

## The influence of exercise on adolescents *self-concept*

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*The present research sheds light on the importance of physical activity with regards to self-concept in Spanish adolescents and considers physical exercise, family and academic variables. An explanatory and relational study was conducted. A total of 2,134 teenagers aged between 15 and 18 years old participated in the study. A descriptive and relational analysis by means of the ANOVA Test was also undertaken. The results obtained are discussed here taking into account the relevant specialised literature. It was found that two thirds of the students sampled did exercise regularly, team sports being the most popular. These learners presented a high degree of self-concept, particularly for the social and family dimensions. It can also be concluded from this study that better physical condition and appearance are related to sport engagement, and that physical activity is related to improved self-image and to fostering social and family relationships.*

KEY WORDS: Adolescents, Physical activity, Self-concept, Family, Sport.

Traditionally, adolescence has been a critical period in the development of the human being. Various pieces of research have focused on the study of motivation and self-concept, and their importance during adolescence (Standage & Treasure, 2002; Standage, Duda & Ntoumanis, 2005). During adolescence the cognitive, physical and social spheres take shape (Carballo et al, 2013; Villarreal-González, Sánchez & Musitu, 2013). It is therefore of paramount importance that teenagers feel motivated and are educated in val-

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ues aimed at developing healthy habits once they are adults. In this sense, it is essential to adjust the factors with greatest influence over the teenager, such as family, teachers, sport instructors and peer groups. All of these can reinforce, support or suppress their patterns of conduct (Londoño, 2010; Ruiz-Juan & Ruiz-Ruisueño, 2011).

Although there are a number of theories regarding the mechanisms involved, it is certain that physical exercise and the types of feedback given by the teacher are appropriate channels to bring about improvement in the pubescent pupils' motivation (Moreno-Murcia, Zomeño, Marín, Ruiz & Cervelló, 2013). Doing physical activity not only has a positive influence on health, but also has an effect on other behavioural variables that are of great importance (especially at this stage), such as academic performance, self-concept, motivation, and the consumption of alcohol, tobacco and drugs (Paz-Navarro, Roldán & González, 2009).

Similarly, González & Portolés (2014) state that doing physical exercise has a positive effect on several of the variables mentioned above, as well as on the reinforcement of motivation, especially oriented to the attainment of goals. These variables contribute towards shaping the teenager's personality. One of the key parts of this personality is self-concept. This is considered crucial to the individual's development (Esnaola, Goñi & Madariaga, 2008), since it is related to various factors such as life habits, eating irregularities, physical activity, progress in life, perception of difficulty, performance, sex and age (Contreras, Fernández, García, Palou, & Ponseti, 2010; Soriano, Sampascual & Navas, 2010).

Namely, the physical sphere is especially important, as the individual's perception of himself/herself will have an effect on health habits such as, engaging in exercise and positive nutrition and opposing the consumption of drugs (Esnaola, Rodríguez & Goñi, 2011). Several studies have demonstrated a relationship between self-concept, physical activity and psychological well-being (Goñi & Infante, 2010). Owing to this, it is very important that the individual engages in sport throughout their childhood which, besides having a great deal of implicit positive aspects, will effectively impact on physical self-concept and its various dimensions such as physical ability, physical condition, strength, attractiveness and psychological well-being, all of which are vital for the human being's development (Reigal, Vídera, Parra, & Juárez, 2012).

The dimensions of self-concept have been widely studied, for instance in relation to violent or aggressive behavior (Jiménez, Musitu, Murgui, & Lehalle, 2007; Cava, Murgui & Musitu, 2008; Jiménez, Musitu, Ramos & Murgui, 2009), academic performance (Musitu & García, 2004), communi-

cation and family influence (Estevez, Herrero, Martínez & Musitu, 2006; Jiménez et al., 2007) and physical activity (Goñi & Infante, 2010; Esnaola et al., 2011). It is necessary to pay as much attention as possible to these variables to facilitate positive development of the individual during their adolescence. In this respect, it must be remarked that, as teachers, we feel it is our duty to investigate the way in which exercise affects the various dimensions (social, emotional and physical) during the developmental years prior to adult age.

Thus, the general objective of this research was to carry out an analysis of self-concept in Spanish teenagers considering personal, physical/sport and family variables. The aims were a) to determine self-concept and its various dimensions in adolescents; b) to examine the existing relationships between self-concept and its personal (generic and academic), physical/sport (engaging in physical activity) and family dimensions, as well as the overall relationship between all the variables considered.

This paper is believed to yield new data about the relationships between physical activity and the various dimensions of self-concept (academic, social, emotional, family and physical) during adolescence and further sheds light on the possible influence of family relationships. The information gathered corresponds to a fairly underprivileged province where no projects of this kind have been implemented in the last decade to the best of our knowledge. This therefore constitutes an original investigation in the field.

## **Material and Methods**

This section gives an account of the sample and the instruments used to conduct this descriptive and cross-sectional study.

