

## RESUMEN

El impacto de la actividad física en el ser humano es un ámbito de estudio que se está ampliando constantemente, hoy en día se indaga mucho en el ámbito académico, sobre todo en adolescentes. Es por ello que muchos estudios investigan cómo afecta la actividad física al rendimiento académico observando una relación positiva entre ambas. Por otro lado el rendimiento académico se ha tratado de relacionar con diferentes variables psicológicas, entre ellas la motivación, y realmente existe una relación positiva entre motivación académica y rendimiento académico. Viendo estas relaciones, hay estudios que han relacionado la actividad física con la motivación académica y dado que se ha visto que existe una relación positiva entre ambas el objetivo de esta investigación es realizar una revisión sistemática para encontrar estudios con cierto rigor metodológico que investiguen el efecto de la actividad física en la motivación académica. Para ello, se emplean las bases de datos Scopus, Pubmed, E-Journals y Psychinfo, utilizando las palabras ("physical activity") OR ("physical exercise") OR (exercise) OR (sport) AND ("academic motivation"), filtrando por título y resumen y siguiendo los criterios de inclusión formados por (1) artículos que estudien el efecto la actividad física en la motivación académica; (2) artículos de acceso libre y (3) artículos redactados en inglés o castellano. Posteriormente y siguiendo los criterios de exclusión (1) no tener grupo control, (2) la muestra no se comprende entre 12 y 18 años y (3) la motivación académica no es medida con un instrumento que la mida específicamente, la muestra final del estudio se reduce a 1 artículo. Pese a que muchas investigaciones estudian la relación entre actividad física y motivación académica, concluyendo que la actividad física tiene un efecto positivo en la motivación académica, pocas son las que lo hacen con métodos y/o herramientas que les aporten rigor científico.

**Palabras clave:** motivación académica, actividad física, deporte, adolescente.

## Abstract

The impact of physical activity on humans is a field of study that is constantly expanding, and nowadays, much research is being done in the academic field, especially in adolescents. That is why many studies investigate how physical activity affects academic performance, observing a positive relationship between both. Furthermore, academic performance has been related to different psychological variables, including motivation, and actually there is a positive relationship between academic motivation and academic performance. In view of these relationships, there are studies that have related physical activity with academic motivation and since it has been seen that there is a positive relationship between them, the aim of this research is to carry out a systematic review to find studies with certain methodological rigor that investigate the effect of physical activity on academic motivation. To this end, the databases Scopus, Pubmed, E-Journals and Psychinfo were used, using the words ("physical activity") OR ("physical exercise") OR (exercise) OR (sport) AND ("academic motivation"), filtering by title and abstract and following the inclusion criteria of (1) articles that study the effect of physical activity on motivation; (2) open access articles; and (3) articles written in English or Spanish. Subsequently, and following the exclusion criteria (1) not having a control group, (2) the sample not being between 12 and 18 years old and (3) academic motivation not being measured with an instrument that specifically measures it, the final sample of the study was reduced to 1 article. Although many investigations study the relationship between physical activity and academic motivation, concluding that physical activity has a positive effect on academic motivation, few do so with methods and/or instruments that provide them scientific rigor.

**Keywords:** academic motivation, physical activity, sport, adolescent.



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# THE EFFECT OF PHYSICAL ACTIVITY ON ACADEMIC MOTIVATION: A SYSTEMATIC REVIEW



## INTRODUCTION

Physical activity is able to prevent some common diseases and produce a lot of benefits for health (Annesi et al., 2007; González-Serrano et al., 2013), but because of technology, people adopts more sedentary lifestyles, most of young people included. That's why research body about how physical activity affects at academic environment is growing. Nowadays the investigation about how physical activity affects to academic performance is increasing exponentially and there are evidences supporting a positive and significant relationship in the effect of physical activity at academic performance (Bartholomew & Jowers, 2011).

Also a lot of studies want to investigate the relationship between academic performance and many psychological variables. So academic motivation is one of them and the evidence confirms the important role that it plays in achieving good academic results (Lepper et al., 2005; Martin, 2001).

Some researchers based on these findings have investigated the relationship between physical activity and academic motivation, and the outcomes show that could be a positive relationship between them (Müller, 2014; Im et al., 2015). Therefore, the objective of this research is to carry out a systematic review to see which studies with certain methodological rigor investigate how physical activity affects academic motivation.



