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Physical Activity in Latin-American Immigrant Adults Living in Seville, Spain

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Abstract

Background: Self-rated health status of the Latin-American immigrant population in Spain varies by gender, education, and doing physical exercise. Physical activity patterns have not been described.

Objective: The aim is to describe self-reported physical activity in adult Latin-American immigrants living in Seville (Spain), and explore relationships of physical activity with sociodemographic and health-related variables.

Method: A representative sample of 190 immigrants between the ages of 25 and 44 who live in Seville responded to the Centers for Disease Control's Behavioral Risk Factor Surveillance System (Spanish language version) from May 2010 through May 2011.

Results: Physical activity (PA) was practiced by 66.8% during leisure time, 49.2% had a normal weight, and 20.5% were on a diet. The practice of physical activity was higher in women who had a normal weight, a good state of health, and a higher education. Older age was associated with exercising during free time.

Discussion: Population-specific strategies are needed to improve the practice of PA among Latin-American immigrants in Spain. Research focused on other emerging immigrant groups is needed.

Key Words: body mass index, immigrants, physical activity, Spain

Physical Activity in Latin-American Immigrant Adults Living in Seville, Spain

The immigrant population in Spain has increased greatly in recent years. In the last 20 years, Spain has become one of the main host countries of immigration in Europe (Malmusi, Jansà, & del Vallado, 2007): during the first decade of the century, immigrants in Spain increased from 1.8% to 11.4% of the total population. In 2008, 40% of the immigrants came from Europe, followed by 31% from South America (Cardim & Luzón, 2009). Overall, immigrants now represent over 12.2% of the Spanish population (Spanish Statistical Office [SSO], 2012). This percentage varies across regions of Spain; for example, it is less in the Autonomous Community of Andalucía (8.7%) and in Seville (4.2%). In Seville, the Latin-American immigration population has increased 3.4% over the last 10 years (SSO, 2013). The increase in immigration makes it more necessary than ever to know what the health behaviors of this community are in order to design appropriate health strategies and care.

Many immigrants in Spain have arrived from Latin-American countries. Spain offers Latin-American immigrants numerous opportunities arising from similarities with their country of origin. Integration is easier due to similarities in language, patriarchy-based values and customs (Rodríguez, Lanborena, Senhaji, & Pereda, 2008), and religious values (Vicente-Torrado, 2006). Nevertheless, there are several differences between the immigrant population and the Spanish native people related to health concept. These differences include a diet rich in carbohydrates (González et al., 2009), the importance of body care and fitness, practice of regular physical exercise (Forodeporte, 2004; Jiménez, Durán & Domínguez, 2009), the imaginary representation of illness and the importance with which physical examination, complementary tests, and the use of technology for diagnostics are viewed (Fuertes & Martin,

2006). Latin-American immigrant women hold more traditional attitudes regarding women's sexual and reproductive health (Rodríguez & Martínez, 2011).

Physical activity (PA) contributes to health and is a main strategy in the prevention of obesity (World Health Organization [WHO], 2004). PA is "any bodily movement produced by skeletal muscles which produces an energy expenditure above the basal metabolic rate" (Bouchard, Shephard, Stephens, Sutton, & McPherson (1990). This includes routine daily activities, such as household chores and labor undertakings. Taking into consideration the growing morbidity burden of noncommunicable diseases (NCDs), the World Health Assembly (WHO, 2004) adopted the Global Strategy on Diet, Physical Activity, and Health. Within the WHO strategy, PA was recognized as a method that promotes health because it is a source of life experiences that leads to mobilization of resources, and brings benefits which may modify health-related habits and social behaviors. This can lead to an improvement in the life perception of individuals and communities. Similarly, health promotion is understood as the process of enabling people to increase their control over the determinants of health and, consequently, its improvement (Pan American Health Organization, 2002). This view of health promotion not only embraces actions directed at strengthening the abilities and capabilities of individuals, but also those aimed at changing health-limiting social, environmental, and economic conditions.

