Correlates of Physical Activity in Urban Midwestern Latinas

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Background: Latinas (Latino women) are at higher risk than non-Latina white women of cardiovascular disease and stroke, primarily because of higher rates of obesity and type-2 diabetes mellitus. Increases in physical activity help control these cardiovascular risk factors, but a higher percentage of Latinas than white women are inactive. The study goals were to identify personal, social environmental, and physical environmental correlates of physical activity of urban-dwelling, Midwestern Latinas and to obtain their recommendations for increasing exercise in their communities.

Methods: A face-to-face interview (Women and Physical Activity Survey) that covered personal, social environmental, and physical environmental correlates of physical activity was performed with 300 volunteer Latinas (242 in Spanish, 58 in English), aged 20 to 50 years, living in Chicago. Physical activity was measured with questions on lifestyle and planned leisure activity (exercise) from the Behavioral Risk Factor Surveillance System survey.

Results: The sample consisted of urban-dwelling Latinas who were primarily from Mexico and who spoke predominantly Spanish. The breakdown was as follows: 36% met current recommendations for moderate or vigorous physical activity, 52.3% were insufficiently active, and 11.7% were inactive. Physical activity was higher among younger women, married women, and women with the following characteristics: had some confidence about becoming more active, saw people exercising in the neighborhood, attended religious services, or lived in areas with heavy traffic.

Conclusions: Interventions need to focus on encouraging Latinas, especially those who are older, to reach the level of physical activity recommended to benefit health. The church may be a suitable community setting for initiating programs that provide women with the knowledge, skills, and motivation to become more active so that they can bring back to the larger Latina community.

(Am J Prev Med 2003;25(3Si):69–76)

Latinas (Latino women) are at higher risk than non-Latina white women of cardiovascular disease and stroke, primarily because of higher rates of obesity and non–insulin-dependent (type 2) diabetes mellitus.[1,2] Increasing physical activity helps control obesity and diabetes and lowers blood pressure and cholesterol in some people.[3] According to the 2000 Behavioral Risk Factor Surveillance System (BRFSS) survey, 32.0% of Latinos, compared with 24.8% of whites, did not participate in any leisure physical activities in the previous month.[4] Also, the lack of physical activity is higher for women (28.6%) than for men (24.0%) and for persons with lower incomes (<$15 000 per year, 40.8%) than for persons making $50,000 or more (16.6%). These findings suggest that Latinas, particularly low-income Latinas, are among the least physically active. According to the Illinois BRFSS, participation in no physical activity was even higher for Latinos in Illinois (50.1%), and the disparities by gender and income were more pronounced.[4]

Despite the low physical activity levels of Latinas in general, little is known about factors that influence physical activity in this population.[5] Addressing these issues is of paramount concern, because the Latino population is the fastest growing minority group in the United States.[6] Illinois ranks 10th overall for states with the highest percentage of Latino population (7.9%). The 2000 census for the city of Chicago indicates that 26.0% of the population is Latino, representing a growth of 38% in 10 years.[7]

The purposes of this study are to (1) describe the physical activity of urban-dwelling, Midwestern Latinas; (2) identify the personal (acculturation, demographics, self-reported health, self-efficacy), social environmental (social issues, social roles, sense of community), and

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0749-3797/03/$–see front matter
doi:10.1016/S0749-3797(03)00167-3

physical environmental correlates of that physical activity; and (3) find out the Latinas' recommendations for increasing exercise in their communities.

Methods

Data Collection

A face-to-face interview survey was the method of data collection, and sites included health fairs and community clinics located in two Chicago communities that have large Latino populations (35.1% and 84.5%). People in these communities have predominantly blue-collar jobs and low incomes.[8] In a third community (only 5.1% Latino), the clinic that was used has served a predominantly Latino population for the past 30 years.

The Institutional Review Board at the University of Illinois at Chicago approved the study. For recruitment, a table was set up at the site with flyers in both Spanish and English to inform women of the eligibility criteria: ethnicity (Latina), gender (female), and age (20–50 years). Flyers were translated into Spanish and then verified by back-translations.

