


# Physical activity index for Galician schoolchildren of primary school education according to age and gender

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## ABSTRACT

The acquisition of an active lifestyle in childhood and adolescence help it to be maintained in adult life. For this reason, it is essential to know the current situation of the number of schoolchildren who are active in their free time, both at school and when they are going to school. Therefore, the objective of this study has been to know the rates of children school physical activity practice, voluntary and leisure time in schoolchildren aged between 10 to 12 years, by gender. Participants were primary school children (n=1009), aged between 10 to 12 years old, (boys=507; girls= 502); average age = 10.85, SD = 0.79 who were enrolled in different centres in Galicia (Spain). Statistically significant differences were found according to gender in the school physical activity index ( $p < .001$ ) and in voluntary physical activity practice index ( $p < .001$ ), being higher in boys than in girls. Statistically significant differences were also observed for age ( $p < .001$ ). Physical activity rates of Galician schoolchildren at school and leisure are higher in boys than girls. School physical activity index decreases as school age increases. **Keywords:** Physical activity index; Primary education; Schoolchildren; Galicia.

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## **INTRODUCTION**

The World Health Organization (WHO) has been developing promotion and education programs for school health for more than three decades due to increase in sedentary lifestyles and unhealthy lifestyles (Muñoz, Fernández, & Navarro, 2015), because the majority of schoolchildren aged 5-17 years do not reach the world recommendations on physical activity for health, which should mean 60 minutes a day of moderate to vigorous physical activity (WHO, 2010). Therefore, the objective of this study has been to know the rates of practice of school physical activity, voluntary and in their leisure time in schoolchildren aged between 10 to 12 years, as well as gender differences.

## **MATERIAL AND METHODS**

### ***Participants***

1009 primary school students participated, 507 were boys and 502 girls; average age = 10.85, SD = 0.79 who were enrolled in different centres in provinces of Lugo, A Coruña, Ourense and Pontevedra (Galicia, Spain).

### ***Measures***

The Inventory of Physical Activity for Schoolchildren (IAFHE) validated by García-Cantó (2011) was used for the evaluation of physical activity indexes of students regarding their leisure physical-sport activity, their physical-sport practice in school context and physical-sport practice in leisure time. Possible range of values for the three indexes is 1-5.

### ***Procedures***

To carry out the study, detailed information was provided and collaboration was requested from different educational centres. Likewise, permission was requested to parents, mothers and/or legal guardians of participating children. Students only participated in the study with written authorization from their legal representatives. After offering a brief initial explanation and resolving the existing doubts, a time of 25 minutes was provided to answer the questionnaire. The instrument was applied by researchers during a Physical Education (PE) session that the corresponding teacher authorized altruistically for this task. For this, it was requested that the teacher was not present, in order to avoid interference in the responses of the students. A time of 20 minutes was provided to answer the questionnaire: additionally time was given for explanation and resolution of doubts before starting.

### ***Analysis***

Descriptive statistical analyses (average and standard deviation) were performed for all dependent variables. Subsequently, after verifying that data complied with the assumptions of parametric statistical analyses, a multivariate analysis of variance (MANOVA), of two factors (age and gender), was carried out to examine differences between boys and girls in terms of their physical activity index. The size of the effect was estimated by eta squared ( $\eta^2$ ). All the statistical analyses were performed with the SPSS program version 18.0 for Windows. The level of statistical significance was established at  $p=.05$ .

## **RESULTS**

A significant main effect of gender was observed in school physical activity practice index [ $F(1, 1003) = 19,392, p < .001, \eta^2 = .019$ ], and in the index of voluntary physical activity practice [ $F(1, 1003) = 61,099, p < .001, \eta^2 = .057$ ], being higher in boys than girls. There was also a significant main effect on the age factor

in the school physical activity index [ $F(2, 1003) = 15,141, p < .001, \eta^2 = .029$ ], so that as age increases the physical activity index decreases.

## DISCUSSION

If we focus on the levels of practice according to gender, as in our study, different investigations indicate a lower level of sports practice in girls with respect to boys (García-Cantó, 2011; Pantoja & Montijano, 2012; Villagrán, Rodríguez-Martín, Novalbos, Martínez, & Lechuga, 2010). In the case of differences according to age, these indexes decrease as the age of schoolchildren increases, confirming studies such as Hermoso, García & Chinchilla (2010).

## CONCLUSIONS

Galician schoolchildren physical activity rates are higher in boys than girls and decrease as age of schoolchildren increases.

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