Reduction in the prevalence of overweight and obesity in every age group, and increasing the proportion of adults who perform moderate PA for at least 30 minutes daily are established goals in the WHO (2010) *Health for All 2010* strategy and reinforced in *the Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013-2020* (WHO, 2013). The number of deaths worldwide due to noncommunicable diseases (NCDs) in 2012 was 38 million (68% of the total deaths)—most of them being in countries with low or middle

incomes (WHO, 2014, pp.33). According to this report, 28.68% of the NCDs deaths took place in the Western Pacific Region, 21.32% in the European region, and 13.68% in the Region of the Americas. An unhealthy diet and a lack of PA are two of the major risk factors for chronic health problems in the Western world. During 2012, 3.2 million people died of health problems associated with physical inactivity (WHO, 2014).

PA as a factor for health promotion is an important issue for public health systems (Hallal, Parra, Azevedo, Pratt, & Brownson, 2010). Promotion of PA is an effective intervention strategy for achieving physical, mental, and social well-being. Promotion of PA also allows individuals and groups the capacity to satisfy their changing needs and adapt to the environment (Daniel & Wilbur, 2011). This relationship between PA and health can have different repercussions at both a social and a personal level (Soares, Simões, Ramos, Pratt, & Brownson, 2010). PA practice has positive health-inducing effects at the physical, psychological and social levels (Hayes & Kriska, 2008; Romero, Carrasco, Sañudo, & Chacón, 2010; Williams, Hendry, France, Lewis, & Wilkinson, 2007). Participation in PA programs positively enables the modification of people's perception of their health (Mikolajczyk et al., 2008; Mostert & Kesselring, 2002). Further, PA interventions targeted at sedentary healthy adults are cost effective (Müller-Riemenschneider, Reinhold, & Willich, 2009).

In Spain, the prevalence of obesity in the adult population ages 25 to 64 is about 15.5% for men and women, according to the results of the DORICA study (Aranceta et al., 2004), and prevalence is higher in the regions with a greater immigrant population. The DORICA study analyzed nutritional guidelines and cardiovascular risk factors in random samples representative of the population (native and immigrant) of nine regional communities in Spain.

Immigration experiences often involve postmigration stress. This stress has socio-health and economic implications that often result in changes in the daily routines of the immigrant. According to Perreten et al. (2010), there is a higher probability that immigrant women develop a sedentary lifestyle, particularly those who have been living at least five years in the destination country. This is because from their time of residence in Spain, those born abroad have equated their life habits, their levels of health, and use of services with those of the native Spanish population. The cause is probably the lower socioeconomic status of the immigrant population (Ball & Crawford, 2005), although this could also be influenced by there being more positive perceptions of overweight in the cultures of origin.

Cultural care is necessary for nursing practice and research when the population is in conditions of displacement and migration (Douglas et al., 2011). In order to evaluate the PA levels in Latin-American immigrant communities, all types of PA, as well as the acculturation effects (Ham, Yore, Kruger, Heath, & Moeti, 2007), should be explored. The objective of this article is to describe PA and explore the relationships between PA practice and some factors (perception of health state, BMI category, being on a diet, and sociodemographic variables) in adult, Latin-American immigrants living in Seville, Spain.

Methods

Design

This analysis constitutes part of the findings from a cross-sectional survey of health behaviors of Latin-American adult immigrants who live in Seville. In this sample, health status was associated with education, number of days of good health, and performance of physical activity (González-López, Rodríguez-Gázquez, & Lomas-Campos, 2015). A pilot study was carried out to ensure feasibility of procedures and adequacy of the instrumentation (González-

López et al., 2010); here, the pilot and main study data were combined to produce a complete report about physical activity.