### **PARTICIPANTS**

A total of 2,134 Spanish adolescents participated. The sample was 49.8% male and 50.2% female and aged between 15 and 17 years old ( $M=15.93\pm 0.85$  years old). Participants attended 20 educational institutions in the province of Granada (Spain). This sample is believed to be representative of teenagers from Granada ( $n=18,930$ ), assuming a sampling error of 0.02 and a 95% reliability level. The required sample was 2,231 students. In order to select the participants, random conglomerate sampling was used following the procedures of Santos, Muñoz, Juez & Cortiñas (2003). Data collected from 68 questionnaires were invalid and so were excluded. Moreover, 283 adolescents did not hand in their informed consent forms and so were also excluded from the research.

## VARIABLES AND INSTRUMENTS

The following variables and instruments were used in the study:

Gender (male or female)

**Physical exercise engagement.** Participants were asked if they engaged in at least three hours a week of exercise outside of school time (“Yes” option) or not (“No” option). Data were gathered by means of the Ad-Hoc record sheet and the student’s self-record sheet.

Physical activity and level feature. Physical activity was categorized into five different groups according to the frequency of activity types reported by participants and based on previous research (Rodríguez, López, López & García, 2013; González & Portolés, 2014), they were classified as: a) *No activity*; b) *Team sports* (football, volleyball, handball,...); c) *Individual sports* (tennis, swimming, cycling, ...); d) *Gym activities* (weight training, (step) aerobics,...) and e) *Others*, which includes all other sport types or varieties. Whether the student was a member of a sports club/team was considered too. These data were also gathered through the Ad-Hoc record sheet and the self-record sheet, where they indicated if they had a sports club/team membership card that was valid for the present year.

Self-concept, measured using the “Autoconcept - Form 5 (AF-5)” questionnaire by García & Musitu (1999). The AF-5 measures the dimensions of academic self-concept (*A-SC*), social self-concept (*S-SC*), emotional self-concept (*E-SC*), family self-oncept (*F-SC*) and physical self-concept (*P-SC*). This test includes 30 questions, which are assessed using a five-point Likert scale ranging from never (1) to always (5); the addition of the following items is considered for each dimension (*A-SC*: items 1,6,11,16,21,26; *S-SC*: items 2,7,12,17,22,27; *E-SC*: items 3,8,13,18,23,28; *F-SC*: items 4,9,14,19,24,29; *P-SC*: items 5,10,15,20,25,30). In the study of García & Musitu (1999) a reliability of  $\alpha=.810$  was determined, which is a value almost identical to the one in our research (Cronbach Alpha  $\alpha=.833$ ). When separated by dimensions (*A-SC*:  $\alpha=.773$ ; *S-SC*:  $\alpha=.702$ ; *E-SC*:  $\alpha=.697$ ; *F-SC*:  $\alpha=.778$ ; *P-SC*:  $\alpha=.721$ ), the values in all the groups were satisfactory as set out by Estévez, Martínez & Musitu (2006) or Cava et al., (2008).

**Academic performance.** The Ad-Hoc record sheet and the student’s self-record sheet recorded whether students had repeated any of their previous year courses due to poor grades (excluding absences resulting from long illness).

Family Functionality Scale (FFS). Extracted from the original version “Family APGAR”, by Smilkstein, Ashworth & Montano (1982) and adapted to Spanish by Bellon, Luna & Lardelli (1996). Participants respond on a three-point Likert scale (0= hardly ever, 1= sometimes and 2= almost always) to five positively-worded items. From this family functionality was labelled as: severe dysfunction (*SD*), from 0 to 3; moderate dysfunction (*MD*), from 4 to 6; and family functionality (*FF*), over 6. The internal consistency (Cronbach Apha) of the questionnaire in its original versión is  $\alpha=.750$  (Smilkstein et al., 1982). In its adaptation to Spanish, Bellon et al., (1996) obtained  $\alpha=.840$ , and more recently Sánchez-Sosa, Villarreal-González & Musitu (2010) reported an internal consistency of  $\alpha=.790$ . Internal consistency for this study was  $\alpha=.720$ .

## Procedure

Educational institutions in the province of Granada were contacted through the Faculty of Education Sciences at the University of Granada and the Local Education Authority Office and

were invited to take part. The headteacher of each high school was fully informed about the nature of our research and the participation of their students was requested. Parents or guardians of the students were then provided with study information and consent forms. The anonymity of the information gathered was ensured at all times, and it was made clear that data would be used only for scientific purposes. Data was collected by trained members of the research team during school hours in the student's regular classrooms. No problems with data collection were reported.

Following completion, headteachers and teachers were thanked for their help and were informed on plans regarding the future use of the data collected. This study complied with the ethical rules of the Research Committee and Declaration of Helsinki of 1975.

## DATA ANALYSIS

The statistical program SPSS 20.0 was used to analyze the data. Descriptive statistics are provided using means and frequencies. Comparative analysis was conducted using ANOVA and contingency tables.

