions, safety, support, and availability of recreational facilities) present for the Latino community in Greater Cincinnati; b) reports the extent to which weight status and physical activity levels differ based on demographic characteristics and healthy community factors; and c) proposes recommendations for future research and health education programming to address the identified gaps and relationships.

Research Questions

1. What percent of Latinos in the Greater Cincinnati area report a normal weight status (BMI < 30) and the recommended physical activity levels (at least 150 minutes per week and at least two days each week of muscle-strengthening activities)?

2. What percent of Latinos in the Greater Cincinnati area report perceived neighborhood health (i.e., structural conditions and availability of recreational facilities)?
facilities) and healthy community factors (i.e., presence of walkable communities, safety, and support)?

3. Does perceived neighborhood health differ based on weight status among Latinos in the Greater Cincinnati area?

4. Does perceived neighborhood health differ based on physical activity among Latinos in the Greater Cincinnati area?

5. Do healthy community factors differ based on weight status among Latinos in the Greater Cincinnati area?

6. Do healthy community factors differ based on physical activity among Latinos in the Greater Cincinnati area?

Methods

Study Design

This study is a secondary data analysis of the 2013 Greater Cincinnati Community Health Status Survey (CHSS) Latino participants (n =251). The data are observational and based on a purposeful oversample of Latinos in this geographical area.

Participants

As reported by Interact for Health (2015), the original data were collected from a total of 4,929 randomly selected adults residing in a 22-county area within the Greater Cincinnati metropolitan area (See Figure 1). Respondents included those of all races and ethnicities. Of these participants, a total of 251 adult participants who self-identified as Latino or Hispanic adult completed the survey.
Measures

The data on overall health status of Latino participants were collected using the 2013 CHSS questionnaire. As reported by Interact for Health (2015), the 2013 CHSS contained 93 total items to assess 14 health topics. These health topics included access to healthcare, insurance coverage, physical and mental health, obesity, healthy eating, active living, smoking rates, alcohol use, and the presence of certain health conditions, dental health, community support, healthy neighborhoods, mental and emotional well-being, and housing conditions. CHSS survey variables \((n=32)\) used in this research study include self-reported items that assessed four main concepts: general health status and access, body weight, physical activity, and community factors. A complete list of survey items utilized for the present study can be found in Appendix A.

General Health Status

One item measured perception of general health status (1= excellent; 5=poor) and another item measured the length of time since the last visit to a doctor (1= less than 1 year; 6= never).

Weight Status

We used a computed variable derived from original data by the Institute for Policy and Research (IPR) for BMI, which was computed based on height and weight of participants. These include computed obesity measures (BMI derived categories of obesity) that classify participants in two different ways: 1) Overweight (BMI \(> 30\)) or Not-overweight (BMI \(< 30\)) and 2) Not-obese (BMI<30), mildly obese (BMI 30-35), moderately obese (BMI 35-39), severely obese (BMI 40-49), and very severely obese (50+ BMI).

Physical Activity
Physical activity was measured by five items. The first item measured if they had participated in any physical activity in past month (yes, no). The second item assessed the type of activity (open ended). The next two items measured frequency per week and per month (number of times) and the length of the activity (minutes and hours). The last item asked the frequency of use of neighborhood recreational facilities (1= more than 1/week, 6= never).

*Perceived Neighborhood Health*

The first scale was the Perceived Neighborhood Healthiness Scale (items 36, 37, 38, 39 & 40—see Appendix A). These included measures of perceived health of the region, their neighborhood, and the structural quality of their neighborhood and their own residence. Lastly, the availability of recreational facilities in their own neighborhood was assessed. Answers were measured on a five-point Likert-type scale (1= excellent; 5=poor).

*Healthy Community Factors*

Healthy community factors were measured using 4 items (Q42, Q44, Q45, & Q46) that asked the level of agreement on: presence of safe sidewalks/shoulders, dependability on each other, perceived safety, and being able to get help from each other. These items were measured on a six-point scale (1=strongly agree, 6=strongly disagree) and can be found in Appendix A).

All items were reverse coded to ensure that a higher score corresponded to a healthier rating. Each scale score was then computed by summing across item responses. Reliability testing for each scale was conducted and alpha values were found to be acceptable (Cronbach’s alpha = .840 and Cronbach’s alpha =.780 respectively).

*Demographics*

The six items assessed age, sex, marital status (i.e., married, widowed, divorced, separate, never married, and having a partner but not married), highest grade or year of school (i.e., never
attended, grades 1-8, 9-11, 12 or GED, college 1-3 years, college 4 years of more, and post
college/graduate degree). A computed variable combined income (i.e., $42,850 or less, $42,851 -
$85,700, or more than $85,700) and household data to derive at poverty status classification
[<100% federal poverty level (FPL), 100%-200% FPL, 200%+ FPL]. We also used a computed
variable to classify insurance status: insured or not insured. Additionally, participants were
asked if they were Latino or Hispanic (yes, no).

Procedures

A total of 251 randomly oversampled Latino residents were interviewed by telephone
between August 20, 2013 and January 19, 2014. Phone numbers were selected at random for
inclusion in the original study. Respondents were interviewed in either Spanish or English,
depending on respondent preference. A thorough introduction of the survey was given by a
trained telephone screener and informed consent was given by the respondent prior to the
beginning of the survey. The criteria about informed consent and anonymity were met according
to the IPR at the University of Cincinnati; Institutional Review Board (IRB) approval was
obtained for data collection by IPR. Upon completion of the telephone survey, participants were
offered a $10 gift card for participation in the CHSS. Prior to this secondary data analysis, the
IRB determined this study as non-human subjects research, and thus, was exempt from review
(See Appendix B for IRB letter).

