

ORIGINAL ARTICLE

# Characteristics associated with sport practice among adolescents from a city in Southern Brazil

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## Abstract

**Introduction:** physical inactivity is a major public health problem. It is necessary to acquire healthy behaviors in childhood, since the habits acquired tend to last until adult life.

**Objective:** the aim of this study was to estimate the prevalence and characteristics related to sport practice in adolescents from a city in southern Brazil.

**Methods:** a cross-sectional, epidemiological study was carried out with 582 adolescents aged 11-17 years. Independent, dependent variables and covariates were evaluated by means of questionnaire. Body mass index (BMI) and waist circumference (WC) were measured. Multinomial logistic regression was used to estimate odds ratio (OR) and 95% confidence interval.

**Results:** students from public and private schools who did not participate in any sport team were more likely of presenting abdominal obesity (OR: 2.17; 95% CI: 1.16-5.09 and OR: 2.15; 95% CI: 1.13-4.09, respectively) and not practicing sports in childhood (OR: 1.38; 95% CI: 0.98-2.45 and OR: 1.87; 95% CI: 1.98-2.80, respectively), and those who participated in one sport team were more likely of not practicing sports in childhood (OR: 2.60; 95% CI: 1.45-4.65 and OR: 1.26; 95% CI: 1.20 -1.33, respectively), when compared to those who participated in two or more sport teams. Students from public school who participated in one sport teams were more likely of having abdominal obesity (OR: 3.50; 95% CI: 1.02-12.92) when compared to adolescents who participated in two or more sport teams.

**Conclusions:** results can help in possible school-based interventions to promote sport practice.

**Keywords:** adolescents, physical education, sport, school.

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## Authors summary

### Why was this study done?

Physical inactivity is one of the major health problems worldwide. It is necessary to acquire healthy behaviors even in childhood, since habits acquired in childhood tend to last until adult life. One of the aspects that contribute to the greater involvement of children and adolescents in physical activities is sport practice. In this perspective, the aim of this study was to estimate the prevalence and correlated characteristics of sports practice in adolescents from a city in southern Brazil.

### What did the researchers do and find?

What did the researchers do and find? The researchers found that adolescents from public and private schools who were not involved in any sport team and those engaged in one sport team were more likely of not practicing sports in childhood. Adolescents from public and private schools who were not involved in any sport team and those from public schools involved in one sport team were more likely to have abdominal obesity.

### What do these findings mean?

What do these findings mean? Sport practice during childhood, which is a critical period for the development of healthy behaviors, should be encouraged in school through Physical Education classes to prevent possible health problems, such as abdominal obesity.

## INTRODUCTION

Physical inactivity is one of the major health problems worldwide<sup>1</sup>. A systematic review study has shown that little physically active individuals are more likely to be obese, which in turn is the main risk factor and precursor of chronic diseases<sup>2</sup>. For this reason, it is necessary to acquire healthy behaviors even in childhood, since habits acquired in childhood tend to last until adult life<sup>3</sup>. Thus, physical activity is an important factor for health promotion, so that the World Health Organization (WHO) recommends for children and adolescents (5-17 years) daily involvement in at least 60 minutes of moderate to vigorous intensity physical activity per day for health benefits<sup>4</sup>.

One of the aspects that contribute to the greater involvement of children and adolescents in physical activities is sport practice<sup>5,6</sup>. Sport practice is defined as the performance of games using rules established by federations, and may be aimed at education, leisure, health or income<sup>7</sup>. Systematic reviews have shown that sport provides benefits to young people, such as increased physical fitness, reduced body fat, reduced risk of cardiovascular disease, improved bone health, and reduced symptoms of depression and anxiety<sup>8,9</sup>.

The prevalence of sport practice is considered low among Brazilian children and adolescents (58.1%)<sup>10</sup>, when compared to adolescents from other countries such as Czech Republic (66%)<sup>11</sup> and Australia (60%)<sup>12</sup>. In different localities of Brazil, the prevalence of sport practice is also discrepant. In Londrina, PR, the prevalence of children and adolescents engaged in sports is 32.4%<sup>13</sup>. In Presidente Prudente, SP, and Florianópolis, SC, prevalence is 67.8%<sup>13</sup>. Although Brazil has several government programs designed to promote sport participation for children and adolescents, available data are not consistent across the country and more research to elucidate this theme is needed<sup>10</sup>.