## Results

Data were collected from 2,134 adolescents. As shown in Table I, engagement in physical activity did not differ greatly according to gender. 67.1% reported engaging in more than three hours a week of exercise outside of school time, although only 21.9% of them said that they were associated members. With respect to the most popular types of exercise engaged in, 27.2% reported team sports, while 21.2% reported 'others' such as hiking. On the other hand, gym activities were the least popular sport, being reported by only 4.3% of respondents.

35.1% of students reported having to repeat an academic course due to initial failure versus 64.9% who had not. Moreover, Table I shows that 74.5% of pupils reported having normal family functionality, while the remaining 25.5% reported some dysfunction. Finally, a mean of 3.62 was reported for self-concept (AF-5). Family and social dimensions emerged as more important than the academic, emotional and physical dimensions.

Statistically significant differences ( $p \leq .05^{**}$ ) were found for the academic, emotional and physical dimensions of self-concept (AF-5). As shown in Table II, girls had higher academic self-concept than boys whereas boys had higher emotional and physical self-concept. No other significant differences were found.

As shown in Table III, membership to a sports team/club had a significant influence on the family and physical dimensions of self-concept ( $p \leq .05^{**}$ ) with students who reported being a team/club member also reporting higher family self-concept ( $M=4.12$ ) and higher physical self-concept ( $M=3.48$ ) relative to those who were not members. No other significant associations with team/club membership were found (Table III).

Anova examined differences in the types of physical activities reported. the only statistically significant relationship ( $p \leq .05^{**}$ ) identified was with family self-concept, with participants reporting gym activities and team sports also demonstrating higher family self-concept (see Table IV).

Finally, no significant associations were found between the academic or family dimensions of self-concept and whether the student reported having repeated a previous course. In contrast, significant differences were identified between responses to the FFS and all dimen-

TABLE I  
Descriptive the Variables

<b>Gender</b>			
	<b>Male</b>		49,8% (n=1.062)
	<b>Female</b>		50,2% (n=1.072)
<b>Doing Physical Exercise</b>		<b>In a Sport Federation Federated</b>	
<b>Yes</b>	67,1% (n=1.431)	<b>Yes</b>	21,9% (n=467)
<b>No</b>	32,9% (n= 703)	<b>No</b>	78,1% (n= 1.667)
<b>Physical Activity</b>			
<b>No</b>	32,9% (n= 703)	<b>Gym activities</b>	4,3% (n= 91)
<b>Team Sports</b>	27,2% (n= 581)	<b>Others</b>	21,2% (n= 452)
<b>Individual Sports</b>	14,4% (n= 307)		
<b>Academic Performance</b>			
	<b>Repeated</b>		35,1% (n=749)
	<b>Not Repeated</b>		64,9% (n=1.385)
<b>APGAR</b>			
	<b>Severe Dysfunction</b>		5,3% (n=113)
	<b>Moderate Dysfunction</b>		20,2% (n=432)
	<b>Family Functionality</b>		74,5% (n=1589)
	<b>Self-concept (AF-5) (M=3,62; D.S=.457)</b>		M= 3.36 (D.S=.793)
	<b>Academic Self-Concept</b>		M= 3.94 (D.S=.695)
	<b>Social Self-Concept</b>		M= 3.32 (D.S=.758)
	<b>Emotional Self-Concept</b>		M= 4.09 (D.S=.788)
	<b>Family Self-Concept</b>		M= 3.40 (D.S=.782)
	<b>Physical Self-Concept</b>		

TABLE II  
Dimension Self-Concept with Gender

<b>Dimension</b>	<b>Self-Concept</b>	<b>M</b>	<b>S.D.</b>	<b>F</b>	<b>X<sup>2</sup></b>
AA	Male	3.30	,730	15.674	p= .000**
	Female	3.42	,742		
AS	Male	3.95	,701	.252	p=.616
	Female	3.93	,689		
AE	Male	3.46	,753	74.632	p= .000**
	Female	3.18	,737		
AFM	Male	4.11	,771	1.254	p=.263
	Female	4.07	,805		
AF	Male	3.59	,763	127.040	p= .000**
	Female	3.21	,756		

sions of self-concept apart from the emotional dimension, as can be seen in Table V. As could be expected, participants whose responses to the FFS were labelled as 'family functionality' had higher means for all dimensions of self-concept apart from emotion relative to those labelled as demonstrating, 'moderate dysfunction' and 'severe dysfunction' (severe dysfunction being associated with the lowest self-concept for all dimensions).

