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## Middle school students' views about physical education: A comparative study between four European countries

### Opiniones de los estudiantes de secundaria sobre la educación física: Un estudio comparado entre cuatro países europeos

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**Abstract.** Comparable and cross-national research is needed to examine students' views on the role of physical education (PE) in promoting active and healthy lifestyles, particularly in non-English speaking contexts. Thus, the present study aims to investigate and compare the views of middle school students from four European countries towards PE, considering cross-national and gender variables. In this cross-sectional study, 1244 middle school students (635 boys, 609 girls; Mean age = 14.3±0.9 years) from a public secondary school in Croatia, Lithuania, Poland and Portugal, answered to a questionnaire about their: (a) PE attitude, (b) PE importance, (c) PE main aim, and (d) perception of competence in PE. ANOVA and Student t-test were used to compare students' views across countries, and to compare boys' and girls' views within each country. Overall, results show that the students' views towards PE were mainly positive but important differences were found across the students from the four European countries. In all countries, boys have a more positive attitude, gave more importance to PE and perceived themselves as more competent than girls. Regardless of the sociocultural context, this study suggests that there is a cross-national need to further explore the nature of the differences found and increase young girl's attitudes towards PE. Additionally, more comparative studies are needed with a broad range of sociocultural contexts to assess the extent to which this type of differences is present.

**Keywords:** physical education, adolescents, attitude, perception of competence, comparative education.

**Resumen.** Se hace necesaria una investigación de carácter comparada e internacional para contrastar las opiniones de los estudiantes sobre el papel de la Educación Física (EF) en la promoción de estilos de vida activos y saludables, particularmente en contextos no anglófonos. Así, el objetivo del estudio fue examinar las opiniones de los estudiantes de secundaria de cuatro países europeos con respecto a la EF, teniendo en cuenta las variables país y género. En este estudio transversal, 1244 estudiantes de secundaria (635 niños; 14.3±0.9 años) de una escuela secundaria pública en Croacia, Lituania, Polonia y Portugal, respondieron a un cuestionario sobre: (a) la actitud, (b) la importancia (c) objetivo principal, y (d) la percepción de competencia en EF. Se aplicaron las pruebas ANOVA y *T-de-Student* para comparar las opiniones, entre los países, de los estudiantes, y de los niños y las niñas en cada país. En general, los resultados muestran que las opiniones de los estudiantes hacia la EF fueron principalmente positivas, pero se encontraron diferencias importantes entre los estudiantes de los cuatro países. En todos los países, los niños tienen una actitud más positiva, le dan más importancia a la EF y se perciben a sí mismos como más competentes que las niñas. Independientemente del contexto sociocultural, es necesario explorar más la naturaleza de las diferencias encontradas y mejorar las actitudes de las niñas hacia la EF. Además, se necesitan más estudios comparativos con una amplia gama de contextos socioculturales para evaluar en qué grado este tipo de diferencias está presente.

**Palabras clave:** educación física, adolescentes, actitud, percepción de competencia, educación comparada.

### Introduction

Regular participation in physical activity (PA) is positively associated with health, psychological, social and educational benefits (USDHHS, 2018; Warburton & Bredin, 2017). Yet, research suggests that most adolescents fail to meet the recommended 60 minutes of daily moderate-to-vigorous PA, especially girls (Guthold, Stevens, Riley, & Bull, 2019; Marques et al., 2020). Schools and in particular physical education (PE) departments have a uniquely advantageous position to provide young people with opportunities and learning experiences for health enhancing PA (Chen, Kim, & Gao, 2014; Dobbins, Husson, DeCorby, & LaRocca, 2013; OECD, 2019; UNESCO, 2015). Nevertheless, for many young people, PE curriculum seems to be neither personally meaningful, nor aligned with out-of-school lifestyles (UNESCO, 2014). In this regard, it has been suggested that PE needs a reappraisal about its nature, purpose and curriculum in schools (OECD, 2019; UNESCO, 2015).