## METHODS

("physical activity") OR ("physical exercise") OR (exercise) OR (sport) AND ("academic motivation")



### Inclusion criteria

- Scientific articles studying how physical activity affects academic motivation
- Publications in English or Spanish
- Free access

### Exclusion criteria

- Not having control group
- Academic motivation measure is not with a specific academic motivation instrument.
- Sample age 12-18 years old

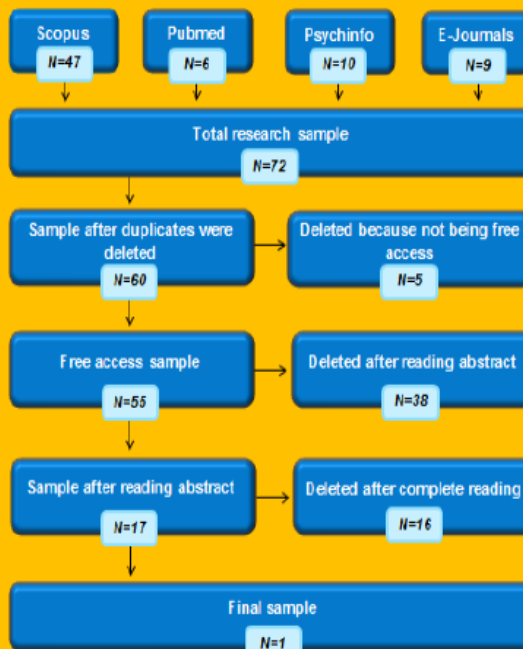


Figure 1: Flowchart of the selection of the study sample

## RESULTS

Table 1. Articles meeting the inclusion and exclusion criteria

Reference and sample	Groups	Variables	Evaluation	Conclusion
González & Portolés 2014 n= 421	OOSPA* = 339 No OOSPA* = 82	Frequency of physical activity Substance abuse Sleep quality Academic motivation Academic performance	Sociodemographic questionnaire Escala de motivación educativa (EME-S) Academic scores	Participants who engage in out-of-school physical activity (OOSPA) at least one day per week have higher academic motivation and academic achievement than those who do not participate.

\* Out-of-school physical activity (OOSPA)

## DISCUSSION

Once all the data necessary for the study had been collected and analyzed, it was observed that those who participate in out-of-school physical activities had more academic motivation than the group that does not participate and they also had achieved better academic scores. So this relationship between physical activity and academic motivation could be interpreted in such a way that academic motivation acts as a link between physical activity and academic performance.



To sum up this review, even though just one article has past the filters, there are many studies that investigate physical activity effect on academic motivation and find a positive relationship between them. But it would be interesting to investigate this relationship along the lines of the study of the final sample, using control groups and also using any instrument that specifically measures academic motivation.

## REFERENCIAS

Annesi, J. J., Faigenbaum, A. D., Westcott, W. L., Smith, A. E., Unruh, J. L., & Hamilton, F. G. (2007). Effects of the youth fit for life protocol on physiological, mood, self-appraisal, and voluntary physical activity changes in African American preadolescents: Contrasting after-school care and physical education formats. *International Journal of Clinical and Health Psychology*, 7(3), 641-659.

Bartholomew, B. J., & Jowers, M. E. (2011). Physically active academic lessons in elementary children. *Preventive Medicine*, 52, S51-S54.

González-Serrano, G., Huéscar, E., & Moreno, J. A. (2013). Satisfacción con la vida y ejercicio físico. *Motricidad. European Journal of Human Movement*, 30(1), 131-151.

González, J., & Portolés, A. (2014). Actividad física extraescolar: relaciones con la motivación educativa, el rendimiento académico y conductas asociadas a la salud. *Revista Iberoamericana de Psicología del Ejercicio y el Deporte*, 9(1), 51-65.

Im, M., Hughes, J. N., Cao, Q., & Kwok, O. M. (2015). *Effects of Extracurricular Participation during Middle School on Academic Motivation and Achievement at Grade 9*. Manuscript under review, available from Jan Hughes, 4225 TAMU, College Station, TX, 77843-4225.

Lepper M. R., Henderlong-Corpus J. H., & Iyengar S. S. (2005). Intrinsic and extrinsic motivational orientations in the classroom: Age differences and academic correlates. *Journal of Educational Psychology*, 97: 184-196.

Martin A. J. (2001). The student motivation scale: A tool for measuring and enhancing motivation. *Australian Journal of Guidance and Counselling*, 11: 1-20.

Müller, A. J. (2014). Brazil and USA cross-cultural study of sport as motivational factor in education. *International Education Studies*, 7(12), 76-83.