Physical activity enjoyment and self-efficacy in school performance of 11-17-year-old students at educational institutions in Lima

ANDREA ALESSANDRA RODRÍGUEZ DE SOUZA - PAJUELO¹, ALEXANDRA FABIOLA TARAZONA - LUJÁN², MARIO REYES – BOSSIO³

^{1,2,3} Faculty of Psychology, Universidad Peruana de Ciencias Aplicadas, PERU

Published online: July 31, 2021

(Accepted for publication July 15, 2021)

DOI:10.7752/jpes.2021.s3278

Abstract

Introduction: People have become sedentary because of the lifestyles they have adopted. Consequently, they are unable to enjoy the physical and cognitive benefits that sports offer. Furthermore, the Peruvian school curriculum includes only 2–3 hours of physical activity (PA) per week (Ministry of Education, 2018) because it is not considered relevant for academic development. **Purpose:** The present study aimed to identify the relationship between PA enjoyment and self-efficacy in school performance. **Methods:** A non-experimental correlational design and non-probabilistic sampling were employed. A self-efficacy scale on academic performance (Cartagena, 2008) and a scale of enjoyment of PA were administered. This instrument comprises two dimensions. The first one focuses on and includes three items linked to intrinsic motivation; the second dimension deals with perception of enjoyment (Fernández, Sánchez & Salinero, 2008). The instrument was administered to a sample of 442 students (62.7% women and 37.3% men) of 11–17 years. They all attended secondary-level educational institutions in Lima—specifically, 60.9% and 39.1% public and private schools, respectively. **Results:** The results reveal a positive and significant relationship between both variables. Students who enjoyed PA had greater confidence in their skills and abilities in relation to their academic performance. Furthermore, male students demonstrated greater intrinsic motivation to be involved in sports activities than their female counterparts. **Conclusions:** It is recommended that programs in educational institutions that promote the continued practice of PA should be implemented because they are imperative for the holistic development of adolescents; such programs encourage the development of feelings of trust and awareness about the goals and objectives that students have achieved.

Key words: sport psychology; academic performance; satisfaction; intrinsic motivation; perception of enjoyment

Introduction

During the last decade, 3.2 million people throughout the world died because of physical inactivity every year. Physical inactivity (PA) is the fourth highest risk factor for global mortality. This risk factor has increased in many countries and has an impact on individuals' health because low PA tends to trigger non-communicable diseases. Only one in four adults adheres to the World Health Organization's (WHO, 2017) recommended level of PA, and 80% of adolescents are not engaged in enough PA. Modern lifestyles have resulted in sedentary behavior, mainly resulting from the indiscriminate use of new technologies, with children and adolescents being the most vulnerable (Hallal, Wells, Reichert, Anselmi & Victora, 2006; Bauer, Nelson, Boutelle & Neumark-Sztainer, 2011). Because many Peruvians, including young children, follow a sedentary lifestyle, it is imperative that this problem be addressed. In this regard, it is noteworthy that behavioral patterns that are established during childhood continue throughout adult life (Álvarez, Sánchez, Gómez & Tarqui, 2012; Piñeros & Pardo, 2009).

Regular engagement in PA is vital for the maintenance of vital functions because movement is an essential aspect of a healthy lifestyle (Cigarroa, Sarqui & Zapata, 2016) and enhances sports performance (Reyes-Bossio, Raimundi & Gómez-Correa, 2012; Trujillo-Torrealva & Reyes-Bossio, 2019). Although the regular engagement in PA provides a wide array of physical benefits, it is also related to the enhancement of attention, memory, and executive functions, which leads to an improvement in academic performance (Maureira, 2014). Furthermore, the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2015) found that physical education and regular PA enhance attention span and accelerate children's cognitive processing. Despite these facts, the Peruvian school curriculum currently implements only 2–3 hours of PA per week (MINEDU, 2018).

