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Physical activity in Latinas: social and environmental influences

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Abstract

Latinas are the largest, fastest growing female ethnic minority group in the USA, and also report the lowest levels of physical activity. Following the framework of the social ecological model, this review examines unique social and environmental factors that influence physical activity in Latinas. Research shows that Latinas receive little social support for activity despite having large, close-knit social networks. Interventions incorporating social support components are generally efficacious. Latinas also face many environmental barriers, including crime, heat, traffic, lack of facilities and a fear of immigration enforcement, and there have been few attempts to address environmental barriers in Latino communities. Successful future interventions will need to consider unique social and environmental barriers affecting Latinas, and help Latinas learn to incorporate social networks into physical activity participation.

Keywords

environmental barriers; Latinas; physical activity; social ecological model; social support

Despite the well-established health benefits of physical activity, rates of physical activity in the USA are markedly low. Approximately 30–33% of adults in the USA meet current physical activity guidelines, though objective measures show this number to be even lower, and 32–40% of adults report getting no physical activity at all [1]. The consequences of inactivity are significant; it is estimated that the number of deaths worldwide due directly to physical inactivity is similar to the number due to smoking [2].

While activity rates are low in the USA overall, activity levels vary widely between demographic subgroups, with minority females reporting the lowest of all. Almost half (47.8%) of adult Latinas or Latino women report they never engage in any leisure time physical activity, compared with just 29.2% of non-Latino white women [101]. In fact, rates of leisure inactivity are higher in Latinas than in any other major demographic subgroup [101]. Not surprisingly, Latinas also suffer disproportionately from conditions related to sedentary lifestyles, such as obesity and diabetes; three out of four Latina women are overweight or obese [3], and it is estimated that just over half (52%) of the Latina girls born in this century will eventually develop diabetes [4]. Clearly, inactivity signifies a very real

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health burden in this population, and gaining a better understanding of the factors that predict and prevent Latinas from being physically active is essential in order to address this disparity.

Physical activity is a complex behavior influenced by many factors. Research has shown that determinants of physical activity may best be described by a social ecological model, which posits that behavior is determined by the interplay of personal, social, environmental and policy-related factors [5–7]. The majority of research on physical activity in Latinas thus far has focused on social and environmental influences. These domains may be particularly important for Latinas, as cultural and socioeconomic factors may be especially salient and influential for this population. The Latino emphasis on immediate and extended family (familism), for example, uniquely shapes Latina's social environments, and has been shown to influence health and health-related behaviors [8]. Thus, while Latinas report many of the same barriers to activity as non-Latino white women, such as lack of time and energy [9], a thorough exploration of the growing literature on the social and physical environment may produce a more complete understanding of physical activity in Latinas, and how to best target this behavior in this population.

In this review, the authors will explore the current literature on social and environmental factors influencing physical activity in Latinas, along with interventions to address social and environmental barriers. The authors will discuss implications of this research, and future directions for the field in better understanding and addressing disparities in physical activity behavior.

Methods

The authors selected papers by searching PubMed and MEDLINE for studies relating to social influences, social support, environment, physical activity and Latinas, as well as examining previous reviews on related topics, and selecting pertinent papers in peer-reviewed journals. For the purposes of this review, physical activity was defined broadly and included any type of measured bodily movement. The majority of studies focused on leisure and transportation activity, while very few considered occupational or other types of activity. In the majority of studies, the primary activity outcome was self-reported, and was typically reported as weekly minutes of at least moderate intensity activity. Objectively measured activity was seldom reported with Latinas.

The authors will first examine the literature on social influence on physical activity in Latinas, then explore the published literature on environmental influences. Within each of these sections, the authors will also review interventions targeting these factors as a way to increase physical activity.

Social influences on physical activity in Latinas

Given the important role that family, friends and even broader social networks can play in facilitating or discouraging physical activity participation, it is not surprising that most research conducted, to date, on correlates of physical activity in Latinas has focused on social influences. Findings thus far indicate that Latinas who know people who exercise [10] or belong to a community or faith-based group [11–13] are more likely to be physically active. Some data indicate that friends are particularly influential upon physical activity participation in Latinas [14]. For example, Marquez and McAuley found that Latinos with high activity levels received more social support from friends, but not family [14]. This may be due to immigration and a resulting lack of family living nearby. However, no such differences were found in another study [15], which argues that the presence of social

support for physical activity may be helpful regardless of the source. In fact, Wilbur *et al.* noted that Latinas who reported even seeing people exercise in their neighborhood were 2.5-times more likely to meet physical activity recommendations than those who did not [13]. Given the prevalence of inactivity among Latinas and the need to understand potential underlying determinants, a review of the research literature on social influences on physical activity for Latinas is provided below.