Setting and Sample

Latin-American adult immigrants ages 25-44 (Rodríguez & Martínez, 2011) born in South America (Argentina, Bolivia, Brazil, Chile, Colombia, Cuba, Ecuador, Nicaragua, Paraguay, Peru, Uruguay, and Venezuela) (United Nations, 2009) and who established habitual residence in Seville were invited to take part. Seville has 702,355 inhabitants (SSO, 2012) and is the capital of the Regional Community of Andalusia, Spain. Although there was relatively little immigration in the past, Seville is currently experiencing a rapid increase in immigration similar to other cities in the south of Europe. The Latin-American group composes almost half (42.8%) the immigrant population in Seville.

Data collection was carried out in Seville's 11 administrative districts from May 2010 to May 2011. To obtain a representative sample, a proportionally stratified, random sample was used by taking the immigrants' distribution by district, gender, and nationality into account. The minimum sample size was established at 190 immigrants due to the following considerations: (a) the number of adult immigrants included in the census in Seville; (b) a 95% reliability level; and (c) a 0.86% probability of carrying out some of the health behaviors studied.

Inclusion criteria were: (a) men or women residing in any of the official neighborhoods or census sections from the 11 administrative districts in Seville; (b) 25 to 44 years of age; (c) born in any of the countries considered by the United Nations (2009) classification of nationalities, territories, and regions as countries from Latin America; (d) emigrated to Spain; (e) able to communicate and understand the requirements of the study; and (f) signed the informed

consent document. The main exclusion criterion was suffering from a mental illness that prevented understanding the reason and purpose of the study.

Procedure

Labor and social associations or groups of Latin-American immigrants in the district were contacted to facilitate recruitment. Most of the respondents were contacted directly by the interviewer on the street or waiting outside the places frequently visited by Latin-American immigrants (small shops, gardens, consulates, immigration office). Potential participants were approached and informed of the aim of the study. It was highlighted that participation was anonymous, data collection and handling was confidential, and survey results might serve to improve provision of health services for the immigrant Latin-American population.

Instrumentation

Sections of the validated questionnaire *Behavioral Risk Factor Surveillance System* (BRFSS) (Centers for Disease Control and Prevention, 2010) were used. No translation was required because a Spanish-language version is available. The questionnaire was structured in three parts: sociodemographics, health status, and physical activity. The questionnaire was read aloud and answers were tabulated by the interviewer.

Sociodemographics. Participants provided information about gender, age in categories, marital status, level of education, current occupation, country of origin, and district.

Health status. General health status was rated as poor, fair, good, very good, or excellent. Height (cm) and weight (kg) were reported and used to compute body mass index (BMI) with the protocol used for the DORICA Study (Spanish Society for the Study of Obesity, 2000). Participants were asked whether they were dieting.

Physical activity. Weekly PA frequency was reported as not at all, one, two, three, or more than three times per week during the week preceding the survey. Types of leisure-time PA were checked from a list of 17 activities. Leisure-time PA was indicated as "yes" for any type of PA carried out at least three times a week for at least 30 minutes. Participants who were employed indicated the kind of PA their work required (standing, sitting, walking, carrying light loads, climbing stairs or going up inclines, hard work).

Ethical Considerations

Procedures followed the ethical principles of the Declaration of Helsinki of 1964 (updated 2008). Written informed consent was obtained. Data collection was exclusively carried out by an interviewer (JRGL). Consent forms and questionnaires were stored in a locked cabinet. All the respondents knew how to read and write in Spanish. Data were transferred to a password-protected, computer database. The research was approved by the Research Ethics Committee of the University of Seville.

Statistical Analysis

Findings were reported using descriptive statistics and χ^2 tests. Bonferroni-correct *p*-values of .003 were used because multiple tests were conducted. Data were analyzed with the SPSS statistical package, Version 20.0 for Windows.