The last report of the Program for the International Evaluation of Students (MINEDU, 2019) noted that although there was an improvement in the results in comparison to the evaluation conducted in 2015, Peru only ranks 64th out of the 77 countries in the region. Peruvian students have below average results in science, reading, and mathematics. Various studies have revealed that engaging in PA is associated with an increase in the

development of self-efficacy in children and adolescents. In addition, better scores were observed in the self-perception of students who practiced some type of PA frequently in academic, family, and physical areas (Contreras, Fernández, García, Palou & Ponseti, 2010; Molero, Ortega, Valiente & Zagalaz, 2010). Despite the role of PA, recent research has shown that children and adolescents increasingly distance themselves from continuous practice. Only one in three Peruvians over the age of 15 years performs any type of PA (MINSA, 2017). The lack of adherence to PA is due to a lack of attraction and enjoyment of PA because of the sedentary habits that younger generations have adopted (Pavón & Moreno, 2008).

Enjoyment of PA is defined as the positive state of affection that reflects feelings of fun, pleasure and fulfillment during the performance of PA. If these feelings of enjoyment are not found throughout the practice, it will affect adherence and continuity in it (Chamero & Fraile, 2013; García & Llopis, 2011). When there is a satisfactory feeling for the person who practices PA, there will be a favorable judgment about her own ability and she will develop a positive attitude towards herself and the activities she performs. Therefore, knowing the level of enjoyment with physical activity in schoolchildren is an aspect to take into account in education, since it could be a tool to redirect the levels of PA practice in the important stages and thus contributing to a greater increase in their self-efficacy in the academic area and benefit school performance.

In recent years, self-efficacy has been considered as a determining and predictive psychological variable in academic performance (Ornelas, Blanco, Peinado & Blanco, 2012). In the school context, it will be the personal belief or perception of the students about their ability to coordinate and execute their actions and to adequately function in academic activities (Barraza, 2010). This is how self-efficacy in school performance can predict performance in school activities, this explains why students who present similar levels of ability and knowledge exhibit different behaviors and / or results (Blanco, Ornelas, Aguirre & Guedea, 2012; Pajares & Schunk, 2001).

Despite the importance and recognition of studies that find a relationship between PA and self-efficacy, there is still little research that relates the enjoyment of physical activity as a tool for increasing self-efficacy in the school environment. Which have found that self-efficacy will be a predictor of commitment and motivation to carry out physical-sports activities and, in turn, adherence to FA fosters the discipline necessary to help to have a good academic performance (Oropeza, Ávalos & Ferreyra, 2016). For this reason, the general objective of this research is to determine the relationship between the dimensions of enjoyment of PA and the dimension of self-efficacy in school performance in schoolchildren from 11 to 17 years of age at educational institutions in Lima. Regarding the specific objectives, it is expected to identify the difference between both dimensions according to sex and educational management.

Material and methods

Participants:

The sample was made up of 442 secondary school students between 11 and 17 years old, distributed in two educational centers, 60.9% (n = 269) of a public institution and 39.1% (n = 173) of a private school. Furthermore, the average age was 14.06, where 62.7% (n = 277) were women and 37.3% (n = 165) men. Likewise, 44.1% agreed that sports are important. An intentional non-probability sampling was performed.

Instruments

Enjoyment scale with physical activity (PACES)

The validated and reduced spanish version of Fernández, Sánchez and Salinero (2008) in Spain was used with students between 12 and 18 years old. The instrument aims to measure the degree of satisfaction when performing any physical activity. The scale is made up of 6 items in a bipolar statement format (bores me versus amuses me), with a scoring range from the minimum value (1) to the maximum value (7). The instrument is made up of two factors. Factor 1 includes the first three items that are related to intrinsic motivation, while the second corresponds to the dimension of perception of enjoyment. The reliability of the original questionnaire presents a Cronbach's alpha of .82. In our investigation, the Cronbach's alpha coefficient presented a value equal to .80, being this satisfactory. In the first factor, an alpha of .705 was obtained and in the second, an alpha of .663.