The involvement of young people in sports is associated with different factors<sup>10</sup>. Systematic reviews have shown that the characteristics of adolescents practicing sports are: being male, high economic level and physically active<sup>6, 14</sup>. However, other factors such as the presence of physical spaces in schools for the practice of sports and the frequency in Physical Education classes should also be better investigated. National survey on the practice of physical activity among children and adolescents in Brazil revealed that the physical conditions of schools are

precarious, and the lack of spaces for sports such as multi-sports courts, swimming pools and fields, was one of the most frequently reported factors<sup>10</sup>.

In this perspective, the aim of this study was to estimate the prevalence and correlated characteristics of sports practice in adolescents from a city in southern Brazil.

## METHODS

This research is characterized as an epidemiological school-based cross-sectional study, conducted in 2016 in the city of Criciúma, Santa Catarina, southern Brazil. The study was approved by the Ethics Committee for Research with Human Beings of the “Extremo Sul Catarinense” University on 06/26/2015 and integrates the “Association of health status, risk behaviors and level of physical activity of schoolchildren from public schools of the city of Criciúma - SC “ research. The study was elaborated according to precepts listed by Strengthening the reporting of observational studies in epidemiology (STROBE) recommendations for cross-sectional studies<sup>15</sup>. Adolescents who participated in the research signed the Assent Form and parents / guardians signed the Free and Informed Consent Form authorizing the participation of students in the research.

## Population and sample

The target population of this study was composed of 17,000 schoolchildren enrolled from the 5th grade of elementary school to the 3rd grade from public and private high schools of the city of Criciúma, Santa Catarina, Brazil. In order to calculate the size of the macroproject sample, the main outcomes were: overweight, low levels of physical activity and low levels of aerobic fitness. Considering previous publications in the investigated city<sup>16,17</sup>, prevalence of 30% (overweight) or 70% (low levels of physical activity and aerobic fitness) was estimated. These estimates have the same effect in terms of information for sample calculation. The confidence level adopted was 95%, estimated error of five percentage points, delineation effect of 1.5 and increment of 20% for eventual losses and refusals. Based on these parameters, a sample of 570 students was estimated.

## Dependent variable

Sport practice was evaluated through a question

from the Youth Risk Behavior Survey (YRBS) questionnaire translated and validated for Brazilian adolescents<sup>18</sup>. This questionnaire presented kappa concordance index with average of 68.3% and median of 68.5%, considered relatively high for reproducibility<sup>10</sup>. The question used was: “During the past 12 months, in how many sport teams did you play? (including school, club or neighborhood teams)”. This item presented the following answer options: 0) None, 1) 1 team, 2) 2 teams, 3) 3 or more teams. Results were categorized into “none”, “one team” and “two or more teams”.

### Independent variables

Independent variables were: adolescent’s perception about the current conditions of physical spaces for sport practice at school, frequency of participation in Physical Education classes, body mass index (BMI), waist circumference and sport practice in childhood.

Adolescent’s perception about the conditions of physical spaces for sport practice at school was identified through the question: “In general, physical spaces in your school are under what conditions?” The answers to this item were: 1) excellent, 2) good, 3) regular, 4) poor, 5) very poor. This question was taken from the “Behavior of Adolescents from Santa Catarina” questionnaire (COMPAC)<sup>19</sup>, which presented reproducibility values ranging from 0.64 to 0.99 per thematic unit. The variable was dichotomized into “adequate” for students who answered options 1, 2 or 3; and “inadequate” for students who answered options 4 or 5.