Sometimes social influences can have a negative impact on physical activity. For example, family obligations and resulting fatigue and lack of time often interfere with physical activity participation in Latinas [9,10,16–19]. According to the National Health and Nutritional Examination Survey, Mexican–American women report having larger families compared with non-Hispanic white women, a phenomenon which is related to less activity [20]. In focus groups, the women described being too busy with care-giving and household responsibilities for exercise [21,22].

Moreover, lack of childcare [9,14,23], and/or lack of relatives to help care for children were cited as major impediments to being physically active [10,15, 24]. Not surprisingly, a recent study by Bautista *et al.* found that a significantly smaller proportion of Latino men compared with women reported “lack of childcare to be able to exercise” [9]. Such differences are likely attributable to the influence of traditional gender roles in the Latino community, in which such domestic tasks are relegated to women, and to *marianismo*, the tendency for Latinas to place family needs above their own [17,25–27]. Another relevant cultural value is familism, or strong identification with and attachment to nuclear and extended family, which can result in rather broadly defined family responsibilities, especially in this age of multigenerational households. In fact, babysitting siblings and assisting grandparents were reported as barriers to exercise in a study with Latina college women [17].

Other past studies have indicated that Latinas face social barriers such as having no one to exercise with [17], or even being discouraged from exercising by others [18,21]. Husbands were cited as a source of disapproval in several studies [9,28]. In fact, Latinas who are married or partnered are more likely to be inactive than non-Hispanic white women of the same marital status, which may speak to cultural- and gender-related beliefs [29]. Many Latinas indicated that their spouses or partners did not like them to exercise [9,28]. Husbands' jealousy (i.e., machismo) was considered the root of the problem by several women who indicated that spouses/partners did not want them to go out and exercise with other men [29] or attract attention from other men by wearing exercise apparel [16].

Given reports that many Latinas view sports and vigorous activity as being exclusively for men [16–18], typical gender roles may be a barrier to physical activity participation in Latinas. Foreign-born Latinas were even more likely to describe vigorous physical activities as ‘unfeminine’ and less likely to have participated in competitive sports or vigorous exercise in the past or even be able to identify family members who were role models for physically active lifestyles [30]. In fact, several participants described a lack of parental support for participation in sports such as soccer and indicated that parents would probably not attend their games as such activities were considered inappropriate for women [30].

Finally, positive perceptions of weight in this community may serve as an exercise barrier. Some Latinas reported different body size ideals and cultural norms regarding overweight, with larger sizes being viewed more favorably and often equated with marriage and motherhood [18]. Moreover, several women described how some Latinos discourage weight loss because it is viewed as a sign of poor health [16], while being overweight is a sign of health, maternity and wealth [31,32].

Research also indicates that social influences can help facilitate physical activity. More specifically, friends, family and extended social networks can play an important role in disseminating physical activity information and resources (e.g., telling a neighbor about a community exercise program). This is critical for Latinas who in several studies reported that lack of basic knowledge regarding physical activity was a barrier [9,16,23]. Some women were not aware of the benefits of exercising [28], whereas other participants reported feeling hesitant to exercise due to lack of education and information about appropriate types of exercises for their specific age, fitness level and health status [28]. This was especially concerning for pregnant Latinas [23,33], who during focus groups reported fearing that the wrong exercise could harm one's baby and needing to be better informed about what is safe. Sharing knowledge of available exercise resources could also help enhance activity levels among Latinas. In fact, Voorhees *et al.* commented that many of the women recruited at a community Latino festival were not even aware of a public community recreation center located directly adjacent to the festival area [34].

Friends and family can also exert a positive influence upon physical activity behavior by helping overcome everyday obstacles such as cost [16,23,28,32] and lack of transportation [28,32]. This barrier is particularly pertinent for Latina girls/adolescents who are at high risk for inactivity and related conditions (e.g., obesity and diabetes) and may require instrumental support such as transportation to access school- and community-based physical activity opportunities [35].