Self-efficacy Scale in School Performance

Instrument created by Cartagena (2008) in Peru, which is used for secondary school students with the intention of evaluating the perception of self-efficacy to successfully carry out an academic activity. This questionnaire is made up of 20 items, which are answered using a scale that ranges from 0 (not being able to carry out the activity) to 10 (total security to carry out the task). The scale has a one-dimensional factor structure. In the original study, the author reported reliability using Cronbach's alpha coefficient, reaching a value of .94. In the present study, Cronbach's alpha obtained a value equal to .97.

Process

The directing and pedagogical department of both educational institutions was contacted to inform them of the objectives of the study and to request their authorization to apply the instruments. After the approval of the directors was obtained, parents or guardians were given an informed consent. Before applying the instruments to the study sample, a pilot test was carried out on 51 students, to verify the understanding of the items of each instrument. Once the reliability data of both tests were obtained, the researchers proceeded to apply the questionnaires, previously the objective of the study was explained to them, the instructions to complete the instruments were indicated and sincerity was requested in the answers.

Statistical analysis:

First, a statistical analysis was performed using the Statistical Package for Social Sciences 24.0 program (SPSS-24.0). Then, a psychometric analysis of the instruments used was performed. Then, an exploratory factor analysis was carried out, with the unweighted least squares estimation method. Reliability was calculated using Cronbach's alpha coefficient. Subsequently, the descriptive analysis of the dimensions of each of the variables was carried out. Also, the Kolmogorov Smirnov statistic was analyzed to determine the normality of the data. Finally, the correlations were calculated using the Spearman RHO coefficient and from the Mann-Whitney U statistic, the comparisons.

Results

The normality test was performed using the Kolmogorov-Smirnov statistic. Table 1 shows that both scales do not present a normal distribution ($p < .05$). Therefore, non-parametric tests were used.

Table 1. Kolmogorov Smirnov test of the Self-efficacy Scale in School Performance and the Scale of Enjoyment of Physical Activity

	Statistical test	Sig. Asymptomatic (bilateral)
Autoeficacia en el rendimiento escolar	.054	.004
Motivación intrínseca	.125	.000
Percepción de disfrute	.125	.000

The Spearman correlation results presented in Table 2 shows a positive and statistically significant correlation between self-efficacy in school performance and intrinsic motivation ($\rho = .327$; $p = .000$), likewise, a positive and statistically significant correlation is observed between the variables self-efficacy and perception of enjoyment ($\rho = .298$; $p = .000$).

Table 2. Correlation between study variables

	Self-efficacy in school performance
Intrinsic motivation	.327**
Perception of enjoyment	.298**

Table 3 shows the results obtained according to sex show that there are statistically significant differences ($p > .05$) in the motivation scores ($U = 20113.50$). Being the men the ones that show a higher score.

Table 3. Comparative results of the self-efficacy scores in school performance and enjoyment with physical activity, by sex.

	Female		Male		U Whitney	Mann- Sig.	Effect Size
	N	Range Mid	N	Range Mid			
Self-efficacy in school performance	277	226.81	165	212.59	21382.000	.258	.003
Intrinsic motivation	277	211.61	165	238.10	20113.500	.034	.01
Perception of enjoyment	277	216.97	165	229.11	21596.500	.330	.002

The results of the students of the public educational institution according to sex, show that there are significant differences ($p < .05$) in the motivation variable ($U = 7,250,500$). Where men were the ones with the highest score. From the comparative results in the private school students according to sex. It was found that there are no statistically significant differences ($p > .05$) in the scores of self-efficacy ($U = 2674.500$), motivation ($U = 2425.500$) and perception ($U = 2534.000$).