The weekly frequency of participation in Physical Education classes was investigated by a question taken from the COMPAC questionnaire<sup>19</sup>: “During a typical week, in how many Physical Education classes do you participate?” The response options were: 1) I am relieved from Physical Education classes; 2) I participate in one class; 3) I participate in two classes; 4) I participate in three classes; 5) I participate in four classes. The variable was categorized as “none” for students who chose alternative 1; “One or two classes” for students who chose alternatives 2 and 3 and “three or more classes” for students who chose answer 4 and 5.

Height was collected through Sanny<sup>®</sup> stadiometer with tripod (São Paulo, Brazil) and body mass was measured using G-tech<sup>®</sup> digital scale (Zhongshan, China). In order to classify the results in relation to BMI, the Z-score cutoffs proposed by the WHO<sup>20</sup> were used, in which overweight was defined as  $> + 1$  standard deviation and obesity  $> + 2$  standard deviations. In the present study, students classified above  $> + 1$  standard deviation were considered as “overweight” and those below this classification as “eutrophic”.

Waist circumference was measured in the narrower portion of the trunk, between the lower costal border and the iliac crest, using Sanny<sup>®</sup> anthropometric tape (São Paulo, Brazil). The classification of adolescents with abdominal obesity used cutoff points previously proposed for children and adolescents<sup>21</sup>, which defined as excess abdominal obesity Z-score values  $\geq 1$ . These cutoffs were proposed according to age and sex<sup>21</sup>.

The practice of sports in childhood was analyzed by the question: “During childhood (seven to 10 years of

age), did you practice any sports activity, under teacher supervision, for at least six months without interruption? (Do not consider physical education classes)”. The options for this question were: 1) yes and 2) no. The practice of sports in childhood was categorized as “yes” (practiced sports in childhood) and “no” (did not practice sports in childhood), following previous methodologies<sup>22, 23</sup>.

### Covariates

Covariates of this research were level of physical activity, age, economic level and sex. Sex and age were collected through self-administered questionnaire. Sex was categorized as “male” and “female”; age was collected in complete years and later dichotomized into “11 to 13” and “14 to 17” years. Economic level was investigated through the purchasing power of the adolescents’ families, in which students themselves answered the questionnaire of the Brazilian Association of Research Companies<sup>24</sup> and the information was categorized into high “A1”, “A2”, “B1”, “B2”) and low purchasing power (“C1”, “C2”, “D” and “E”).

Level of physical activity was evaluated by the Brazilian version of the YRBSS questionnaire used in the United States, translated, and validated for Brazil<sup>18</sup>. The question used was: “In the past seven days, on how many days have you been physically active for at least 60 minutes per day?” (Consider moderate to vigorous physical activity). Response options were: 1) none; 2) one day; 3) two days; 4) three days; 5) four days; 6) five days; 7) six days and 8) seven days. Adolescents who practiced physical activity five days or more in the week were classified as “physically active” and less than five days / week as “little physically active”<sup>25</sup>.

### Statistical analysis

Initially, data were normalized by means of asymmetry and kurtosis values. Data presented normal distribution. Descriptive analysis (mean, standard deviation and frequency distribution) was performed. Multinomial logistic regression was used to examine associations between outcome and independent variables, estimating odds ratios (OR) and 95% confidence intervals, and category two or more sport teams was considered as reference. In the adjusted analysis, all variables were introduced into the model, regardless of p-value in the crude analysis. In the adjusted analysis, variables with p-value  $\leq 0.20$  remained, according to the backward method. In relation to the adjusted analysis, covariates (level of physical activity, age, economic level and sex) were introduced together with independent variables. The significance level was set at 5%. Analyses were stratified by type of school (public and private) and carried out in the Statistical Package for the Social Sciences software (IBM SPSS Statistics, Chicago, USA), version 22.0.

## RESULTS

The majority of adolescents from public schools were boys (52.8%), while the majority of students from private schools were girls (57.0%). More than half of adolescents from public (50.6%) and private schools (66.7%) had ages ranging from 14 to 17 years. As for the

economic level, half of adolescents from public (51.2%) and private (52.3%) schools belonged to the low economic level. Nine out of ten adolescents from public (97.2%) and private schools (93.0%) reported adequate physical space conditions at school. In relation to the frequency in Physical Education classes, approximately all students from public (97.8%) and private schools (95.8%) reported participating in two or more Physical Education classes per week. During childhood, 37.9% of adolescents from public schools did not practice sports and 47.0% of adolescents from private schools did not carry out sports activities during childhood.