In recent years, several reports have focused on comparing the status of PE across countries. However, these reports tend to be based on national specialists and PE teachers' perspectives, analysis of official documents, and literature reviews (Eurydice, 2013; Hardman & Marshall, 2009; Onofre et al., 2012a; Pühse & Gerber, 2005; UNESCO, 2014) and often leave out young people's views who live the PE curriculum. Understanding student's views about PE is fundamental for providing more meaningful experiences (Beni, 2017; Enright & O'Sullivan, 2010) and encouraging young people to become and remain physically active (Dismore & Bailey, 2011; Martins, Marques, Peralta, Palmeira, & Carreiro da Costa, 2017; Tannehill, MacPhail, Walsh, & Woods, 2015). When students' choices are implemented, the motivation to participate in PE tends to increase (Beni, 2017; Enright & O'Sullivan, 2010; Heredia, Sánchez, Gallego, Zagalaz, & Moral, 2019; Van den Berghe, Vansteenkiste, Cardon, Kirk, & Haerens, 2014).

In the last two decades, different areas of concern have been addressed in researching students' views towards PE, such as age, gender and cultural dimension (Beni, 2017; Dismore & Bailey, 2011; Silverman, 2017). Particularly, attitude

towards PE and importance attributed to PE, perception of PE main goals and perception of competence in PE are relevant views from students to engage with PE.

Student's attitude towards PE tends to be overall positive, better in boys than girls, and declines with age particularly in middle school phase (Baños, 2020; Cairney et al., 2012; Carreiro da Costa & Marques, 2011; Silverman, 2017; Silverman & Subramaniam, 1999). Nevertheless, despite the positive appreciation of PE, when compared to other school subjects such as language and mathematics, PE still tends to be perceived as less important and recreational (Carreiro da Costa & Marques, 2011; Martins et al., 2018).

The perceived main aim of PE is another important theme to consider in young people views because they have an impact in students' enjoyment and behaviours related to PE and PA (Silverman, 2017). Research suggests that PE main aims are often related to exercise and health, learning PA, social and personal development, with similarities and differences being found across European countries (OECD, 2019; Onofre et al., 2012a; UNESCO, 2014).

Finally, perceived competence in PE is important to understand adolescents' involvement, thoughts and learning in PE and PA contexts (Fox, 1990; Martins et al., 2017; Tannehill et al., 2015). Higher perceived competence in PE is related with a higher involvement, satisfaction and positive attitudes towards the subject and PA outside school (Cairney et al., 2012; Carreiro da Costa & Marques, 2011; Carroll & Loumidis, 2001; Fraile-García, Tejero-González, Esteban-Cornejo, & Veiga, 2019; Martins et al., 2018). Also, in this dimension, the research shows that perceived competence in girls is more likely to be lower than in boys (Bailey et al., 2009; Cairney et al., 2012; Martins et al., 2017).

Despite the advances in researching young people views towards PE (Silverman, 2017), most cross-sectional research tends to be developed in single national contexts. There is an agreement that a comparable and cross-national research is needed to examine students' views, where non-English speaking countries are underrepresented (OECD, 2019; Silverman, 2017; UNESCO, 2015). Hence, based on a sample drawn from four European Union countries (Croatia, Lithuania, Poland, and Portugal), the present study sought to examine and compare middle school student's views towards PE, main aims of PE and their perceived competence in PE, considering cross-national and gender variables. The evidence stemming from this study might be an important contribution to benchmarks for quality in PE across different countries and cultures.

## Methods

### Participants

Four public secondary schools selected by convenience, each one from the city capitals of Croatia (Zagreb), Lithuania (Riga), Poland (Warsaw), and Portugal (Lisbon) participated in this cross-sectional study. All students' aged 12 to 15 years-old were eligible to participate in study. The students were in the age range where the PA level and the PE attitude decline is concerning (Dumith et al., 2011), with the final sample consisting of 1244 students attending from grade 7 to 9.

### Instruments and variables

A questionnaire composed by 15 questions representing 3 dimensions (PA, PE, socio-demographics) was used. Questions previously used in other international or national studies were included. This study is focused on the questions addressing the student views towards PE namely their PE attitude, PE perceived importance, perception of competence in PE, and PE main aim.

