


# Disruptive behaviours in Physical Education classes: A descriptive research in compulsory education

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## ABSTRACT

The aim of this research was determining disruptive behaviours of Primary and Secondary Schoolchildren in physical education classes according to educational stage, age and gender. The sample consisted of a total of 1304 students from 10 to 16 years old ( $M = 12.77$ ;  $SD = 1.89$ ), of whom 548 were Primary Education and 756 of Secondary Education; 612 were boys (46.9%) and 692 were girls (53.1%). The data collection was conducted through to the appropriate conduct scale in physical education and sport (CCDEF). The results obtained showed significant statistical differences in the age factor on Aggressiveness (AGR) ( $p < .001$ ), Irresponsibility (IRRP) ( $p < .001$ ), Fails to follow directions (FFD) ( $p < .001$ ), Distracts or disturbs others (DDO) ( $p < .001$ ) and Poor self-management (PSM) ( $p < .001$ ). Regarding gender, there were statistically significant differences between boys and girls in FFD and on PSM ( $p < .001$ ). Also, significant statistical differences were found on stage factor on AGR ( $p < .001$ ), IRRP ( $p < .001$ ), FFD ( $p < .001$ ), DDO ( $p < .001$ ) and PSM ( $p < .001$ ). Disruptive behaviours scores increase with age and are higher in Compulsory Secondary Education than in Primary education schoolchildren. Boys in Primary Education scores higher than girls in all dimensions studied, while boys in Compulsory Secondary Education do so on aggressiveness.

**Keywords:** Aggressiveness; Irresponsibility; Fails to follow directions; Poor self-management; Distracts or disturb other; Physical education.

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## INTRODUCTION

The academic context it is a laboratory of social relations in which pupils usually confront each other due to the interaction between them and their different personalities and personal procedures that characterize the individuals (Sáez de Ocáriz & Lavega, 2015). Therefore inappropriate behaviours in students are more often observed such as low motivation, no interest, aggressiveness, disobedience, or poor self-management, among others (Granero-Gallegos et al., 2019; Hernando & Sanz, 2017; Lopes et al., 2017; López-Castedo et al., 2018) shown in the last Teaching and Learning International Survey (OECD, 2014).

Even though the origin of this behaviours could be multiple (familiar, individual, curricular factors...) we know for sure, that the increase of this behaviours, has a significative impact on the detriment of education for students, teachers, and the school community (Álvarez-Hernández et al., 2016; Granero-Gallegos & Baena-Extremera, 2016; Jurado & Tejada, 2019; OECD, 2014; Vega & González, 2016). Therefore the management and the prevention of this indisciplinary manners is key and urgent to achieve the right learning environment for the XXI century (Jurado et al., 2020) and, particularly, in physical education classes (Maddeh et al., 2015).

Therefore, recently, the research of disruptive behaviour within physical education lessons has increase (Granero-Gallegos et al., 2019), because, to know and identify the existing problems is essential to find answers and solve them (Álvarez-Hernández et al., 2016). In Spain “*The strategic plan of scholar coexistence 2016-2020*” defined by the Education, Culture and Sports Ministry (2016) shows different action plans as a way of prevention and control of issues within the school context. The Organic Law for the Improvement of Educative Quality (LOMCE, 2013) reflects the necessity of educative actions to communicate positive values in order to peacefully end a school issue, such as responsibility, solidarity, tolerance, respect and empathy, among others (Jurado et al., 2020). That is why is so important to investigate the disciplinaries and social factors of the students within the scholar context, in order to know which of them are more repetitive and work on them (Müller et al., 2018).

When we talk about “*disruptive behaviours*” regarding education, we are referring to inappropriate behaviours which disturb the teaching-learning process, and one of the most common concerns for teachers (Álvarez-Hernández et al., 2016; Álvarez et al., 2016; Duesund & Ødegård, 2018; Jurado & Justiniano, 2017; Maddeh et al., 2015; Nash et al., 2016; Vega & González, 2016). This bad behaviours are related to scholar failure, learning and academic performance (Granero-Gallegos et al., 2020; Jurado & Olmos, 2012), and they can also lead to future violent behaviours inside or outside the scholar context (Taylor & Smith, 2017). Therefore, their absence or presence is a strong indicator for success or academic failure (Granero-Gallegos et al., 2019).

