

## Personal and social responsibility development through sport participation in youth scholars

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### Abstract:

This work analyses the relationship between the quantity of practised sport activity and personal and social responsibility development grade, as well as the influence of gender and education stage on these variables. The personal and social responsibility is assessed by the Personal and Social Responsibility Questionnaire. To achieve this, questionnaires have been administrated to 607 Primary and Secondary scholars. Primary students and males show a higher responsibility, higher sport practise levels and a higher perception with regard to their environment about their quantity of practised sport. The positive relationship between the quantity of practised sport, assessed with two different instruments, and the responsibility development grade has also been demonstrated. Therefore, physical activity promotion during adolescence is important not only due to its effects on physical health but also due to its contribution to pro-social character development.

**Key words:** sport activity level, sedentary lifestyle, education in values, adolescents, Physical Education.

### Introduction

Physical activity and sport practice during leisure time have been offered as an efficient mechanism to reach a personal and social development, due to the positive conception society has about them and also due to its attractiveness and its potential ability to convene, especially among adolescents (Escartí, Gutiérrez, Pascual, & Marín, 2010; Ginesta, 2007; Menéndez & Fernández-Río, 2016).

Nevertheless, the orientation and dimensions of this practice are not always fruitful to reach these aims: if sport practice lacks of an adequate orientation, its practisers can be deprived of an appropriate and integral personality development as well as they can receive negative values that suppose an incentive to participate in socially reprehensible conducts (Garrido, Zagalaz, Torres, & Romero, 2010; Gómez-Mármol, & Valero, 2013).

Sport is especially interesting during these ages because of its potential capability to educate in values and social rules (Lee, Whitehead, Ntoumanis, & Hatzigeorgiadis, 2008; Martínez, Esteban, & Buxarras, 2011; Menéndez & Fernández-Río, 2016), what is relevant for many teachers nowadays (Gordon & Doyle, 2015), principally due to the high prevalence of anti-social, violent and un-healthy behaviours among adolescents (Amaya, 2010), as a reflection of a crisis of values expressed as conflictive attitudes (Pelegrín, 2005).

There is not an unanimous criteria about the utility of physical exercise and sport practice for personal and social responsibility development although there are different perceptions on this point:

A first approach considers that sport is good in itself for the processes of socialization and education in values (Bredemeier, Weiss, Shields, & Shewchuck, 1986), since it collects the witness of the Olympics ideology that created the movement of thought based on education of values through sport in British schools and universities during the modern period.

Secondly and contrarily, several authors have remarked that sport initiation programs usually reproduce stereotypes and hostile environment of professional sport which is characterised by frequent anti-social and violent conducts and attitudes that cannot help to the education of citizens and the cohabitation (Gutiérrez & Vivó, 2005). Finally and thirdly, there is an intermediate stance that defends that sport practice can be negative or positive to its practisers depending on several conditionings. This stance summarizes the opinion of most current sport psychologist and pedagogues (Sánchez & Mosquera, 2011).

Nevertheless, these stances lead to another reflection; it could be questioned whether the positive effects of physical activity practice can be translated to other contexts of daily life or, in other words, whether this development of values through sport (in case of existence) has consequences on the individual's behaviour when he is not practicing sport (Gutiérrez & Vivó, 2005).

Such as in the previous case, there are several interpretations: on one hand, Bredemeier and Shields (1986) do not accept this relationship because they defend the divergence of both context (sport and daily life)

meanwhile on the other hand, Cruz, Boixadós, Valiente and Torregrosa (2001) defend that those values will be considered lifelong in any context.

Ortega and Gasset proposes a sort of reflections about the importance of sport in human life because he considers sport practice as a “vital luxury” human beings can freely and voluntarily dedicate to when he has already satisfied the rest of his “compulsory occupations” and that sport is able to provide a complete meaning to one’s own life (Ortega & Gasset, 1996). Therefore, he understands sport as a space where an individual can rehearse attitudes to apply them later in other contexts of daily life.

