

SATISFACTION OF SPANISH HIGH SCHOOL STUDENTS WITH PHYSICAL EDUCATION: GENDER, AGE, PHYSICAL ACTIVITY LEVEL AND BODY TYPE

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ABSTRACT

The aim was to examine the degree of satisfaction with Physical Education (PE) of Spanish teenagers and to determine whether there are differences according to gender, age, physical activity or body type. A total of 2293, 12–16 year-old adolescents participated in this cross-sectional study. The data collection instruments were the School Questionnaire and the Adolescent Physical Activity Measure (MVPA). Participants were categorised as normal-weight or overweight (including obese). Results showed that 62% of participants reported a high level of liking for PE and 69.2% showed high enjoyment levels. Girls and younger students showed higher satisfaction with PE. Being overweight had a more negative impact on PE satisfaction than physical inactivity itself. Normal-weight teenagers were more widely accepted than their overweight classmates in PE lessons. Physically inactive normal-weight boys and girls were more likely to perceive that teachers had a favourable opinion of them than their physically active overweight classmates.

Keywords: Satisfaction; Physical education; Teenagers; Obesity.

INTRODUCTION

Satisfaction is a general construct related to a personal and subjective feeling of well-being, along with the presence of positive effect and absence of negative effect (Vera-Villaruel *et al.*, 2012). In school, individuals holding different goal expectations express different levels of satisfaction faced with the same school performance data (Jacobsen *et al.*, 2015). In Physical Education (PE), school satisfaction is mainly determined by the student's perceived efficiency level in physical/sports activities (Reina *et al.*, 2010), relationships with classmates (Leo *et al.*, 2015) and teacher expectations of their students (Jaakkola *et al.*, 2012). Identifying the main variables that affect school satisfaction in relation to PE may help to increase healthy habits, socio-affective relationships (Hernández *et al.*, 2008) and cognitive-academic performance

(Kim & So, 2015; Ruiz-Ariza *et al.*, 2016). School satisfaction is not the same in all subjects and varies among students (Columna *et al.*, 2014). Although some studies have found that girls and younger teenagers show higher school satisfaction levels (Barr-Anderson *et al.*, 2008), other researchers have questioned the idea that girls report greater satisfaction with PE lessons (Prochaska *et al.*, 2001; Hernández *et al.*, 2008).

Physical activity (PA) level and body type have also been shown to have an important impact on PE satisfaction. This satisfaction is in turn associated with a positive perception of sports competence and personal self-confidence (Rodríguez-Fernández *et al.*, 2013). Normal-weight teenagers have higher school satisfaction levels than their overweight counterparts (Fernández-Bustos *et al.*, 2015). The latter experience greater stigmatisation in PE lessons (Peterson *et al.*, 2012) and lower academic performance (Ruiz-Ariza *et al.*, 2016).

Evidence has indicated that young people enjoy increasingly less PA. In the European context, 80% of young people aged 11-17 do not practise the recommended minimum of 60 minutes daily of MVPA (European Commission, 2016), and young people have increased the time spent on sedentary behaviour up to 8-9 hours/day, with activities, such as TV, videogames, smartphones, computer or tablet (LeBlanc *et al.*, 2015). To counter this trend, proposals based on physical activity across the curriculum are proliferating in recent years. An example of this, could be to incorporate PA in active recess or lunchtime (Ridgers *et al.*, 2013), to carry out PA during breaks between lessons (Wilson *et al.*, 2016), or physically active lessons including movement inside the curricular classes (Bartholomew *et al.*, 2013). Nevertheless, the level of satisfaction of the youth with PA performed within the school context, is unknown.

Furthermore, PA levels and the prevalence of sedentarism may vary over time, while life satisfaction may be modified by new contexts (Nuñez *et al.*, 2010). Because patterns of association of satisfaction differ among countries (Van Sluijs *et al.*, 2010), not only in relation to age-group and geographical factors, such as climate, more research on specific populations is needed (Currie *et al.*, 2012). In Spain, other factors also need to be taken into account, including changes to the Spanish educational system over the last 20 years that eliminated the culture of effort, and the 2008 economic-financial crisis (Dávila & González, 2009), which threatens school sports programmes and non-subsidised private sports participation.

