

# Practice of physical activity, prosocial behavior and self-concept in adolescents: connections in school contexts

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## Abstract

**Introduction.** The research has two objectives: to establish differences between internal variables (self-concept and pro-sociality) and external variables (frequency of physical activity) that surround adolescents in the school context, according to social conditions (sex, type of physical activity and age); and to propose causality and predictability relationships between the different dimensions of self-concept and prosocial behavior towards the practice of physical activity in a sample of adolescents.

**Method.** This is a descriptive and lineal association study, whose sample is made up of 409 participants of ESO and Bachillerato. A sociodemographic questionnaire has been used, the self-concept questionnaire (AF-5), the scale of pro-sociality in adolescents and adults, and the Cantoblanco scale of socialization difficulties (SOC).

**Results.** The main area where social relations are encouraged in adolescence is friends (42.3%), followed by school (34%), indicating sport as the least favorable environment to foster their social relations (42.1%). The practice of physical activity is positively related to the dimensions of self-concept, except for the emotional, contemplating a relevant influence of the condition of being federated, for such a negative relationship. In addition, the relationship between self-concept and prosocial behaviour is confirmed for a psychosocially adapted response to the increased frequency of physical activity in adolescence.

**Discussion and Conclusion.** The practice of physical activity causes adolescents to have a better perception of their own personal conditions, thus increasing their confidence to establish social relationships with peers and teachers, in the development of attitudes seeking positive social experiences. All this contributes to the increase in the frequency of sports practice, mediated by the understanding and comprehension of their well-being in relation to prosocial behaviors.

**Key words:** individual differences, pro-sociality, physical education, youth, school.

## Resumen

**Introducción.** La investigación tiene dos objetivos: (1) establecer diferencias entre variables internas (autoconcepto y prosocialidad) y externas (frecuencia de actividad física) que rodean al adolescente en el contexto escolar, según condiciones sociales (sexo, tipo de práctica de actividad física y edad). (2) Proponer relaciones de causalidad y predictibilidad entre las diferentes dimensiones del autoconcepto y conducta prosocial hacia la práctica de actividad física en una muestra de adolescentes.

**Método.** Se trata de un estudio de carácter descriptivo y de asociación lineal, cuya muestra está formada por 409 participantes de ESO y Bachillerato. Se ha utilizado un cuestionario sociodemográfico, el Cuestionario de Autoconcepto (AF-5), la Escala de prosocialidad en adolescentes y adultos, y la Escala de Dificultades de Socialización de Cantoblanco (SOC).

**Resultados.** El principal ámbito donde se fomentan las relaciones sociales en la adolescencia es en el de los amigos (42.3%), seguido de la escuela (34%), señalando el deporte como el entorno menos propicio para fomentar sus relaciones sociales (42.1%). La práctica de actividad física, se relaciona positivamente con las dimensiones de autoconcepto, excepto con el emocional, contemplando una relevante influencia de la condición de estar federado, para tal relación negativa. Además, se confirma la relación entre autoconcepto y conducta prosocial para una respuesta adaptada psicosocialmente, de cara al aumento de la frecuencia de práctica de actividad física en la adolescencia.

**Discusión y Conclusiones.** La práctica de actividad física provoca que los adolescentes tengan una mejor percepción de sus propias condiciones personales, aumentando así su confianza para establecer relaciones sociales con compañeros y docentes, en el desarrollo de actitudes de búsqueda de experiencias sociales positivas. Todo ello contribuyendo al aumento de la frecuencia de la práctica deportiva, mediada por el entendimiento y comprensión de su bienestar ante las conductas prosociales.

**Palabras claves:** diferencias individuales, prosocialidad, educación física, jóvenes, escuela.

## Introduction

The development that is generated in adolescence at a maturational, personological and cognitive level plays an extremely important role in social relationships and their individual understanding (Rowse, Ciarrochi, Deane, & Heaven, 2016). Adolescents cease to have their parents as their main reference and spend more time away from home, which leads to fewer positive interactions with their parents, and conflicts arise with aspects of daily life such as household chores, new friendships, ways of dressing or when to go home (Darr, 2011; Wang & Holcombe, 2010), abandonment of sports (Janosz, Archambault, Morizot & Pagan, 2008, Li, Doyle, Calvin, Liu & Lerner, 2011), and school performance (Martinez, English, Piqueras & Ramos, 2010). On the other hand, the importance, intensity and stability of relationships with friends increase, and the peer group becomes the most influential context of socialization (Martinez & Gonzalez, 2017, Vanatta, Gartsein, Zeller & Noll, 2009).

Family is a fundamental institution in the development of the individual and its socialization is considered (Fajardo, Maestre, Felipe, León & Polo, 2017). In fact, authors such as Oyarzún, Estrada, Pino and Oyarzún (2012), have concluded that family support, acceptance of oneself and friendship or good social relationships that can occur in the school environment, during the first socializing stages, are some of the factors that have a direct relationship with self-concept, cognitive development and the practice of physical activity.