Results

Sample Characteristics

The sample was composed of 190 Latin American immigrants. Of these, 114 (60%) were women; and 120 (63.1%) were 30 years of age or older (M = 33.8 years, SD = 6.3). Almost half the sample was married (n = 86; 45.3%). Most had higher or secondary education (secondary: n = 108, 56.8%; university: n = 46, 24.2%). Participants had lived in Spain for 5.4 years on

average (*SD* = 3.6), which was slightly higher than their mean residence time in Seville (*M* = 4.6 years, *SD* = 3.2). Most of the participants worked (*n* = 148, 77.9%; employed: *n* = 113, 59.3%; self-employed: *n* = 35, 18.4%); the remainder were unemployed (*n* = 20, 10.5%), students (*n* = 13, 6.8%), or housewives (*n* = 9, 4.7%). By nationality, the highest presence of immigrants in the sample was from Bolivia followed in frequency by Peru, Colombia, Ecuador, and eight other Latin-American countries. Most reported that their health was good, very good, or excellent (*n* = 166, 87.8%). Details are provided in Table 1.

Regarding BMI, 49.2% had a normal weight, 34.5% were overweight, 11.3% were obese, and 5.1% were underweight. The association of BMI categories with gender was statistically significant ($\chi^2 = 27.45$, $p < .001$). The proportion of men whose weight was normal was much lower than that estimated in women (27.4% and 64.4%, respectively).

Physical Activity

At work. Usual PA performed at work is listed by gender for the pilot, main, and combined groups in Table 2. In the combined group, the most frequently reported PAs at work were standing or sitting (*n* = 92, 64.8%), followed by transporting light loads, and frequently going up stairs or inclines (*n* = 23, 16.2%). In the combined group, the proportion of participants reporting that standing or sitting was the most common work activity overall was much higher in women than men, but the association of gender with the type of PA performed at work was nonsignificant using the Bonferonni-corrected decision rule (χ^2 with Yates correction = 13.32, $p = .004$).

Leisure time. In this study, two out of three people (*n* = 127; 66.8%) engaged in some type of PA in their leisure time during the week, before the survey was conducted. Among the activities most frequently carried out were: walking at a brisk pace—usually four or more times a

week (60.5%); walking at an intense pace (15.3%); cycling at a brisk pace (14.2%); soccer (12.1%); and jogging (10.2%). The other exercise practices and their frequency can be seen in Figure 1. A significant gender association with the practice of soccer was observed ($\chi^2 = 34.4$; $p < .001$); more men participated in soccer.

Table 3 shows associations of PA with other participant characteristics. PA was practiced during leisure time by 69.0% of the people who worked versus 66.2% of those who did not, but this association was not statistically significant ($\chi^2 = 0.12$, $p = .73$). In this study, 20.5% of participants had been on some form of a diet in the previous six months—all for weight loss. A significant gender difference was found, with only 7.9% of men but 29.5% of women being on a diet ($\chi^2 = 12.81$, $p < .001$). Although there were no statistically significant associations, PA performed during leisure time was higher in women, people whose weight was normal, those who had good health, those with higher educational levels, and those who were on a diet. A direct relationship was found with the performance of activity: the greater the age, the greater the proportion of participants who exercised in their free time. Also, 38.4% of the participants who had been living in Spain less than five years practiced PA, and this diminished to 28.4% when the residence was over five years

Finally, we tried to describe the general characteristics of male and female Latin-American immigrants in Seville who practiced PA practices during leisure time. Table 4 shows profiles of men and women who did or did not perform leisure-time PA. To do so, we broke down the sample into four groups and carried out a frequency analysis of key variables that defined the groups practicing leisure-time PA. Table 4 shows profiles of men and women who did or did not perform leisure-time. Men who practiced PA were in the 25-29 years age group, had very good health, normal weight, secondary education; their main PA was walking, and their

occupation was paid employment. Like men, women who practiced leisure-time PA rated their general health status as "very good" and their BMI was normal; however, active women had higher education than active men; their main PA at work was more sedentary (standing or sitting rather than transporting light loads, climbing stairs, or going up inclines), and many were students. Inactive men and women tended to be overweight and to be either self-employed (men) or housewives (women).