A review of the literature shows that research has mainly focused on life satisfaction among the adult population (Vera-Villaruel *et al.*, 2012), although greater attention has been paid to the factors that influence school satisfaction in teenagers over the past decade. Accordingly, the present study aimed to establish the degree of satisfaction with PE for Spanish teenagers and whether this varies by gender, age, PA level, or body type. It was hypothesised that overweight students would perceive more unfavourable opinions from their PE teachers, older students would show lower PE satisfaction, and physically active and normal-weight students would enjoy PE more than their overweight classmates.

METHODOLOGY

Participants

A total of 2293 secondary education students from 16 educational centres in eight Spanish provinces took part in the study (age: 14±0.8 years). In relation to gender, 1150 were females (50.2%) and 1143 were males (49.8%). Participants were also classified by their weekly PA level where 1674 (73.1%) were considered physically active and 616 (26.9%) were considered inactive. According to the age- and gender-specific, body mass index (BMI) cut-offs proposed by Cole and Lobstein (2012), 83.45% of participants were classified as normal-weight and 16.65% as overweight (including obese) (Table 1).

Table 1. CHARACTERISTICS OF SAMPLE CLASSIFIED BY GENDER AND AGE

Variables	Boys				Total (n=1143)	
	12-13yrs (n=392)	14yrs (n=296)	15-16yrs (n=455)	p		
Weight (kg)	53.76±11.92	61.22±12.40	65.70±12.11	***	60.44±13.15	
Height (m)	1.61±0.10	1.69±0.09	1.73±0.09	***	1.67±0.10	
BMI (kg/m ²)	20.68±4.11	21.38±3.81	21.94±3.64	***	21.36±3.88	
Active (%)	38.91	31.92	30.15	*	33.63	
Inactive (%)	61.11	68.16	69.92		66.47	
Normal-weight (%)	89.81	89.56	85.07	*	87.29	
Overweight (%)	10.19	10.44	14.93		12.71	
Variables	Girls				Total N=2293 (gender) p	
	12 -13 yrs (n=370)	14yrs (n=278)	15-16yrs (n=502)	p		
Weight (kg)	51.64±1.03	54.74±9.60	56.51±9.05	***	54.51±9.72	***
Height (m)	1.59±0.08	1.62±0.07	1.63±0.07	***	1.61±0.07	***
BMI (kg/m ²)	20.44±3.61	20.95±3.87	21.23±3.22	**	20.91±3.52	**
Active (%)	20.94	20.51	19.70		20.32	***
Inactive (%)	79.12	79.55	8.31	-	79.77	
Normal-weight (%)	83.51	85.65	83.7	**	84.62	-
Overweight (%)	16.49	14.35	16.3		15.38	

BMI=Body Mass Index

*p<0.05

**p<0.01

***p<0.001

Continuous variables: Analysis of variance (ANOVA)

Categorical variables: χ^2

Measures

The *School Questionnaire* (Samdal *et al.*, 2004) was adapted to examine students' school satisfaction in relation to PE. This instrument comprised six items and used a 4-5 option Likert-scale. For example: Do you feel stressed by the practical activities that you have to complete in PE lessons? (1=not at all, 2=somewhat, 3=sometimes, and 4=a lot). The internal consistency of students' school satisfaction was high (Cronbach's alpha=0.787).

The *Adolescent Physical Activity Measure* (MVPA) (Prochaska *et al.*, 2001) was used to determine weekly PA levels. The internal consistency was high (Cronbach's alpha=0.812). An ASIMED® B-type-class III (Spain) and a portable SECA 214 (SECA® Ltd, Germany) were used to measure participants' weight and height. Both instruments have been used in similar investigations showing a high reliability (Grao-Cruces *et al.*, 2016). The BMI was calculated (kg/m^2).

Procedure

The data were collected between April and June 2014. The questionnaires were handed out by the same researcher during one 50-minute lesson. The research design followed the Spanish legal requirements regarding clinical research in humans (Royal Decree 561/1993) and the ethical principles adopted in the 2013 review of the Declaration of Helsinki. All the children assented to participate in the study. Written informed consent was obtained from the parents and schools involved, after approval by the School Head.

Analysis of data

ANOVA analysis and χ^2 (χ^2) were performed for continuous (weight, height and BMI) and categorical variables (active vs. inactive, normal-weight vs. overweight, and items in the questionnaire on PE satisfaction of teenagers), respectively. Descriptive analysis of data was completed by means of frequency analysis.