Social support interventions

Despite qualitative [18,36–38] and quantitative [14] data suggesting the potential benefits of interventions aimed at improving social support for physical activity among Latinas, few interventions specifically focused on social support have been reported. There are generally three strategies used to enhance social support for physical activity among Latinas: group-based, promotora-led and family/friend-based interventions.

Social support has been most commonly addressed by providing Latinas with a support network for exercise through structured group activities. In Pasos Adelante, walking groups were used to promote physical activity among Mexican–American women [39]. Although the number of self-reported minutes per week of moderate to vigorous walking significantly increased after the 12-week program, there was no control group or measure of postintervention maintenance. Aerobic dance classes have also been implemented as a means to foster social support for exercise. In Un Corazon Saludable, salsa dance aerobics was used to increase physical activity among predominately Puerto Rican women [40]. Positive health outcomes such as reduced BMI from pre- to post-program were achieved in women who completed the program. Unfortunately, the study experienced high attrition and did not report on physical activity outcomes. By contrast, Hovell *et al.* reported excellent retention of participants and increased vigorous physical activity in an aerobic dance program that assigned an exercise buddy to Mexican–American women [41]. Similarly, Avila and Hovell used ‘buddy’ support as a strategy to increase walking for exercise in an intervention for obese Mexican–American women [42]. Partnering women with other participants was also used to help elderly Mexican–American women adhere to a walking plan, although no control group was available [43].

Interventions have also used promotoras or lay health workers to provide Latinas support for physical activity. Promotoras typically offer physical activity education [44–46] or lead exercise sessions [39,43]. Promotora-delivered interventions are often used to target low acculturated or Spanish-speaking Latinas; however, these studies tend to lack control groups or rely on self-reported physical activity outcomes.

As lack of support from family or friends is often noted as a barrier to exercise [14], some interventions have included members of Latinas' existing social network to promote physical activity. In the BOUNCE program, Latino mothers and daughters (aged 7–13 years) were paired in an intervention that included exercise sessions, such as aerobic dance, resistance training and sport activities [47]. At the end of the 12-week program, daughters but not mothers experienced improved physical fitness possibly because the daughters had higher attendance than did mothers [48]. Targeting broader social networks has also been attempted in an effort to facilitate supportive relationships that encourage adherence to physical activity. Poston *et al.* recruited women within social groups such as neighbors, coworkers and family members and then block randomized the networks to either physical activity intervention or wait-list control [49]. Despite the physical activity intervention consisting of walking clubs and weekly exercise classes, increases in weekly minutes of activity were small and not significantly different between groups. Nonequivalent groups due to block randomization and/or control group contamination were noted as possible explanations for the lack of group difference.

Environmental influences on physical activity in Latinas

Among the most commonly cited barriers to physical activity are environmental barriers – that is, conditions in neighborhoods and cities that make physical activity difficult or unadvisable. While this barrier affects many people in the USA, it may be especially pertinent and problematic for Latina women. Overall, Latinos in the USA are of lower socioeconomic status, with a median family income of approximately US\$37,000 (compared with US\$54,000 in non-Latino whites) and approximately one-quarter (25.3%) of Latinos living in poverty (compared with 12.3% of non-Latino whites) [102]. Consequently, Latinas are more likely to live in low-income urban neighborhoods with higher crime, fewer resources and worse environmental conditions, all of which can act as barriers to physical activity [31,50].

Concerns about neighborhood safety for physical activity are disproportionately reported in minorities. Compared with 30% of non-Latino whites, 41% of nonwhite respondents indicate that they are fearful of walking alone in their neighborhoods at night [31,103]. This is even more of a concern for women than for men. While just 19% of men say they are afraid to walk alone at night, 47% of women are afraid of walking alone [103]. Women in lower socioeconomic status neighborhoods report more fear of being assaulted [51], which could be why 26.7% of Latinas in one study reported they lacked a safe place to exercise (compared with 16.4% of Latino men) [9].

Whether or not concern over neighborhood safety actually prevents Latinas from being active, however, is not certain, though there is evidence to suggest it might. Worry about neighborhood safety has been cited as a barrier to physical activity by Latinas and individuals in low-income neighborhoods in a number of studies [50,52–55]. Sallis *et al.* reported that twice as many low-income individuals (31%) reported worry about safety as a barrier to activity than did moderate-income respondents (15%) [50]. Data from the Behavioral Risk Factor Surveillance System showed that higher neighborhood safety is associated with lower rates of inactivity, and that this disparity was greatest for the elderly, women and minorities [56]. In qualitative studies with Latinas, women reported that they were afraid to leave their homes because of safety issues [53], and Latinas cited neighborhood safety as their main sociocultural barrier to physical activity [16,32].