Discussion

The research seeks to determine the relationship between enjoyment of physical activity and self-efficacy in school performance in students from 11 to 17 years of age from educational institutions in Lima. In this regard, the data is compatible with the hypothesis that both variables maintain a direct and significant relationship between them. The results show that students who enjoy physical activity will have greater confidence in their abilities and skills regarding their school performance. This demonstrates the importance of promoting the practice and enjoyment of PA for increasing self-confidence, sense of worth, recognition of personal competences, and the ability to organize certain behavior in the academic context (Cartagena, 2008). Both variables are related, since the regular practice of PA at early ages offers benefits at the psychosocial level, since it improves the self-perception of the individual's own abilities, because the basic and necessary skills for sport such as leadership, teamwork, perseverance and discipline, when increased cause the person to be perceived as more capable of facing the challenges of the school area, since these skills are the basis for adequate academic performance (Zurita et al., 2017). This is how the continued practice of PA, will develop a greater commitment, adherence and interest when doing it, being guided by intrinsic motivation.

Regarding the intrinsic motivation according to sex, significant differences were found in men, that is, men usually show a greater taste for the practice of some FA. This occurs due to the fact that they show a greater need for competition, which is closely related to the practice of exercises (Covers, 2011). While women do not consider competition as a relevant factor, having, to a greater extent, as a motive related to image care and body weight control (Abarca, 2011; Nicolás, 2017; Pavón & Moreno, 2008). Likewise, boys in adolescence tend to satisfy their need for socialization by interacting in activities that encompass competition, strength and contact, which are present in carrying out PA (Isoma, Rial & Vaquero, 2014). In addition, it is more feasible for men to achieve socialization through the execution of these activities, since most of the collective sports are directly related to the male gender. This is how men, by belonging to a group of colleagues with whom they can share similar tastes, interests and objectives, will obtain a greater sense of belonging to a group, which is a factor that predicts motivation and continuity in the execution of sports activities (García & Caracuel, 2007). Granda, Alemany and Aguilar (2018) found that schoolchildren perceive that there are differences associated with gender and their relationship with PA, one of them is that men obtain more benefits for their effort in sports and even have a greater advantage over women to develop professionally as an athlete. This is how the motivations for practicing PA are different depending on gender, although boys and girls think that both genders can perform any activity, there is still a general idea that there are some physical-sports activities that are for women and others for men (Alvariñas et al., 2009; Millán & Pérez, 2012). This causes women to have less motivation to perform PA, which results in them not participating continuously and having less adherence (Paulette, 2016). Another factor, mentioned by Alonso, Martínez and Moreno (2006), for which women have less intrinsic motivation towards PA is that there are fewer examples or female sports referents with whom adolescents can identify (Granda et al., 2018).

On the other hand, it is observed that women adolescents have greater academic self-efficacy, this because they, compared to their male peers, have a greater self-perception of their abilities related to communication and attention, which are basic to achieve adequate school performance (Narváez, Posso, Guzmán & Valencia, 2018). Furthermore, Borzone (2017) states that women, by presenting a better perception of their abilities to organize and put these skills into practice in the school environment, focus more on academic activities and acquire greater adherence to the rules or guides that are the basis of the academic framework.

Regarding the sex of the students of the public educational institution, it was found that there are significant differences in motivation, with the males obtaining the highest score. According to Moreno (2006), the context that frames physical activities directly influences the motivation to carry out these activities. This premise explains a lower level of motivation in women, since in the national school it only has a sports infrastructure that is associated with playing soccer, considered a sport that is usually carried out more frequently by men. In addition to the fact that the offer of little varied physical activities, which only focuses on traditional sports, does not reflect the needs or interests of the students, which shows the lack of equality of opportunities for adolescents (IPD, 2017). This situation refers to the reality of public educational institutions, because despite the improvements in policies that seek to increase the level of PA for children and adolescents, this is still gradually being incorporated, maintaining the gap with private institutions (MINEDU, 2018).