Pearson's correlation test was used to determine the relationships between variables (items in the questionnaire on PE satisfaction of teenagers). To determine the main and interaction effects between variables, ANOVA analysis was completed using average responses to each satisfaction item as the dependent variable, and gender (male and female), age (12–13, 14 and 15–16 years), PA level (active and inactive), and body type (normal-weight and overweight) as independent variables. The confidence interval in post-hoc analysis was adjusted by means of the Bonferroni test. The significance was accepted at $p < 0.05$. All analyses were performed using SPSS (v. 20.0 for Windows; SPSS, Inc., Chicago, IL, US).

RESULTS

Descriptive and item-correlation analyses

Of the students, 62% liked PE, while 67.7% reported that the PE teacher assessed their PE performance as good or very good. Most (70.9%) of the participants occasionally experienced low levels of stress in PE. A majority agreed with the statements, 'I enjoy myself in PE' (69.2%), 'most classmates are kind' (56.5%), and 'classmates accept others as one of them' (77.8%). There was a positive correlation between the degree of acceptance among classmates and student-perceived kindness ($r=0.47$, $p < 0.01$), as well as between kindness and enjoyment in PE ($r=0.41$, $p < 0.001$). In contrast, a high negative correlation was observed between classmate acceptance and stress involved in PE physical activities ($r=-0.95$, $p < 0.01$) (Table 2).

Table 2. MEAN RESULTS, FREQUENCIES, CORRELATIONS BETWEEN ITEMS IN QUESTIONNAIRE

Variables	M±SD	Frequency of response %					Person's bivariate correlation matrix					
		1	2	3	4	5	PE	Teacher	Stress	Enjoy	Kind	Accept
PE	2.66±0.84	10.1	27.9	47.7	14.3	–		0.14**	-0.13	0.08	0.07	0.07
Teacher	2.80±0.77	4.9	27.4	50.4	17.3	–	–		-0.01	-0.07	-0.04	-0.12**
Stress	2.41±0.93	13.0	30.6	40.3	16.1	–	–	–		-0.04	-0.09	-0.95**
Enjoy	3.83±0.92	3.0	3.4	24.4	46.0	23.2	–	–	–		0.41**	0.40**
Kind	3.50±1.01	5.2	10.0	28.3	42.8	13.7	–	–	–	–		0.47**
Accept	4.01±0.94	2.7	4.1	15.4	45.4	32.4	–	–	–	–	–	

M=Mean SD=Standard Deviation **p<0.01 Enjoy=Enjoyment Kind=Kindness Accept=Acceptance

PE: What do you think about PE? (1=Do not like it at all, 2=Scarcely like it, 3=Rather like it, and 4=Love it)

Teacher: In your opinion, what does your teacher think of your PE performance compared to your classmates? (1=below average, 2=average, 3=good, 4=very good)

Stress: Do you feel stressed by PE activities? (1=not at all, 2=a little, 3=sometimes, 4=a lot)

Enjoyment: Classmates enjoy playing together. Kindness: Most classmates are kind/useful. Acceptance: Classmates accept me as I am. Enjoyment, Kindness and Acceptance response scales: 1=completely disagree, 2=disagree, 3=not disagree/agree, 4=agree, 5=fully agree.

Table 3. MAIN EFFECTS AFTER ANALYSIS OF VARIANCE (ANOVA) FOR ITEMS IN QUESTIONNAIRE

Variables		PE		Teacher		Stress		Enjoyment		Kindness		Acceptance	
		F	M±SD	F	M±SD	F	M±SD	F	M±SD	F	M±SD	F	M±SD
Gender	Boys	9.04	2.54±0.88	1.33	2.88±0.76	2.95	2.45±0.97	2.98	3.81±0.93	6.82	3.45±1.03	1.49	4.01±0.94
	Girls	**	2.78±0.78		2.72±0.77		2.47±0.89		3.83±0.91	**	3.54±1.00		4.00±0.94
Age (yrs)	12-13		2.82±0.83		2.86±0.76		2.31±0.9±0		3.74±0.96		3.40±0.96		3.98±1.03
	14	4.67	2.60±0.84	1.25	2.80±0.74	2.56	2.44±0.9±0	3.02	3.89±0.85	2.75	3.47±1.00	4.23	3.69±0.92
	15-16	**	2.58±0.82		2.75±0.8±0		2.48±0.97	*	3.86±0.92		3.59±0.96	*	4.04±0.87
Phys. act.	Active	0.29	2.68±0.89	8.82	2.93±0.78	2.60	2.42±0.93	0.24	3.84±0.95	0.10	3.51±1.04	1.62	4.03±0.95
	Inactive		2.65±0.82	**	2.75±0.76		2.41±0.94		3.83±0.91		3.49±1.00		4.00±0.94
Body type	Norm-w	0.28	2.61±0.83	4.91	2.82±0.77	0.69	2.42±0.94	0.18	3.83±0.91	1.39	3.51±1.00	4.30	4.03±0.91
	Overw.		2.71±0.86	**	2.65±0.79		2.33±0.9±0		3.79±0.98		3.47±1.01	**	3.81±1.18