In this regard, the transtheoretical model (TTM) has been paid much attention as an effective tool to explain physical activity changes. This model consists of five stage of physical activity and they have been shown to have predictable relationships with self-efficacy and social norms (Kim & Cardinal, 2010; Titze, Stronegger, & Owen, 2005).

In this way, a positive influence on moral and social development is observed in those people who participate in sport education programs and campaigns orientated to the promotion and development of values (Cecchini, Fernández, González, & Arruza, 2008; Menéndez & Fernández-Río, 2016; Palou, Borràs, Ponseti, Vidal, & Torregrosa, 2007). Despite the difficulty of assessing this type of relationships, there are evidences and signs which affirm that these relationships could be viable (Vasconcelos, 2009), although it is always mediated by the methodological problem that supposes the assessment of these improvements in behaviour and the physical activity level quantification which is crucial to establish significant relationships between the studied variables (Lee, Whitehead, & Balchin, 2000).

In this way, the present work aims to analyse the relationship between the practiced physical activity and the development of values, specifically personal and social development, in a sample of adolescents from the Region of Murcia, under the starting hypothesis which defends that those individuals who practices more physical activity will also have higher levels of personal and social responsibility than sedentary individuals.

## Material & methods

### *Participants*

This is a correlational and transversal study (Thomas, Nelson & Silverman, 2015) where 607 subjects participated (350 men and 257 women) whose ages vary from 11 to 17 years ( $M = 13.82 \pm 1.82$ ).

### *Measures*

The personal and social responsibility is assessed by the translated Spanish version (Escartí, Gutiérrez, & Pascual, 2011) of Personal and Social Responsibility Questionnaire (PSRQ) designed by Li, Wright, Ruckavina and Pickering (2008). This questionnaire is made up by 14 items distributed in two factors: Personal Responsibility (seven items) and Social Responsibility (seven items), that must be answered in a Likert scale with six options: from (1) *Totally disagree* to (6) *Totally agree*.

In order to study its relationship with physical activity levels, these levels are assessed with two questionnaires; a) Krece Plus Short Test designed by Serra, Aranceta and Rodríguez-Santos (2003) and b) Physician-based Assessment and Counseling for Exercise (PACE) designed by Proschaska, Sallis and Long (2001).

Moreover, the perception of the own physical activity depending on the physical activity of the people in context, is also considered with the Comparative Physical Activity Scale (Martínez-Gómez, et al., 2009) which is made up by only one item with a five options Likert Scale that includes from (1) “Much less physical activity than my context” to (5) “Much more physical activity than my context”. The Krece Plus Short Test is made up by two questions: 1) How many hours do you daily watch TV, play videogames or use your pc? 2) How many hours do you weekly practice sport after school time? They have six answer options: from (1) *0 hours* to (6) *5 or more hours*.

This questionnaire permits the classification of healthy lifestyles in three categories: bad, ordinary and good (Edo et al., 2010). Finally, the PACE questionnaire (Proschaska, et al., 2001) also has two questions about How often do you practice sport for at least 60 minutes in a normal week and in the last week. To classify a subject as “active” the average of both answers must be  $\geq 5$  days (Martínez-Gómez, et al., 2009).

### *Statistical analysis*

The data statistic treatment has been carried out with SPSS 21.0. The U Mann Whitney test has been used to value the influence of gender and stage of education on the studied variables; the Spearman’s ranks test has been employed to determine the correlation between the studied variables and, lastly, multinomial logistic regression has been used to study the effect of physical activity level on personal and social responsibility.

## Results

Firstly, this paper presents the descriptive values for the study variables according to gender and educational level of the participants (Table 1). Furthermore, U of Mann Whitney has been used to analyse if differences between the two categories are significant.