Regarding level of physical activity, 91% of adolescents from public schools and 88% from private schools were little physically active. Regarding overweight, three out of ten adolescents were overweight (38.6% from public schools and 31.0% from private schools). Adolescents from public schools had higher prevalence of abdominal obesity (39.1%), compared to those from private schools (32.8%). The prevalence of sport practice was 40.7% and 44.7% for adolescents from public and private schools, respectively, who participated in one or more sport teams (Table 1).

**Table 1:** Distribution of schoolchildren from Criciúma, SC, Brazil.

Variables	n	Public		Private	
		n	% (CI 95%)	n	% (CI 95%)
<b>Sex</b>					
Male	171	52.8	(47.2-58.0)	111	43.0 (37.2-48.8)
Female	153	47.2	(42.0-52.8)	147	57.0 (51.5-62.8)
<b>Age</b>					
11-13 years	160	49.4	(44.4-54.9)	86	33.3 (27.1-39.1)
14-17 years	164	50.6	(45.1-55.6)	172	66.7 (60.9-72.9)
<b>Economic level</b>					
High	158	48.8	(43.2-54.6)	123	47.7 (40.7-53.9)
Low	166	51.2	(45.4-56.8)	135	52.3 (46.1-59.3)
<b>Conditions of physical spaces in schools</b>					
Appropriate	315	97.2	(95.4- 98.8)	240	93.0 (89.9- 96.1)
Inappropriate	9	2.8	(1.2- 4.6)	18	7.0 (3.9-10.1)
<b>Frequency in Physical Education classes/week</b>					
0	7	2.2	(0.9-3.7)	11	4.3 (1.9-7.0)
1-2	245	75.6	(70.7-79.9)	155	60.1 (53.9-66.3)
≥3	72	22.2	(18.2-27.2)	92	35.7 (29.8-41.9)
<b>Sports practice</b>					
None	179	55.2	(50.0-61.1)	153	59.3 (53.1-64.7)
One sports team	60	18.5	(14.2-23.1)	21	8.1 (5.0-11.6)
Two or more sports team	85	26.2	(21.6-30.6)	84	32.6 (26.7- 38.4)
<b>Childhood sports practice</b>					
Yes	197	62.1	(56.8-67.5)	133	53.0 (46.6-59.4)
No	120	37.9	(32.5-43.2)	118	47.0 (40.6-53.4)
<b>Physical activity</b>					
Active	29	9.0	(6.2-12.0)	31	12.0 (7.8-15.9)
Less active	295	91.0	(88.0-93.8)	227	88.0 (84.1-92.2)
<b>Body mass index</b>					
Eutrophic	199	61.4	(56.2-67.0)	178	69.0 (63.2-74.8)
Overweight	125	38.6	(33.0-43.8)	80	31.0 (25.2-36.8)
<b>Abdominal obesity</b>					
No	196	60.7	(54.8-65.6)	172	67.2 (54.8-65.6)
Yes	127	39.1	(34.4-45.2)	84	32.8 (34.4-45.2)

CI- Confidence interval.

Adolescents from public schools who did not participate in any sport team when compared to those who participated in two or more sport teams were more likely of having abdominal obesity (gross analysis, OR 2.41,

95% CI 1.77-3.40; adjusted analysis, OR: 2.41; 95% CI: 1.16-5.09) and were more likely of not having practiced sports in childhood (gross analysis, OR: 1.90, 95% CI:

**Table 2:** Crude and adjusted multinomial logistic regression analysis between sports practice (reference category = 2 or more sports teams), and independent variables in public school adolescents in Criciúma, Santa Catarina, Brazil.