Typically, the Physical Education area has been related to a conflictive area because of its experimental and social features (Baena-Extremera et al., 2015; Buscà et al., 2015; Sáez de Ocáriz & Lavega, 2015). Despite this, those differentiating features are the ones that give the opportunity to act ahead of the problem to decrease the presence of those behaviours through participatory and communicative methodological proposals (Navarro-Patón, Lago-Ballesteros, et al., 2019) that take into account aspects such as self-management, dialogue and social responsibility (Buscà et al., 2015; Jodra et al., 2018; Jurado et al., 2020; Navarro-Patón, Cons-Ferreiro, et al., 2019).

In order to investigate disruptive behaviours, one of the tools used in Spain during the last few years it's the questionnaire of disruptive behaviours in Physical Education (CCDEF) (Granero-Gallegos & Baena-Extremera, 2016), a Spanish adaptation for the shorter tool of Physical Education lessons (PECI) from Krech

et al. (2010). With it we can measure the undisciplined behaviours and their severity. This way, the disruptive behaviours can be structured as five dimensions (i.e. aggressiveness, irresponsibility, disobedience, disturbing attitude and low self- management (Granero-Gallegos & Baena-Extremera, 2016).

When we talk about aggressiveness we must understand it as an inappropriate, multidimensional, and risky behaviour, which causes negative short and long term results for the victim and the offender (Gutiérrez-Cobo et al., 2017). This aggressiveness multidimensionality is due to the fact that it can be shown in every dimension of the person (i.e. physical, emotional, cognitive, and social) (Carrasco & González, 2006); therefore it can be expressed through physical aggression (physical attacks), verbal abuse (irritating messages, insults or threats and directly (to the offended person) or indirectly (calumnies spread, such as through an irritating message with insults or threats (Santana, 2018).

Irresponsibility is meant as a behaviour of excuses, blame on others, and denying personal responsibility (Fernández-Río, 2014), it was located in the lower level of the five established by Hellison (1995). Monsalvo and Guaraná (2008) claimed that for a person to be responsible, her or him must be completely aware of her or his acts. This awareness represents the power of making a decision, carry it out, and also evaluate it as a benefit or a damage; during this process the family and the school are the two of the most important institutions available for the person (De León, 2011).

Regarding disobedience, Uruñuela (2007) indicates that this disruptive behaviour is opposite to coexistence when an omission of the teacher orders is done repeatedly, answering inappropriately, interrupting the class or not paying attention to it. These behaviours happened as a consequence of the modifications of society, and so of education (Calvo, 2002), as a prove of default for the authority of the teacher, which is not present on actual education (Hurtado, 2019). This disobedience is also related to the lack of effort or indifference to achieve immediate objectives (Hurtado, 2019).

As before, this attitude would delay the correct development of the classes, which is an important concern for all teachers (Uruñuela, 2007). This disturbing behaviours involve external behaviours which perturb the rest of the students and can be shown as many different forms such as loud behaviour, disturbing the environment of the class (Arias et al., 2009). Even though disturbing behaviours are frequent during teenage years, they were also observed during childhood (Granero-Gallegos et al., 2020). If there is no end to those behaviours, they can lead into a risky factor on the development of serious disorders (Díaz et al., 2011) which can be started at home and transferred to the school (Allen et al., 2020).

Self- management has been related to the individual emotional regulation of the person, so it is the person who has to be able to manage her or his emotions properly (Bisquerra, 2003), developing abilities to manage her or himself. The person who experiences a poor self- emotional management is not able to separate her or his internal state from her or his exterior expression, showing, so many times, abuse, laugh at others, and difficulties to manage misunderstandings (Granero-Gallegos & Baena-Extremera, 2016). This could lead to a conflict between students and an anormal development of the Physical Education class. We should indicate that is not about supressing emotions, it is about knowing how to show them, and this skill is easy to show (Whitebread & Basilio, 2012) and better to introduce it during childhood and so, avoid a poor personal self-management (Whitebread & Basilio, 2012).

The latest researches regarding this theme, where made mainly to students of Secondary School (Conde-Vélez & Delgado-García, 2020; Medina & Reverte, 2018) and secondly, to Primary School students (Granero-Gallegos et al., 2020). Conde-Vélez and Delgado-García (2020) highlighted that regarding Primary Education

the issues are mostly shown on the higher courses and indicate the lack of investigation regarding disruptive behaviours in University, as the researches made by López (2017).