Discussion

In this study of 190 Latin-American immigrant residents in Seville, the most frequent PA was standing or sitting at work (related to administrative or salesperson activities), mainly in the service sector. This was also reflected in the work of Vicente-Torrado (2006). Our results differed from those presented by Rodríguez et al. (2008) in the PA variable, as these authors described the immigrant labor activity as "very hard" work. We believe that these discrepancies may be due to the individual characteristics of the availability of employment in each of the places where the research was conducted. An article by the Centers for Disease Control and Prevention (2011) found that the prevalence of occupational PA was much lower than that estimated for the general population in people of Latin-American origin living in the United States in 2007.

PA during leisure time was performed by 66.8% of the sample, somewhat above the data provided by the study of González et al. (2009), who reported that 49.7% of immigrants aged 18 to 44 performed some type of exercise. However, Kaiser and Baumann (2010) found that PA in the low-income Latin Americans living in the U.S. was related to work and child care.

The frequency of participation in sports can be motivated, according to Camacho and Comas (2003), by its having a cultural value and a socializing role for this group. Another

reason, proposed by Fuertes & Martin (2006), is that Latin Americans place much more importance on bodycare, ranging from hygiene—especially oral health—to practicing a sport. Practicing a sport was associated with gender, with women being the ones who performed physical exercise the most.

Comparing the most popular sports in the Spanish population in the study of Ferrando (2006), it was found that swimming (33%), soccer (31.7%), and cycling (19.1%) were those preferred by the Spanish. By comparison, the Latin-American immigrants in Spain who took part in this study reported PAs that included walking at a brisk pace (60.5%), walking at an intense pace (15.3%), cycling at a brisk pace (14.2%) and soccer (12.1%). Our results are consistent with the research of Jiménez et al. (2009), conducted in Madrid, in which it was found that the immigrants preferred aerobics. This current research also noted that women showed a preference for activities such as aerobics, fitness training, and walking (Forodeporte, 2004).

According to Sjöström, Oja, Hagströmer, Smith, and Bauman (2010), PA in leisure time is correlated with the gender and the age—men are more active and this has an inverse relationship with age. Our study revealed a different situation regarding gender (women are more active) and age, perhaps because our sample was restricted to the 25- to 44-year-old age groups. With regard to educational level and PA, a strong relationship was found in this study between these two variables—with similar findings to those reported in the Netherlands—which concluded that people with lower educational levels had a higher risk of decreasing PA than those with higher education levels (Droomers, Schrijvers, & Mackenbach, 2001).

With respect to being on diets in the previous six months, one in five respondents had started a diet to reduce weight—almost double the rate reported in the study of the adult indigenous population of Madrid (Galán, Rodríguez-Artalejo, & Zorilla (2004), in which 12.1%

of this group had been on some kind of diet. Almost one in two of our participants was above normal weight (34.5% overweight and 11.3% obese), with a statistically significant gender association. This is also different from what has been reported. For example, Rodríguez et al. (2008) noted 22.2% overweight and an obesity level of 6.8% in the Latin-American population who live in Spain—below those found in our study. We believe that these differences may be due to different nutritional habits in the autonomous regions in which the studies were conducted (the Basque country and Andalusia). We found similarities in the data on overweight with those described in a study on the prevalence of obesity carried out in Spain (Aranceta et al., 2004).

The results of the study revealed that women reported dieting more than men, even though they said that their weight was normal. This fact leads us to consider the bias of the self-report on height and weight (used to compute BMI). This is a controversial issue since, in an integrative review of 26 investigations (Engstrom, 2003), it was found that in most studies, women overestimated height and underestimated weight. This could explain our results. Additionally, a higher proportion of women reported trying a diet plan in an effort to lose weight. This is consistent with Davy et al.'s (2006) results. They found that women typically wish to lose weight and men are more likely to try exercises rather than dieting.

In our study, nine out of 10 participants perceived their current health status as excellent, very good, or good. These results are superior to those found in the study of Rodríguez et al. (2008), cited above. Nevertheless, other studies have found significant correlations between perceived health status and PA (Mikolajczyk et al., 2008; Sohng, Sohng, & Yeom, 2002). According to García, Matute, Tifner, Gallizo, and Gil-Lacruz (2007), these variables are predictive of one another. In addition, Romero et al. (2010) reported that the correlation between self-perceived health status and performance of PA was higher in males.