Variables	None sports team				One sports team							
	OR	Crude analysis (IC95%)	p	OR	Adjusted analysis* (IC95%)	p	OR	Crude analysis (IC95%)	p	OR	Adjusted analysis* (IC95%)	p
Conditions of physical spaces in schools			0.10			0.59			0.14			0.98
Appropriate	1			1			1			1		
Inappropriate	0.74	(0.25-2.18)		0.71	(0.20-2.44)		1.26	(0.14-11.4)		1.01	(0.10-10.3)	
Frequency in Physical Education classes/week			0.66			0.82			0.83			0.71
0	1			1			1			1		
1-2	1.36	(0.32-5.66)		1.18	(0.26-5.23)		1.29	(0.11-4.13)		1.33	(0.11-16.1)	
≥3	1.08	(0.62-1.90)		0.77	(0.47-1.75)		0.93	(0.34-2.52)		0.81	(0.26-2.49)	
Body mass index			0.75			0.50			0.21			0.50
Eutrophic	1			1			1			1		
Overweight	1.09	(0.62-1.93)		0.80	(0.42-1.52)		2.12	(0.65-6.91)		1.52	(0.44-5.28)	
Abdominal obesity			<0.01			0.01			<0.01			0.04
No	1			1			1			1		
Yes	2.41	(1.77-3.40)		2.17	(1.16-5.09)		2.48	(1.77-3.49)		3.50	(1.02-12.92)	
Childhood sports practice			<0.01			0.02			0.01			0.05
Yes	1			1			1			1		
No	1.90	(1.57- 3.90)		1.38	(0.98- 2.45)		1.58	(1.09-2.29)		2.60	(1.45-4.65)	

OR-Odds ratio; IC95% - Confidence Interval; \*: Analysis adjusted for sex, physical activity, age, economic level and independent variables.



**Table 3:** Crude and adjusted multinomial logistic regression analysis between sports practice (reference category = 2 or more sports team) and independent variables in adolescents from private schools in Criciúma, Santa Catarina, Brazil.

Variables	None sports team					One sports team						
	OR	Crudes analysis (IC95%)	P	OR	Adjusted analysis* (IC95%)	p	OR	Crude analysis (IC95%)	p	OR	Adjusted analysis* (IC95%)	p
Conditions of physical spaces in schools			0.32			0.50			0.34			0.37
Appropriate	1			1			1			1		
Inappropriate	1.05	(0.25-0.32)		1.65	(0.38-7.16)		1.09	(0.28-4.57)		2.69	(1.18-6.15)	
Frequency in Physical Education classes/ week			0.66			0.69			0.53			0.72
0	1			1			1			1		
1-2	1.36	(0.32-5.66)		0.69	(0.11-4.22)		0.47	(0.49-5.06)		1.05	(0.45-2.48)	
≥3	1.08	(0.62- 1.90)		0.95	(0.47-1.89)		1.03	(0.47-2.27)		0.59	(0.59-7.13)	
Body mass index			0.30			0.32			0.40			0.47
Eutrophic	1			1			1			1		
Overweight	1.32	(0.78-2.32)		1.31	(0.76-2.28)		1.33	(0.67-2.62)		1.28	(0.64-2.56)	
Abdominal obesity			<0.01			<0.01			0.81			0.07
No	1			1			1			1		
Yes	2.49	(1.77-3.49)		2.15	(1.13-4.09)		0.92	(0.47-1.79)		0.97	(0.59-1.92)	
Childhood sports practice			<0.01			<0.01			<0.01			<0.01
Yes	1			1			1			1		
No	1.72	(1.56-2.73)		1.87	(1.98-2.80)		1.45	(1.05-1.99)		1.26	(1.20-1.33)	

1.57-3.90; adjusted analysis OR: 1.38; 95% CI: 0.98-2.45). Adolescents from public schools who participated in one sport team when compared to those who participated in two or more sports teams were more likely of having abdominal obesity (gross analysis, OR: 2.48; 95% CI: 1.77-3.49; adjusted analysis, OR: 3.50, 95% CI: 1.02-12.92) and not having practiced sports in childhood (gross analysis, OR: 1.58, 95% CI: 1.09-2.29; adjusted analysis, OR: 2.60, 95% CI: 1.45-4.65) (Table 2).