The latest results indicate that teachers, generally, have behaviour problems with 10% of their students (OECD, 2014), but in Spain this number goes up to 30 % (OECD, 2015). The results of the disruptive behaviours show that boys present a high disruptive behaviour profile (Baños et al., 2019; Cothran & Kulinna, 2007; Glock & Kleen, 2017; Granero-Gallegos et al., 2019, 2020; Kulinna et al., 2006) while girls show a low disruptive behaviour profile (Baños et al., 2019; Fernández Baños et al., 2017; Granero-Gallegos et al., 2019, 2020).

Despite the investigation on the field of disruptive behaviours, there are no investigations regarding aggressiveness, irresponsibility, disobedience, disturbing attitudes, and low self-management, and physical education showing opinions or perceptions of the students, or Primary and Secondary students together, or investigations which objective is to study gender and their differences in order to comprehend relations and improve the teaching-learning conditions.

By virtue of the previous establishments, the objective of this research was to determine the level of presence of the different disruptive behaviours from Primary Education and Secondary Education students, regarding age, educative stage and gender in Galicia.

## METHOD

### **Design**

To give an answer to the objective of this investigation, a non-experimental, descriptive and transversal (Ato et al., 2013) design was implemented because the dependent variables (aggressiveness, irresponsibility, disobedience, disturbing behaviour, or low self-control) were described regarding age, gender and educative stage.

### **Sample**

A non-probabilistic and convenience sample was selected in order to carry out this research. Also, for its geographic proximity and voluntariness. A total of 1304 students from Primary Education (n = 548) and Secondary Education (n = 756) participated on it. From this group, 612 were boys (46,9%) and 692 girls (53,1%); Medad = 12.77, DE = 1.89 attending to public schools of Galicia (Spain).

### **Tool**

The questionnaire of Disruptive Behaviours on Physical Education (CCDEF, Granero-Gallegos & Baena-Extremera, 2016) was used to obtain data for this investigation. This questionnaire has 17 elements with an introduction sentence "*Think about your own behaviour during Physical Education lessons and indicate your level of agreement with these statements*". The items were Likert scale type from 1 to 5 (in which 1 meant "*Never*"; 2 "*Almost never*" 3 "*Sometimes*" 4 "*Often*" and 5 "*Always*"). The scale had 5 factors: Aggressiveness ("*I threaten my classmates on purpose*"), irresponsibility and poor compromise ("*I work slowly on purpose*"), disobedience towards the rules ("*I do not follow the instructions*") disturbance of the class environment ("*I abandon the group during an activity*") and low self-management ("*I make laugh of other classmates*").

Internal consistency was found in every factor, as we can see in Table 1.

**Procedure**

In order to carry out this research, all the information was given to the schools asking for their collaboration. Also, the legal responsible of the kids were asked for permission, and only those who had it participated in it. During the investigation, the participants have been treated as established on the Helsinki declaration, highlighting the respect for their privacy right.

The tool was applied in the schools during a Physical Education class, asking the teacher to not be present while they were covering it up, to avoid interferences on the answers.

An initial explanation was given to the students about the content of the questionnaire and all the doubts were answered. After this, there were given 25 minutes to complete it.

**Statistical analysis**

First of all, the descriptive statistics were calculated (average and standard deviation), also the bivariate ones, through Pearson’s Coefficient of Correlation. After, the reliability of the subscales through *alfa Cronbach* Coefficient (Table 1). The variance analysis (ANOVA) was made in order to observe what happened with the age factor regarding the CCDEF dimensions, through the *Welch* statistic due to the lack of homoscedasticity and also the *post hoc* test using the *Bonferroni* statistic to study the peer significance. Subsequently, the multifactorial variance analysis (MANOVA) was made for each studied variable: The first factor was the educative stage with two levels (Primary Education and Secondary Education) and the second factor was the gender variable (boy-girl). The main effects were studied using partial “ $\eta^2$ ”, and also the interaction between variables, using the *Bonferroni* statistic in order to know the significance. For all that, a statistical package called IBM SPSS Statistics v. 22.0 was applied. The level of statistical significance was established at  $p < .05$  with a 95% of confidence interval.