Data Analysis

All data were analyzed using IBM SPSS (version 23.0). Descriptive statistics, such as
counts, frequency distributions, and means, were utilized to assess and describe each variable.
Analysis of variance (ANOVA) tests were utilized to establish differences in scale scores when
compared to corresponding dependent variables in each inferential research question. All
inferential statistical tests utilized a significance level of \( p < .05 \) with a confidence interval of 95\%. Post-hoc Tukey tests and Cohen’s \( d \) effect sizes were performed for all statistically significant differences. The provided ‘weight’ variable was utilized to standardize this representative data set to the Latino population in the Greater Cincinnati Region. Missing data were excluded from all analyses.

Results

Participants

A total of 251 adult participants who self-identified as Latino or Hispanic completed the survey (Table 1). The average participant was in their mid-thirties (\( M = 35.74, SD = 13.249 \)). The two most reported age categories were 30 to 45 years (42.0 \%, \( n = 99 \)) and 18 to 29 years (36.4\%, \( n = 85 \)). Of 235 participants who provided their sex, 57.0\% (\( n = 134 \)) were male and 43.0\% (\( n = 101 \)) were female. Marital status included 48.8\% (\( n = 144 \)) married and 39.8\% (\( n = 93 \)) never… married. Educationally, 56.5\% (\( n = 133 \)) participants graduated from high school or less and 43.6\% (\( n = 102 \)) graduated from college or attended some college.

In regards to annual income, 51.6\% (\( n = 21 \)) of participants reported earning $42,850 \geq$, 23.1\% (\( n = 54 \)) between $42,851 and $85,700, 15.8\% (\( n = 37 \)) > $85,700, and 5.8\% (\( n = 14 \)) refused to report annual income. Based on the federal poverty level (FPL) guidelines 36.4\% (\( n = 73 \)) of participants were within 100\% of the Federal Poverty Level and 23.9\% (\( n = 48 \)) between 100\% - 200\%. For health insurance status (\( M = 1.46, SD = .499 \)), 54.1\% (\( n = 127 \)) of participants reported they had a current type of health insurance coverage and 45.9\% (\( n = 108 \)) were uninsured.
Health Status

Mean ratings of self-reported health status were mostly positive ($M = 2.93, SD = 1.293$). The top two most reported health conditions were ‘good’ 27.1% ($n = 64$) and ‘very good’ 25.0% ($n = 59$). Only 15.3% ($n = 36$) of participants reported being in an excellent health condition.

Out of the 235 Latino participants, 61.4% ($n = 144$) reported that they have visited a primary care physician within the past year. As for the remaining reports, 5.4% ($n = 13$) stated they have visited a primary physician more than five years ago and 3.2% ($n = 8$) indicated they have never visited a doctor.

Weight Status

Findings show that 37.1% of Latinos in the Greater Cincinnati area reported a normal weight status (BMI < 30) according to both BMI and JAMA measurement guidelines. Of the 235 participants who self-reported their height and weight, 17.9% ($n = 38$) were measured as moderately obese, and 26.3% were mildly obese ($n = 56$).

Physical Activity

Almost seven out of 10 participants (69.6%, $n = 164$) reported having participated in physical activity within the past month. Of these 69.5%($n = 142$) met the criteria for recommended physical activity levels of at least 150 minutes per week and at least two days in which they engaged in strength training exercises. The top three types of physical activities performed within the past month were walking (51.2%, $n = 84$), running 13.4% ($n = 22$), and ‘other’ activities (16.8%, $n = 28$). However, almost one-third (30.4%, $n = 72$) of participants reported that they did not participate in any type of physical activity within the past month. The most reported frequency was 4 to 15 times per month (40.5%, $n = 95$) and the most reported
frequency among those who exercised was one hour. Almost one-third (30.6%, \( n = 71 \)) of participants reported the utilization of recreational facilities once or twice a month. Over one-fifth (20.2%, \( n = 47 \)) of participants reported never using recreational facilities and nearly one-fifth (17.1%, \( n = 40 \)) of participants reported the utilization of recreational facilities more than once a week respectively.

**Perceived Neighborhood Health**

The majority of Latino participants (70.8%, \( n = 165 \)) rated the Greater Cincinnati Region as a healthy place to live. Nearly three out of 10 (29.2%, \( n = 68 \)) participants rated neighborhood healthiness as excellent and 24.8% \( (n = 58) \) rated their neighborhood healthiness as good. Generally, participants mostly reported neighborhood housing conditions as good (27.8%, \( n = 65 \)) and very good (27.0%, \( n = 63 \)). Mean ratings of personal housing conditions were positive \( (M = 3.68, SD = 1.115) \); nearly one-third of participants (30.3%, \( n = 71 \)) self-reported that their personal housing conditions were very good and 28.5% reported conditions were excellent \( (n = 67) \). Regarding availability of recreational facilities in their neighborhoods \( (M = 3.28, SD = 1.558) \), nearly one-third of participants rated their recreational facilities as very good (30.8%, \( n = 72 \)) and good (30.6%, \( n = 72 \)).