Adolescents from private schools who did not participate in any sport team, when compared to those who participated in two or more sport teams were more likely of having abdominal obesity (gross analysis, OR 2.49, 95% CI: 1.77-3.49, adjusted analysis, OR: 2.15, 95% CI: 1.13-4.09) and were more likely of not having practiced sports in childhood (crude analysis, OR: 1.72, 95% CI: 1.56- 2.73, adjusted analysis, OR: 1.87, 95% CI: 1.98-2.80). In addition, adolescents from private schools who participated in one sport team when compared to those who participated in two or more sport teams were more likely of not having practiced sports in childhood (gross analysis, OR: 1.45, 95% CI: 1.05-1.99, adjusted analysis, OR: 1.26, 95% CI: 1.20-1.33) (Table 3).

## DISCUSSION

The main findings of this study were: 1) approximately four out of 10 adolescents from public (40.7%) and private schools (44.7%) participated in one or more sport teams; 2) students from public and private schools that did not participate in any sport team were more likely of presenting abdominal obesity and not practicing sports in childhood when compared to adolescents who participated in two or more sport teams; 3) students from private and public schools who participated in one sport team were more likely of not practicing sport in childhood when compared to those who participated in two or more sport teams; 4) adolescents from public schools who participated in one sport team were more likely of having abdominal obesity when compared to those who participated in two or more sport teams.

In this study, four out of 10 adolescents reported practicing sports (42.7%). A systematic review aimed at identifying the involvement of Brazilian adolescents aged 10-18 years in sport practice demonstrated prevalence of 58.1% of adolescents involved in sports in Brazil<sup>10,13</sup>. Almost half of individuals reported practicing sports, which can be explained by the fact that sport can be considered an entertainment and fun activity, when considered in a playful way, in which actions may be more flexible and less rigorous, promoting pleasant ways of spending leisure time<sup>14</sup>. In relation to the other half that was not engaged in sports (57.3%), it can be explained by the greater frequency and time dedicated to habits such as watching television, excessive use of computer, mobile phone and video game, spending more time in these activities and reducing involvement in sports<sup>26</sup>.

The present study found that adolescents from public and private schools who did not participate in any sport team and students from public schools participating in one sport team were more likely of presenting abdominal obesity when compared to those involved in two or more

sport teams. Sport practice is an important aspect for the accumulation of weekly physical activity of young people and increase of energy expenditure, and sport practice should be encouraged with the aim of increasing the proportion of young people who meet the recommendation of moderate to vigorous weekly physical activity<sup>7,27</sup>. Individuals in the school environment are more likely to engage in sport practices, being an alternative to reach physical activity recommendations, culminating in better balance between energy consumption and expenditure<sup>27</sup>. Thus, individuals not engaged in sports may have less involvement in physical activities, and consequently lower energy expenditure, which can lead to body fat accumulation<sup>27</sup>. This research also showed that obesity estimated through BMI was not associated with sport practice. The age group examined in this study was in the growth and development phase, where body mass and height gains may result in changes in BMI<sup>28</sup>, and therefore, waist circumference is the parameter most related to changes related to excess body fat<sup>6</sup>.

Students from public and private schools who did not participate in any sport team and those who participated in one sport team were more likely of not practicing sports in childhood. A systematic review study demonstrated similar outcome<sup>29</sup>. In childhood, the lack of sport practice may be related to the overemphasis on collective sports in school curricula, which can cause unintended side effects for children, including discouragement and disengagement for less skilled individuals, generating less involvement in lifelong sporting practices<sup>14,29</sup>. In the present study, no associations between physical conditions and spaces in schools and sport practice were found. This finding corroborates another study carried out with adolescents from a city in Southern Brazil<sup>7</sup>. A possible justification is the fact that even with adequate physical conditions and spaces, adolescents decrease the time spent in physical activities with increasing age, culminating in lower participation in sports, since school prioritizes the most known sports modalities that have higher social prestige, such as soccer, volleyball and basketball, and are seen by adolescents as repetitive and mechanical activities, to the detriment of freedom of movement, creativity and playfulness<sup>30</sup>.