Table 1. Sample characteristics and differences by gender and educational level for all variables established through U of Mann Whitney and Wilcoxon test

	Men M±ST	Women M±ST	P	Primary M±ST	Secondary M±ST	P
Personal Responsibility	5.11±0.79	4.92±0.76	.000	5.15±0.78	4.94±0.77	.000
Social Responsibility	5.22±0.74	5.28±0.62	.831	5.32±0.79	5.19±0.60	.000
Total Responsibility	5.16±0.68	5.10±0.59	.017	5.23±0.72	5.06±0.58	.000
Physical activity level (short Krece Plus test)	5.60±2.20	4.47±2.08	.000	5.34±2.18	4.96±2.24	.033
Physical activity level (PACE)	3.61±1.82	2.91±1.76	.000	3.63±1.79	3.07±1.82	.000
Comparative Scale	3.50±1.18	2.80±1.12	.000	3.34±1.14	3.10±1.24	.013
Number of hours per day sedentary	2.43±1.28	2.56±1.25	.142	2.29±1.33	2.63±1.20	.000

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

A greater development of personal and total responsibility, as well as physical activity level assessed by both questionnaires in the group of men is observed. However, women have higher levels of social responsibility and daily hours per day of sedentary activities, although these differences do not reach a statistical significance. With regards to the educational level, primary students show greater personal, social and total responsibility and a higher physical activity level. On the other hand, secondary students spend daily more hours in sedentary activities.

Regarding the comparative scale, men and primary students show higher values of their counterpart, coinciding with the highest values of physical activity practiced. Furthermore, bilateral correlations were found between the variables, as shown in table 2:

Table 2. Association between different variables studied (Spearman correlation coefficient)

	Sedentary hours	Comparative scale	Personal Responsibility	Social Responsibility	Physical Activity Level (Krece Plus Short Test)
Comparative scale	-.144**	-			
Personal Responsibility	-.133**	.306**	-		
Social Responsibility	-.112**	.151**	.411**	-	
Physical Activity Level (Krece Plus Short Test)	-.546**	.528**	.298**	.123**	-
Physical Activity Level (PACE)	-.029**	.521**	.293**	.100*	.444**

\*\* Correlation is significant at level .01 (bilateral)

\* Correlation is significant at level .05 (bilateral)

In this way, several statistically significant relationships are revealed: an increase of the hours spent in sedentary activities reduces personal and social responsibility, of the physical activity level evaluated with both questionnaires and the comparative scale values. Similarly, higher values in the comparative scale are accompanied by higher levels in personal and social responsibilities and physical activity levels on both questionnaires.

Respecting responsibility variables, correlation between personal and social responsibility exists, as well as between these and physical activity levels measured with both questionnaires, which present another positive correlation with each other. In addition, the correlation between the amount of physical activity and the total level of responsibility was analysed, presented in figure 1a and figure 1b for PACE and Kerece Plus Short Test values, respectively.

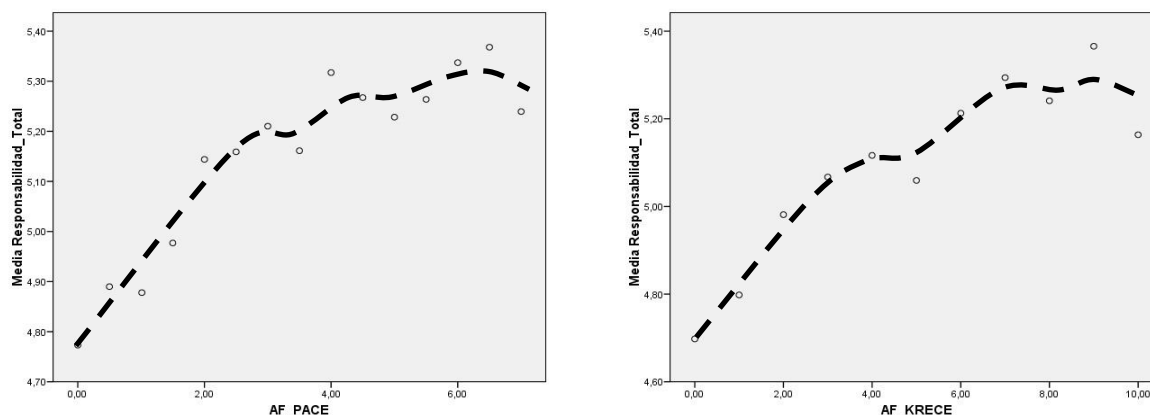


Fig. 1a. Total Responsibility based on the amount of physical activity by the PACE Test  
 Fig. 1b. Total Responsibility based on the amount of physical activity by the Krece Plus Short Test