The Perceived Neighborhood Healthiness scale scores ranged between 5 and 25 and had a mean score of 17.0 \( (SD = 4.734) \). Results also show that 73.9% of Latinos in the Greater Cincinnati area reported at least a rating of ‘good’ in all 5 items in the Neighborhood Healthiness items. However, nearly 30% rated the healthiness of the region as ‘fair or poor’ and nearly 25% rated the neighborhood as ‘fair or poor’. Further, nearly 25% of respondents rated their own living facilities as ‘fair or poor’.
Healthy Community Factors

Almost half of the Latino participants (49.3%, n = 116) reported that they strongly agree and 19.0% (n = 45) indicated that they somewhat agree/lean agree that their communities allow for safe walking. The mean ratings for dependability on each other within the Latino community was 4.48 (SD = 1.780); the most reported levels of agreement for dependability were somewhat agree/lean agree (40.2%, n = 94) and strongly agree (35.7%, n = 83). Mean ratings of secure feeling were positive overall (M = 4.92, SD = 1.647); the two most reported rates of agreement were strongly agree (53.9%, n = 125) and somewhat agree/lean agree (28.1%, n = 65). Levels of agreement on receiving community help (M = 4.81, SD = 1.581) were positive with nearly 8 in 10 (80.6%, n = 186) of participants reporting strongly agree or somewhat agree/lean agree.

In regards to the Community Factors Scale scores, results showed that scores ranged from 4 to 24 with a mean score of 18.61 (SD = 5.441). A total of 86.1% of adult Latino participants reported some level of agreement with all four items in the Community Factors scale. However, over 30% of participants reported lack of walkable communities and between 18% and 24% reported not feeling secure, or as if they could not obtain help or depend on their communities.

Neighborhood Health, Community Factors, and Weight Status among participants

To answer this question, a one-way ANOVA test was conducted to compare means scores on each scale by weight status. A statistically significant difference was found for participants who were overweight and perceived neighborhood health (F(1, 204) = 12.800, p < .001). Latino participants who were normal weight (M = 18.82, SD = 5.284) had higher perceived neighborhood health than overweight participants (M = 16.40, SD = 4.299). The magnitude of
difference between perceived neighborhood health and BMI overweight classification was medium (Cohen’s $d = 0.50$).

For the classification of non-overweight versus overweight, there was no statistically significant difference found between weight status ($F(1, 204) = .037, p = .848$) and community factors. Latino participants who had a normal weight status ($M = 18.26, SD = 6.007$) had relatively similar means in comparison to those who were overweight ($M = 18.42, SD = 5.388$).

A one-way ANOVA was computed to analyze the difference amongst the community scale scores and JAMA obesity classifications. Statistically significant differences were found between weight status defined by JAMA and perceived neighborhood health [$F(4, 201) = 9.145, p < .001$]. Participants who were severely obese ($M = 11.69, SD = 6.426$) reported lower perceived neighborhood health than their counterparts in all other JAMA obesity classification. The magnitude of difference between perceived neighborhood health and JAMA obesity classifications was small to large with Cohen’s $d$ ranging from 0.27-1.21. We also found statistically significant differences between weight status defined by JAMA and community factors [$F(4, 201) = 6.236, p < .001$]. Mean scores of participants who were severely obese ($M = 12.16, SD = 8.325$) were lower than other JAMA obesity classifications. The magnitude of difference between healthy community factors and JAMA obesity classifications was relatively medium to large with Cohen’s $d$ ranging from 0.31-0.84.

**Neighborhood Health, Community Factors, and Physical Activity among Participants**

Results showed a statistically significant difference in perceived neighborhood health and physical activity [$F(1, 228) = 23.099, p < .001$]. People who reported having engaged in physical activity in the prior 30 days had higher perceived neighborhood health ($M = 17.96, SD = 4.042$).
than those who reported physical inactivity \((M = 14.86, SD = 5.440)\) in the same time period. The magnitude of difference between perceived neighborhood health and physical activity level was medium (Cohen’s \(d = 0.65\)).

Similarly, a statistically significant difference in community factors and physical activity was found \([F(1, 226) = 14.105, p < .001]\). Participants who reported physical activity had higher community factors scores \((M = 19.46, SD = 4.242)\) than those who reported physical inactivity \((M = 16.59, SD = 7.176)\). The magnitude of difference between healthy community factors and physical activity level was medium (Cohen’s \(d = 0.49\)).

**Discussion**

The present study assessed weight status, physical activity, perceived neighborhood health, and community factors present for the Latino community in Greater Cincinnati. Further, this study assessed the differences in perceived neighborhood health and community health factors when compared to weight status and physical activity levels. Results demonstrate that a majority of Latino participants fell in the unhealthy weight status classification, although most were physically active, few met the criteria established by the CDC (2015b).

When examining healthy community factors, many of the Latino participants in the present study reported healthy community factors on both scales. Differences between BMI overweight classification and JAMA obesity classification by perceived health were found showing that individuals with healthier BMI were more likely to live in healthier communities. In a similar study, Wen and Maloney (2011) found that place matters for individual risk of obesity for both men and women and there are multifarious pathways linking residence to obesity. Thus, the built environment may greatly influence the levels of physical inactivity and
unhealthy weight status classifications seen in the Latino population. Unhealthy weight status could inhibit the utilization of healthy community factors by the adult Latino participants. As stated by Wen and Maloney (2011) among the demographic, socioeconomic, physical, and cultural aspects of neighborhood context examined, perhaps the most modifiable environment features that could prevent weight gain and its associated problems would be the built environmental factors such as greenness, park access, and mixed land use (industrial and residential combined).