Likewise, no associations were found between participation in Physical Education classes and sport practice in students. This fact is justified because students can practice sports in other contexts such as clubs, parks and squares<sup>7</sup>. In addition to sports, physical education classes address all physical body elements such as games, dances, fights and gymnastics, which do not allow for consistent intervention to improve the technical and tactical skills of sports<sup>5</sup>.

This study did not verify the duration, frequency and type of sports practiced, which is a study limitation, as well as its cross-sectional design. As strengths, contributions to the educational, health and sport area when identifying characteristics associated to the sport practice among adolescents can be highlighted. In addition, the use of gender, level of physical activity, age and economic level as control variables in the adjusted model is highlighted, aiming to find more precise results on the relationship

between characteristics of physical spaces in school, participation in Physical Education classes, obesity, sport practice in childhood and involvement in sport teams during adolescence.

## CONCLUSION

It could be concluded that less than half (42.7%) of adolescents were involved in sport practice. In addition, adolescents from public and private schools who were not involved in any sport team and those engaged in one sport team were more likely of not practicing sports in childhood. Adolescents from public and private schools who were not involved in any sport team and those from public schools involved in one sport team were more likely of having abdominal obesity. Therefore, sport practice during childhood, which is a critical period for the development of healthy behaviors, should be encouraged in school through Physical Education classes to prevent possible health problems, such as abdominal obesity.

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## Abbreviation list

Body mass index (BMI);  
Waist circumference (WC);  
Odds ratio (OR);  
World Health Organization (WHO);  
Strengthening the reporting of observational studies in epidemiology (STROBE);  
Youth Risk Behavior Survey (YRBS);  
Behavior of Adolescents from Santa Catarina” questionnaire (COMPAC);  
Statistical Package for the Social Sciences software (SPSS);  
CI- Confidence interval.

## Conflict of interest

Authors state no conflict of interest.



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## Resumo

**Introdução:** a inatividade física é um dos principais problemas de saúde pública. É necessário adquirir comportamentos saudáveis na infância, pois os hábitos adquiridos tendem a durar até a vida adulta.

**Objetivo:** o objetivo deste estudo foi estimar a prevalência e as características relacionadas à prática esportiva em adolescentes de uma cidade do sul do Brasil.

**Método:** foi realizado um estudo epidemiológico transversal com 582 adolescentes de 11 a 17 anos. Variáveis independentes e dependentes e covariáveis foram avaliadas por meio de questionário. O índice de massa corporal (IMC) e a circunferência da cintura (CC) foram medidos. Regressão logística multinomial foi usada para estimar odds ratio (OR) e intervalo de confiança de 95%.

**Resultados:** estudantes de escolas públicas e privadas que não participaram de nenhuma equipe esportiva apresentaram maior probabilidade de apresentar obesidade abdominal (OR: 2,17; IC95%: 1,16-5,09 e OR: 2,15; IC95%: 1,13-4,09, respectivamente) e não praticar esportes na infância (OR: 1,38; IC95%: 0,98-2,45 e OR: 1,87; IC95%: 1,98-2,80, respectivamente), e aqueles que participaram de uma equipe esportiva apresentaram maior probabilidade de não praticar esportes na infância. (OR: 2,60; IC95%: 1,45-4,65 e OR: 1,26; IC95%: 1,20 -1,33, respectivamente), quando comparados aos que participaram de duas ou mais equipes esportivas. Alunos da escola pública que participaram de uma equipe esportiva apresentaram maior probabilidade de ter obesidade abdominal (OR: 3,50; IC 95%: 1,02-12,92) quando comparados aos adolescentes que participaram de duas ou mais equipes esportivas.

**Conclusões:** os resultados podem ajudar em possíveis intervenções escolares para promover a prática esportiva.

**Palavras-chave:** adolescentes, educação física, esporte, escola.

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