Phys. act.=Physical activity Norm-w.=Normal-weight Overw.=Overweight M=Mean SD=Standard Deviation *p<0.05 **p<0.01
 Dependent variable= Questionnaire Independent variables=Gender, age, physical activity level and body type

PE: What do you think about PE? (1=Do not like it at all, 2=Scarcely like it, 3=Rather like it, and 4=Love it)

Teacher: In your opinion, what does your teacher think of your PE performance compared to your classmates? (1=below average, 2=average, 3=good, 4=very good)

Stress: Do you feel stressed by PE activities? (1=not at all, 2=a little, 3=sometimes, 4=a lot)

Enjoyment: Classmates enjoy playing together. **Kindness:** Most classmates are kind/useful. **Acceptance:** Classmates accept me as I am.

Enjoyment, Kindness and Acceptance response scales: 1=completely disagree, 2=disagree, 3=not disagree/agree, 4=agree, 5=fully agree.

School satisfaction and gender, age, PA level and body type (Analysis of variance)

Girls reported more favourable opinions towards PE than boys ($M=2.78$ vs $M=2.54$ respectively, $p=0.003$). Girls, perceived greater kindness from classmates than boys ($M=3.54$ vs $M=3.45$ respectively, $p=0.009$). Younger participants showed higher PE-satisfaction levels than 14-year-olds ($M=2.82$ vs $M=2.6$, $p=0.005$) and 15–16-year-olds ($M=2.58$, $p=0.031$). Older teenagers, however, showed higher enjoyment levels than their 12–13-year-old classmates ($M=3.86$ vs $M=3.74$, $p=0.017$) and reported greater acceptance by their classmates than 14-year-olds ($M=4.04$ vs $M=3.69$, $p=0.005$) [post hoc data is not shown]. Analysis of variance according to PA levels showed that active teenagers perceived more favourable opinions from their PE teachers than their inactive counterparts ($M=2.93$ vs $M=2.75$, $p=0.005$). Finally, analysis according to body type showed that normal-weight students perceived better opinions from their PE teachers and better acceptance by their classmates than overweight students ($M=2.82$ vs $M=2.65$, $p=0.006$; and $M=4.03$ vs $M=3.81$, $p=0.005$, respectively) (Table 3 previous page).

ANOVA results showing the interaction effects (gender×age, gender×PA level, gender×body type, age×PA level, age×body type, and PA level×body type) are reported in Table 4 (to follow).

The *gender×age* interaction showed that 12–13-year-old boys enjoyed PE more than 14-year-olds ($M=2.70$ vs $M=2.46$, $p<0.001$) and 15–16-year-old boys ($M=2.45$, $p<0.001$). However, they showed more kindness than 15–16-year-old students when compared to 12–13-year-olds ($M=3.58$ vs 3.34 , $p=0.001$) and 14-year-olds ($M=3.41$, $p=0.022$). Furthermore, 12–13-year-old girls enjoyed PE more than 14- ($M=2.94$ vs $M=2.74$, $p=0.002$) and 15–16-year old ($M=2.69$, $p<0.001$) girls. Younger girls also showed less stress than their 14-year-old ($M=2.32$ vs $M=2.54$, $p=0.002$) and 15–16-year-old ($M=2.54$, $p<0.001$) counterparts [post-hoc data not shown].

Gender×PA level results showed that physically active boys and girls perceived more favourable opinions from their PE teachers than their inactive classmates ($M=2.95$ vs $M=2.84$, $p=0.034$ and $M=2.90$ vs $M=2.68$, $p<0.001$, respectively).