Spanish-speaking staff members explained the study to all interested women. Women who wished to participate were screened for eligibility and offered the opportunity to have the questionnaire read in Spanish or English. Of the 300 women who volunteered, 242 (80.7%) chose Spanish. Completion of informed consent and the survey took, on average, 30 minutes. At the conclusion, each woman was given $10 in cash and Spanish and English health promotion material related to nutrition and exercise.

Instrument

The Women and Physical Activity Survey was developed on the basis of 42 focus groups conducted as part of the Women's Cardiovascular Health Network Project. Six of the focus groups were conducted in Spanish with 49 Latinas, the majority of whom had emigrated from Mexico.[9] The questionnaire was originally translated into Spanish for use in North Carolina.[10] A qualified translator from Mexico provided translations into Spanish. Back-translation from Spanish to English was then provided by a second, independent translator blinded to the original English survey. Discrepancies found in comparing the back-translated version to the original English were rectified through consensus. For the Chicago study site, the Spanish questionnaire was reviewed by two bilingual staff members, one of Mexican descent and one of Puerto Rican descent. Consensus was reached, and appropriate changes were made.

Measurement

Physical activity level was determined by using questions from the BRFSS survey. Depending on responses to those questions, women were classified into three groups according to current recommendations for physical activity: women who "meet recommendations" for physical activity (5 or more days a week of moderate activity for 30 minutes or 3 or more days a week of vigorous activity for 20 minutes), women who are "insufficiently active" (some physical activity but not enough to meet recommendations), and women who are "inactive" (reported no moderate or vigorous physical activity). To facilitate logistic comparisons, the three groups were collapsed and examined in two ways: meets recommendations vs does not (insufficiently active and inactive combined), and any activity (meets recommendations and insufficiently active combined) versus no activity.

The acculturation scale was measured by the sum of four items. Women indicated the language that they use in four situations. Responses were from 1 (only Spanish) to 5 (only English) (possible range, 4 to 20), with a higher score indicating more use of English. The social issues scale involved five statements of how some women feel when they see a woman exercising. The social roles scale involved nine statements about typical barriers to exercise. Sense of community was measured with four statements about the neighborhood. Responses to all three scales ranged from 1 (strongly agree) to 4 (strongly disagree) and were averaged for a possible range of 1 to 4. Higher scores indicated fewer social issues, fewer barriers because of social roles, and a lower sense of community. Further details on these scales and single-item questions related to self-reported health, self-efficacy (confidence in ability to exercise more), social environmental correlates, and physical environmental correlates are provided in the introduction to this supplement.[11]

Reliability

Cronbach alphas were calculated for the acculturation scale (0.94), social issues scale (0.50), social roles scale (0.74), and sense of community (0.67). For test–retest reliability, the survey was re-administered by telephone to 25 women (8.3%) after 3 to 4 weeks (mean, 20.9±11.6 days). Seven interviews were in English; eighteen were in Spanish. For the items used to calculate physical activity, the intraclass correlation (ICC) was 0.30 (95% confidence interval [CI], 0.09–0.62). ICCs were 0.97 for the acculturation scale, 0.71 for self-reported health, and 0.45 for self-efficacy. ICCs were also calculated for the three scales: 0.57 for social issues, 0.23 for social roles, and 0.87 for sense of community. For physical environment, ICC ranged from 0.20 to 1.00. Further details on the reliability of the survey can be found in the article by Evenson et al.,[12] which accompanies this supplement.

Statistical Analyses

Logistic models were calculated by using the Statistical Package for the Social Sciences (SPSS version 11.5; SAS Institute, Cary NC, 2002) with physical activity level as the outcome variable examined in two ways. All models were calculated unadjusted and then recalculated, controlling for possible confounding by demographic variables of age, education, annual income, marital status, number of children at home, general health, and acculturation. The unadjusted models are reported because no adjustments meaningfully changed odds ratios or 95% CIs.