TABLE III  
Physical Exercise and Federated with AF-5

Physical Exercise	M	S.D.	F	X <sup>2</sup>	Federated	M	S.D.	F	X <sup>2</sup>
AA Yes Physical Exercise	3.35	.730	.177	p=.674	Yes	3.32	.758	1.268	p=.260
AA No Physical Exercise	3.37	.757			No	3.37	.733		
AS Yes Physical Exercise	3.96	.691	2.802	p=.094	Yes	3.97	.716	.942	p=.332
AS No Physical Exercise	3.91	.703			No	3.93	.689		
AE Yes Physical Exercise	3.32	.749	.029	p=.866	Yes	3.35	.730	1.166	p=.280
AE No Physical Exercise	3.32	.775			No	3.31	.765		
AFM Yes Physical Exercise	4.12	.788	5.868	p=.016**	Yes	4.13	.788	1.305	p=.253
AFM No Physical Exercise	4.03	.786			No	4.08	.788		
AF Yes Physical Exercise	3.41	.788	.946	p=.331	Yes	3.48	.787	6.852	p=.009**
AF No Physical Exercise	3.38	.768			No	3.38	.779		

TABLE IV  
Varieties Sports Relative to AF5

AF-5	Varieties Sports	M	S.D.	F	X <sup>2</sup>
<b>Academic Self-Concept</b>	Individual sports	3.35	.775	.088	p=.986
	Team Sports	3.35	.740		
	Gym Activities	3.38	.643		
	Other	3.36	.702		
	No Activity	3.37	.757		
<b>Social Self-Concept</b>	Individual Sports	3.95	.690	1.259	p=.284
	Team Sports	3.98	.679		
	Gym Activities	3.86	.702		
	Other	3.96	.705		
	No Activity	3.91	.703		
<b>Emotional Self-Concept</b>	Individual sports	3.33	.735	.338	p=.853
	Team Sports	3.34	.730		
	Gym Activities	3.34	.710		
	Other	3.29	.791		
	No Activity	3.32	.775		
<b>Family Self-Concept</b>	Individual sports	4.09	.845	3.937	p=.003**
	Team Sports	4.17	.751		
	Gym Activities	4.27	.681		
	Other	4.04	.807		
	No Activity	4.03	.786		
<b>Physical Self-Concept</b>	Individual sports	3.34	.759	.992	p=.411
	Team Sports	3.44	.811		
	Gym Activities	3.40	.693		
	Other	3.42	.796		
	No Activity	3.38	.768		

## Discussion and Conclusions

The present study identified two thirds of adolescents within this population to be regularly engaging in more than three hours a week of exercise outside school time. Only a small proportion of adolescents engage in activ-

TABLE V  
Academic Performance and APGAR With AF5

AF-5	Academic Performance	M	S.D.	F	X <sup>2</sup>	APGAR	M	S.D.	F	X <sup>2</sup>
AA	Repeated	3.34	.770	.668	p=.414	D.S	2.93	.805	88.245	p=.000**
	Not Repeated	3.37	.721			D.M	3.03	.707		
						FF	3.48	.704		
AS	Repeated	3.93	.705	.284	p=.594	D.S	3.55	.846	28.387	p=.000**
	Not Repeated	3.95	.690			D.M	3.84	.714		
						FF	4.00	.666		
AE	Repeated	3.34	.768	.741	p=.389	D.S	3.16	.830	2.764	p=.063
	Not Repeated	3.31	.752			D.M	3.35	.741		
						FF	3.33	.756		
AFM	Repeated	4.08	.797	.202	p=.653	D.S	2.86	.848	341.13	p=.000**
	Not Repeated	4.10	.783			D.M	3.65	.759		
						FF	4.30	.652		
AF	Repeated	3.41	.802	.183	p=.669	D.S	2.83	.865	58.892	p=.000**
	Not Repeated	3.39	.771			D.M	3.20	.774		
						FF	3.49	.750		

ity as a member of a sports team or club. Ruiz, García & Hernández (2001) in a study with pupils from Almería, and Abarca-Sos, Zaragoza, Generelo & Julián (2010), similarly found that two thirds of their sample achieved the World Health Organization (WHO) recommendations for physical activity. In contrast, González & Portolés (2014) found a much smaller proportion of their sample engaged in exercise on at least three days each week.

The higher engagement with physical activity found in the present sample could be because of two important factors. Firstly, sport opportunities offered by city councils have increased over the last 15 to 20 years. New facilities such as indoor swimming pools and pavilions have now been built to encourage more physical activity and sport on cold and rainy days. Secondly, a large proportion of the present sample lives on the coast and thus enjoys a mild climate all year round.

The most popular types of physical exercise reported by the present sample were team sports, which were reported by approximately one quarter of respondents. These results corroborate early findings obtained by Luego (2007), who identified handball and football as the most popular.

It is possible that the large impact of football, a sport played nationwide and worldwide, may partly explain these findings (Pedrosa, García-Cueto, Suárez-Álvarez & Pérez, 2012; López-Alameda, Alonso-Benavente, López-Ruiz., Miragaya-López, Alonso-del Olmo & González-Herranz, 2012).