On the other hand, in the case of the students of the private educational institution there are no significant differences according to sex. In relation to this result, no previous research has been found to explain this inequality between public and private schools. Our inferences are based on the particularities observed in each institution. We deduce that this can happen because the private management school offers more opportunities that encourage the practice of PA in all its students. Through extracurricular hours dedicated to PA and the formation of sports teams by gender, which compete at the inter-school level apart from the time assigned for the Physical Education course. Likewise, having specialized teachers who focus on the best strategies considering the needs of adolescents stimulates the participation of students in sports competitions (Gråstén, 2014). Another factor that supports this result is that the private school, having an optimal infrastructure for sports environments, generates a higher level of motivation and enjoyment for doing a certain

sport, since it is a factor that students consider to start executing PA, since that having the appropriate facilities facilitates their practice and therefore motivates them to carry it out continuously (Cocca, 2013).

Conclusions

It can be concluded that there is a positive correlation between the enjoyment of physical activity and self-efficacy in school performance in students from 11 to 17 of educational institutions in Lima. In addition, it was found that men have a higher level of intrinsic motivation to carry out physical or sports activities. Finally, when segmenting the sample between the type of management of the educational institution, it was found that male students of the public school show a higher degree of motivation compared to women. While in the private institution there are no significant differences between men and women.

This research is useful because it contributes by providing more information about the relationship that exists between the enjoyment of physical activity and self-efficacy in school performance, giving it the importance that these physical-sports activities generate. In order to generate programs that promote adherence to PA, through the stimulation of these activities, also recognize the importance of providing adequate infrastructure that contributes to adequate sports practice.

Among the limitations of the present work, is the scarce variety of previous studies that relate both variables, both in Peru and internationally. Thus, it is recommended to carry out various investigations with both variables in order to obtain greater results on the problem. Likewise, since the instruments used are self-reported, it is suggested to include the academic performance variable, for which the recording of grades is required, in order to identify the effects of PA on cognitive processes, which include attention, concentration, memory and all the processes that involve learning.

References

- Abarca, A. (2011). *Personal, social and environmental factors that influence the levels of physical activity of Aragonese adolescents* [Factores personales, sociales y ambientales que influyen los niveles de actividad física de los adolescentes aragoneses]. (Doctoral thesis, University of Zaragoza, Department of Musical, Plastic and Body Expression. Huesca, Spain).
- Alonso, N., Martínez, C., & Moreno, J. (2006). Gender and attitudes toward the practice of physical activity and sport [Actitudes hacia la práctica físico-deportiva según el sexo del practicante]. *Revista Internacional de Ciencias del Deporte*, 2(3), 20-43.
- Álvarez, D., Sánchez, J., Gómez, G., & Tarqui, C. (2012). Overweight and obesity: prevalence and determining social factors of overweight in the Peruvian population [Sobrepeso y obesidad: prevalencia y determinantes sociales del exceso de peso en la población peruana]. *Revista Peruana de Medicina Experimental y Salud Pública*, 29(3), 1726-4634.
- Ardoy, D., Fernández J., Jiménez, D., Castillo, R., Ruiz, R., & Ortega, F. (2014). A Physical Education trial improves adolescents' cognitive performance and academic achievement: the EDUFIT study. *Scandinavian Journal of Medicine & Science in Sports*, 24(1), 52-61. <https://doi.org/10.1111/sms.12093>
- Barraza, A. (2010). Validation of the inventory of academic self-efficacy expectations in three sequential and independent samples [Validación del inventario de expectativas de autoeficacia académica en tres muestras secuenciales e independientes]. *Revista de Investigación Educativa*, (10), 1-30.
- Bauer, K., Nelson, M., Boutelle, K., & Neumark-Sztainer, D. (2011). Parental influences on adolescents' physical activity and sedentary behavior: longitudinal findings from Project EAT-II. *International Journal of Behavioral Nutrition and Physical Activity*, 8(12). <https://doi.org/10.1186/1479-5868-5-12>
- Blanco, H., Ornelas, M., Aguirre, J., & Guedea, J. (2012). Perceived self-efficacy in academic behaviors: differences between males and females [Eficacia percibida en conductas académicas: diferencias entre hombres y mujeres]. *Revista Mexicana de Investigación Educativa*, 17(53), 557-571
- Borzone, A. (2017). Self-efficacy and academic experiences with university students [Autoeficacia y vivencias académicas en estudiantes universitarios]. *Acta Colombiana de Psicología*, 20(1), 266-274.
- Cartagena, M. (2008). Relationship between Self-efficacy in School Performance and Study Habits in Academic Performance in Secondary Students [Relación entre la Autoeficacia en el Rendimiento Escolar y los Hábitos de Estudio en el Rendimiento Académico en Alumnos de Secundaria]. *Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, 6(3), 59-99.
- Cocca, A. (2013). *Analysis of the level of physical activity and factors related to psychophysical health in young people from Granada* [Análisis del nivel de actividad física y los factores relacionados con la salud psicofísica en jóvenes granadinos]. (Doctoral thesis, University of Granada, Faculty of Physical Activity and Sports Sciences. Granada, Spain).
- Contreras, O., Fernández, J., García, L., Palou, P., & Ponseti, J. (2010). Relationship in adolescents between physical self-concept and participating in sport [El autoconcepto físico y su relación con la práctica deportiva en estudiantes adolescentes]. *Revista de Psicología del Deporte*, 19(1), 23-39.