Results

Description of Sample

The mean age of the 300 Latinas in this study was 32.32 years (±7.69). Most of the participants (81%) were born outside the United States, most (92%) in Mexico.

Table 1. Personal acculturation correlates of physical activity in 300 urban Latinas aged 20–50 years

Correlate	% (*n*)[a]	Physical activity status: Meets recommendations v does not (*n*=108 v 192) OR (95% CI)	Physical activity status: Any activity v no activity (*n*=265 v 35) OR (95% CI)
Country of birth			
Outside United States	81.3 (244)	1.68 (0.88–3.21)	0.70 (0.26–1.89)
United States (referent)	18.7 (56)	1.00	1.00
Language spoken at home			
Spanish	74.7 (224)	1.22 (0.50–2.98)	0.61 (0.14–2.74)
English and Spanish	15.7 (47)	0.85 (0.30–2.44)	1.33 (0.21–8.57)
English (referent)	8.0 (24)	1.00	1.00
Acculturation score (mean ± SD)	7.06 ± 4.33[b]	0.97 (0.93–1.04)	1.06 (0.96–1.16)
Time in United States			
<5 years	14.9 (44)	2.08 (0.90–4.81)	0.76 (0.21–2.83)
5–9 years	21.0 (62)	1.97 (0.91–4.30)	0.58 (0.18–1.84)
10–19 years	29.5 (87)	1.61 (0.77–3.35)	0.72 (0.24–2.21)
≥20 years	15.6 (46)	0.97 (0.94–1.01)	1.02 (0.99–1.05)
Born in United States (referent)	18.7 (56)	1.00	1.00
Missing data	2.0 (5)		

Note: Odds ratio (ORs) and 95% confidence intervals (CIs) are unadjusted.
Meets recommendations: engages in moderate physical activity (five week for at least 30 minutes) or vigorous activity (three week for at least 20 minutes), insufficient: some activity but not enough to meet recommendations, inactive: no moderate or vigorous physical activities; does not meet recommendations (insufficient and inactive combined), any activity (meets recommendations and insufficient combined), no activity (Inactive)
[a]Sample sizes vary because of missing values.
[b]Mean ± standard deviation.

Of the 244 women not born in the United States, more than half (54.5%) had lived in the United States for more than 10 years (mean, 11.9 years±7.9; range, 2 months to 48 years). More than half of the women (53.0%) had less than a high school education. Nearly one third reported a household income of less than $15,000 and most women were not employed outside the home (62.3%). Most of the women had a partner (73.7%) and children living in the home (82.0%) (mean number of children, 2.47; range, 1–10). Only 13.3% of the women reported their general health to be excellent or very good. Nearly all of the women (96.0%) were somewhat to very confident that they could exercise more.

Prevalence of Physical Activity

Of the women in the study, 36% (108) met the current recommendations for moderate or vigorous physical activity, 52.3% (157) were classified as insufficiently active, and 11.7% (35) were inactive.

Personal Correlates

Most of the women (75%) spoke predominantly Spanish in the home (Table 1). The acculturation score yielded a mean of 7.06 (±4.33). None of the acculturation correlates had any significant influence on physical activity status.

Age, marital status, and self-efficacy were the personal correlates that had a statistically significant influence on physical activity, but only for specific comparisons (Table 2). When women who met recommendations were compared with women who did not, the women in the two younger age groups were more than twice as likely to meet recommendations than women aged 40 to 50 years, and women who had a partner were more than twice as likely to meet recommendations than women who did not. When the women who reported any activity were compared with women who reported no activity, the statistical significance of both age and marital status disappeared. Women who were somewhat confident that they could exercise more were nearly 6 times more likely to report any activity than women who were not at all confident that they could exercise more. The statistical significance of this self-efficacy disappeared when the women who meet recommendations were compared with women who do not.

Social Environmental Correlates

Women who reported that they see people exercise in their neighborhood were more than 2.5 times more likely to meet recommendations than women who did not (Table 3). Similarly, these women were 2.5 times more likely to report any activity than no activity. Women who reported that they attend religious services were twice as likely to meet the recommendations as were women who did not. No other social environmental correlates had a statistically significant influence on physical activity status.