Due to the growing evidence demonstrating the economic and social impacts of obesity on individuals and communities, the focus on recent public health initiatives targeting Latinos has expanded to include interventions for the prevention and treatment of obesity (Perez et al., 2013). Several evidence-based interventions targeting obesity in the Latino population have been delivered through the internet, school and work settings with primary emphasis on the individual. These current obesity prevention and control strategies are theoretically guided and laboratory-based interventions often target individual-level health behaviors and have marginal short-term effects with limited ecological validity (Huberty et al., 2008). The limited impact of these strategies suggests a need to work collaboratively with the community to create innovative solutions to reduce obesity from a ‘real world’ perspective (Mama et al., 2014). This perspective allows for the engagement of community members in the development of evidence-based sustainable interventions into communities to ensure greater implementation and sustainability (Suminski et al., 2009). In contrast, to date, limited research has simultaneously examined the relationship between individual-level use of affordable educational community resources, sociodemographic and psychosocial factors, and diet and physical activity among low-SES
Latino immigrants living in neighborhoods with unhealthy environmental factors (Drieling et al., 2014).

We found a relationship between levels of physical activity and both computed healthy community factor scores. Based on prior work, it can be anticipated that urban parks may play a beneficial role in fostering leisure time physical activity (LTPA) among minority populations, such as Latinos, who are at risk of negative health effects related to physical inactivity (Stodolska et al., 2010). The Latino population has been shown to participate in various types of recreational activities within urban parks today. A study conducted by Hutchison (1987), found that Latinos were more likely to engage in passive activities in large, multigenerational groups, while non-Hispanic Whites and African Americans were more likely to be involved in active pastimes, such as jogging and biking. Similarly, Gobster (1992), found that Latinos participated in more passive recreation activities, including picnicking and watching weekend soccer matches, more often than other groups. However, due to the prevalence of physical inactivity among Latinos living in the U.S. today, the importance of physical activity promotion in recreational activities for this population has been extensively documented.

In this present study, a majority of Latino participants reported the availability of recreational facilities in their neighborhood as very good or good. Hence, the availability of such recreational facilities and amenities has the potential to improve physical activity levels within the adult Latino population. However, less than one-third of Latino participants in this study reported the utilization of recreational facilities once or twice a month, and over two out of 10 participants reported never utilizing recreational facilities in their respective neighborhoods. It is unclear as to what barriers may be limiting access to existing facilities.
In a similar study, Kaczynski et al. (2007) suggested that physical inactivity observed in low-income minority neighborhoods may be mitigated by access to physical activity-related facilities and amenities. Particular barriers to physical activity among the Latino population have heavily influenced the participation rates seen within this population. Some studies on LTPA participation have identified constraints that may influence involvement in LTPA among the Latino population including: lack of time due to caregiving responsibilities, lack of motivation, safety concerns, lack of availability of programs, and lack of money to participate in physical activity programs (Stodolska et al., 2010). Similarly, perceived barriers, self-efficacy, and social support are correlates that have been reported in the literature with Latinos (Marquez, & McAuley, 2006). Levels of leisure time physical activity for Latina women have been reported to be lower than those for Latino men (Marquez, & McAuley, 2006). This may be due to lower levels of social support Latina women receive when they participate in various physical activities. However, according to Marquez & McAuley (2006), there are a limited number of studies that have examined the relationship between social support for exercise and leisure time physical activity among Latinos. Social support for exercise could also enhance the participation rates of physical activities seen in urban parks today.

Limitations

These findings should be interpreted while considering the inherent limitations. These include the cross-sectional nature of the study design and lack of a comparison group. Although randomly selected phone numbers were utilized for recruitment, this is a purposeful oversample of Latinos and may include participants who are innately more likely to participate in research than others. Moreover, the study was a secondary data analysis of existing data and investigators were limited to existing survey questions and resulting variables. Data is based on self-report by
the adult Latino participants making social desirability bias a possible contributing factor in the results. Lastly, participants were recruited from a 22-county area within the Greater Cincinnati metropolitan area, thus limiting the generalizability of the study findings to Latino participants living in other geographical areas.

**Conclusions**

These findings support the need to further analyze the relationship between obesity, physical activity levels, and healthy community factors among the Latino population. The findings may be of value to health educators in conducting obesity prevention efforts towards physically inactive Latino adults. Further research is warranted in order to determine what influences Latino adults to become physically active and improve their weight status. Implications of these findings can help health educators increase neighborhood health through a variety of strategies. For example, health educators can tailor future physical activity program design to the Latino population. Specifically these programs should include social support mechanisms and consider environmental circumstances. Health educators should continue to consider and address community factors such as the presence of walkable communities, perceptions of healthy environments and social support.
References


Larson, L., Whiting, J. W., Green, G. T., & Bowker, J. M. (2014). Physical activity levels and


Figures

Figure 1. Survey Region of the Community Health Status Survey.