**RESULTS**

**Descriptive analysis, Confidence analysis, and Correlations**

Table 1 shows the descriptive statistics of the used variables, the confidence analysis and also its correlation. The results of the confidence analysis showed suitable values in all the analysed dimensions. On the correlation analysis it should be highlighted the good and positive significance between AGR and DDO, as well as the moderate and positive relation with IRRP, FFD, and PSM. Also, the good and direct significative relation between FFD, DDO and PSM.

Table 1. Averages, standard deviation, asymmetry, kurtosis, confidence analysis and bivariate correlations between the studied dimensions of the CCDEF.

Dimensions	M	SD	A	K	$\alpha$	AGR	IRRP	FFD	DDO	PSM	Age	Stage	Gender
Aggressiveness (AGR)	1.48	.61	-.48	-.35	.787	1							
Irresponsibility (IRRP)	2.07	.83	-.46	-.17	.766		1						
Fails to follow directions (FFD)	1.53	.72	-.35	-.50	.818			1					
Distracts or disturbs others (DDO)	1.58	.60	-.18	-.23	.734				1				
Poor self-management (PSM)	1.45	.65	-.39	-.26	.712					1			

*M = Average; SD = Standard deviation; A = Asymmetry; K = Kurtosis;  $\alpha$  = Alpha of Cronbach; \*\* The correlation is significative at level .01 (Bilateral). \* The correlation is significative at level .05 (Bilateral).*

As it can be observed, the asymmetry and kurtosis values fulfil the normal criterion proposed by Curran et al. (1996).

### Variance analysis regarding age

Table 2 shows the averages and standard deviations of CCDEF from the questionnaires, regarding the age of the students.

Table 2. Descriptive data of the analysed variables of the CCDEF. Average, Standard Deviation, regarding age.

	10 (n = 144)		11 (n = 268)		12 (n = 264)		13 (n = 136)		14 (n = 184)		15 (n = 168)		16 (n = 140)	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
<b>AGR</b>	1.11	.23	1.34	.43	1.36	.60	1.47	.59	1.56	.69	1.80	.70	1.84	.59
<b>IRRP</b>	1.32	.37	1.55	.55	1.97	.76	2.18	.77	2.30	.80	2.66	.63	2.91	.64
<b>FFD</b>	1.27	.36	1.53	.80	1.44	.66	1.41	.77	1.46	.64	1.65	.58	2.05	.87
<b>DDO</b>	1.32	.40	1.32	.32	1.59	.58	1.73	.77	1.52	.60	1.69	.64	2.10	.58
<b>PSM</b>	1.20	.29	1.37	.59	1.49	.59	1.45	.78	1.47	.80	1.42	.66	1.80	.61

M: Average. SD: Standard deviation. AGR: Aggressiveness; IRRP: Irresponsibility; FFD: Fails to follow directions; DDO: Distracts or disturbs others; PSM: Poor self-management.

The ANOVA results show that there is a statistic significant effect between age of the students and AGR ( $F(6, 1297) = 32.057; p < .001, \eta^2 = .13$ ), the IRRP ( $F(6, 1297) = 120.508; p < .001, \eta^2 = .36$ ); FFD ( $F(6, 1297) = 18.686; p < .001, \eta^2 = .08$ ); DDO ( $F(6, 1297) = 37.732; p < .001, \eta^2 = .15$ ) and the PSM ( $F(6, 1297) = 11.486; p < .001, \eta^2 = .05$ ).

The multiple comparisons indicate the existence of statistical significant differences regarding AGR between the group of 10 with the 11 years old ( $p = .002$ ) and with 12, 13, 14, 15 and 16 year old students ( $p < .001$ ). There are also statistical significant differences between 11 and 14 years old students ( $p = .001$ ) and 15 and 16 years old students ( $p < .001$ ). Regarding 12 years old students, there are statistical significant differences on this dimension if we compare 14 years old students ( $p = .005$ ) with 15 and 16 years old students ( $p < .001$ ). Regarding 13 and 14 years old students there were found statistical significant differences if we compare them with 15 and 16 years old students ( $p < .001$ ). Also, the multiple comparisons indicate that regarding IRRP, there are statistical significant differences between the 10 and 11 ( $p = .013$ ), and with 12, 13, 14, 15 and 16 years old student ( $p < .001$ ). As well as statistical significant differences between the 11 and 12, 13, 14, 15 and 16 years old ( $p < .001$ ), as well as between 12 and 13 years old ( $p = .046$ ), and the first one between 14, 15 and 16 years old ( $p < .001$ ). Finally, also statistical significant differences between 13 and 14 years old student with 15 and 16 years old student ( $p < .001$ ) were found. Regarding FFD, statistical significant differences were found between 10 years old students and 11 years old students ( $p = .004$ ) with 15 and 16 years old students ( $p < .001$ ). Also, differences between 11 and 16 years old students ( $p < .001$ ), between 12 and 15 years old students, ( $p = .040$ ) and 16 years old students ( $p < .001$ ) and 13, 14 and 15 years old with 16 years old ( $p < .001$ ).