The results of our study show that the practice of PA is associated with the perceived health status, gender, and BMI. Significant, gender-based differences in the kind of PA performed at work was revealed. The most frequent PA during leisure time is walking at a brisk pace four or more times a week; female workers with low PA in their work are those who do PA more regularly and intensely in their leisure time.

Future Research

It is important to continue studying factors associated with physical activity in immigrant populations; particularly, to go further in the analysis of specific factors (nutritional guidelines, consumption of alcohol and other substances, and medical consultations), especially in Latin-American immigrants aged 30 a 34 who do not perform PA. It is also necessary to broaden the research to other emerging immigrant groups in Spain, such as Africans and Chinese, whose cultures are very different from the native people of Spain.

Practice Implications

Leininger and McFarland (2002) suggested that it is essential to provide nursing care from the perspective of cultural diversity. This is critical, given the increasing population of immigrants in the world. As part of a holistic health assessment that includes a cultural component, nurses should assess the amount, type, and frequency of the exercise that people do, and have a good understanding of the specific benefits for particular conditions. In this way, they can then make recommendations to improve their lifestyles, such as planning training activities for the daily practice of PA to improve their level of health. Specifically, there should be work in the creation and dissemination of a gender- and age-adapted guidelines for recommendations which informs about the benefits of PA, and responds to the daily concerns of the population (frequency, type of activity, intensity). Finally, it is important to consider that this

implementation must be carried out in an agile manner. This is because the acculturation process may make this population diminish the healthy behaviors that they have when they arrive, or acquire others that are not so beneficial to their health.

Limitations

Data were based on self-report and were not verified using other methods. However, anonymity favored sincerity when answering the questions. The cross-sectional design precluded establishing a causal relationship between PA and other variables. Nevertheless, it was possible to explore some associations which will facilitate design of future analytical studies to more precisely determine the meaning of the relationships found in this study.

Conclusions

We found that the practice of PA is associated with a good perceived health status, gender (women), and the BMI category. Additionally, while significant gender-based differences in the kind of PA performed at work have been revealed, no differences are shown in the PA during leisure time (walking at a brisk pace four or more times a week). Those female workers who do PA more regularly and intensely in their leisure time are those who do not have much PA at work.

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TABLE 1. Participant Characteristics

	Pilot[a] (*n* = 34)		Main (*n* = 156)		Combined (*N* = 190)	
Characteristic	***n***	**(*%*)**	***n***	**(*%*)**	***n***	**(*%*)**
Gender (female)	18	(52.9)	96	(61.5)	114	(60.0)
Marital status (married)	15	(44.1)	71	(45.5)	86	(45.3)
Education						
< secondary	4	(11.7)	32	(20.5)	36	(18.9)
Secondary	25	(73.5)	83	(53.2)	108	(32.1)
University	5	(14.8)	41	(26.3)	46	(24.2)
Unemployed (yes)	1	(2.9)	19	(10.0)	20	(10.5)
Country of origin						
Bolivia	13	(38.2)	49	(31.4)	62	(32.6)
Peru	4	(11.8)	32	(20.5)	36	(18.9)
Columbia	3	(8.8)	27	(16.3)	30	(15.8)
Ecuador	9	(26.5)	12	(7.7)	21	(11.1)
Other[b]	5	(14.7)	36	(23.1)	41	(21.6)
Perception of health[c]						
Poor	1	(2.9)	1	(0.6)	2	(1.1)
Fair	6	(17.6)	15	(9.6)	21	(11.1)
Good	13	(38.2)	67	(42.9)	80	(42.3)
Very good	9	(26.5)	44	(25.2)	53	(28.0)
Excellent	5	(14.7)	28	(17.9)	33	(17.5)

Note. [a]From González-López et al. (2010). [b]Includes Paraguay, Venezuela, Chile, Uraguay, Brazil, Nicaragua, Cuba, and Argentina. [c]*n* = 189 (combined).