The path described by each of the curves shows, in both cases, the great development of responsibility in those subjects who do more physical activity compared to those of more sedentary nature. In this way, the multinomial logistic regression statistical test applied to personal and social responsibility based on the physical activity level (Table 3), confirms the relationship between the amount of physical activity and responsibility level (as it shown in Figures 1a and 1b).

Table 3. Multinomial logistic regression model examining the relationship between the different personal and social responsibility levels (quartiles) and the amount of physical activity estimated by Pace Scale and Krece Plus Short Test

Responsibility Level	Physical Activity Level - Krece Plus <sup>3</sup> OR (95% IC)		Physical Activity Level – PACE <sup>4</sup> OR (95% IC)
	Poor	Fair	Sedentary
Personal Responsibility <sup>1</sup>			
3 <sup>er</sup> quartile (5.29-5.43)	1.39 (0.66-2.92)	1.16 (0.57-2.38)	1.36 (0.83-2.20)
2 <sup>o</sup> quartile (4.71-5.14)	4.61 (1.87-11.39)**	2.34 (0.95-5.76)	2.07 (1.31-3.28)**
1 <sup>er</sup> quartile (1.00-4.57)	7.55 (2.74-20.86)**	2.37 (0.85-6.63)	3.82 (2.40-6.10)**
Social Responsibility <sup>2</sup>			
3 <sup>er</sup> quartile (5.43-5.57)	1.34 (0.61-2.93)	1.20 (0.55-2.60)	1.28 (0.80-2.05)
2 <sup>o</sup> quartile (5.00-5.29)	4.78 (1.85-12.35)**	2.36 (0.91-6.15)	1.51 (0.98-2.34)
1 <sup>er</sup> quartile (1.29-4.86)	2.43 (1.08-5.45)*	1.52 (0.67-3.41)	1.31 (0.84-2.03)

<sup>1</sup>Reference group: 4<sup>o</sup> quartile (5.57-6.00). <sup>2</sup>Reference group: 4<sup>o</sup> quartile (5.71-6.00). <sup>3</sup>Reference group: Physical activity level “good”. <sup>4</sup>Reference group: “Active”. \* $p < .05$  \*\* $p < .01$

It is observed that those participants classified with a physical activity of “poor” based on the Krece Plus Short Test scores, have a higher risk of being grouped into quartiles of a very low and low personal responsibility and, similarly, to those of very low and low social responsibility. Furthermore, sedentary subjects, according to their results in PACE questionnaire, have a higher risk of being part of very low and low quartiles with no significant relationships with the social responsibility.

### Dicussion

This work establishes the expected positive relationship between the personal and social responsibility levels, also showing the decrease of responsibility in secondary students compared with primary students, independently of their gender, in line with Aguilar, Sroufe, Egeland and Carlson (2000).

Regarding the relationship between physical exercise and sport during leisure time, the results ratify the starting hypothesis, that is, higher levels of physical activity and sport practice are associated with a higher development of personal and social responsibility, regardless of the assessment tool used and the limitation that the ignorance of the orientation of this physical activity practice supposes (which has not been analysed). Nevertheless and according to the attached results through this wide scholar sample, it can be observed that the dedication of a higher number of hours to physical activity and sport practice makes the transference of its values

and coexistence rules to the scholars' own values possible, according to the starting hypothesis of others authors (Cecchini, González, et al., 2008).