Not all studies, however, have found relationships between neighborhood safety and physical activity. Women in one multiethnic study said that safety was not a prominent barrier to activity [57], and neighborhood safety showed no relationship to walking behavior

in a number of studies [10,32,58,59]. While Latinas in one qualitative study did cite neighborhood safety as a barrier, it was less of a concern than other individual factors, such as lack of time and energy [9].

One potential reason for this inconsistency is the distinction between physical activity for transport and leisure time physical activity/walking for exercise. While Ross found that women in poorer neighborhoods had more safety concerns than those in wealthier areas, they also reported that residents in lower socioeconomic status areas walked more for transport and utilitarian purposes than wealthier people [51]. Consistent with this, Martinez *et al.* did not find a strong influence of neighborhood safety on walking for transport in Latinos [16]. Latinos are more likely than non-Latino whites to use walking as a means of commuting to work [102], thus walking for many Latinos may be a transportation necessity rather than a leisure time activity. This may be especially true for less acculturated Latinas, who have fewer transportation options due to language barriers and limited familiarity with or access to public transportation. Consistent with this, more acculturated Latinas (those who had been in the USA at least 12 years) are less likely to walk for transport than less acculturated Latinas [16]. Thus, while acculturation is associated with greater leisure time activity [59], this may be countered by decreases in utilitarian or transport activity.

While walking for transport could be beneficial for health, doing so in unsafe conditions is hazardous. Latinos and other ethnic minorities are disproportionately exposed to unsafe traffic conditions [29], and ethnic minorities suffer a higher rate of pedestrian deaths and traffic accidents than non-Latino whites [29]. Increasing the safety and walkability of lower socioeconomic status neighborhoods, then, is important not only for facilitating greater leisure time physical activity but also for enhancing the safety of walking for transport.

Leisure time activity may be more influenced by access to facilities than by safety [60]. In a review of environmental influences on activity, Humpel *et al.* reported that safety was not as strongly tied to physical activity as access to facilities and opportunities for walking for exercise [61]. Whether or not this is the case for Latinas, however, is unclear. Minority communities often have less access to parks and recreation facilities [62–64], and one study found that access to recreation facilities was associated with physical activity for Latinos and blacks, but not for non-Latino whites [65]. While Evenson *et al.* found no association between neighborhood safety and leisure time activity for less acculturated Latinas [10], the authors did find that having access to indoor and outdoor facilities predicted greater leisure time activity in this population.

Even in neighborhoods where there is access to recreational facilities, Latinas may face unique barriers to using them. In one qualitative study with Latinas, some reported a fear of immigration enforcement as a reason to avoid leaving the house [16]. Some women indicated that Latinos specifically avoided the neighborhood park because Immigration and Naturalization Services officials were known to go there. In addition, opportunities to be active indoors may be limited for Latinas. In another qualitative study, several Latina participants said that they lived in small homes without adequate space for exercising [30]. Use of outdoor facilities may also be limited in regions where extreme weather conditions make outdoor physical activity difficult. The Pasos Adelante study reported that participants in the southern Arizona regions where the program was implemented were generally unwilling to walk in the summer months when the heat was extreme [39]. As Latinos in the USA are primarily located in states where summer months experience extreme heat (TX, NM, AZ and CA) [104], weather may be a significant factor in preventing Latinas from being more physically active. While Latinas in one study reported lack of time and energy as their main barriers to activity, heat was the third most-cited barrier [9].

Environmental interventions to promote activity

Traditional approaches for increasing physical activity have primarily focused on changing individual behaviors through health education and promotion efforts. However, there has been growing attention by public health professionals and researchers to expand interventions to environmental settings where behaviors take place [66]. Addressing environmental barriers is complex, as some, such as crime, require large-scale changes of the physical and social environment. Most environmental interventions have focused on creating facilities for activity, and while the majority have targeted communities where Latinos comprise a small percentage of the population [66,67], some of these have specifically targeted communities with Latino populations. While the interventions themselves did not specifically target Latina women, they do seek to modify environmental barriers often cited by Latinas.