Table 2. Personal correlates of physical activity in 300 urban Latinas aged 20–50 years

Correlate	% (*n*)[a]	Physical activity status: Meets recommendations v does not (*n*=108 v 192) OR (95% CI)	Physical activity status: Any activity v no activity (*n*=265 v 35) OR (95% CI)
Age (years)			
20–29	39.3 (118)	2.24 (1.10–4.59)*	0.87 (0.34–2.27)
30–39	39.7 (119)	2.83 (1.39–5.76)*	1.04 (0.39–2.75)
40–50 (referent)	20.7 (62)	1.00	1.00
Education			
College graduate	7.7 (23)	1.22 (0.50–2.99)	1.60 (0.35–7.32)
Some college	11.0 (33)	0.95 (0.43–2.09)	2.36 (0.52–10.59)
High school/GED	16.7 (50)	0.89 (0.45–1.75)	1.75 (0.57–5.36)
Less than high school (referent)	53.0 (159)	1.00	1.00
Missing data	11.7 (35)		
Annual income			
≥$35,000	4.0 (12)	0.72 (0.20–2.55)	2.23 (0.27–18.50)
$15,000–<$35,000	56.7 (170)	0.74 (0.43–1.25)	1.82 (0.87–3.80)
<$15,000 (referent)	31.7 (95)	1.00	1.00
Missing data	7.7 (23)		
Employment			
Employed	37.3 (112)	0.86 (0.52–1.40)	1.85 (0.83–4.10)
Not employed (referent)	62.3 (187)	1.00	1.00
Marital status			
Partner	73.7 (221)	2.29 (1.27–4.14)*	0.98 (0.44–2.19)
No partner (referent)	26.0 (78)	1.00	1.00
Number of children[b]			
0	16.3 (49)	0.81 (0.42–1.58)	2.37 (0.68–8.19)
1	19.7 (59)	0.92 (0.50–1.70)	1.15 (0.46–2.81)
≥2 (referent)	62.3 (187)	1.00	1.00
General health			
Excellent/very good	13.3 (40)	1.04 (0.50–2.18)	0.37 (0.14–0.99)
Good	39.0 (117)	1.21 (0.73–2.02)	0.63 (0.28–1.41)
Fair/poor (referent)	47.0 (141)	1.00	1.00
Self-efficacy			
Very confident	42.0 (126)	2.18 (0.42–11.22)	3.85 (0.84–17.59)
Somewhat confident	54.0 (162)	1.34 (0.26–6.87)	5.88 (1.28–27.07)*
Not confident (referent)	2.7 (8)	1.00	1.00

Note: Odds ratios (ORs) and 95% confidence intervals (CIs) are unadjusted.
Meets recommendations: engages in moderate physical activity (five week for at least ≥30 minutes) or vigorous activity (three week for at least ≥20 minutes), insufficient: some activity but not enough to meet recommendations, inactive: no moderate or vigorous physical activities; does not meet recommendations (insufficient and inactive combined), any activity (meets recommendations and insufficient combined) versus no activity (inactive).
[a]Sample sizes vary because of missing values.
[b]Children aged 17 years or younger who live in the home.
*Statistically significant difference.
GED, general equivalency diploma.

Physical Environmental Correlates

The majority of women described vehicular traffic in the community as moderate to heavy (84.3%) and indicated that they had sidewalks (99.3%) (Table 4). Only 11% reported that street lighting was poor or very poor, and nearly 36% reported that unattended dogs were a problem. Little more than one half of the women reported that the neighborhood was safe from crime (56.0%). Nearly all (89.3%) of the women reported that they could walk to places in the community such as stores and businesses, and more than half (60%) reported that there were places in the community to exercise. Only one physical environmental correlate was significant for one comparison. When women who reported some activity were compared with women who reported no activity, they were significantly less likely to be active if the traffic was light in their neighborhood than if the traffic was heavy.

