Physical inactivity in the leisure-time in young people from Feira de Santana, Bahia, Brazil

Inatividade física no lazer em jovens de Feira de Santana, Bahia

Inactividad física en el ocio en jóvenes de Feira de Santana, Bahia, Brasil

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ABSTRACT

Objective: To evaluate the prevalence of physical inactivity during leisure-time among adolescents and young adults.

Methods: A cross-sectional epidemiological study was conducted among 1,400 young people aged 15–29 years living in the urban area of Feira de Santana, Northeast, Brazil. Physical activities and entertainment were assessed using a structured questionnaire, which addressed the frequency, type, reason, and effort involved.

Results: Among interviewed individuals 63.3% (n=795) were considered physically inactive concerning leisure activities. Prevalence was higher among women ($p<0.001$) and among those 10 to 24 years old ($p<0.001$).

Conclusions: The young population of Feira de Santana city, Brazil, presented an elevated rate of physical inactivity during leisure. Public policies directed to health promotion among adolescents and young adults should include specific programs to encourage women and 18–24years old individuals to engage in physical activities.

Key-words: motor activity; sedentary lifestyle; adolescent; young adult.

RESUMO

Objetivo: Estimar a prevalência de inatividade física no lazer entre os jovens.

Métodos: Estudo epidemiológico de corte transversal com amostra constituída de 1.400 jovens entre 15 e 29 anos, residentes na zona urbana de Feira de Santana, Bahia. As atividades físicas e de lazer foram avaliadas por meio de um questionário estruturado, que abordou frequência, tipo, motivo e esforço envolvido.

Resultados: Dos entrevistados, 63,3% (n=795) eram inativos fisicamente no seu tempo de lazer, sendo que a prevalência foi maior entre as mulheres ($p<0,001$) e entre os indivíduos na faixa etária de 18–24 anos ($p<0,001$).

Conclusões: A população de jovens residentes no município de Feira de Santana, Bahia, apresentou uma prevalência elevada de inatividade física no lazer. As políticas públicas direcionadas à promoção de saúde de adolescentes e jovens adultos devem priorizar ações que facilitem às mulheres e aos indivíduos de 18 a 24 anos engajarem-se em práticas de atividades físicas.

Palavras-chave: atividade motora; estilo de vida sedentário; adolescente; adulto jovem.

RESUMEN

Objetivo: Estimar la prevalencia de inactividad física en el ocio entre los jóvenes.

Métodos: Estudio epidemiológico de corte transversal con muestra constituida por 1.400 jóvenes entre 15 y 29 años, residentes en el área urbana de Feira de Santana, Bahia

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(Brasil). Las actividades físicas y de ocio fueron evaluadas por medio de un cuestionario estructurado, que abordó frecuencia, tipo, motivo y esfuerzo implicado.

Resultados: De los entrevistados, el 63,3% (n=795) eran inactivos físicamente en su tiempo de ocio, siendo que la prevalencia fue mayor entre las mujeres (p<0,001) y entre los individuos en la franja de edad de 18–24 años (p<0,001).

Conclusiones: La población de jóvenes residentes en el municipio de Feira de Santana, Bahia (Brasil), presentó una prevalencia elevada de inactividad física en el ocio. Las políticas públicas destinadas a la promoción de salud de adolescentes y jóvenes adultos deben priorizar acciones que faciliten que las mujeres y a los individuos de 18 a 24 años se comprometan en prácticas de actividades físicas.

Palabras clave: actividad motora; estilo de vida sedentario; adolescente; adulto joven.

Introduction

Physical activity is defined as any bodily movement performed by skeletal muscles, resulting in a substantial increase in energy expenditure[1]. It can be understood as an essential quality of human beings, and it is an interdisciplinary topic which arouses the interest of investigators from several fields of knowledge, of the media and of public health. Hallal *et al*[2] highlight the fact that at no other time in history the practice of physical activities was so present in the public health agenda and in academic debate as in these last years.