The *gender×body type* interaction showed that normal-weight boys perceived their teachers' opinions about them more positively than overweight ($M=2.92$ vs $M=2.66$, $p=0.002$) students. Normal-weight boys also considered themselves better accepted than their overweight ($M=4.06$ vs $M=3.69$, $p<0.001$) classmates, and also perceived higher levels of kindness among their classmates ($M=3.50$ vs $M=3.36$, $p=0.003$).

Age×PA level results showed that physically active students perceived a better opinion from their PE teachers than their inactive classmates. These differences were found among both 12–13- ($M=3.00$ vs $M=2.80$, $p<0.01$) and 15–16-year-old students ($M=2.87$ vs $M=2.72$, $p<0.05$), but not in 14-year-olds ($p>0.05$). The *age×body type* interaction showed that normal-weight 14-year-olds perceived better opinions from their PE teachers than overweight ($M=2.84$ vs $M=2.60$, $p<0.026$) schoolchildren. The former also perceived higher kindness levels among their classmates than overweight students ($M=3.50$ vs $M=3.11$, $p=0.013$), as well as greater acceptance than overweight students ($M=4.04$ vs $M=3.65$, $p=0.004$).

Table 4. INTERACTION EFFECTS IN ANALYSIS OF VARIANCE (ANOVA) USING ITEMS IN QUESTIONNAIRE

Interaction and variables		PE		Teacher		Stress		Enjoyment		Kindness		Acceptance	
		F	M±SD	F	M±SD	F	M±SD	F	M±SD	F	M±SD	F	M±SD
Boys x Age	12-13		2.70±0.87		2.93±0.74		2.29±0.90		3.74±0.99		3.34±1.10		3.96±1.06
	14	1.47	2.46±0.87	1.50	2.84±0.77	1.49	2.34±0.92	2.95	3.90±0.89	6.40	3.41±1.08	1.22	4.00±0.99
	15-16	***	2.45±0.87		2.85±0.78		2.41±1.06		3.87±0.90	**	3.58±0.91		4.06±0.78
Girls x Age	12-13		2.94±0.76		2.79±0.77		2.32±0.89		3.75±0.93		3.47±1.08		3.99±1.01
	14	1.20	2.74±0.81	2.71	2.74±0.72	7.44	2.54±0.88	2.12	3.88±0.82	1.49	3.54±0.89	0.09	3.99±0.85
	15-16	***	2.69±0.76		2.67±0.80	**	2.54±0.89		3.85±0.94		3.59±1.00		4.01±0.94
Boys x PA	Active	1.63	2.53±0.85	4.51	2.95±0.78	1.06	2.35±0.99	1.44	3.86±0.89	1.24	3.45±1.00	1.88	3.98±0.95
	Inactive		2.57±0.94	*	2.84±0.75		2.34±0.94		3.79±1.00		3.48±1.08		4.08±0.91
Girls x PA	Active	3.69	2.87±0.75	5.61	2.90±0.78	1.87	2.54±0.89	3.54	3.93±0.87	0.35	3.58±0.98	0.5	3.96±1.00
	Inactive		2.76±0.79	***	2.68±0.77		2.45±0.89		3.80±0.92		3.53±1.01		4.01±0.93
Boys x BT	Norm-w.	0.33	2.53±0.88	8.58	2.92±0.76	0.05	2.35±0.98	1.14	3.85±0.91	5.00	3.50±1.00	8.38	4.06±0.90
	Overw.		2.60±0.90	**	2.66±0.74		2.33±0.93		3.77±1.03	**	3.36±1.11	***	3.69±1.16
Girls x BT	Norm-w.	0.25	2.78±0.78	0.53	2.73±0.77	1.13	2.48±0.90	0.67	3.82±0.90	0.57	3.53±1.00	0.42	4.00±0.91
	Overw.		2.84±0.78		2.64±0.84		2.32±0.87		3.81±0.94		3.60±0.87		3.96±1.20
12-13 x PA	Active	0.45	2.85±0.89	1.65	3.00±0.74	0.17	2.31±0.92	0.34	3.71±1.01	0.39	3.44±1.11	0.03	3.99±1.07
	Inactive		2.80±0.81	**	2.80±0.76		2.31±0.89		3.76±0.94		3.39±1.08		3.97±1.02
14 x PA	Active	0.11	2.58±0.93	1.67	2.52±0.97	0.69	3.91±0.94	0.15	3.91±0.94	0.10	3.50±1.10	0.04	3.98±1.01
	Inactive		2.60±0.83		2.41±0.97		3.88±0.82		3.88±0.82		3.47±0.95		4.00±0.89
15-16 x PA	Active	0.06	2.59±0.84	6.47	2.87±0.82	0.22	2.45±0.90	1.04	3.92±0.89	0.02	3.60±0.93	2.51	4.11±0.76
	Inactive		2.57±0.82	*	2.72±0.79		2.48±1.00		3.84±0.93		3.59±0.97		4.01±0.90

(Continued)

Table 4. INTERACTION EFFECTS IN ANALYSIS OF VARIANCE (ANOVA) USING ITEMS IN QUESTIONNAIRE (cont.)