Regarding DDO, there were found statistical significant differences between students of 10 years old with 14 years old ( $p = .029$ ) and with 12,13,15, and 16 years old ( $p < .001$ ). Also, these differences were shown between 11 years old students with 14 years old students ( $p = .004$ ) and with 12,13,15, and 16 years old students ( $p < .001$ ). Regarding 12 years old students, there were only found differences with the 16 years old students ( $p < .001$ ). 13 years old students show differences with 14 years old students ( $p = .014$ ) and with 16 years old students ( $p < .001$ ). Finally, regarding this dimension, there were found differences between 14- and 15-years old students with 16 years old students ( $p < .001$ ).

Regarding PSM, statistical significant differences were found between students of 10 years old with the rest of ages (i.e. 12 ( $p < .001$ ), 13 ( $p = .021$ ), 14 ( $p = .002$ ), 15 ( $p = .032$ ) y 16 ( $p < .001$ )). Also, there were statistical significant differences between 11,12,13 14 and 15 years old students with 16 years old students ( $p < .001$ ).

**Factorial Variance Analysis regarding educative stage and gender**

Table 3 shows averages and standard deviation of the CCDEF variables gathered from the questionnaire regarding educative stage and gender.

Table 3. Descriptive data of the analysed variables of the CCDEF. Average, Standard Deviation, regarding gender and educative stage.

Variable	Educative Stage	Total (n = 1304)		Boys (n = 612)		Girls (n = 692)	
		M	SD	M	SD	M	SD
AGR	Primary (n = 548)	1.25	.39	1.25	.43	1.26	.35
	Secondary (n = 756)	1.64	.68	1.65	.75	1.63	.64
IRRP	Primary (n = 548)	1.54	.59	1.70	.68	1.38	.43
	Secondary (n = 756)	2.46	.76	2.30	.73	2.59	.76
FFD	Primary (n = 548)	1.46	.71	1.68	.92	1.24	.28
	Secondary (n = 756)	1.59	.72	1.51	.68	1.65	.72
DDO	Primary (n = 548)	1.43	.48	1.51	.52	1.35	.42
	Secondary (n = 756)	1.68	.66	1.60	.63	1.74	.68
PSM	Primary (n = 548)	1.41	.57	1.66	.66	1.16	.31
	Secondary (n = 756)	1.48	.70	1.44	.64	1.52	.74

M: Average. DE: Standard Deviation. AGR: Aggressiveness; IRRP: Irresponsibility; FFD: Fails to follow directions; DDO: Distracts or disturbs others; PSM: Poor self-management.

The factorial ANOVA results regarding AGR indicated the existence of a main significant effect of the educative stage [ $F(1, 1300) = 140.721, p < .001, \eta^2 = .01$ ]. It was higher the punctuation given by Secondary School students, but not in the gender factor ( $p = .909$ ), nor their interaction ( $p = .656$ ). Regarding IRRP, the results showed that there is a main significant effect in the educative stage [ $F(1, 1300) = 553.046, p < .001, \eta^2 = .298$ ]; the punctuation given by Secondary School students was higher; and in the interaction of both factors [ $F(1, 1300) = 64.783, p < .001, \eta^2 = .047$ ]. Regarding FFD, the factorial ANOVA results, indicated the existence of a main significant effect on the education stage factor [ $F(1, 1300) = 9.067, p = .003, \eta^2 = .007$ ]; the punctuation given by the Secondary School students was higher; and on the gender factor [ $F(1, 1300) = 15.370, p < .001, \eta^2 = .012$ ], which was higher on girls than boys. There is also a statistical significant difference on the interaction between both factors [ $F(1, 1300) = 53.205, p < .001, \eta^2 = .039$ ]. The factorial ANOVA results regarding DDO, the results showed that there is a main significant effect on the educative stage [ $F(1, 1300) = 51.669, p < .001, \eta^2 = .038$ ]; the given punctuation by the Secondary School students was higher, and on the interaction of both factors [ $F(1, 1300) = 19.909, p < .001, \eta^2 = .015$ ]. Finally, the factorial ANOVA results regarding PSM showed the existence of a main significant effect on the educative stage factor, [ $F(1, 1300) = 4.088, p = .043, \eta^2 = .003$ ]; the punctuation given by the Secondary School students was higher; and on the gender factor [ $F(1, 1300) = 35.387, p < .001, \eta^2 = .026$ ]; higher on boys than girls. There is also a statistical significant difference on the interaction between both factors [ $F(1, 1300) = 65.176, p < .001, \eta^2 = .048$ ].