- Fernández, E., Sánchez, F., & Salinero, J. (2008). Validation and adaptation of the PACES scale of enjoyment of the practice of physical activity for Spanish adolescent girl [Validación y adaptación de la escala PACES de disfrute con la actividad física para adolescentes españolas]. *Psicothema*, 20(4), 890-895.
- García, J., & Caracul, J. (2007). Motivation towards sports practice in Mexican adolescents: Start, maintenance and abandonment [La motivación hacia la práctica deportiva en adolescentes mexicanos: Inicio, mantenimiento y abandono]. *Revista Iberoamericana de Psicología del Ejercicio y el Deporte*, 2(1), 41-60.
- García, M., & Llopis, R. (2010). *Democratic ideal and social welfare. Survey on sports habits in Spain 2010* [Ideal democrático y bienestar social. Encuesta sobre los hábitos deportivos en España 2010].
- Granda, J., Alemany, I., & Aguilar, N. (2018). Gender and its Relationship with the Practice of Physical Activity and Sport [Género y relación con la práctica de la actividad física y el deporte]. *Apunts: Educación física y deportes*, 2(132), 123-141. [http://dx.doi.org/10.5672/apunts.2014-0983.es.\(2018/2\).132.09](http://dx.doi.org/10.5672/apunts.2014-0983.es.(2018/2).132.09)
- Gråstén A. (2014). *Students' physical activity, physical education enjoyment, and motivational determinants through a three-year school-initiated program*. (Doctoral thesis, University of Jyväskylä, Faculty of Sport and Health Sciences. Jyväskylä, Finlandia).
- Hallal, P., Well, J., Reichert, F., Anselmi, L., & Victora, C. (2006). Early determinants of physical activity in adolescence: prospective birth cohort study. *The BMJ*, 332(7548). <https://dx.doi.org/10.1136%2Fbmj.38776.434560.7C>
- Hillman, C., Erickson, K., & Kramer, A. (2008). Be smart, exercise your heart: exercise effects on brain and cognition. *Nature Reviews Neuroscience*, 9(1), 58-65. <https://doi.org/10.1038/nrn2298>
- Instituto Nacional de Estadística e Informática (INEI). (2018). *Peru: Non Communicable and Communicable Diseases* [Perú: Enfermedades No Transmisibles y Transmisibles]. Retrieved from https://proyectos.inei.gob.pe/endes/2018/SALUD/ENFERMEDADES_ENDES_2018.pdf
- Instituto Peruano del Deporte (IPD). (2017). *National Sports Policy* [Política Nacional del Deporte]. Retrieved from <http://www.ipd.gob.pe/sistemasipd/recursos/formulario1/PNDV29.pdf>
- Isoma, M., Rial, A., & Vaquero, R. (2014). Motivations for practicing sports in federate and non-federate students [Motivaciones para la práctica deportiva en escolares federados y no federados]. *Retos. Nuevas tendencias en Educación Física, Deporte y Recreación*, (25), 80-84.