The present findings regarding repetition of prior year academic courses due to underperformance are also comparable to the extant literature. One



third of students surveyed here confirmed having to repeat classes due to academic underperformance. This is similar to that reported by Barca, Peralbo, Porto, Marcos & Brenlla (2011), with students from Galicia (Spain). With a view to explaining these results work by Córdoba, García, Luengo, Vizuete & Feu (2012) must be considered. These authors attributed low academic performance to variables such as absenteeism, time devoted to studying, time devoted to reading, school atmosphere and school satisfaction amongst others. Calero, Choi & Waisgrais (2010) reported a 14.6% academic course failure rate in Asturias (Spain) which is an autonomous community with the best academic results in the whole country.

A comparative analysis of European data by Pérez-Espàrrells & Morales (2012), identified the countries with the highest proportion of students completing secondary education to be United Kingdom (100%), Finland (91%) and France (88%) with almost total completion at population level. These countries could therefore provide a model from which Spain could establish a more effective and inclusive educational system and reach more satisfactory academic levels (De Jorge & González, 2010; Arnáiz, 2012; García & López, 2012).

Also of importance is the family atmosphere, which was reported to be positive by the majority of individuals in the present study. Inappropriate behavior or family dysfunction was disclosed by only one quarter of the adolescents sampled. The importance of this is indicated in a study conducted by Revuelta & Esnaola (2011), which identified a large relationship between a good family atmosphere and engagement of the family in physical activity or sport activities.

The present sample also showed appropriate levels of global self-concept, with the family and social dimensions being generally higher than the other dimensions suggesting that major importance is given to family relationships and peer groups during adolescence. A developed global self-concept fosters the attainment of good psychological adjustment, personal competence and decreased behavioral problems (Carmona, García & Suárez, 2010; Fuentes, García, Gracia & Lila, 2011).

Gender differences regarding the AF-5 dimensions were only found for the academic, emotional and physical dimensions, with no gender associations being identified for the family or social concepts. Equivocal findings regarding gender and academic self-concept exist in the extant literature. Whilst some studies found females to have a higher academic self-concept (Padilla, García & Suárez, 2010; Malo, Bataller, Casas, Casas, Gras & González, 2011), similarly to the present study, other studies have reported lower scores for girls (Backes, 1994; Gordillo, Vicente, Sánchez, Gómez &

Gordillo, 2011). These differences may be attributable to differences within specific academic areas being masked by the global assessment of academic self-concept. Future studies may therefore wish to divide the academic dimension into several competencies (Stevenson & Newman, 1986).

Our finding of higher emotional and physical self-concept in boys over girls is supported by a number of previous studies (e.g., Padilla et al., 2010 and Veliz & Apodaca, 2012 for emotional and Pastor, Balaguer & Benavides, 2002; Ruíz de Azúa, Rodríguez & Goñi, 2005; Carmona et al., 2010; Malo et al., 2011; Gordillo et al., 2011 for physical). On the contrary, there are very few pieces of research demonstrating the opposite, that is to say, girls having higher physical self-concept than boys (López-Justicia & Pichardo, 2003). It is possible that girls demonstrate lower physical self-concept because they are more critical of their image in adolescence than boys, giving physical appearance more importance. The earlier maturation of girls relative to boys may also be an important factor to consider.

The present findings replicate earlier evidence that physical activity is positively correlated with physical appearance (e.g., Hellín, 2007; Candel, Olmedilla, & Blas, 2008; Moreno-Murcia, Moreno, & Cervelló, 2007; Reigal & Videra, 2011). Further, in the present study adolescents who were members of a sports club/team more positively rated their physical condition than those who were not members. Members of sports clubs/teams may devote more time to exercise and so have a more positive physical appearance.

In the family context, adolescents who engage in physical activity report more positive family experiences. These results are similar to those obtained by Revuelta and Esnaola (2011). Weiss, Smith, and Theeboom (1996) and later, Roberts (2001) have concluded that parents who play and engage in exercise with their children can introduce them to different stimuli, increase their family values and, through spending more time with their children, improve their family ties and positive perceptions of the parents held by their adolescent children.

Moreover, the participants who played team sports reported the most positive scores for family experience. This may be due to the greater unity existing between families born out of going to events and matches organized by the clubs, where they can share many hours over a season (Gutierrez & Escartí, 2006; Matilla, 2013).

Finally, it must be highlighted that those children who reported enjoying a positive family atmosphere also presented with higher self-concept than those with a severe family atmosphere. Studies conducted by Santos (2005), Borine (2009), Padilla and Suárez (2010), and Nunes, Marcerla, Ferrari, and Marín (2012) provide some explanations for this. They show that family is very much related to the development of personality and self-concept, and that a good

family unit may cause a decrease in negligence, aggressiveness and disinterest, and an increase in intrepidity in men, and an increase in sensuality, commitment and affection in women, and also a decrease in insecurity in women.