Regarding them in pairs, comparisons of the 5 dimensions of the disruptive behaviours, there were found statistical significant differences between girls and boys from Primary Education regarding IRRP ( $p < .001$ ),

regarding FFD ( $p < .001$ ), on the DDO ( $p = .002$ ) and regarding PSM ( $p < .001$ ); higher punctuations given by boys. On Secondary School, there were also found statistical significative differences regarding IRRP ( $p < .001$ ) and FFD ( $p = .010$ ) and also on DDO ( $p = .002$ ), with higher punctuations given by girls than boys.

If we compare boys of both educative stages, there were statistical significative differences on AGR ( $p < .001$ ) and IRRP ( $p < .001$ ) with higher punctuations on boys from Secondary School. Also, there were differences on FFD ( $p = .003$ ) and PSM ( $p < .001$ ) and the higher punctuations were given, in this case, by the Primary School students. The comparison between girls on both stages, show statistical significative differences on AGR ( $p < .001$ ), IRRP ( $p < .001$ ), FFD ( $p < .001$ ), DDO ( $p < .001$ ) and on PSM ( $p < .001$ ).

## DISCUSSION

Regarding the objective of this research which was to determine the level of presence of disruptive behaviour on Primary and Secondary School during Physical Education classes regarding age, gender and educative stage in Galicia, the results show a low punctuation in general terms, because none of them achieves the medium punctuation of the scale.

The results show that, as similar researches (Medina & Reverte, 2018), these behaviours are more present in Secondary School Students (Conde-Vélez & Delgado-García, 2020; Granero-Gallegos et al., 2020). The Primary School Students give lower punctuations than Secondary School students (Cothran & Kulinna, 2007; Kulinna et al., 2006), and during the first stage, the boys give higher punctuations than girls, also similar results to previous researches for older students (Baños et al., 2019; Cothran & Kulinna, 2007; Fernández Baños et al., 2017; Glock & Kleen, 2017; Granero-Gallegos et al., 2019, 2020; Kulinna et al., 2006). On our investigation and regarding Secondary School students, girls give higher punctuations to this kind of behaviours, opposite results to most of the researches done regarding this educative stage (Baños et al., 2019; Cothran & Kulinna, 2007; Glock & Kleen, 2017; Granero-Gallegos et al., 2019, 2020; Kulinna et al., 2006) because they show a low profile of disruptive behaviour.

On our research, given a descendent order of punctuation, we find a trend for all the dimensions of disruptive behaviours regarding stage, gender or age. In the first place there is irresponsibility which is a lot higher than the others, so it is the most significative dimension as shown in other investigations (Baños et al., 2019; Cothran & Kulinna, 2007; Jurado & Tejada, 2019; Martínez-Molina et al., 2020).

After, there is distracts or disturbs others, with higher values than the others, (Jurado & Tejada, 2019), but not as significative as irresponsibility, opposite results to those from Martínez-Molina et al., (2020) who found that this dimension had lower punctuations. After there is fails to follow directions (Ishee & James, 2004; O'Brien, 2019) and aggressiveness (Klomsten et al., 2005) with the lower punctuations maybe due to the boys effort to display their masculinity in front of the girls (O'Brien, 2019).

Similarly o previous dimensions, we should highlight the por self-management, which is the last on the list, opposite results of those shown in Martínez-Molina et al., (2020). Other authors, regarding this dimension highlighted that most of the physical education classes are related to dominant situations of the boys which can lead to mockery between the students due to poor self-management (Baños et al., 2019; Granero-Gallegos et al., 2019; Jachyra et al., 2014; Mooney & Hickey, 2012).