The regular practice of physical activities is a protective behavior against the development of obesity, cardiovascular diseases, type II diabetes, cervical cancer[3], and arterial hypertension[4], also contributing to an improvement in the sense of wellbeing[5].

In the last years, however, a substantial decrease in the population's level of physical activity can be noticed, especially during adolescence[6]. The decrease in the time the young population spends in physical activities is a consequence of the increase of the time spent in sedentary activities such as watching TV and using the computer[7]. The increase of the time spent in intellectual activities, such as school activities, language and computer courses, work (either paid or not), and the ease in waving physical education at school are factors that contribute to a sedentary behavior[8].

The regular practice of physical activities during adolescence can promote physical growth, increase self-esteem, and contribute to the development of social skills. Literature evidence shows that the practice of physical activities during adolescence may be associated to the level of physical activities during adulthood[9].

Since population-based studies with adolescents and adults in Northeastern Brazil are rare, this study aimed to estimate the prevalence of physical inactivity during leisure-time in young people from Feira de Santana, state of Bahia. We hope our results can foster the introduction of measures to promote and stimulate physical activities, which in its turn, as literature shows, can be an important element in the prevention of the major injuries and non-communicable chronic diseases of modernity.

Method

An epidemiological cross-sectional study was performed in a representative sample of the urban population over 15 years old in Feira de Santana. The areas were selected through a stratified sample by subdistrict with random criteria, using census data from the Brazilian Institute of Geography and Statistics (Instituto Brasileiro de Geografia e Estatística, IBGE)[10].

The analyzed data included 3,597 subjects of 15 years or older. However, for this study, the target population selected was of 1,400 young people from 15 to 29 years, according to the age classification of the National Youth Council (Conselho Nacional da Juventude)[11] for adolescents (from 15 to 17), youths (from 18 to 24), and young adults (from 25 to 29).

The following procedures were adopted to select the sample: percent representation of the population per urban area subdisctrict; definition of the percentage in each subdisctrict's sample, made from the resident population data from each subdisctrict; list of the census sectors in each subdistrict; random selection of census sections included in the sample; random selection of streets; selection of houses.

The houses in the selected streets were visited and inhabitants aged 15 years or more were considered eligible for this study. To reduce the loss percentage, up to three visits per house were made, excluding those that refused to participate in the study and the individuals that were not found in their houses after three visits.

The data were collected through an individual questionnaire that had sociodemographic info, info on self-reported diseases and life habits, such as alcohol drinking, smoking, leisure activities, physical activities and mental health practices.

To evaluate physical inactivity during leisure-time, subjects were asked if they regularly participated in physical activities during their leisure moments, of what kind were these activities, and how they classified their intensity: light, moderate, or heavy.

Subjects who classified their physical effort in leisure as moderate – at least two hours per week of activities such as walking, biking, dancing classes, – or heavy – at least four hours per week of activities such as jogging, gymnastics, swimming, ball games – were considered active in their leisure. Those who did not participate in physical activities or just described sedentary behaviors in their leisure-time (activities such as reading, listening to the radio, or watching TV) were considered inactive. The adopted procedure was similar to that used in other studies found in the literature[12-15].

The database was built and analyzed using the statistical program Statistical Package for Social Sciences (SPSS), version 9.0 for Windows. In the analysis, the global prevalence of physical inactivity of the studied population was estimated. The prevalence of inactivity according to sex and age were also evaluated. The chi-square test was calculated to analyze the association of the investigated variables, adopting a significance level of $p<0.05$. Info about some of the characteristics researched in this study were lost due to questionnaires filled incorrectly or absence of an answer by the respondent.

The study was submitted to and approved by the Human Being's Research Ethics Committee of Universidade Estadual de Feira de Santana, under the Opinion n. 042/2006. The adopted procedures followed the recommendations established by the Resolution n. 196/96 of the Brazilian National Health Council (Conselho Nacional de Saúde).