In this sense, elements related to individual differences (empathy, prosocial behavior or self-concept), allow us to understand the variability of behaviors in adolescents, as well as the influence on the psychological response that allows them to adjust psychosocially (Caprara & Cervone, 2000; Martínez & González, 2017). Precisely, a good psychological indicator of school adjustment is self-concept (Wang & Fredricks, 2014), defined as: "knowledge or cognitive representation that each individual possesses in relation to their personal characteristics, attributes and limitations, corresponds to the image that each one has of itself, without the need to submit to comparison with other people "(De la Torre, García, Carpio & Casanova, 2008, p.58).

During these years, understood as a one-dimensional construct, it is argued that individuals generate very different perceptions of themselves in different aspects of their lives (family, social, emotional, physical ...), considering it more appropriate to study each of its di-

mensions separately (Goñi & Infante, 2010, Rosenberg, 1979, Stojiljković, Todorović, Đigić & Dosković, 2014).

On the other hand, prosocial behavior as a set of actions that are carried out voluntarily to increase the welfare of another has been defined (Eisenberg, Fabes & Spinrad, 2006). Acting autonomously, prosociality not only contributes to the welfare of those who receive the action and improves interpersonal relationships (Caputi, Lecce, Pagnin & Banerjee, 2012, Weinstein and Ryan, 2010), but also generates positive affection and well-being in the person performs such behaviors (Dunn, Aknin & Norton, 2008, Steger, Kashdan & Oishi, 2008).

Different authors consider prosocial behavior as a protector of maladaptive social interaction styles, such as aggression, isolation or social withdrawal (Eisenberg et al., 2006, Gilma & Anderman, 2006, English, Martínez-González & García-Fernández, 2013; Veenstra et al., 2008; Wentzel, 2005), playing an important role in the formation of positive interpersonal relationships and acceptance by peers, parents and teachers (Eisenberg et al., 2006; Gilman and Anderman, 2006). Inglés, Delgado, García, Ruiz & Díaz, 2010), being a good indicator of the school and social adaptation of students (Guevara, Cabrera & Barrera, 2007).

In the study of the relevance of the development of the habit of physical activity at an early age, research in the area of education (Cecchini, Fernandez, Gonzalez & Arruza, 2008) shows that through play and sports practice, we can learn and/or improve essential skills such as self-control, empathy, self-concept or prosocial behaviors, and add that they are transferable to other areas such as family or school. It is considered a very important element to consider.

When its relationship with gender has been pointed out, it has been noted that girls present significantly higher levels of prosocial behavior than boys, increasing these differences with age (Álvarez, Carrasco & Fustos, 2010, Carlo et al., 2013; English et al., 2009; Kärtnner, Keller & Chaudhary, 2010; Kumru, Carlo, Mestre & Samper, 2012; Plazas et al., 2010). At the same time, prosocial behaviors of adolescents in the social practice of sport (inter and intragender), maintain a close relationship with emotional self-regulation (Richaud & Mesurado, 2016; Torstveit, Sütterlin & Lugo, 2016), being the main protector of aggressive behaviors, antisocial and maladaptive behaviors (Carlo et al., 2014, Kornbluh & Neal, 2016, Mesurado et al., 2014, Mikolajewski, Chavarria, Moltisanti, Hart & Taylor, 2014).

Some researchers have observed the positive association between social behaviors and the practice of physical activity in the educational context and outside it (González & Portolés, 2016, Samadzadeh, Abbasi & Shahbazzadegan, 2011), as well as the positive or negative emotional links established between peers and teachers (Jiménez, Estévez & Murgui, 2014; Samper, Mestre & Malonda, 2015). Such experiences in adolescence establish a cognitive connection with personal values and norms that underlie psychosocial development, favoring the development of prosocial attitudes (Revuelta & Esnaola, 2011). Physical activity is a very useful tool for obtaining these lessons is considered, and the educational center a place where they can be consolidated, along with other elements of adolescent growth (González, Caprara, Garcés de los Fayos & Zuffianó, 2014).

### *Aims and hypothesis*

Taking into account all these premises, this work is designed and presented with the objectives of: a) establishing differences between internal variables (self-concept and prosociality) and external variables (frequency of physical activity) that surround the adolescent in the school context, according to the social conditions (sex, type of physical activity practice and age); and b) provide relationships of the causality and predictability between the different dimensions of self-concept and prosocial behavior towards the practice of physical activity in a sample of adolescents.

## **Method**

### *Sample*

In the present study, a transversal and incidental methodology has been carried out in a sample of students of high schools of educational centers located in the Region of Murcia, Spain. The sample was 486 students from 1° Secondary School to 2nd year of High School. Of these, 432 finally participated, of which 23 (5.32%) were excluded for not obtaining the informed consent of the parents or for presenting errors or omissions in their answers. Therefore, the current sample was of 409 participants ( $n = 409$ ), distributed by academic level in 1° Secondary School ( $n = 45$ , 11.0%), 2° Secondary School ( $n = 84$ ; 20.5%), 3° Secondary School ( $n = 76$ ; 18.6%), 4° Secondary School ( $n = 69$ , 16.9%), 1° High School ( $n = 86$ ; 21.0%), and 2° of High School ( $n = 49$ ; 12.0%). Regarding the gender variable, 185 of the participants were boys (45.2%) and 224 girls (54.8%), being between 12 and 19 years old ( $M = 14.81$ ;  $SD = 1.79$ ).