The present findings greatly support the importance of continuing the investigation of healthy habits and personality in adolescents. Future study should further explore the key stages at which harmful behaviors affecting young people begin and the extent to which they can influence development at later life stages. There is a clear need to determine the contributing factors as well as to elaborate programs designed to decrease maladaptive family and academic conducts at earlier stages.

## REFERENCES

- Abarca-Sos, A., Zaragoza, J., Generelo, E., & Julián, J.A. (2010). Comportamientos sedentarios y patrones de actividad física en adolescentes. *Revista Internacional de Medicina y Ciencias de la Actividad Física y el Deporte*, 10(39), 410-427.
- Arnáiz, P. (2012). Escuelas eficaces e inclusivas: cómo favorecer su desarrollo. *Educatio Siglo XXI*, 30(1), 25-44.
- Backes, J.S. (1994). Bridging the Gender Gap: Self-Concept in the Middle Grades. *Schools in the middle*, 3, 19-23.
- Barca, A., Peralbo, M., Porto, A., Marcos, J.L., & Brenlla, J.C. (2011). Metas académicas del alumnado de Educación Secundaria Obligatoria (ESO) y Bachillerato con alto y bajo rendimiento escolar. *Revista de Educación*, 354, 341-368.
- Bellón, J., Delgado, A., Luna, J., & Lardelli, P. (1996). Validez y fiabilidad del cuestionario de función familiar Apgar-Familiar. *Revista de Atención Primaria*, 186, 289-296.
- Borine, B. (2009). *Escala de Depressão (EDEP) e Bateria fatorial da personalidade: Evidências de Validade*. Tesis de Maestría: Universidade São Francisco
- Calero, J., Choi, A., & Waisgrais, S. (2010). Determinantes del riesgo de fracaso escolar en España: una aproximación a través de un análisis logístico multinivel aplicado a PISA-2006. *Revista de Educación*, número extraordinario, 225-256.
- Candel, N., Olmedilla, A., & Blas, A. (2008). Relaciones entre la práctica de actividad física y el autoconcepto, la ansiedad y la depresión en chicas adolescentes. *Cuadernos de Psicología del Deporte*, 8(1), 61-77.
- Carballo, J.L., Marín, M., Jáuregui, V., García, G., Espada, J., Orgilés, M., & Piqueras, J.A. (2013). Consumo excesivo de alcohol y rendimiento cognitivo en estudiantes de secundaria de la provincia de Alicante. *Health and addictions. Salud y Drogas*, 13(2), 157-163.
- Cava, M.J., Murgui, S., & Musitu, G. (2008). Diferencias en factores de protección del consumo de sustancias en la adolescencia temprana y media. *Psicothema*, 20(3), 389-395.
- Contreras, O. R., Fernández, J. G., García, L. M., Palou, P., & Ponseti, J. (2010). El autoconcepto físico y su relación con la práctica deportiva en estudiantes adolescentes. *Revista de Psicología del Deporte*, 19(1), 22-39.
- Córdoba, L.G., García, V., Luengo, L.M., Vizuete, M., & Feu, S. (2012). Cómo influyen la trayectoria académica y los hábitos relacionados con el entorno escolar en el rendimiento académico en la asignatura de educación física. *Retos. Nuevas tendencias en Educación Física, Deporte y Recreación*, 21, 9-13.