Results

Of the selected population, 47.7% were aged 18 to 24 years; 68.4% were female; 68.5% were single; 81.8% were black (self-reported as brown or black); and 55.4% were finishing or still attending secondary education (Table 1).

Soccer/volleyball (23.2%) and walking (12.2%) were the physical activities most practiced during leisure-time (Table 2). Global physical inactivity in leisure was of 63.3%. Analyzing physical inactivity according to sex, physical inactivity in men was less prevalent than in women (Table 3).

Table 1 - Distribution of young people from 15 to 29, according to sociodemographic characteristics

	n	%
Sex		
Female	958	68.4
Male	442	31.6
Age group (years)		
15 to 17	324	23.1
18 to 24	667	47.7
25 to 29	409	29.2
Marital status		
Single	953	68.5
Married/Stable relationship	414	29.8
Divorced/apart/separated/widower	24	1.7
School level		
Illiterate/Semi-illiterate	8	0.6
Primary education	524	37.5
Secondary education	774	55.4
Higher education	91	6.5
Skin color		
Brown/black	1,096	81.8
White	226	16.9
Yellow (oriental)	12	0.9
Native	5	0.4

Lost information: nine for marital status, three for school level, and 61 for skin color

Table 2 - Percentage of the major leisure physical activities reported by the studied population

	n	%
Soccer/volleyball	292	23.2
Walking	154	12.2
Gymnastics	84	6.6
Swimming/biking	62	4.9
Yoga/dancing	34	2.6
Hidrogymnastics	5	0.3
Others*	42	3.4

*Bodybuilding, stretching, basketball, boxing, capoeira, physical education, indoor soccer, handball, karate, skateboarding, tennis

Table 3 - Percentage of (active and inactive) levels of physical activity in leisure, according to sex

	Sex		*p*-value
	Female	Male	
Inativo	80.6	53.2	<0,0001
Ativo	19.4	46.8	

Information lost on 144 people

Table 4 - Percentage of (active and inactive) levels of physical activity in leisure and spent effort in leisure physical activities according to age group

	Age group (years)			*p*-value
	15 to 17	18 to 24	25 to 29	
Inactive	52.5	69.2	62.1	<0.0001
Active	46.5	30.8	37.9	
Spent physical effort				
Light	52.5	69.2	62.1	
Moderate	29.8	23.1	28.5	<0.0001
Heavy	17.7	7.7	9.4	

Information lost on 144 people

Physical inactivity in leisure changes with age: from the 15–17 to the 18–24 group the prevalence of physical inactivity increased. However, from 25 onwards a decrease occurred in the percentage of subjects classified as physically inactive in leisure (Table 4). The intensity of physical activity according to age group showed that only 7.7% of youths and 9.4% of young adults take part in leisure-time physical activities considered heavy, a percentage much smaller than the 17.7% of adolescents. The presented profile of leisure activity practices is characterized by the high prevalence of physical inactivity in leisure among young people.

Discussion

Regular physical activity is an important behavior in people's lives and presents a significant impact in the prevention and control of non-communicable chronic diseases, also helping the control of stress, anxiety and depressive symptoms.

The physical activities most practiced by young people during their free time were walking, soccer and volleyball, while hydrogymnastics was the least attended physical activity. Two categories may influence physical activities' patterns: individual characteristics, including motivations, self-efficacy, motor skills, and other health behaviors; and environmental characteristics, such as access to work or leisure spaces, costs, time availability barriers, and sociocultural support[16]. The prevalence of soccer and volleyball as the major preferences of adolescents and young adults has been indicated in several studies[17] and, as noted above, may be caused by cultural aspects, such as the extensive dissemination of soccer in Brazilian society, especially among men. These activities, besides, do not have a high cost, which can help their practice in our social contexts.