- Iturricastillo, A., & Yanci, J. (2016). The level of enjoyment with physical activity in adolescents: Physical education vs. physical activity extracurricular [El nivel de disfrute con la actividad física en adolescentes: Educación física vs. Actividad física extraescolar]. *Revista digital de Educación física*, (39), 30-47.
- Maureira, F. (2014). Relation of the practice of physical activity and the academic performance in students of Santiago of Chile [Relación de la práctica de Actividad Física y el Rendimiento Académico en Escolares de Santiago de Chile]. *Revista Ciencias de la Actividad Física*, 15(1), 43-50.
- Millán, J., & Pérez, A. (2012). Review study on gender stereotypes, adolescence and physical-sports practice: a bibliographic and bibliometric análisis [Estudio de revisión sobre estereotipos de género, adolescencia y la práctico físico-deportiva: un análisis bibliográfico y bibliométrico] 125-148. Coruña: Universidade da Coruña.
- Ministry of Education of Perú (MINEDU). (2018). *Strengthening Plan for Physical Education and School Sports* [Plan de Fortalecimiento de la Educación Física y el Deporte Escolar]. Retrieved from <http://www.dreim.gob.pe/dreim/portal/plan-de-fortalecimiento-de-la-educacion-fisica-y-el-deporte-escolar-2018-2/>
- Ministry of Education of Perú (MINEDU). (2019). *International PISA evaluation result* [Resultado de evaluación Internacional PISA]. Retrieved from http://umc.minedu.gob.pe/resultadospisa2018/?fbclid=IwAR3xi_zunXVwbGanfDAITFiiN9yc391ZhWu6RgWGpSHsUvab96i58Uz4eG8
- Moore, J., Yin, Z., Hanes J., Duda, J., Gutin, B., & Barbeau, P. (2009). Measuring Enjoyment of Physical Activity in Children: Validation of the Physical Activity Enjoyment Scale. *Journal of Applied Sport Psychology*, 21(1), 116-129. <https://doi.org/10.1080/10413200802593612>
- Moreno, J. (2006). Gender and attitudes toward the practice of physical activity and sport [Actitudes hacia la práctica físico-deportiva según el sexo del practicante]. *Revista Internacional de Ciencias del Deporte*, 2(3), 20-43. doi:10.5232/ricyde2006.00302
- Mousavi, R., & Dashi, A. (2016). The Effects of Physical Activity on Self-Esteem: A Comparative Study. *International Journal of High Risk Behaviors and Addiction*, 6(1). <http://dx.doi.org/10.5812/ijhrba.35955>
- Narváez, G., Posso, M., Guzmán, F., & Valencia, S. (2018). Academic self-efficacy: a determining factor for academic adjustment in university life [Autoeficacia académica: un factor determinante para el ajuste académico en la vida universitaria]. *Sathiri*, 13(2), 59-69. <https://doi.org/10.32645/13906925.755>