However, there are works that demonstrate that the sport practice with a lack of a pedagogical purpose does not improve the coexistence but it fosters anti-social behavior and misconduct (Gómez-Mármol & Valero, 2013). Assuming that this hypothesis could be reasonable, from a pedagogical perspective and considering this work's limitations, it is necessary to remind the importance of an adequate orientation of this sport practice towards pro-social values and the promotion of cooperation attitudes which contribute to moral development and coexistence (Sánchez & Mosquera, 2011).

The development of values has been principally studied in function of the accuracy of educational programs implementation (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004; Danish & Nellen, 1997; Escartí, et al., 2003; Hastie & Buchanan, 2000; Hellison, 2011; Hodge & Danish, 1999; Martinek, McLaughlin & Schilling, 1999; McKenney & Dattilo, 2001), which although often use sport as a vehicle of values, they do not study its development according to the level of physical activity practice but the participation or not in the program.

These programs heed those conditionings that are important to let the sport practice become a tool for the development of values, for instance: the decrease of the excessive emphasis on competition and victory (Cruz, et al., 2001; Pelegrín, 2005), as well as the promotion of conflicts that require the collective cooperation to reach a solution and the free participation on these programs (Gutiérrez & Vivó, 2005); all of them are conditionings that have been related to the persistence and adherence of physical activity and sport practice during scholars leisure time (Beltrán-Carrillo, Devís-Devís, Peiró-Velert, & Brown, 2012).

This work shows that the higher implication on sport practice the higher punctuation in personal and social responsibility scale, which is associated to the development of other positive features as the self-concept improvement (Inglés, Martínez-González, Torregrosa, García-Fernández, & Ruiz-Esteban, 2012), of the quality of life (Caracuel & Arbinaga, 2010), the lifestyle broad improvement (Sygusch, 2005), the participants' attitudes towards violence, competence and relatedness improvement (Menéndez & Fernández-Río, 2016).

The effects of these programs which aim to educate through physical activity and sport is limited, because its practice during leisure time is mediated by several factors: for instance and based on the results of this study, regarding gender, boys have a higher sport engagement than girls in line with the conclusions of other studies: OPACA developed by Cano, Pérez, Casares and Alberola (2011) and the AFINOS study (Martínez-Gómez, Welk, Calle, Marcos, & Veiga, 2009) as well as other studies in Europe (Riddoch, et al., 2007; Sagatun, Kalle, Anderssen, Thoresen, & Sjøgaard, 2008) and Central America (Dugas, et al., 2008).

Furthermore, the attached results also remark that girls dedicate more time to sedentary activities as watching TV or playing videogames (Cano, et al., 2011; Sagatun, et al., 2008); this entails a lower socialization and less time dedicated to the coexistence among equals, which could explain, partly, the higher punctuations gathered by boys in personal and social responsibility scale compared to girls.

Another important conditioning refers to age: in this way, primary students have shown a higher level of physical activity and, contrarily to secondary students, less time dedicated to sedentary activities, in line with the results attached by Cano, et al. (2011). This progressive sedentarization observed during adolescence (Riddoch, et al., 2007) could noticeably contribute to a decrease of personal and social responsibility levels. Most of the pro-social values, which could determine the behavior in adult life, are acquired during this stage (Garaigordobil & Oñederra, 2008), therefore, according to the results of this study, the promotion of physical activity and sport practice should be emphasized in order not only to improve health but also to improve the scholar coexistence.

## Conclusions

Independently of factors like the type of sport or its pedagogical orientation, a higher level of physical activity is broader associated to higher punctuations in the personal and social responsibility scale used, regardless of the gender.

To sum up, we assume that the regular practice of physical activity can contribute to improve the coexistence among young scholars, through the development of personal and social responsibility in those scholars who are engaged in these types of activities during their leisure time. Therefore, among many other benefits, the promotion of a healthy lifestyle also supposes a basic element for a civic education.

One research prospective interests in the future may be the hybridization of models-based practice, in particular the hybridization of teaching for personal and social responsibility model with others, such as the cooperative learning (Fernández-Río, 2014) or the sport education model (Hastie & Buchanan, 2000; Menéndez & Fernández-Río, 2016).

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