The frequency of physical inactivity among young people from Feira de Santana was high (72.8%). More than half of the respondents was considered inactive in leisure, that is, they reported they did not participate in physical activities or participated only in light physical activities during their free time. Lopes *et al*[13], in a study performed with 2,022 adults from 20 to 59 years old from the city of Lages, state of Santa Catarina, Brazil, detected a smaller prevalence of physical inactivity (only 29.6%) than the one detected in this study. Burton e Turrel[15] described results close to the ones found in Feira de Santana, with a 67.7% prevalence of physical inactivity in adults living in Australia. Tenório *et al*[9], detected that 65.1% of adolescents attending secondary education were insufficiently active.

Obtained results show physical inactivity is higher among women, confirming results from the literature[17] and showing the need for actions to promote physical activities among women.

During the classification of physical activity effort, it was found that a low percentage of subjects reported practicing high intensity physical activities. Besides, the intensity of physical activity was considerably reduced with age.

For Tenório *et al*[9], participation in physical education classes is a factor associated both to the level of physical activities' practice and to the exposure to non-sedentary behavior in secondary school students. Schools must be attentive to the planning of this subject in the school environment, so that young people be encouraged to take part in physical activities. Since this is a phase in life in which group activities are very motivating, the organization of teams, championships and extra activities in school can be improved so that spaces of social exchange be enlarged, increasing the possibility of adolescents and youths participating in these activities. The benefits of these programs and actions can be even greater, since physical activity habits in adolescence are associated with physical activity during adulthood[17].

Other aspect that can be highlighted is that the probability of overweight is larger among sedentary young people, what increases exposure to cardiovascular diseases. In a research with adolescents, Silva *et al*[16] claim that the probability of overweight is 74% larger in not very active boys than in active ones.

Data from the Risk and Protection Factors for Chronic Disease Watch by Phone Interview System (Sistema de Vigilância de Fatores de Risco e Proteção Para Doenças Crônicas por Inquérito Telefônico, VIGITEL), in a 2006 survey that covered the 26 Brazilian state capitals and the Federal District, showed a high percentage of physically

inactive adults (≥18 years). Among the state capitals of the Northeast region, the city of Salvador, state of Bahia, presented the smaller percentage of people physically inactive in leisure (29%), while the city of Recife, state of Pernambuco, presented the larger percentage (32.8%)[18].

Sedentariness is acknowledged as a risk factor for non-communicable chronic diseases and presents a high prevalence in several countries[19]. Studies show that a large part of the population does not meet the current recommendations on the practice of physical activities. When evaluating only physical activities performed during leisure-time, investigators have been detecting an even higher prevalence of sedentariness[20-22]. The high number of young people physically inactive in leisure is, thus, worrying. Keeping this sedentary behavior throughout life may lead to health damages, especially those related to non-communicable chronic diseases, thus compromising these individual's life quality and overloading the city's Public Health system.

The design of this study can be pointed out among its possible limitations, since a cross-sectional study prevents us to secure implicit causal relations between the studied variables. The instrument used to analyze physical activity in leisure was not especially built to investigate physical activity, but to perform a population survey with the primary purpose of studying the mental health conditions of the city's urban area residents. This can be a relevant limitation to this study, since it hindered the development of more specific aspects of physical activity in the studied population. The analysis of physical activity in leisure was set after the data collection. There was no validation nor was the test-retest agreement of the questionnaire checked for this purpose. However, a pilot study was performed to evaluate and better adequate the questions of the instrument. It is worth noticing, however, that this is a population-based study with a randomly selected sample, involving a significant number of subjects, what allowed us to obtain estimates for the event of interest (physical inactivity in leisure), adopting sample procedures to minimize potential biases in selection.

Results allow us to conclude that the young people population from Feira de Santana, state of Bahia, presents a high prevalence of physical inactivity in leisure, which is further shortened in its physical effort intensity with age. In view of the fact that 55.4% of these young people were finishing or still attending secondary education, actions to promote physical activities and the adoption of an active lifestyle may be developed in the school environment, especially in Physical Education classes. The construction of leisure equipments in public spaces (courts, walk lanes, soccer fields, pools), connected to the development of public policies oriented towards changes in behavior and the promotion of the adoption of an active lifestyle may contribute to the increase of the population's level of physical activity.

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