Source: Internet for Health, 2015
Tables

Table 1. Participant Characteristics

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
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<td></td>
</tr>
<tr>
<td>18 to 29</td>
<td>85</td>
<td>36.4</td>
</tr>
<tr>
<td>30 to 45</td>
<td>99</td>
<td>42.0</td>
</tr>
<tr>
<td>46 to 64</td>
<td>41</td>
<td>17.5</td>
</tr>
<tr>
<td>65 and over</td>
<td>10</td>
<td>4.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>235</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
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<td></td>
</tr>
<tr>
<td>Male</td>
<td>134</td>
<td>57.0</td>
</tr>
<tr>
<td>Female</td>
<td>101</td>
<td>43.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<td>100.0</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
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<td></td>
</tr>
<tr>
<td>Married</td>
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<tr>
<td>Widowed</td>
<td>4</td>
<td>1.6</td>
</tr>
<tr>
<td>Divorced/Separated</td>
<td>23</td>
<td>9.8</td>
</tr>
<tr>
<td>Never married</td>
<td>93</td>
<td>39.8</td>
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<td><strong>Total</strong></td>
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<td>100.0</td>
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<tr>
<td><strong>Educational Status</strong></td>
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</tr>
<tr>
<td>Less than high school</td>
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<td>33.1</td>
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<tr>
<td>High school graduate</td>
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<td>23.4</td>
</tr>
<tr>
<td>Some college</td>
<td>54</td>
<td>22.9</td>
</tr>
<tr>
<td>College graduate</td>
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<td>20.7</td>
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<td><strong>Total</strong></td>
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<td>100.0</td>
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<tr>
<td><strong>Annual Income</strong></td>
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<tr>
<td>$42,850 or less</td>
<td>121</td>
<td>51.6</td>
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<tr>
<td>Between $42,851 and $85,700</td>
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<td>23.1</td>
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<td>15.8</td>
</tr>
<tr>
<td>Refused</td>
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<td>5.8</td>
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<td><strong>Total</strong></td>
<td>235</td>
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<tr>
<td><strong>Federal Poverty Level</strong></td>
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<td></td>
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<tr>
<td>100% and below FPL</td>
<td>73</td>
<td>36.4</td>
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<tr>
<td>Between 100% and 200% FPL</td>
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<td>23.9</td>
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<tr>
<td>Above 200% FPL</td>
<td>80</td>
<td>39.7</td>
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<tr>
<td><strong>Total</strong></td>
<td>201</td>
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<tr>
<td><strong>Do you have health insurance?</strong></td>
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<td></td>
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<tr>
<td>Insured</td>
<td>127</td>
<td>54.1</td>
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<tr>
<td>Not insured/ Don’t know</td>
<td>108</td>
<td>45.9</td>
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<td><strong>Total</strong></td>
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Note: Missing Data excluded
Table 2. General Health Status

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<thead>
<tr>
<th>Variables</th>
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<tr>
<td>In general … your health status is?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent</td>
<td>36</td>
<td>15.3</td>
</tr>
<tr>
<td>Very Good</td>
<td>59</td>
<td>25.0</td>
</tr>
<tr>
<td>Good</td>
<td>64</td>
<td>27.1</td>
</tr>
<tr>
<td>Fair</td>
<td>39</td>
<td>16.6</td>
</tr>
<tr>
<td>Poor</td>
<td>38</td>
<td>16.1</td>
</tr>
<tr>
<td>Length of time since last doctor visit</td>
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<td></td>
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<tr>
<td>In the past 1 year</td>
<td>144</td>
<td>61.4</td>
</tr>
<tr>
<td>In the past 2 years</td>
<td>38</td>
<td>16.1</td>
</tr>
<tr>
<td>In the past 3 years</td>
<td>5</td>
<td>1.9</td>
</tr>
<tr>
<td>In the past 5 years</td>
<td>28</td>
<td>12.0</td>
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<tr>
<td>More than 5 years ago</td>
<td>13</td>
<td>5.4</td>
</tr>
<tr>
<td>Never</td>
<td>8</td>
<td>3.2</td>
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Note. Missing data excluded
Table 3. Weight Status Classifications