For example, in Boyle (CA, USA), a predominantly Hispanic community with approximately 75% of residents born in Mexico or Latin America, a collaborative effort between community members, activists and government agencies, was used to transform a cracked and treacherous sidewalk into a 1.5-mile rubberized jogging path. Following the construction of the new path, daily use for walking, jogging and socializing increased from approximately 200 to 1000 people per day [105]. The California Endowment's Healthy Eating Active Communities, California Endowment's Central California Regional Obesity Prevention Program and Kaiser Permanente Community Health Initiative are health interventions that include environmental modification components such as park development and improvements, increasing access to open space, safe walking routes, walking trails, new parks and enhanced park amenities. Community Health Initiative and Central California Regional Obesity Prevention Program have been implemented in communities with approximately 30–54% Latino populations, while the Healthy Eating Active Communities are comprised of a diverse mix of African–American, Latino, and Asian–American families. Changes in physical activity levels have not been reported as the interventions are in process; however, comprehensive evaluation strategies have been described for assessing changes in physical activity upon completion of the interventions [68].

One challenge in evaluating the impact of environmental modifications on physical activity levels in communities is that not all studies report activity outcomes. Some environmental modification projects are not implemented with the specific target of achieving behavioral change, but rather to create a space where behavior change could occur. For example, Get Active Orlando was implemented in a community where 70% of Latino residents reported no leisure time physical activity [69]. This project focused primarily on developing comprehensive strategies for policy change, which would ultimately yield environmental modifications for promoting activity. Meanwhile, the focus of Active Living Logan Square was on advocacy and planning efforts for creating a walking trail, as well as safe and inviting places, for physical activity in a largely Hispanic community in Chicago (IL, USA) [70]. Other environmental modification programs in predominantly Latino and ethnically diverse neighborhoods have aimed at increasing a sense of physical security through reduction of crime and enhancement of the community with the goal of promoting local businesses, which in turn could lead to increased levels of activity [66].

An additional challenge in examining the impact of environmental modification on physical activity is that many studies have relied on cross-sectional data to evaluate changes in physical activity; therefore, not allowing for causality [66]. Research on environmental interventions should track longitudinal changes in behavior [66]; however, communities

often do not have the resources or financial support to conduct long-term monitoring of changes in population health [68,105].

In order to assess the effectiveness of environmental interventions to promote physical activity in communities, appropriate strategies and recommendations are necessary [106]. Further research specific to the Latino population is warranted [107] and should include the use of longitudinal studies as well as objective and subjective assessments [71].

Discussion

While Latinas face many of the same barriers to physical activity as women from other ethnic backgrounds, clearly their involvement in physical activity is uniquely impacted by their ethnic and cultural background. Unfortunately, much of their unique experience is seen in barriers to physical activity, including a lack of social support and a lack of a safe or convenient place to be active. Multiethnic interventions, or those designed using non-Latino white populations, may, therefore, not be effective in addressing the barriers and concerns unique to Latinas.

Interventions designed specifically for Latinas, however, could not only target their specific barriers, but could also turn unique cultural factors into strengths. The strong tie that Latinas share with community and family, for example, could be an asset in facilitating physical activity if friends and family members also become physically active. Latinas also have a rich cultural heritage in specific kinds of physical activity, particularly dance. In fact, studies report that dancing as a form of physical activity is more common among Latinas than other groups [20,72,73]. Dancing also appears to be a popular mode of leisure physical activity among older Latinas [74]. Although most interventions for women in the USA feature walking as the primary activity [75], activities such as salsa, Zumba or other dance-based exercises may appeal more to Latinas. Danced-based physical activity interventions for Latinas have generally shown good success [41].

These programs also have the benefit of offering Latinas a place to be physically active, which is a commonly cited barrier. At this point it is unclear whether environmental interventions are effective in Latino communities, and, in the short term, providing a place to be active may be more feasible than changing neighborhood conditions. The Academia Fit program in San Diego (CA, USA) has taken a community-based approach to increasing physical activity among Latinos by providing free Spanish-language group exercise classes in parks and community centers in Latino neighborhoods. Thus far, more than 1000 community members have participated, and more than 200 have enrolled in an effectiveness study. Importantly, the program is also highly sustainable in that Latino community members have been trained and nationally certified to serve as the fitness instructors. While there are not yet published data on the success of this approach, the model is poised for high success with Latinas, as it provides an opportunity for activity that is group-based, in Spanish, includes activities that Latinas enjoy (e.g., Zumba classes), and provides them with a safe place to be active in their own neighborhood.