Focusing now on the variables that are related to the practice of physical activity, the distribution of the sample is presented in physical activity practice ( $n = 309$ ; 75.6%) and does

not practice physical activity ( $n = 100$ ; 24.4%). In addition, 92 participants indicate being federated (22.5%), and 317 non-federated (77.5%). If analyzed in detail, in relation to the age of the participants (Figure 1), the boys perform physical activity with an average frequency of 3.5 days a week, while the girls do 2.18 days.

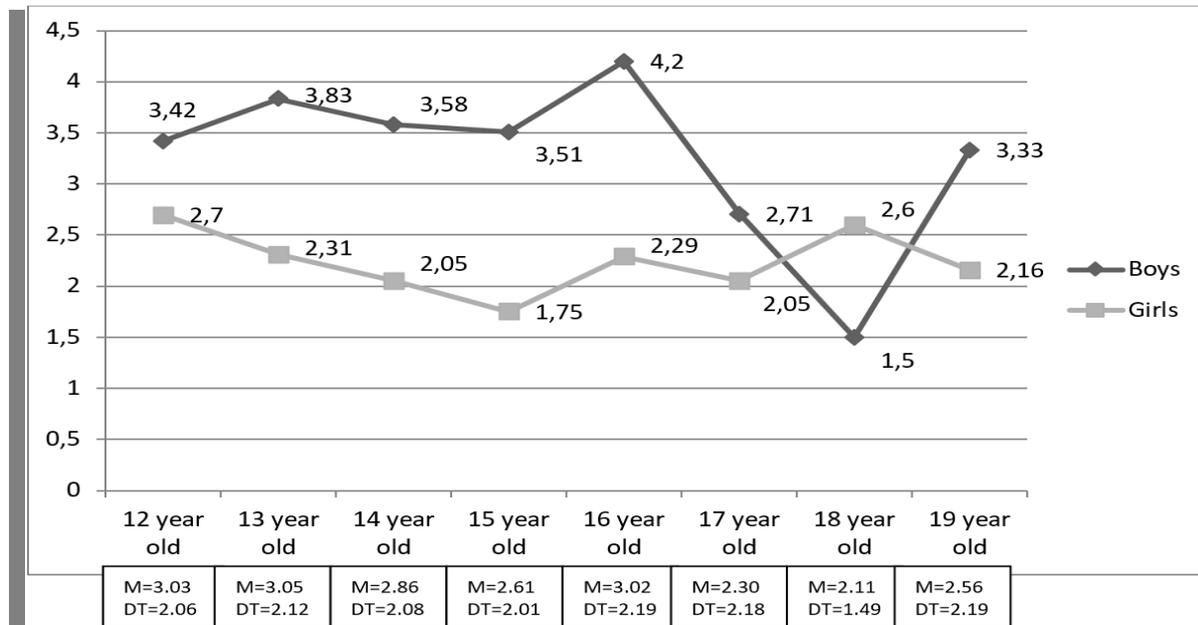


Figure 1. Days of physical activity of the participants, in relation to age.

In the same way, adolescents indicate the contexts where they most promote their social relations. As can be seen in Table 1, about half of the students who are part of the sample, indicate that the main area where they promote their social relationships is that of friends (42.3%), followed by school (34%, and 36.7% if it is a third option), indicating sports as the least favorable environment for the four to foster their social relations (42.1%). The family remains in an intermediate position within their priorities.

Table 1. Importance of the contexts for the promotion of social relations of the participants.

N=409	Promotion of Social Relations 1	Promotion of Social Relations 2	Promotion of Social Relations 3	Promotion of Social Relations 4
Sport	75 (18.3%)	59 (14.4%)	101 (24.7%)	<b>172 (42.1%)</b>
Family	89 (21.8%)	96 (23.5%)	105 (25.7%)	119 (29.1%)
School	72 (17.6%)	<b>139 (34%)</b>	<b>150 (36.7%)</b>	50 (12.2%)
Friends	<b>173 (42.3%)</b>	115 (28.1%)	53 (13.0%)	68 (16.6%)

Considering the student's relationship by course and gender (Figure 2), the average frequency of physical activity is between 2.26 and 4.33 days per week, by boys, and between

1.85 and 3.37 times per week if reference is made to the girls. In addition, it can also be seen that the percentage of physical activity practice by boys exceeds that of girls in all academic courses except in 2nd year of High School, which are practically equal. In the same way, it is appreciated that as the age increases, both boys and girls tend to perform less physical activity, going from almost 100% in 1º Secondary School, on the part of the boys, to little more than half in the last studied course.