Interventions

When the Latinas were asked what could be done in their community to increase exercise levels in women, the most frequent response was to provide facilities in the neighborhood. Furthermore, the women wanted the facilities to be low cost and to have programs designed especially for women. They wanted facilities that provided childcare while they exercised, and they

Table 3. Social environmental correlates of physical activity in 300 urban Latinas aged 20–50 years

Correlate	% (*n*)[a]	Physical activity status: Meets recommendations v does not (*n*=108 v 192) OR (95% CI)	Physical activity status: Any activity v no activity (*n*=265 v 35) OR (95% CI)
Know people who exercise			
Yes	74.7 (224)	1.38 (0.79–2.42)	1.66 (0.78–3.54)
No (referent)	25.0 (75)	1.00	1.00
See people in neighborhood exercise			
Yes	72.3 (217)	2.78 (1.46–5.29)*	2.56 (1.21–5.42)*
No (referent)	23.7 (71)	1.00	1.00
Belong to community groups			
Yes	69.7 (209)	1.66 (1.00–2.75)	2.26 (0.92–5.64)
No (referent)	30.0 (90)	1.00	1.00
Attend religious services			
Yes	63.7 (191)	2.01 (1.20–3.37)*	1.23 (0.60–2.54)
No (referent)	35.3 (106)	1.00	1.00
Social issues score (mean ± SD)	3.065 ± 0.34[b]	0.72 (0.36–1.47)	1.02 (0.36–2.91)
Social roles score (mean ± SD)	2.828 ± 0.32[b]	0.86 (0.41–1.84)	0.73 (0.39–2.21)
Sense of community score (mean ± SD)	2.756 ± 0.48[c]	1.35 (0.81–2.24)	0.83 (0.39–1.77)

Note: Odds ratio (ORs) and 95% confidence intervals (CIs) are unadjusted.
Meets recommendations: engages in moderate physical activity (five week for at least ≥30 minutes) or vigorous activity (three week for at least ≥20 minutes), insufficient: some activity but not enough to meet recommendations, inactive: no moderate or vigorous physical activities; does not meet recommendations (insufficient and inactive combined), any activity (meets recommendations and insufficient combined), no activity (inactive).
*Statistically significant difference.
[a]Sample sizes vary because of missing values.
[b]Mean ± standard deviation.

wanted programs that would increase their knowledge about exercise.

The 112 women who worked at jobs outside the home were asked what could be done in the workplace to increase exercise levels. The most frequent response was to have exercise equipment and company-sponsored programs at the workplace. Suggestions for both the community and the workplace appear in Table 5.

Discussion

Physical Activity

Thirty-six percent of the Latinas met the recommendations for moderate or vigorous physical activity. This percentage is consistent with findings of the 2001 BRFSS survey in Chicago, which indicated that 36% of Latinas were meeting current recommendations for physical activity. This level is lower, however, than that for white women (49.9%) and for African American women (42.8%) in Chicago (Illinois Department of Public Health, unpublished raw data, 2001). Most of the women reported some activity but not enough to meet recommendations. In our study, only 11.7% of the women reported no activity. That figure is lower than the percentage reported as inactive for the 2001 BRFSS survey in Chicago, which found that 36.8% of Latinas were inactive. The women may have provided a more socially desirable response in our face-to-face interviews than in the state telephone survey.

Correlates of Physical Activity and Suggested Interventions

Personal factors. Mexico was the country of origin for the majority of Latinas participating in this study, which is consistent with the proportion of Mexican Latinas (80%) in the city of Chicago.[13] Also, more than one half of the women had less than a high school education, and very few had an annual income of $36,000 or more. The finding reflects the immigrant status of many of these women. Crespo et al.[14] found that Latinos who were less acculturated identified themselves as Spanish speakers or Spanish and English speakers, and that Latinos who had lived in the United States for less than 5 years were more likely to be inactive during leisure time. We found no relationship, however, between levels of acculturation and physical activity, but that finding may be due to our inclusion of lifestyle activity along with exercise. Women in an urban setting may engage in physical activity through their lifestyle, particularly if they do not have cars for transportation.