Conclusion & future perspective

Given that Latinas who report more care giving responsibilities and less social support have poorer intervention success [40], interventions that address the interpersonal environment and help shape social networks into sources of support for physical activity are essential. Although efforts have been made thus far to improve social support for physical activity among Latinas, interventions generally include social support along with many other components making it difficult to determine the mechanism mediating behavior change. In order to identify effective strategies for promotion of social support for physical activity,

interventions should specify and measure the type of social support targeted for change, be based on a randomized control design to allow the testing for provision or manipulation of social support, and report long-term outcomes such as maintenance of physical activity.

As established social relationships may provide longer lasting influence on behavior change, network-based physical activity interventions should focus on targeting network members as well. Family and worksite interventions may be more appropriate for Latinas given that many report family responsibilities and lack of time to exercise as a reason for inactivity [76]. Faith-based physical activity interventions have been less explored among Latinas and may potentially be an effective approach [16,77]. In addition, interventions could help promote social cohesion in group-based activities by incorporating competitive team-based exercises, an approach shown to work especially well with Latinos [78].

Interventions for Latinas will also need to consider solutions to environmental barriers. While the vast majority of physical activity interventions with women feature walking as the main activity, this may not be feasible for Latinas who live in areas with high crime, no sidewalks, unsafe traffic conditions, extreme heat or those who fear harassment from immigration officials. Interventions with Latinas may need to provide a safe place to exercise, or direct them to available safe facilities of which they may be unaware. This is another compelling reason to involve family and friends in activity interventions for Latinas, as exercising in pairs or groups may make Latinas feel safer. Approaches that incorporate group activities and/or provide places to be physically active may, therefore, have the greatest chance of effectively increasing activity in Latinas.

Future studies will also be needed that consider the heterogeneity of Latinas, both across subgroups and across levels of acculturation. Latinas are a heterogeneous group with varying behavioral risk factors and health outcomes that are influenced by country of origin or ethnic background and acculturation [79]. Of the Latino subgroups, Mexican-Americans are by far the largest, comprising 63% of the Latino population in the USA [104]. As a result, Mexican-Americans, particularly in the southwest, have constituted much of the physical activity research focused on Latinos. However, according to the latest US Census while Mexicans are the largest group, other Latino subgroups are growing at a faster rate and addressing their unique needs instead of generalizing findings is increasingly important [104]. For example, evidence indicates that although Mexican-American women are less physically active than non-Hispanic white women, Latinas of Caribbean descent such as Dominican and Cuban women are an even less physically active group [80]. In addition, studies based on National Health and Nutritional Examination Survey accelerometry data reveal that Mexican-American women may actually get more lifestyle physical activity than non-Hispanic white women [81,82]. Studies using similar methodology with other Latina subgroups have not been reported in the literature.

Moreover, acculturation among Mexican-American and other Latino subgroups is associated with physical activity. Specifically, Latinas born outside the USA or who speak Spanish at home are more likely to be physically inactive [83,84]. Given that differences in ethnicity and acculturation contribute to physical activity among Latinas, more studies on this heterogeneous group are required to appropriately inform and implement relevant intervention strategies aimed at providing a social and environmental context that promotes physical activity.

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Executive summary

Background

- Latinas report especially low levels of physical activity, and suffer disproportionately from conditions related to a sedentary lifestyle.
- Growing literature on social and environmental influences on physical activity may shed light on this disparity.

Social influences on physical activity in Latinas

- Latinas face unique social barriers to physical activity, such as justifying personal leisure time and discouragement from friends and family members.
- Social support-focused interventions have relied typically on group activities, promotoras and/or using members of existing social networks. These approaches have generally shown effectiveness in increasing activity.

Environmental influences on physical activity in Latinas

- Environmental barriers may be especially pertinent to Latinas who live in low-income areas and feel they do not have a safe place to exercise. Latinas also struggle with barriers such as extreme heat, fear of deportation, unsafe traffic conditions and lack of nearby facilities.
- Few environmental interventions have been attempted in predominantly Latino neighborhoods, and those that have generally do not provide assessments of behavior change.

Future directions

- Future interventions with Latinas should take a culturally targeted approach, provide Latinas with options for partnered or group activities and safe places to be active, and should consider differences in Latina subgroups and across levels of acculturation.