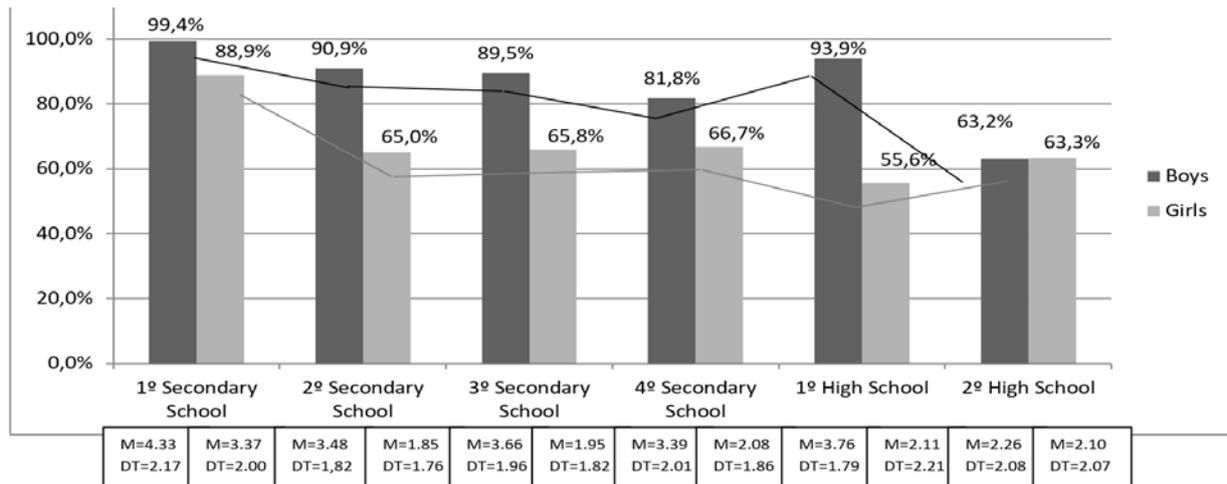


Figure 2. Physical activity practice, distributed through the gender and courses of the participants.

If this same comparison in relation to prosocial behavior is made (Figure 3), it can observe how the average level of prosociality of girls exceeds that of boys in all the academic courses studied, obtaining the maximum difference between both sexes in 4th Secondary School.

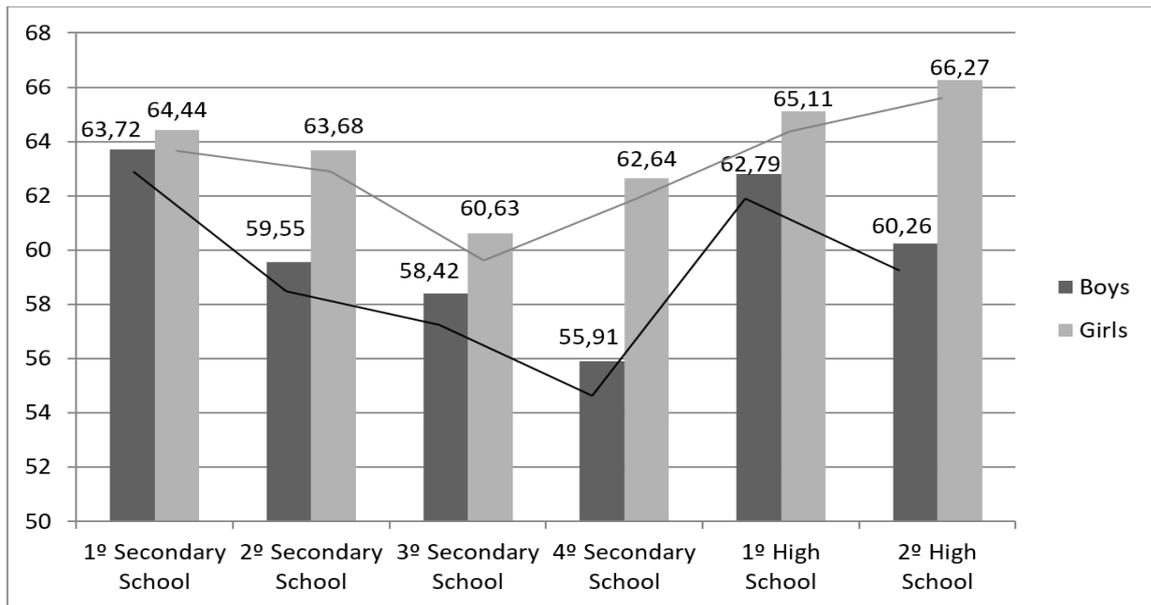


Figure 3. Average level of prosociality, distribution by course and gender of the participants.

### Instruments

*Sociodemographic.* An "ad hoc" self-report is prepared with a series of items that take into account age, sex, physical activity practice and frequency, federated athlete status and sports modality, number of siblings and environments where participants promote more social relationships

*Selfconcept.* To measure self-concept the 4th edition of the Self-concept Questionnaire (AF-5, García & Musitu, 2014) has been used. Part of a multidimensional consideration of self-concept, including items that allow evaluating the concept and the assessment that the subject has of itself in five personal and relational dimensions: academic, social, emotional, family and physical. The questionnaire consists of 30 items with a response orientation from 1 to 99, showing an internal reliability of  $\alpha = .77$ .