TABLE 2. Usual Type of Physical Activity at Work by Gender

		Stand/sit		Walk		Light loads, stairs, inclines		Hard work, much physical effort	
Study	***n***	***n***	**(%)**	***n***	**(%)**	***n***	**(%)**	***n***	**(%)**
Pilot[a]									
Men	16	8	(23.5)	4	(11.6)	4	(11.6)	0	(0.0)
Women	18	15	(44.2)	3	(9.2)	0	(0.0)	0	(0.0)
All	34	23	(67.7)	7	(20.8)	4	(11.6)	0	(0.0)
Main									
Men	44	23	(14.7)	8	(5.1)	6	(3.8)	7	(11.7)
Women	64	46	(29.5)	4	(2.6)	13	(8.3)	1	(1.2)
All	108	69	(44.2)	12	(7.7)	19	(12.2)	8	(5.6)
Combined									
Men	60	31	(51.7)	12	(20.0)	10	(16.7)	7	(11.7)
Women	82	61	(74.4)	7	(8.5)	13	(15.9)	1	(1.2)
All	142	92	(64.8)	19	(13.4)	23	(16.2)	8	(5.6)

[a]From González-López et al. (2010)

TABLE 3. Associations with Physical Activity During Leisure Time

	Physical activity[a]			
Variable	**Yes**	**No**	χ^2	***p***
Gender			0.32	.57
Men	49 (64.5)	27 (35.5)		
Women	78 (68.4)	36 (31.6)		
Age (years)			5.52	.14
25-29	41 (58.6)	29 (41.4)		
30-34	19 (61.3)	12 (38.7)		
35-39s	31 (73.8)	11 (26.2)		
≥ 40	36 (76.6)	11 (23.4)		
Months in Spain			2.72	.09
≤ 60	73 (38.4)	44 (23.2)		
> 60	54 (28.4)	19 (10.0)		
BMI category			2.01[b]	.15
Underweight	5 (55.6)	4 (44.4)		
Normal weight	65 (74.7)	22 (25.3)		
Overweight	35 (57.4)	26 (42.6)		
Obesity	12 (60.0)	8 (40.0)		
General health status			6.3[b]	.17
Poor	0 (0.0)	2 (100.0)		
Fair	51 (63.8)	29 (36.2)		
Good	16 (76.2)	5 (23.8)		
Very good	38 (71.7)	15 (28.3)		
Excellent	21 (63.6)	12 (36.4)		
Education			2.32[b]	.68
Uneducated	3 (42.9)	4 (57.1)		
Primary School	50 (65.8)	26 (34.2)		
Secondary School	21 (65.6)	11 (34.4)		
Higher education	21 (72.4)	8 (27.6)		
Degree / Doctorate	32 (69.6)	14 (30.4)		
Marital status			4.88[b]	.43
Single	43 (61.4)	27 (38.6)		
Unmarried partner	14 (82.4)	3 (17.6)		
Married	60 (69.8)	26 (30.2)		
Widowed	1 (100.0)	0 (0.0)		
Separated	4 (57.1)	3 (42.9)		
Divorced	5 (55.6)	4 (44.4)		
Current occupation			6.86[b]	.14
Employed	69 (61.1)	44 (38.9)		
Self-employed	29 (82.9)	6 (17.1)		
Unemployed	13 (65.0)	7 (35.0)		

Housewife	6 (66.6)	3 (33.3)		
Student	10 (76.9)	3 (23.1)		
Dieting			3.46	.06
Yes	31 (79.5)	8 (20.5)		
No	95 (63.8)	54 (36.2)		

[a]Cell entries are *n* (%) based on the number responding. [b]χ^2 with Yates correction.