- De Jorge, J., & González, D. S. (2010). Determinantes de la eficiencia educativa en la Unión Europea. *Hacienda pública española*, 193, 131-155.
- Esnaola, I., Goñi, A., & Madariaga, J. M. (2008). El autoconcepto: perspectivas de investigación. *Revista de Psicodidáctica*, 13(1), 179-194. doi: <http://dx.doi.org/10.1387/RevPsicodidact.231>
- Esnaola, I., Rodríguez, A., & Goñi, E. (2011). Propiedades psicométricas del cuestionario de Autoconcepto AF5. *Anales de Psicología*, 27(1), 109-117.
- Estévez, E., Herrero, J., Martínez, B., & Musitu, G. (2006). Aggressive and non-aggressive rejected: an analysis of their differences. *Psychology in the Schools*, 43, 387-400.
- Estévez, E., Martínez, B., & Musitu, G. (2006). La autoestima en adolescentes agresores y víctimas en la escuela: la perspectiva multidimensional. *Intervención Psicosocial*, 15, 223-232.
- Fuentes, M., García, J., Gracia, E., & Lila, M. (2011). Autoconcepto y ajuste psicosocial en la adolescencia. *Psicothema*, 23(1), 7-12.
- García, F., & Musitu, G. (1999). *AF5: Autoconcepto Forma 5*. Madrid: TEA Ediciones.
- García, M., & López, R. (2012). Explorando, desde una perspectiva inclusiva, el uso de las TIC para atender a la diversidad. *Revista de currículum y formación del profesorado*, 16(1), 277-293.
- González, J., & Portolés, A. (2014). Actividad física extraescolar: relaciones con la motivación educativa, rendimiento académico y conductas asociadas a la salud. *Revista Iberoamericana de Psicología del Ejercicio y el Deporte*, 9(1), 51-65.
- Goñi, E., & Infante, G. (2010). Actividad físico-deportiva, autoconcepto físico y satisfacción con la vida. *European Journal of Education and Psychology*, 3(2), 199-208. doi: 10.1989/ejep.v3i2.60
- Gordillo, M., Vicente, F., Sánchez, S., Gómez, M., & Gordillo, T. (2011). Diferencias en el autoconcepto de adolescentes extremeños en función del género, el nivel socioeconómico-cultural y la población de pertenencia. *Campo Abierto*, 30(2), 65-67.
- Gutiérrez, M., & Escartí, A. (2006). Influencia de padres y profesores sobre las orientaciones de meta de los adolescentes y su motivación intrínseca en Educación Física. *Revista de Psicología del Deporte*, 15(1), 23-35.
- Hellín, M.<sup>a</sup> G. (2007). *Motivación, autoconcepto físico, disciplina y orientación disposicional en estudiantes de Educación Física*. Tesis doctoral: Universidad de Murcia.
- Jiménez, T.I., Musitu, G., Murgui, S., & Lehalle, H. (2007). Le role de la communication familiale et de l'estime de soi dans la delinquance adolescente. *Revue Internationale de Psychologie Sociale*, 20(2), 5-26.
- Jiménez, T.I., Musitu, G., Ramos, M.J., & Murgui, S. (2009). Community involvement and victimization at school: An analysis through family, personal and social adjustment. *Journal of Community Psychology*, 37(8), 959-974. doi: 10.1002/jcop.20342
- Londoño, C. (2010). Resistencia de la presión de grupo, creencias acerca del consumo y consumo de alcohol en universitarios. *Anales de Psicología*, 26(1), 27-33. doi: <http://dx.doi.org/10.1016/j.recot.2012.05.004>
- López-Alameda, S., Alonso-Benavente, A., López-Ruiz De Salazar, A., Miragaya-López, P., Alonso-Del Olmo, J. A., & González-Herranz, P. (2012). Enfermedad de Sinding-Larsen-Johansson: análisis de factores asociados. *Revista Española de Cirugía Ortopédica y Traumatología*, 56(5), 354-360.
- López-Justicia, M. D., & Pichardo, M. C. (2003). Diferencias de género en el autoconcepto de jóvenes afectados de baja visión. *Revista de Educación*, 330, 373-384.

- Luengo, C. (2007). Actividad físico-deportiva extraescolar en alumnos de primaria. *Revista Internacional de Medicina y Ciencias de la Actividad Física y el Deporte*, 7(27), 174-184.
- Malo, S., Bataller, S., Casas, F., Gras, M. E., & González, M. (2011). Análisis psicométrico de la escala multidimensional de autoconcepto AF5 en una muestra de adolescentes y adultos de Cataluña. *Psicothema*, 2011, 23(4), 871-878.
- Matilla, C. (2013). *Percepción de los padres acerca de la influencia de las actividades físicas y deportivas en horario no lectivo sobre el rendimiento académico de los escolares*. Trabajo Fin de Grado: Universidad de Valladolid.
- Moreno-Murcia, J. A., Moreno, R., & Cervelló, E. (2007). El autoconcepto físico como predictor de la intención de ser físicamente activo. *Revista de Psicología y Salud*, 17(2), 261-267.
- Moreno-Murcia, J.A., Zomeño, T., Marín, L.M., Ruiz, L.M., & Cervelló, E. (2013). Percepción de la utilidad e importancia de la educación física según la motivación generada por el docente. *Revista de Educación*, 362, 380-401. doi: 10-4438/1988-592X-RE-2011-362-165
- Musitu, G., & García, F. (2004). Consecuencias de la socialización familiar en la cultura española. *Psicothema*, 16, 288-293.
- Nunes, M., Marcela, D., Ferrari, H., & Marín, F. (2012). Soporte social, familiar y autoconcepto: relación entre los constructos. *Psicología desde el Caribe*, 29(1), 1-18.
- Padilla, M.T., & Suárez, M. (2010). Influence of gender, educational attainment and family environment on the educational aspirations of secondary school students. *Educational Review*, 63(3), 401-426.
- Padilla, M.T., García, S., & Suárez, M. (2010). Diferencias de género en el autoconcepto general y académicos de estudiantes de 4º de E.S.O. *Revista de Educación*, 352, 495-515.
- Pastor, Y., Balaguer, I., & Benavides, G. (2002). Influencia de los dominios del autoconcepto en la autoestima de los adolescentes. *Revista de Psicología Aplicada*, 12 (3), 97-112.
- Paz-Navarro, L. D. S., Roldán, R., & González, M. (2009). Funcionamiento familiar de alumnos con bajo rendimiento escolar y su comparación con un grupo de rendimiento promedio en una preparatoria de la universidad de Guadalajara. *Revista de Educación y Desarrollo*, 10, 5-15.
- Pedrosa, I., García-Cueto, E., Suárez-Álvarez, J., & Pérez, B. (2012). Adaptación española de una escala de apoyo social percibido para deportistas. *Psicothema*, 24(3), 470-476.
- Pérez-Esparrells, C., & Morales, S. (2012). El fracaso escolar en España: un análisis por Comunidades Autónomas. *Revista de Estudios Regionales*, 94, 39-69.
- Reigal, E., & Videra, A. (2011). Frecuencia de práctica física y autoconcepto físico multidimensional en la adolescencia. *Apunts de educación física y deportes*, 105, 28-34. doi: 10.5672/apunts.2014-0983.es.(2011/3).105.03
- Reigal, R., Videra, A., Parra, J.L., & Juárez, R. (2012). Actividad físico deportiva, autoconcepto físico y bienestar psicológico en la adolescencia. *Retos. Nuevas tendencias en educación física, deporte y recreación*, 22, 19-23.
- Reuelta, L., & Esnaola, I. (2011). Clima familiar deportivo y autoconcepto físico en la adolescencia. *European Journal of Education and Psychology*, 4(1), 19-31.
- Roberts, G.C. (2001). *Understanding the dynamics of motivation in physical activity: The influence of achievement goals on motivational processes*. En G.C. Roberts (Ed.), *Advances in Motivation in Sport and Exercise* (pp. 1-50). Champaign, IL: Human Kinetics.
- Rodríguez, P.L, López, F.J., López, P.A., & García, E. (2013). Práctica de ejercicio físico y su relación con el consumo de tabaco en adolescentes. Diferencias entre géneros. *Adiciones*, 25(1), 29-36.