*Prosociality.* Scale of prosociality in adolescents and adults (Caprara, Steca, Zelli e Capanna, 2005. Adaptation to Spanish): which consists of 16 items with Likert scale of 5 points (1 to 5). Each item is evaluated on a scale of 5 positions (1 = almost never, 2 = few times, 3 = sometime, 4 = many times 5 = almost always / always). The scale for adolescents and adults reflects in part the extension, to a more adult population, having developed in a more adequate way for a population of adults the items related to the three components of pro-social behavior (helping, caring and sharing). Four affirmations were added for the detection of cognitive-affective abilities that allows individuals to put themselves in the perspective of the other and understand the call of help, that is, empathy. The internal consistency of the

instrument for this sample, is very reliable with an alpha of .87, and consists of 16 items to assess how often people tend to share their own things with others, care for others, understand when someone needs help and gives assistance.

*Difficulties for socialization:* Scale of Socialization Difficulties (SOC, Herrero, Escorial & Colom, 2009). This instrument is a self-report of 45 items that evaluates three personality traits: impulsivity, absence of fear and search for sensations. These features are indicated in the interpretation of antisocial behavior. Each item poses two response options in the form of two situations from which to choose. One of the options reflects presence of the trait, while the other is symptomatic of absence. In the subscales of Impulsivity and Sensations Seekings, one of the options is a situation or activity that implies a high level of these traits, as opposed to one in which a low level situation arises. An example of a sensation search item is to choose between *"Go to a classical music concert or Pull to bridge tied to an elastic string"*. In the case of the subscale of absence of fear a situation was posed that implied a high dangerousness against another that was very annoying. The reasoning was that a person with a low fear would prefer the dangerous situation to the annoying one. An item on the subscale is choosing between *"Lose the wallet with lots of money and documentation or get in a fight with a stranger"*. As a general feature, the dimension of difficulties for socialization is also defined. The instrument has shown internal consistency indexes of .79.

### *Procedure*

The data during the 2016-2017 academic year was collected, establishing the first face-to-face contact with the educational centers at the end of the first quarter. To start the process, an individualized meeting is held with the directors of each of the centers and they are informed about the subject and the object of the study that they want to develop, requesting their collaboration to carry out the research. Obtained the appropriate permission, the best area was established to collect the data in each one of the centers and we went to speak with the affected teachers with the intention of letting them know the main objective of this study, as well as asking for their collaboration. After this, students are informed of the work and informed consent is provided for their parents-tutors to approve (Helsinki, 2008). Once the proposal was accepted, the dates in which the test was to be carried out in each of the centers and in each of the participating classes were set, some chosen for convenience in terms of schedules, and in others at random. From then on, we proceeded to collect data in different days and sessions, always in the presence of the teacher of the subject and the principal investigator.

### *Analysis of data*

Basic statistical analyzes are carried out to allow the description of the sample, measures of central tendency, frequency, homogeneity and internal reliability of the instruments. In the same way, it is for the inter-sample differentiation (ANOVA and t-tests of mean differences). To determine the relationship between the variables under study, causality, and relationships between the variables through bidirectional correlation analysis. The statistical program used is the SPSS (IBM), in its version 23.

## **Results**

The analysis carried out attempts to establish and explain the interrelation of the variables, as well as the differential contrast for the sociodemographic variables that have been taken into consideration.

### *Differential Analysis*

Taking into account the differential relationships in *gender* (Table 2), the significant differences in prosociality are significant ( $t_{2,407} = -4.32, p < .00$ ), in favor of the girls, and in physical self-concept ( $t_{2,407} = 5.63, p < .00$ ) in favor of the boys, although it is also worth noting the low levels of emotional self-concept in both sexes. In the rest of the dimensions related to the self-concept (academic, social, family and general) no significant differences are found when comparing boys and girls.

In relation to the *practical of physical activity*, it can be observed that 309 (75.6%) participants of the total sample perform physical activity at least one day a week, while 100 (24.4%) of the adolescents do not usually practice physical activity in their day to day. In this sense, the results point out important significant differences in favor of the physical activity practitioners in most of the self-concept dimensions, highlighting the physical self-concept ( $t_{2,407} = 7.06, p < .00$ ) and the general self-concept ( $t_{2,407} = 4.07, p < .00$ ). In the opposite case, the only significant differences in favor of non-practicing physical activity appear in the emotional self-concept ( $t_{2,407} = -2.23; p < .03$ ), and no significant differences appear in dimensions related to social relations such as prosociality or socialization difficulties.