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<th>Variables</th>
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<th>Percent</th>
</tr>
</thead>
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<tr>
<td><strong>BMI categories</strong></td>
<td></td>
<td></td>
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<tr>
<td>Not Overweight</td>
<td>36</td>
<td>37.1</td>
</tr>
<tr>
<td>Overweight</td>
<td>59</td>
<td>62.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>212</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>JAMA Classifications</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not obese</td>
<td>78</td>
<td>37.1</td>
</tr>
<tr>
<td>Mildly obese</td>
<td>56</td>
<td>26.3</td>
</tr>
<tr>
<td>Moderately obese</td>
<td>38</td>
<td>17.9</td>
</tr>
<tr>
<td>Severely obese</td>
<td>28</td>
<td>7.0</td>
</tr>
<tr>
<td>Very severely obese</td>
<td>13</td>
<td>11.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>235</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Missing Data excluded
<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation in Physical Activity in the Past 30 Days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>164</td>
<td>69.6</td>
</tr>
<tr>
<td>No</td>
<td>72</td>
<td>30.4</td>
</tr>
<tr>
<td>Total</td>
<td>235</td>
<td>100.0</td>
</tr>
<tr>
<td>What type of physical activity or exercise did you spend the most time doing during the past month?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walking</td>
<td>84</td>
<td>51.2</td>
</tr>
<tr>
<td>Running</td>
<td>22</td>
<td>13.4</td>
</tr>
<tr>
<td>Gardening</td>
<td>12</td>
<td>7.3</td>
</tr>
<tr>
<td>Weight Lifting</td>
<td>8</td>
<td>4.9</td>
</tr>
<tr>
<td>Aerobics video or class</td>
<td>5</td>
<td>3.0</td>
</tr>
<tr>
<td>Soccer</td>
<td>5</td>
<td>3.0</td>
</tr>
<tr>
<td>Other</td>
<td>28</td>
<td>16.8</td>
</tr>
<tr>
<td>Total</td>
<td>164</td>
<td>100.0</td>
</tr>
<tr>
<td>How many times per week or per month did you take part in this activity during the past month?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No physical activity in past month</td>
<td>72</td>
<td>30.5</td>
</tr>
<tr>
<td>1 to 3 times per month</td>
<td>22</td>
<td>9.3</td>
</tr>
<tr>
<td>4 to 15 times per month</td>
<td>95</td>
<td>40.5</td>
</tr>
<tr>
<td>16 to 27 times per month</td>
<td>32</td>
<td>13.4</td>
</tr>
<tr>
<td>28 or more times per month</td>
<td>15</td>
<td>6.3</td>
</tr>
<tr>
<td>Total</td>
<td>235</td>
<td>100.0</td>
</tr>
<tr>
<td>And when you took part in this activity, for how many minutes or hours did you usually keep at it?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No physical activity in past month</td>
<td>72</td>
<td>30.7</td>
</tr>
<tr>
<td>Less than 30 min</td>
<td>23</td>
<td>9.8</td>
</tr>
<tr>
<td>30 to 59 min</td>
<td>49</td>
<td>20.8</td>
</tr>
<tr>
<td>1 hour</td>
<td>54</td>
<td>23.1</td>
</tr>
<tr>
<td>More than 1 hour</td>
<td>36</td>
<td>15.6</td>
</tr>
<tr>
<td>Total</td>
<td>233</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Missing Data excluded
### Table 5. Perceived Neighborhood Health Scale Items

<table>
<thead>
<tr>
<th>Variable</th>
<th>Excellent</th>
<th>Very Good/Good</th>
<th>Fair</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q36. How would you rate the Greater Cincinnati Region as a healthy place to live … would you say?</td>
<td>48</td>
<td>20.7</td>
<td>117</td>
<td>50.1</td>
</tr>
<tr>
<td>Q37. And, how would you rate YOUR NEIGHBORHOOD as a “healthy place to live” … would you say …</td>
<td>68</td>
<td>29.2</td>
<td>109</td>
<td>46.4</td>
</tr>
<tr>
<td>Q38. Overall, how would you rate the condition of the houses and apartments IN YOUR NEIGHBORHOOD … would you say …</td>
<td>49</td>
<td>20.9</td>
<td>128</td>
<td>54.8</td>
</tr>
<tr>
<td>Q39. And, how would you rate the condition of the house/apartment where YOU LIE … would you say …</td>
<td>67</td>
<td>28.5</td>
<td>130</td>
<td>55.3</td>
</tr>
<tr>
<td>Q40. Would you say the AVAILABILITY of recreation facilities such as parks, playgrounds, pools, soccer fields, bike trails and recreation centers IN YOUR NEIGHBORHOOD is …</td>
<td>35</td>
<td>14.8</td>
<td>144</td>
<td>61.4</td>
</tr>
</tbody>
</table>

Note: Missing Data excluded; Excellent =5, Poor = 1.
Table 6. Community Factors Scale Items

<table>
<thead>
<tr>
<th>Variable</th>
<th>Strongly Agree</th>
<th>Agree/ Lean Agree</th>
<th>Disagree/ Lean disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q42. There are sidewalks or shoulders on streets in my [community/neighborhood] that allow for safe walking, jogging, or biking … do you agree or disagree?</td>
<td>116 49.3</td>
<td>45 19.0</td>
<td>44 18.9</td>
<td>30 12.8</td>
</tr>
<tr>
<td>Q44. People can depend on each other in my community … do you agree or disagree?</td>
<td>83 35.7</td>
<td>94 40.2</td>
<td>27 11.6</td>
<td>29 12.5</td>
</tr>
<tr>
<td>Q45. Living in my community gives me a secure feeling … do you agree or disagree?</td>
<td>125 53.9</td>
<td>65 28.1</td>
<td>24 10.3</td>
<td>18 7.8</td>
</tr>
<tr>
<td>Q46. People in my community know they can get help from the community if they are in trouble … do you agree or disagree?</td>
<td>103 44.2</td>
<td>85 36.4</td>
<td>32 14.1</td>
<td>12 5.2</td>
</tr>
</tbody>
</table>

Note: Missing Data excluded; Strongly Agree = 4 & Strongly Disagree = 1
Table 7. Neighborhood Health Rating, Community Factors and Weight Status Classification

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Statistic</th>
<th>Dep. Variable BMI Overweight Classification</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Not Overweight</td>
<td>Overweight</td>
<td></td>
</tr>
<tr>
<td>Perceived Neighborhood Health</td>
<td>n</td>
<td>77</td>
<td>130</td>
<td></td>
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<tr>
<td>Mean</td>
<td></td>
<td>18.82</td>
<td>16.40</td>
<td>12.800</td>
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<tr>
<td>St. dev.</td>
<td></td>
<td>5.284</td>
<td>4.299</td>
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<tr>
<td>Std. Error</td>
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<td>.60370</td>
<td>.37669</td>
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<tr>
<td>Healthy Community Factors</td>
<td>n</td>
<td>77</td>
<td>130</td>
<td></td>
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<tr>
<td>Mean</td>
<td></td>
<td>18.26</td>
<td>18.42</td>
<td>.037</td>
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<td>St. dev.</td>
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<td>6.007</td>
<td>5.388</td>
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<tr>
<td>Std. Error</td>
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<td>.68634</td>
<td>.47228</td>
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Note: Missing Data excluded; ***p < .001, significant
### Table 8. Neighborhood Health Rating, Community Factors and JAMA Weight Status Classification