- Nicolás, A. (2017). Level of enjoyment in physical activity in teenagers from 12 to 13 years [El nivel de disfrute en la actividad física en adolescentes de 12 a 13 años]. *Revista Digital Educación Física y Deportes*, 21(224).
- World Health Organization (WHO). (2017). *10 facts about obesity* [10 datos sobre la obesidad]. Retrieved from <https://www.who.int/features/factfiles/obesity/es/>
- World Health Organization (WHO). (2017). *Physical activity* [Actividad física]. Retrieved from <http://www.who.int/dietphysicalactivity/pa/es/>
- World Health Organization (WHO). (2020). *Obesity and overweight* [Obesidad y sobrepeso].
- Ornelas, M., Blanco, H., Peinado, J., & Blanco, J. (2012). College Student's Perceived Self-efficacy in Academic Behaviors: A study of Physical Education Students [Autoeficacia percibida en conductas académicas en Universidades. Un estudio respecto de alumnos de educación física]. *Revista Mexicana de Investigación Educativa*, 17(54), 779-791.
- Oropeza, R., Ávalos, M., & Ferreyra, D. (2017). Comparison between academic performance, auto-efficacy and sports practice in university students [Comparación entre rendimiento académico, autoeficacia y práctica deportiva en universitarios]. *Revista Electrónica "Actualidades Investigativas en Educación"*, 17(1), 1-21. <https://doi.org/10.15517/aie.v17i1.27271>
- Pajares, F. (2002). Overview of social cognitive theory and self-efficacy. Atlanta: Emory University.
- Pajares, F., & Schunk, D. (2001). Self-Beliefs and School Success: Self-Efficacy, Self-Concept, and School Achievement. *International perspectives on individual differences*, 6, 239-265.
- Paulette, J. (2016). *Sport and women consequences on motivation, physical self-concept and human flourishing* [Deporte y mujer consecuencias sobre la motivación, el autoconcepto físico y el florecimiento humano]. (Doctoral thesis, Sports Research Center, University Miguel Hernández, Elche, España).
- Pavón, L., & Moreno, J. (2008). University students attitude to physical exercise and sport: gender differences [Actitud de los universitarios ante la práctica físico-deportiva: Diferencias por Géneros]. *Revista de Psicología del Deporte*, 17(1), 7-23.
- Piñeros, M., & Pardo, C. (2010). Physical activity in adolescents of five Colombian cities: Results of the Global Youth Health Survey [Actividad física en adolescentes de cinco ciudades colombianas: resultados de la Encuesta Mundial de Salud a Escolares]. *Revista de Salud Pública*, 12(6), 903-914.
- Ramón, J. (2013). Influence of the perception of self-efficacy on the usual levels of physical activity in adolescents [Influencia de la percepción de autoeficacia sobre los niveles habituales de realización de actividad física en adolescentes]. *Revista Digital Educación Física y Deportes*, 17(177).
- Reigal, R., Videra, A., & Gil, J. (2014). Physical exercise, general self-efficacy and life satisfaction in adolescence [Práctica física, autoeficacia general y satisfacción vital en la adolescencia]. *Revista Internacional de Medicina y Ciencias de la Actividad Física y del Deporte*, 14(55), 561-576.
- Reyes - Bossio, M., Raimundi, M. J., & Gómez Correa, L. (2012). Psychological Skills Training Program in High Performance Volleyball Players [Programa de Entrenamiento en Habilidades Psicológicas en jugadoras de voleibol de alto rendimiento]. *Cuadernos De Psicología Del Deporte*, 12(1), 9-16.
- Trujillo - Torrealva, D., & Reyes-Bossio, M. (2019). Mindfulness-based program for the reduction of precompetitive anxiety in martial arts athletes [Programa de mindfulness para la reducción de la ansiedad precompetitiva en deportistas de artes marciales]. *Retos*, 36(36), 418-426. <https://orcid.org/0000-0003-4655-1927>
- Yanci, J. (2016). Analysis of physical fitness, type of physical activity and academic performance in secondary school students [Análisis de la condición física, tipo de actividad física realizada y rendimiento académico en estudiantes de educación secundaria]. *Retos: Nuevas tendencias en educación Física, Deporte y Recreación*, (30), 64-69.
- Zurita, F., Castro, M., Rodríguez, S., Cofré, C., ... Muros, J. (2017). Physical activity, obesity and self-esteem in Chilean schoolchildren [Actividad física, obesidad y autoestima en escolares chilenos: Análisis mediante ecuaciones estructurales]. *Revista Médica de Chile*, 145(3). <https://doi.org/10.4067/S0034-98872017000300006>