Regarding *federated vs non-federated*, significant differences appear in most of the self-concept dimensions, highlighting the physical self-concept ( $t_{2,407} = 8.05, p < .00$ ) and social self-concept ( $t_{2,407} = 2.24; p < .03$ ) in favor of the federated, and the emotional self-

concept ( $t_{2,407} = -3.00$ ;  $p < .00$ ) in favor of the non-federated; not finding significant differences when compared in the academic dimension. In addition, significant differences appear in the dimensions absence of fear ( $t_{2,407} = -3.46$ ;  $p < .00$ ) and socialization difficulties ( $t_{2,407} = -2.96$ ;  $p < .00$ ) for participants who are not federated in any sports discipline, and have not been found in prosociality, impulsivity and search for sensations.

Table 2. *Differences, according to the variables physical activity practice and gender.*

		M(DT)		F	Sig.	T	Gl <sub>(n-2)</sub>	Sig.
		Physical Activity	No Physical Activity					
Physical Activity (n=309)	ACADEMIC SELF-CONCEPT	6.95(1.82)	6.32(2.01)	2.06	.15	2.91	407	.00
	SOCIAL SELF-CONCEPT	7.50(2.07)	6.90(1.78)	.11	.75	2.60		.01
No Physical Activity (n=100)	EMOTIONAL SELF-CONCEPT	4.59(2.20)	5.14(1.99)	.41	.52	-2.23		.03
	PHYSICAL SELF-CONCEPT	6.60(1.96)	4.98(2.05)	.57	.45	7.06		.00
		GENERAL SELF-CONCEPT	6.80(1.12)	6.27(1.12)	.18	.68	4.07	.00
		<b>Federated</b>	<b>Non-Federated</b>					
Federated (n=92) No federated (n=317)	SOCIAL SELF-CONCEPT	7.76(1.95)	7.23(2.02)	.11	.74	2.24	407	.03
	EMOTIONAL SELF-CONCEPT	4.13(1.78)	4.89(1.78)	2.67	.10	-3.00		.00
	FAMILY SELF-CONCEPT	8.64(1.48)	8.17(2.14)	3.38	.07	1.93		.05
	PHYSICAL SELF-CONCEPT	7.64(1.57)	5.78(2.05)	9.16	.00	8.05		.00
	GENERAL SELF-CONCEPT	7.04(.90)	6.56(1.18)	4.12	.04	3.56		.00
	ABSENCE OF FEAR	22.66(1.57)	23.15(1.77)	1.89	.17	-3.46		.00
	SOCIALIZATION DIFFICULTIES	22.65(.96)	22.98(.92)	.49	.48	-2.96		.00
		<b>Boys</b>	<b>Girls</b>					
Boys (n=185)	PROSOCIALITY	59.72(9.57)	63.77(9.57)	.51	.48	-4.32	407	.00
	EMOTIONAL SELF-CONCEPT	4.29(2.03)	5.09(2.19)	.26	.61	-3.80		.00
Girls (n=224)	PHYSICAL SELF-CONCEPT	6.82(2.01)	5.69(2.05)	.14	.70	5.63		.00
	IMPULSIVILITY	22.14(1.62)	22.54(1.59)	.04	.85	-2.53		.01

\*  $p < .05$ ; \*\*  $p < .01$

### Relational analysis

When analyzing the relationship between the variables studied (Table 3), numerous significant correlations are revealed. Among them, it is relevant to emphasize the direct and significant correlation between the frequency of physical activity and the physical self-concept ( $r = .41$ ;  $p < .00$ ), in such a way that the frequency of physical activity increases, and

self-concept increases physical. In the same way, the academic self-concept also correlates directly and significantly with the physical self-concept ( $r = .37$ ;  $p < .00$ ).

On the other hand, prosociality shows a direct and significant correlation with the general self-concept ( $r = .21$ ;  $p < .00$ ), so that the greater the prosocial behavior, the better perception that person has of himself. In the same way, it occurs when correlating the emotional self-concept with the absence of fear ( $r = .19$ ;  $p < .00$ ).

Finally, another of the relationships that should be mentioned is the one observed between the frequency of physical activity and the absence of fear, since it indicates an inverse and significant correlation ( $r = -.10$ ;  $p < .04$ ), in that the greater the frequency with which physical activity is carried out, the adolescents surveyed indicate having greater indicators of fear in threatening situations.

In the other order, the predictive model (Table 4) indicates, with 20.3% of variance explained ( $F(400, 9) = 11.29$ ;  $p < .00$ ), that the practice of physical activity increases as prosociality increases ( $\beta = .45$ ;  $p < .04$ ), social self-concept ( $\beta = .61$ ;  $p < .04$ ), physical ( $\beta = .73$ ;  $p < .00$ ) and emotional ( $\beta = .63$ ;  $p < .00$ ), as well as the search for sensations ( $\beta = .54$ ;  $p < .03$ ).