TABLE 4. Leisure Time Physical Activity by Gender

	Men		Women	
Characteristic	**PA**	**No PA**	**PA**	**No PA**
Age (years, grouped)	25 to 29	30 to 34	25 to 29	30 to 34
Health status (general)	Very good	Good	Very good	Good
BMI (category)	Normal	Overweight	Normal	Overweight
Educational level	Secondary	Primary	Degree	Secondary
Occupation (current)	Employed	Self-employed	Student	Housewife
Physical activity at work	Walk	Light loads/ stairs/inclines	Standing/sitting	Standing/sitting

Note. BMI = body mass index; PA = physical activity.

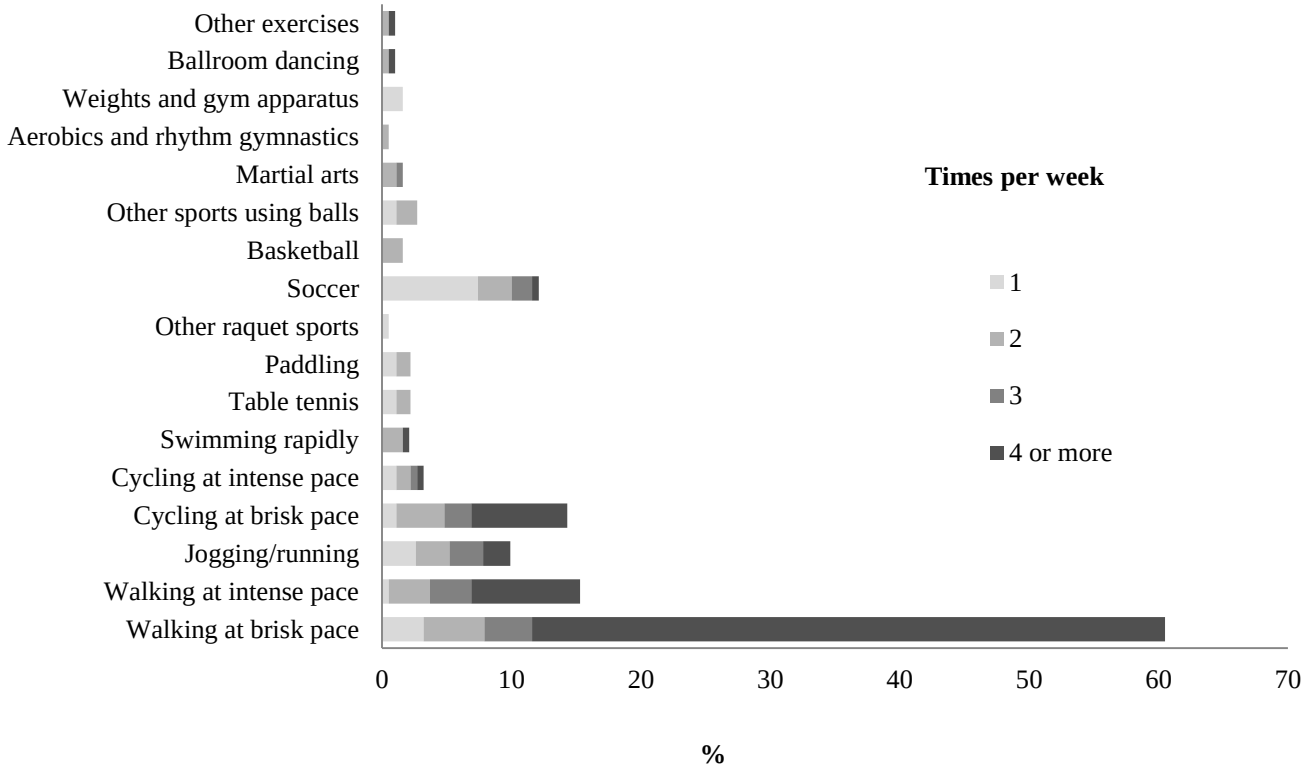

FIGURE 1. Frequency of types of leisure time physical activity for the combined samples (*N* = 127).