Regarding age, a statistical significative effect is observed on all five dimensions, with higher punctuations given by older students (Cothran & Kulinna, 2007; Kulinna et al., 2006). These follows an established pattern,



increasing the punctuations. This is clear in punctuations regarding aggressiveness, irresponsibility and distracts or disturb others except between 13 and 14 years old whose punctuations decrease and then goes up again. Regarding fails to follow directions raises up to 12 years old, and then goes down between this age and 13 years old, to raise again for 14 years old. Also, self-management, raises from 10 to 12 years old, then it keeps stable until 15, and increases at 16 years old. These results may be related with jeopardizing the rules, a common behaviour on the development from a kid to a teenager which helps to make stronger personalities and social positioning (Granero-Gallegos et al., 2020).

The educative stage factor its key for every variable, aggressiveness, irresponsibility, fails to follow directions, distracts or disturb others and poor self-management, because this behaviours are slightly higher in Secondary School students than in Primary School students generally, because of teenage years (Granero-Gallegos et al., 2019; Torregrosa et al., 2012). This can be due to the physical and psychosocial changes the individual suffers when becoming a teenager (Granero-Gallegos et al., 2020). On the other hand if we compare Primary Education boys with Secondary Education boys, the first ones, give higher punctuations to fails to follow directions and to poor self-management and Secondary School students give higher punctuations to aggressiveness, irresponsibility and distracts or disturb others, which is opposite to the results obtained for girls of both educative stages, because of all the studied dimensions the punctuations are higher regarding Secondary School girls than Primary School girls.

On the other side, regarding Secondary School, girls obtained higher punctuations on all dimensions than boys, opposite results to those given by Baños et al. (2019), Glock and Kleen (2017) or Granero-Gallegos et al. (2020) which indicated that boys gave higher punctuations on behaviours related to irresponsibility and low compromise, disobedience, interrupting the class and also poor self-management (Granero-Gallegos et al., 2019). This did not happen regarding Primary School boys who gave higher punctuations than girls, such as shown on the previous researches even though it is a superior educative stage (Baños et al., 2019; Fernández Baños et al., 2017; Granero-Gallegos et al., 2019, 2020). The researches, usually link interrupting attitudes as a positive predictor of satisfaction-joy with the school, because these act of trying to make laugh their classmates, gives them a personal satisfaction (Granero-Gallegos & Baena-Extremera, 2016).

Finally, we should highlight some limitations of this study, because the sample was not random, and even though it was significative and compared both mandatory educative stages of our country, it would have to be done on smaller territories to check if this trends are the same or not. In addition, it would be interesting to analyse the comments of the teachers regarding the disruptive behaviours of their students to oppose their opinions. Furthermore, due to the self-report used to carry out this investigation, the students may not be saying all the truth. Also, it is necessary to indicate that the investigation method applied does not allow us to know the causes of the disruptive cases during Physical Education lessons.

For the teachers, this research allows them to know which are the most repetitive inappropriate behaviours and so, try to avoid them in advance, create a good learning environment (Müller et al., 2018), because it will facilitate the educative procedure.

## CONCLUSIONS

The punctuations given by the students who participated in this research indicate that the disruptive behaviours increase gradually with the age of 10 until 16 years old. On the other hand, we must conclude that, given the results, the disruptive behaviours have higher punctuation on Secondary School students than Primary School Students. Another conclusion is that Primary School boys give higher punctuations to all

different disruptive behaviours than girls, and these punctuations go the other way around when talking about Secondary School kids, because girls give higher punctuations than boys.

Finally, we should highlight that, while Secondary School girls give higher punctuation to all disruptive behaviours, Secondary School boys registered punctuations regarding aggressiveness, irresponsibility and distract or disturb others and Primary School boys on fails to follow directions and poor self-management.

## **AUTHOR CONTRIBUTIONS**

All authors have participated in all parts of this research and in the preparation of the article (in the conception and design of the study, in the acquisition of data, in the analysis and interpretation of the data, as well as in the draft of the article, the critical review of the intellectual content, and in the final approval of this document).

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## **DISCLOSURE STATEMENT**

No potential conflict of interest was reported by the authors.

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