Table 3. *Analysis of correlations between the variables studied.*

N = 409	1	2	3	4	5	6	7	8	9	10	11	12	13
1. COURSE	1	-.14**	.06	-.07	-.12*	.04	-.07	-.12*	-.12*	-.09	-.03	-.05	-.09
2. FREQUENCY PHYSICAL ACTIVITY		1	.05	.10*	.18**	-.16**	.05	.41**	.20**	.03	-.10*	.01	-.04
3. PROSOCIALITY			1	.20**	.16**	.10	.07	.06	.21**	-.05	.18**	.12*	.16**
4. ACADEMIC SELF-CONCEPT				1	.16**	-.07	.34**	.37**	.62**	-.06	.06	.16**	.10*
5. SOCIAL SELF-CONCEPT					1	-.15**	.29**	.41**	.60**	.07	-.03	-.03	-.01
6. EMOTIONAL SELF-CONCEPT						1	-.09	-.08	.24**	-.02	.19**	.08	.15**
7. FAMILY SELF-CONCEPT							1	.32**	.65**	-.07	.06	.06	.03
8. PHYSICAL SELF-CONCEPT								1	.71**	.03	-.09	-.01	-.05
9. GENERAL SELF-CONCEPT									1	-.02	.07	.09	.08
10. SENSATION-SEEKING										1	-.01	-.16**	.43**
11. ABSENCE OF FEAR											1	.14**	.70**
12. IMPULSIVILITY												1	.58**
13. SOCIALIZATION DIFFICULTIES													1

\*  $p < .05$     \*\*  $p < .01$

Table 4. *Predictive modelo of physical activity, based in terms as a function of prosociality, self-concept and socialization difficulties.* $R^2 = .230$ ;  $F_{(400, 9)} = 11.29$ ;  $p < .00$ )

N = 409

	B	Error típ.	Beta	F	p
(Constante)	.74	2.43		.30	.76
<b>PROSOCIALITY</b>	<b>.41</b>	<b>.01</b>	<b>.45</b>	<b>1.10</b>	<b>.04*</b>
ACADEMIC SELF-CONCEPT	-.06	.05	-.05	-1.06	.28
<b>SOCIAL SELF-CONCEPT</b>	<b>.20</b>	<b>.05</b>	<b>.61</b>	<b>.17</b>	<b>.04*</b>
<b>EMOTIONAL SELF-CONCEPT</b>	<b>-.33</b>	<b>.04</b>	<b>-.63</b>	<b>2.92</b>	<b>.00**</b>
FAMILY SELF-CONCEPT	-.09	.05	-.08	-1.76	.09
<b>PHYSICAL SELF-CONCEPT</b>	<b>.43</b>	<b>.05</b>	<b>.73</b>	<b>8.28</b>	<b>.00**</b>
<b>SENSATION-SEEKING</b>	<b>.56</b>	<b>.08</b>	<b>.54</b>	<b>.77</b>	<b>.03</b>
IMPULSIVILITY	.09	.08	.07	1.14	.25
SOCIALIZATION DIFICULTIES	-.14	.16	-.06	-.88	.37

Dependent variable: FREQUENCY PHYSICAL ACTIVITY

### Discussion and Conclusions

The aim of this paper is to contemplate the human relations that appear in a sample of adolescents about their prosocial resources and individual self-perception in terms of their gender, physical activity practice and age. In general, the literature focuses more on the effects that exercise produces on physical health, than those that can be generated in psychological health (González et al., 2014), or on the social influence of this at an early age. That is why the work confirms the tendencies towards the realization of physical activity in adolescents, from the point of view of their social perception as individuals that develop within the school context.

Based on the results achieved, it should be noted that a significant number of participants who have been part of the sample (75.6%) perform physical activity at least one day a week, which approximates the findings in other studies such as that of González and Portolés (2014), which place the student body practicing physical activity at 80.5%. In addition, it is relevant to mention that, among students who perform physical activity, boys (3.5) practice more days per week than girls (2.18), similar to the results obtained by Alvariñas, Fernández and López (2009), that establish a practice of 4 or 5 times a week on the part of the boys and 2 or 3 days on the part of the girls.

The decrease of the frequency of physical activity as the age of the participants increases, becomes evident when passing from 3.85 days in the students of 1° Secondary School to 2.18 days in the 2° year of High School. This corroborates what other studies indicate (Gonzá-

lez & Portolés, 2014, Ruiz-Juan & García, 2002) that affirm that the highest rates of physical activity and sport occur among the youngest, reducing as age increases.

On the other hand, the participants point out that the most influential social context for the promotion of their social relationships is that of friends, while the family is relegated to the background. This fact confirms what many studies argue (Janosz, Archambault, Morizot & Pagan, 2008, Li, Doyle, Calvin, Liu & Lerner, 2011, Martinez et al., 2010, Vanatta, Gartsein, Zeller & Noll, 2009), as they observe in adolescents a significant increase in the influence of the group of equals, with the context of socialization being more influential, to the detriment of the family, which is reduced during this period.