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Statistic</th>
<th>Dep. Variable</th>
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<th>p</th>
</tr>
</thead>
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<tr>
<td></td>
<td></td>
<td>JAMA Obesity Classification</td>
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<td></td>
<td>Not Obese</td>
<td>Mildly Obese</td>
<td>Moderately Obese</td>
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<tr>
<td>Perceived Neighborhood Health</td>
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<td>77</td>
<td>55</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>18.82^a</td>
<td>17.76^a</td>
<td>15.75^a</td>
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<tr>
<td></td>
<td>St. dev.</td>
<td>5.284</td>
<td>3.965</td>
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<td></td>
<td>Std. Error</td>
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<tr>
<td>Healthy Community Factors</td>
<td>n</td>
<td>77</td>
<td>54</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>18.26^a</td>
<td>19.86^a</td>
<td>18.21^a</td>
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<td></td>
<td>St. dev.</td>
<td>6.007</td>
<td>3.954</td>
<td>5.640</td>
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<td>Std. Error</td>
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Note. ***p < .001; Means sharing a superscript letters are similar, those not sharing a letter are statistically significantly different from each other based on a post-hoc Tukey test.
Table 9. Neighborhood Health Rating, Community Factors and Reported Physical Activity

<table>
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<tr>
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<th>p</th>
</tr>
</thead>
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<tr>
<td></td>
<td></td>
<td>Physically Active in prior 30 days</td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Perceived Neighborhood Health</td>
<td>n</td>
<td>159</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>17.96</td>
<td>14.86</td>
<td>&lt;.001***</td>
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<td>St. dev.</td>
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Note. ***p < .001;
Appendix A- Selected Survey Items

COMMUNITY HEALTH STATUS SURVEY

GENERAL HEALTH STATUS

Q5. “In general, would you say your health is…
   1. Excellent
   2. Very good
   3. Good
   4. Fair
   5. Poor

Q 10. “About how long has it been since you personally last visited a health care professional for a routine checkup . . . was it . . .
   1. in the past 1 year,
   2. in the past 2 years,
   3. in the past 3 years,
   4. in the past 5 years,
   5. more than 5 years ago, or
   6. never?”

BODY WEIGHT

Q 16. “About how tall are you without shoes?” ___FEET ___INCHES

Q 17. “About how much do you weigh without shoes?” ___POUNDS

CALCULATED BMI

PHYSICAL ACTIVITY

“The next few questions are about exercise, recreation, or physical activities other than your regular job duties.”

Q 28. “During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?”
   1. YES
   2. NO
Q 29. “What type of physical activity or exercise did you spend the most time doing during the past month?”
(PROBE ALL RESPONSES: “Could you be more specific or give me an example please?”)
[INTERVIEWER INSTRUCTION: If respondent says more than one activity or exercise “What ONE activity or exercise did you do the MOST?”]

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

Q 30. “How many times per week or per month did you take part in this activity during the past month?”
Times Per Week (RECORD NUMBER TIMES Per Week) ____________
Times Per Month (RECORD NUMBER OF TIMES Per Month) ____________

Q 31. “And when you took part in this activity, for how many minutes or hours did you usually keep at it?”
MINUTES (RECORD NUMBER OF MINUTES) ________
HOURS (RECORD NUMBER OF HOURS) ________

Q 41. “And … how often do you use the recreation facilities IN YOUR NEIGHBORHOOD …
1. more than once a week,
2. once a week,
3. once or twice a month,
4. a few times a year,
5. seldom, or
6. never?

COMMUNITY FACTORS

“Next I would like to ask you some questions about living in Greater Cincinnati and the neighborhood where you live …"

Q 36. “How would you rate the Greater Cincinnati Region as a healthy place to live… would you say …
1. excellent,
2. very good,
3. good,
4. fair, or
5. poor?
Q 37. “And, how would you rate YOUR NEIGHBORHOOD as a “healthy place to live” … would you say …
   1. excellent,
   2. very good,
   3. good,
   4. fair, or
   5. poor?

Q 38. “Overall, how would you rate the condition of the houses and apartments IN YOUR NEIGHBORHOOD … would you say …
   1. excellent,
   2. very good,
   3. good,
   4. fair, or
   5. poor?

Q 39. “And, how would you rate the condition of the house/apartment where YOU LIVE … … would you say …
   1. excellent,
   2. very good,
   3. good,
   4. fair, or
   5. poor?

Q 40. “Would you say the AVAILABILITY of recreation facilities such as parks, playgrounds, pools, soccer fields, bike trails and recreation centers IN YOUR NEIGHBORHOOD is…
   1. excellent,
   2. very good,
   3. good,
   4. fair, or
   5. poor?