Age and marital status were the two personal correlates that emerged as statistically significant. Consistent with previous findings across all ethnic groups, women in the oldest age group (40–50 years) tended to be the least active.[4] Earlier, Sternfeld et al.[15] reported that being married was negatively related to sport or exercise and positively related to household activity in an

Table 4. Physical environmental correlates of physical activity in 300 urban Latinas aged 20–50 years

Correlate	% (*n*)[a]	Physical activity status: Meets recommendations versus does not (*n*=108 v 192) OR (95% CI)	Physical activity status: Some activity versus no activity (*n*=265 v 35) OR (95% CI)
Traffic			
Light	15.7 (47)	1.10 (0.52–2.30)	0.26 (0.09–0.71)*
Moderate	52.0 (156)	1.37 (0.80–2.33)	0.64 (0.25–1.60)
Heavy (referent)	32.3 (97)	1.00	1.00
Presence of sidewalks			
Yes	99.3 (298)	0.56 (0.04–9.05)	1.01 (1.00–1.02)
No (referent)	0.7 (2)	1.00	1.00
Street lighting at night			
Very good/good	44.7 (134)	2.41 (0.97–5.97)	0.56 (0.16–2.00)
Fair	44.7 (134)	1.93 (0.78–4.80)	1.16 (0.30–4.41)
Poor/very poor (referent)	10.7 (32)	1.00	1.00
Presence of unattended dogs			
Not much of a problem	63.7 (191)	0.85 (0.52–1.39)	0.61 (0.27–1.36)
Big/somewhat a problem (referent)	35.7 (107)	1.00	1.00
Safety from crime			
Extremely/somewhat safe	56.0 (168)	0.87 (0.54–1.40)	1.39 (0.67–2.91)
Slightly/not at all safe (referent)	41.7 (125)	1.00	1.00
Places within walking distance			
Yes	89.3 (268)	0.84 (0.39–1.81)	1.59 (0.56–4.46)
No (referent)	10.0 (30)	1.00	1.00
Places to exercise			
Yes	60.0 (180)	1.63 (0.98–2.70)	1.87 (0.90–3.88)
No (referent)	36.7 (110)	1.00	1.00
Missing data	3.3 (10)		

Note: Odds ratios (ORs) and 95% confidence intervals (CIs) are unadjusted.
Meets recommendations: engages in moderate physical activity (five week for at least ≥30 minutes) or vigorous activity (three week for at least ≥20 minutes), insufficient: some activity but not enough to meet recommendations, inactive: no moderate or vigorous physical activities; does not meet recommendations (insufficient and inactive combined), any activity (meets recommendations and insufficient combined), no activity (inactive).
*Statistically significant difference.
[a]Sample sizes vary because of missing values.

ethnically diverse group of women. Including both exercise and household activity in our study may explain the relationship we found: For married women, physical activity could come from household chores.

The number of women who rated their health as excellent or very good (13.3%) was surprisingly low given the age of the study population. The recruitment of women at health fairs and clinics may be an issue here because health is on their mind. Although Juarbe et al.[16] reported that many Latinas found personal health a significant barrier to maintaining a regular program of physical activity, the women in our study who reported fair or poor health were not significantly less active.

Women who were somewhat confident in their ability to exercise more were more likely to report some activity than were women who were not at all confident. As reported by Eyler et al.,[5] self-efficacy consistently has been shown to have a positive association with physical activity. Interestingly, women who were very confident were not more active. High self-efficacy for some women who are not active at the recommended levels may reflect unrealistic optimism to confront barriers.[17] Women who were somewhat confident may have experience with struggling to become more active and, thus, were more realistic.

Social environmental factors. Seeing women exercising in the neighborhood was related to being more physically active. Our findings, consistent with those reported by King et al.,[18] suggest the importance of role models in the neighborhood.