Interaction and variables		PE		Teacher		Stress		Enjoyment		Kindness		Acceptance	
		F	M±SD	F	M±SD	F	M±SD	F	M±SD	F	M±SD	F	M±SD
12-13	Norm-w.	0.17	2.81±0.84	3.00	2.89±0.75	0.58	2.31±0.90	0.31	3.76±0.96	0.49	3.42±1.11	2.87	4.01±0.99
x BT	Overw.		2.84±0.82		2.68±0.80		2.21±0.87		3.72±1.00		3.28±0.94		3.69±1.30
14	Norm-w.	0.37	2.58±0.85	4.19	2.84±0.74	0.43	2.45±0.91	4.15	3.90±0.82	3.14	3.50±0.56	4.42	4.04±0.04
x BT	Overw.		2.63±0.90		*		2.60±0.74		3.88±1.00		*		3.11±1.11
15-16	Norm-w.	0.42	2.58±0.82	0.27	2.76±0.81	0.67	2.48±0.98	0.41	3.86±0.91	0.79	3.59±0.93	1.28	4.04±0.86
x BT	Overw.		2.60±0.85		2.65±0.84		2.50±0.94		3.79±0.95		3.74±0.93		4.21±0.95
Active	Norm-w.	0.07	2.68±0.87	1.40	2.95±0.78	1.75	2.40±0.93	4.41	3.88±0.91	4.41	3.88±0.91	8.74	4.09±0.86
x BT	Overw.		2.72±0.97		2.75±0.84		2.39±0.96		**		3.69±1.16		*
Inactive	Norm-w.	0.30	2.65±0.83	3.06	2.77±0.77	1.13	2.42±0.95	1.05	3.82±0.90	0.08	3.50±1.00	0.57	4.01±0.93
x BT	Overw.		2.71±0.83		*		2.62±0.77		3.82±0.93		3.48±0.95		3.91±1.06

PA=Physical Activity Norm-w.=Normal-weight Overw.=Overweight M=Mean SD=Standard Deviation *p<0.05 **p<0.01 ***p<0.001

Dependent variable= Questionnaire

Independent variables= Gender (boys and girls), age (12–13, 14 and 15–16 year-olds), physical activity level (active and inactive) and body type (normal-weight and overweight)

PE: What do you think about PE? (1=Do not like it at all, 2=Scarcely like it, 3=Rather like it, and 4=Love it)

Teacher: In your opinion, what does your teacher think of your PE performance compared to your classmates? (1=below average, 2=average, 3=good, 4=very good)

Stress: Do you feel stressed by PE activities? (1=not at all, 2=a little, 3=sometimes, 4=a lot)

Enjoyment: Classmates enjoy playing together. **Kindness:** Most classmates are kind/useful. **Acceptance:** Classmates accept me as I am.

Enjoyment, Kindness and Acceptance response scales: 1=completely disagree, 2=disagree, 3=not disagree/agree, 4=agree, 5=fully agree.

Finally, the results of the *PA level* × *body type* interaction showed that physically active normal-weight students enjoyed playing with their classmates more than overweight students ($M=3.88$ vs $M=3.69$, $p=0.021$). They also perceived higher kindness levels ($M=3.88$ vs $M=3.69$, $p=0.005$) and were better accepted by classmates than overweight students ($M=4.09$ vs $M=3.47$, $p<0.001$). Physically inactive normal-weight students received more favourable opinions from teachers than overweight students ($M=2.77$ vs $M=2.62$, $p=0.031$).