Results of this study indicate that girls have significantly higher levels of prosocial behavior than boys, confirming what many studies have shown (Álvarez, Carrasco & Fustos, 2010, Carlo et al., 2013, English et al., 2009 Kärtner, Keller & Chaudhary, 2010; Kumru, Carlo, Mestre & Samper, 2012; Plazas et al., 2010). In addition, it is interesting that a positive and significant relationship with socialization difficulties appears, due to the fact that some authors (Eisenberg et al., 2006; Gilman and Anderman, 2006; English et al., 2010) point out that it plays a fundamental role in the formation of positive interpersonal relationships and acceptance by peers, even being a good indicator of student and social acceptance of students (Guevara et al., 2007).

In another order, the results show that prosocial behavior also has a direct and significant relationship with the general self-concept, and with its academic and social dimensions. This supports the findings found by Inglés et al. (2013), who relates prosocial behavior with school self-concept and, in addition, consider it a key factor for the social and academic competence of students.

Attending to the different dimensions of self-concept, the boys have levels of physical self-concept significantly higher than the girls, confirming what is argued by studies such as Páez, Fachinnelli, Gutiérrez-Martínez & Hernández (2007). On the other hand, it has been proven that there are significant differences in the dimension of emotional self-concept in favor of girls with respect to boys. This differs from what is indicated by authors such as Padilla, García and Suárez (2010), who point out that if there is a tendency for boys to have a better image of themselves in the physical, emotional and social spheres, the differences with respect to girls are only significant in the emotional self-concept and in the non-academic global self-concept in favor of the children.

Continuing with the study of self-concept, it is relevant to comment on the appearance of significant differences in the dimensions of the physical, social and general self-concept in favor of federated participants; as well as a tendency toward meaning in the family self-concept. On the contrary, in emotional self-concept, absence of fear and difficulties of socialization, the differences are postulated in favor of adolescents who do not practice physical activity in a federated way. The results presented here correspond to those of Martínez & González (2017), who affirm that they find levels of physical self-concept significantly higher in federated adolescents, as well as in the absence of fear, impulsivity and socialization difficulties in favor of non-federated. In the same way, a significant causal relationship is observed between the family, the physical and the general self-concept.

On the other hand, numerous investigations confirm a relationship between the physical self-concept and the level of physical-sport activity (Aróstegi, Goñi, Zubillaga & Infante, 2012, Esnaola & Zulaika, 2009, Revuelta & Esnaola, 2011, Zalagaz, Castro, Valdivia & Cachón, 2017), even indicating that this connection increases in those who practice physical activity more frequently (Goñi & Infante, 2010). The data obtained here reinforces these findings, highlighting the direct and significant relationship between physical and general self-concept and the frequency of physical activity.

In conclusion, it is indicated that the usual practice of physical activity in adolescents can be a very useful educational tool to work and/or improve both self-concept and prosocial behaviors. This leads to an increase in self-confidence, reducing their difficulties to establish social relationships with other classmates, being more successful as a result, and improving their integration, not without effort, within the class-group.

For this, it is considered necessary to fight against such aspects as the low social value of women's sport in society, or the orientation to the extra practice of federated sport versus the practice of exercise as a model of occupation of free time in adolescents, because it generates elements of social involvement or positive personal self-assessment, which facilitates the perception of usefulness of the practice of physical activity as a habit in their daily lives. This makes it very difficult for girls to feel sufficiently stimulated by the exercise, or non-federated people who practice free sports in general, without belonging to more structured environments such as clubs or federations.

On the other hand, it is the little influence that the family generates among adolescents as a context in which to foster their social relations, even though it is the primary social group par excellence. From this perspective, the age of the participants is considered a factor of weight to explain the reason for these results, so it could be interesting to continue investiga-

ting this issue with participants who are in a different age ratio. In addition, it is also necessary to deepen studies on prosocial relationships and the response of difficulties for socialization, so that is possible to explain how the tendency to be social and collaborative is directly related to the impulsive response from the social point of view, and with the consideration of less resources and skills for the consolidation of social relations.

Regarding the limitations of the study, the difficulties that exist today in accessing the sample due to the fact that the educational centers are saturated are outstanding. Each year there are more students and researchers who request their dependencies and it is very difficult to obtain permission to proceed with the data collection. In addition, by posing as a voluntary activity that does not interfere with academic results, students often forget the informed consent completed by their legal guardians, so that the temporary delay and the loss of participants during the process are evident. Another one of the limitations that can be raised about the present work, that is to be cross-sectional study, it is difficult to generalize causal inferences between the different variables, so it would be interesting to propose longitudinal designs that could give greater reliability to the relationships between the different constructs.

On a practical level, the results of this work will help teachers of physical activity and educational communities in the approach of attractive sports proposals, both in school and extracurricular dedication. Adapting the activities to the personal and contextual characteristics of their adolescents, taking into account the promotion of social relationships and the search for new sensations allows emotional connection between peers. At the same time, creativity in the didactic proposals, in connection with activities that they can practice in their neighborhood or locality, will favor adherence, and will allow adolescents to take responsibility and savor the social experience, self-regulating in practice and getting to know each other better. They are the only ones who have the same status, they are the ones who influence their welfare states, and they influence their quality of their interpersonal relationships.

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