Women who attended church were more physically active than women who did not. This finding is consistent with our earlier focus group findings with African-American women who stated that the physically active women were very involved in church and other social activities.[19]

The women had moderately high scores on social issues and social roles, indicating that neither of these factors had an influence on the women's physical activity behavior. This finding was surprising because social roles related to household tasks, childcare, and work were previously reported to be barriers to physical activity for Latinas.[16] Including lifestyle physical activity

Table 5. Interventions to increase the exercise levels of Latinas: the Women and Physical Activity Survey, 2001–2002

Intervention	Number of women	Quotes as an example of the theme
In your community		
Provide facilities in neighborhood	181	More parks closer to my home.
Increase programs available	70	Provide programs targeted to women rather than men or children.
Low cost or free facilities and programs	77	Gyms that are free.
Safety	52	Facilities for women only would make women feel safer.
Education	44	Information benefits of exercise, and how to use exercise equipment.
Daycare	50	Provide entertainment for children.
Cannot think of anything	23	
At work[a]		
Onsite exercise facilities	32	Provide space and exercise equipment at the workplace.
Company sponsored programs	6	Sponsor walking teams.
Education	21	Offer workshops, health fairs, and information about exercise.
Time	19	Provide flexible hours to include physical activity.
Support groups	11	Organize support groups to encourage exercise.

Women could provide more than one suggestion.
[a]These questions were asked only of 112 women who worked.

rather than focusing on leisure-time exercise may have made these barriers less salient.

Physical environmental factors. Most women reported, as one would expect in a large metropolitan environment, that traffic was moderate to heavy, there were sidewalks, and they had places to go, such as grocery stores, within walking distance of their homes. It was unexpected, however, to find that women who lived in areas with the lightest traffic were less likely to report any physical activity. One possible explanation is that women feel safer exercising when large numbers of cars and people are present on busy streets.

Approximately one third of the women reported unattended dogs in the neighborhood—a result consistent with findings from the Latinas who participated in the telephone survey by King et al.[18] Unlike their findings of a significant relationship between unattended dogs and physical activity levels, however, we found no relationship. Nearly twice as many women in our study reported that their neighborhoods were neither somewhat nor extremely safe from crime as did women participating in two large epidemiologic studies[18,20] (41.7% vs 26% and 20%).

Despite women's perceptions that their neighborhoods are not safe, we found no significant relationship with physical activity levels. If some of the physical activity of the women in our study is coming from lifestyle activity, this activity is achieved in the safety of their home. Further research is needed to determine the type of physical activity performed, whether it is traditional exercise or the lifestyle activity accumulated by walking to the store and doing housework.

Intervention Suggestions

The most frequent recommendation for increasing physical activity in both the community and the workplace was for more exercise facilities. A recent literature review by Humpel et al.[21] revealed that accessibility was one of the main environmental factors associated with physical activity. The women in our study, however, had additional suggestions that tended to focus on what was desired in those facilities, including daycare, support groups, and motivational and educational programs.

Limitations

The use of face-to-face interviews served as both a strength and a limitation. One advantage over a telephone survey was that women who could not afford a telephone were included. However, these interviews excluded women who did not attend health fairs or health clinics. In addition, face-to-face interviews reduce anonymity, and some women may have given what they felt were socially acceptable responses because of that. Also, women who attend health fairs may be more conscious of the benefits of a physically active lifestyle. Another limitation is that most of the women in the study are from the same or similar communities, thus providing little variation in many of the physical environmental correlates expected to affect physical activity levels.

Conclusions

It is important to identify the influences that affect Latinas' physical activity before designing interventions

to increase activity levels. Our findings suggest the importance of having role models of physically active women in the community. The church may be a suitable community setting for initiating programs that provide women with the knowledge, skills, and motivation to become more active so that they can bring back to the larger Latina community.

This study was supported by Centers for Disease Control and Prevention, grant U48/CCU409660, and by The Robert Wood Johnson Foundation, grant 039361. We thank Mary Buntin, MS, MPH, RN, for overseeing data collection.

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