DISCUSSION

The present study examined the degree of satisfaction with PE among Spanish teenagers and whether this varied according to a series of personal variables such as gender, age, PA level and body type. The results showed that Spanish teenagers have high levels of enjoyment of and liking for PE, although younger students (12–13-year-olds) showed greater satisfaction and older girls (15–16-year-olds) showed greater PE-related stress. Being overweight rather than physical inactivity itself had negative impact on the PE context. There are several studies indicating results in favour and against these findings (Barr-Anderson *et al.*, 2008; Columna *et al.*, 2014; Kropski *et al.*, 2008).

In this study, girls showed greater satisfaction with PE lessons than boys. These results are similar to those reported by Barr-Anderson *et al.* (2008). However, they differ from those reported by Prochaska *et al.* (2001), in which boys' satisfaction level exceeded that of girls. The current results in favour of girls could be due to the dose-response effect (Ruiz-Ariza *et al.*, 2016). While Hernández *et al.* (2008) found no significant differences ($p>0.05$) between boys and girls. Girls' current perception of PE may be associated with the fact that they receive more signs of kindness than their male peers during PE lessons. This shows that gender differences must be taken into account in school PE, since responses and perceptions of boys and girls differ. For instance, Kropski *et al.* (2008) concluded that girls better assimilated programmes focused on social learning, while boys are more influenced by environmental changes.

Our results also showed that PE is better perceived by 12–13-year-olds than by 15–16-year-olds. According to the World Health Organization norms (Currie *et al.*, 2012), school satisfaction is 15% greater in 11-year-old students than in 13–15-year-old students. It has been noted that Germany, Wales, France and the US had higher school satisfaction than average satisfaction rates out of all the countries surveyed. Standal and Moe (2013) consider that students are mainly concerned with their teachers' opinions of them and, therefore, their overall perception and evaluation of PE can be influenced by their interactions in the teaching-learning process.

On the other hand, the physically active Spanish teenagers reported more satisfaction with PE than inactive ones. These results are similar to those of Perlman (2012), who reported that satisfaction increases with PA level. PE satisfaction was also found to be higher in teenagers who perceive themselves as more physically effective (Dishman *et al.*, 2005). Ommundsen *et al.* (2010) proposed that PE satisfaction requires a balance between achievement and self-determination. Therefore, a teaching approach should focus on motivation of the teaching-

learning process, rather than on the end-product. Based on regular PE involvement from early stages, the school should be socially constructed as the appropriate setting for the deployment of healthy lifestyle strategies (Perlman, 2012; Martínez-López *et al.*, 2015). A focus on PA in PE should be proposed to improve not only teenagers' physical and mental health, but also their cognitive capacities and academic performance (Ruiz-Ariza *et al.*, 2016).

In this study, normal-weight boys were observed to show a more positive opinion of PE than their overweight classmates, but this difference was not observed among girls. One possible explanation could be related to the different role that the gender of the teacher of PE offers regarding self-efficacy expectations and their attitudes towards overweight and obese students (Martínez-López *et al.*, 2010), or the different answer from girls about the proposals of PE teachers. The study conducted by Kropski *et al.* (2008), revealed that girls show higher adherence to programmes based on the principles of social learning and the modeling technique, while boys seem more influenced by direct intervention programmes, which act on diet control or the increase of physical and recreational activity. Although Barr-Anderson *et al.* (2008) concluded that PE-lesson satisfaction and enjoyment were similar in normal-weight and overweight girls, Forste and Moore (2012) reported that girls had lower life satisfaction levels. This suggests that further research is needed to identify the factors that determine school and life satisfaction in overweight girls, particularly as they are often stigmatised by classmates and become the target of discriminatory behaviours that are likely to hinder their learning (Peterson *et al.*, 2012).

CONCLUSION

Spanish teenagers have high levels of PE satisfaction (62%) and enjoyment of it (69.2%). Younger boys and girls (12–13-year-olds) show greater PE satisfaction, although 15–16-year-old girls suffer greater PE-related stress. This could be due to the demands for level tests, sometimes not adapted to the personal characteristics of each individual. Physically inactive normal-weight boys and girls perceive that teachers have a more favourable opinion of them than their physically active overweight classmates. PE teachers should incorporate additional motivation strategies specifically adapted to older adolescents. They should also encourage the expectations of students with overweight/obesity, providing collaborative group activities, such as sports and cooperative motor games. Both groups (older adolescents and overweight young adolescents) have a higher risk of premature abandonment of systematic PA practice. Early action by PE teachers targeted at improving satisfaction with PE could modify behaviour patterns to promote adherence to PA practice in future.

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