- Ruiz de Azúa, S., Rodríguez, A., & Goñi, A. (2005). Variables socioculturales en la construcción del autoconcepto físico. *Cultura y Educación*, 17 (3), 225-238.
- Ruiz, F., García, M. E., & Hernández, A. I. (2001). Comportamientos de actividades físico-deportivas de tiempo libre del alumnado almeriense de enseñanza secundaria postobligatoria. *Revista motricidad*, 7, 113- 143.
- Ruiz-Juan, F., & Ruiz-Risueño, J. (2011). Variables predictoras de consumo de alcohol entre adolescentes españoles. *Anales de Psicología*, 27(2), 350-359.
- Sánchez-Sosa, J.C., Villarreal-González M., & Musitu G. (2010). *Psicología y Desórdenes Alimenticios. Un modelo de Campo Psicossocial*. Monterrey: Universidad Autónoma de Nuevo León-Universidad Pablo de Olavide de Sevilla.
- Santos, J., Muñoz, P. Juez, J., & Cortiñas, A. (2003). *Diseño de Encuestas para estudios de mercado. Técnicas de muestreo y análisis multivariante*. Madrid: Editorial Ramón Areces. doi: <http://dx.doi.org/10.5944/empiria.8.2004.986>
- Santos, T. M. (2005). *Evidência de validade entre percepção de suporte familiar e traços de personalidade*. Tesis de maestría: Itatiba: Universidade São Francisco.
- Smilkstein, G., Ashworth, C., & Montano, D. (1982). Validity and reliability of the Family APGAR as a test of family function. *Journal of Family Practice*, 15, 303-311.
- Soriano, J. A., Sampascual, G., & Navas, L. (2010). El autoconcepto físico en la clase de Educación Física: un análisis centrado en el sexo. *International Journal of Developmental and Educational Psychology*. INFAD. *Revista de Psicología*, 3(1), 419-425. doi: 10.6018/analesps.29.1.132401
- Standage, M., Duda, J.L., & Ntoumanis, N. (2005). A test of selfdetermination theory in school physical education. *British Journal of Educational Psychology*, 75, 411-433. doi: 0.1348/000709904X22359
- Standage, M., & Treasure, D. C. (2002). Relationship among achievement goal orientations and multidimensional situational motivation in physical education. *British Journal of Educational Psychology*, 72(1), 87-103.
- Stevenson, H.W., & Newman, R.S. (1986). Long-term prediction of achievement and attitudes in mathematics and reading. *Child Development*, 57, 646-659.
- Veliz, A., & Apodaca, P. (2012). Niveles de autoconcepto, autoeficacia académica y bienestar psicológico en estudiantes universitarios de la ciudad de Temuco. *Salud y Sociedad*, 3(2), 131-150.
- Villarreal-González, M.E., Sánchez, J.C., & Musitu, G. (2013). Análisis psicossocial del consumo de alcohol en adolescentes mexicanos. *Universitas Psychologica*, 12(3), 857-873. doi:10.11144/Javeriana.UPSY12-3.apca
- Weiss, M.R., Smith, A.L., & Theeboom, M. (1996). "That's what friends are for:" Children's and teenagers' perceptions of peer relationships in the sport domain. *Journal of Sport and Exercise Psychology*, 18, 347-379.