Q 42. “Now please tell me if you agree or disagree with the following statement … There are sidewalks or shoulders on streets in my [community/neighborhood] that allow for safe walking, jogging, or biking . . . do you agree or disagree?”
   1. STRONGLY AGREE
   2. SOMewhat AGREE
   3. LEAN TOWARD AGREE
   4. LEAN TOWARD DISAGREE
   5. DISAGREE SOMewhat
   6. STRONGLY DISAGREE
“Now I am going to read to you some statements about your community. Please tell me if you agree or disagree with each statement. First . . . [INSERT QUESTION] . . . do you agree or disagree?”

1. Strongly Agree
2. Agree Somewhat
3. Lean toward Agree
4. Lean toward Disagree
5. Disagree Somewhat
6. Strongly Disagree

Q 44. People can depend on each other in my community. 1 2 3 4 5 6

Q 45. Living in my community gives me a secure feeling. 1 2 3 4 5 6

Q 46. People in my community know they can get help from the community if they are in trouble. 1 2 3 4 5 6

DEMOGRAPHICS

Q 24. SEX
1. MALE
2. FEMALE

Q 60. “Are you currently married, widowed, divorced, separated, or have you never been married?”
1. MARRIED AND LIVING WITH SPOUSE
2. WIDOWED
3. DIVORCED
4. SEPARATED
5. NEVER MARRIED (INCLUDING ANNULMENTS)
6. PARTNERS NOT MARRIED (VOLUNTEERED)

Q 67. “What is the highest grade or year of school you completed?”
1. NEVER ATTENDED SCHOOL OR ONLY ATTENDED KINDERGARTEN
2. GRADES 1 THROUGH 8 (ELEMENTARY)
3. GRADES 9 THROUGH 11 (SOME HIGH SCHOOL)
4. GRADE 12 OR GED (HIGH SCHOOL GRADUATE)
5. COLLEGE 1 YEAR TO 3 YEARS (SOME COLLEGE OR TECHNICAL SCHOOL)
6. COLLEGE 4 YEARS OR MORE (COLLEGE GRADUATE/BACHELORS DEGREE)
7. POST-COLLEGE/GRADUATE DEGREE (PHD; MD; JD; DOCTORATE; MASTERS)
Q 68. “What is your current age?” ______

Q 71. “Are you Hispanic or Latino?”
   1. YES
   2. NO

Q 73. “Was the TOTAL income you and your family received in 2012, not just from wages or salaries but from all sources . . .
   1. $42,850 OR LESS
   2. BETWEEN $42,851 AND $85,700
   3. MORE THAN $85,700
Appendix B - IRB Letter

Institutional Review Board - Federalwide Assurance #00003152
University of Cincinnati

Date: 2/2/2016
From: UC IRB
To: Principal Investigator: Liliana Rojas Guylor
     CECH Human Services
Re: Study Title: Obesity, Physical Inactivity and Healthy Community Factors among Latinos in Greater Cincinnati

The Institutional Review Board (IRB) acknowledges receipt of the above referenced proposal. It was determined that this proposal does not meet the regulatory criteria for research involving human subjects (see below): No human subjects – analysis of publicly available data from the 2013 Community Health Status Survey data set regarding obesity and health among Latinos in Greater Cincinnati. Ongoing IRB oversight is not required.

Please note the following requirements:

Statement regarding international conference on Harmonization and Good clinical Practices. The Institutional Review Board is duly constituted (fulfilling FDA requirements for diversity), has written procedures for initial and continuing review of clinical trials: prepares written minutes of convened meetings and retains records pertaining to the review and approval process; all in compliance with requirements defined in 21 CFR Parts 50, 56 and 312 Code of Federal Regulations. This institution is in compliance with the ICH GCP as adopted by FDA/DHHS.

Thank you for your cooperation during the review process.

45 CRF § 46.102(d): Research means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge.

45 CRF § 46.102(f): Human subject means a living individual about whom an investigator (whether professional or student) conducting research obtains:

1. data through intervention or interaction with the individual, or
2. identifiable private information.

Intervention includes both physical procedures by which data are gathered (for example, venipuncture) and manipulations of the subject or the subject’s environment that are performed for research purposes.
Interaction includes communication or interpersonal contact between investigator and subject.

Private information includes information about behavior that occurs in a context in which an individual can reasonably expect that no observation or recording is taking place, and information which has been provided for specific purposes by an individual and which the individual can reasonably expect will not be made public (for example, a medical record). Private information must be individually identifiable (i.e., the identity of the subject is or may readily be ascertained by the investigator or associated with the information) in order for obtaining the information to constitute research involving human subjects.

FDA regulations apply whenever an individual is or becomes a participant in research, either as a recipient of a FDA-regulated product or as a control, and as directed by a research protocol and not by medical practice. FDA-regulated activities involve individuals, specimens, or data, as patients or healthy controls, in any of the following:

a. any use of a drug or biologic, other than the use of an approved drug or biologic in the course of medical practice
b. any use of a device (medical or other devices, approved or investigational) to test the safety or effectiveness of the device
c. any use of dietary supplements to cure, treat, or prevent a disease or bear a nutrient content claim or other health claim
d. the collection of data or other results from individuals that will be submitted to, or held for inspection by, the FDA as part of an application for a research or marketing permit (including foods, infant formulas, food and color additives, drugs for human use, medical devices for human use, biological products for human use, and electronic products.)
e. activities where specimens (of any type) from individuals, regardless of whether specimens are identifiable, are used to test the safety or effectiveness of any device (medical or other devices, approved or investigational) and the information is being submitted to, or held for inspection by, the FDA.