*PE attitude.* The question concerning students' attitudes PE was: 'What do you think about your PE lessons at school?'. This question was used in other international comparative studies (Aaro, Wold, Kannas, & Rimpela, 1986; Delfosse et al., 1997) and Portuguese national studies (Carreiro da Costa & Marques, 2011; Marques, André, Martins, Sarmiento, & Diniz, 2014). Answers were given on 5 points Likert scale ranging from 'I dislike it very much' (=1) to 'I like it very much' (=5).

*PE importance.* The importance attributed to PE in the school curriculum was assessed by the question: 'What is the importance of Physical Education in the school curriculum?'. Answers were given on a 5-point Likert scale were defined as from 'Not at all important' (=1) to 'Very important' (=5).

*Perception of competence in PE.* To evaluate the perception of competence in PE the following question was formulated: 'Globally, in Physical Education, how do you consider yourself as a student?'. Answers were given on a 5-point Likert scale ranging from 'Very bad' (=1) to 'Very good' (=5). Several studies have used these questions with Portuguese adolescents (Carreiro da Costa & Marques, 2011; Martins, 2015).

*PE main aim.* The fourth question was: 'What is the most important purpose of physical education?'. This question asked the participants to rank the possible answers by order of preference regarding the promotion of: I) learning and to improve techniques; II) active and healthy lifestyles; III) enjoyment; IV) physical condition; V) knowledge for taking care of their body after leaving school; VI) rules of fair play and cooperation. Demographic information included questions such as sex (male/female), age and country.

As these constructs are all represented by a single-item, previous research has established the advantages of such methodological approach (Hoepfner, Kelly, Urbanoski, & Slaymaker, 2011) despite obvious disadvantages and suspicions on the methodological quality of single-item questionnaires. Hoepfner and colleagues (2011) argue in favour of single-items considering its use for multiple constructs in multiple fields (e.g. in psychological, marketing and medical sciences). Based on that, the authors summarise such advantages with regards to: a) reduced research burden with potential enhancement of data quality, b) increased research economy, c) similar methodological quality of the item representing respective constructs which can be unidimensionally represented, d) ethical value, and e) cultural adaptability. All of these advantages are essential to a cross-national comparative approach and applicable to this study as the addressed constructs can all be responded under a single item-approach as validated in previous studies (Carreiro da Costa & Marques, 2011; Delfosse et al., 1997).

According to Hambleton and Patsula (1998) procedures

of cross-cultural validation, the original English questions (Delfosse et al., 1997) were first translated to Croatian, Lithuanian and Polish by one native language official translator and then back-translated by another official translator. As for the Portuguese version of the questions, they had been previously validated and used in the Portuguese context (Carreiro da Costa & Marques, 2011; Delfosse et al., 1997). To support face validity, a pre-test was conducted with 40 adolescents from the four countries (10 in each country, 5 boys and girls) where feedback was requested regarding the meaning of the adapted questionnaire. Next, test-retest reliability for the questions was carried with one-week interval across 186 adolescents (Croatia = 40, Lithuania = 49, Poland = 50, Portugal = 47) who did not participate in the main phase of the present study. The intraclass correlation coefficients (two-way mixed effects model) of the questions per country were significant ( $p < 0.05$ ) and showed acceptable reliability (PE attitude: Croatia = 0.83; Lithuania = 0.87; Poland = 0.91; Portugal = 0.94; PE importance: 0.89, 0.94, 0.89, 0.87; Perception of competence: 0.97, 0.93, 0.92, 0.95). There was also a significant and moderate correlation between the answers to the nominal variable (PE main purpose) in the two moments ( $V$  Crammer = 0.661;  $p < 0.001$ ).

### Procedures

Before the study, approval from the school's principal was obtained. The adolescents' legal guardians provided an informed consent and the adolescents assented to participate. This research was conducted in accordance with the Code of Ethics of the World Medical Association (Declaration of Helsinki). The questionnaire was applied in the end of one PE class and took between 5 to 10 minutes to be fulfilled. A member of the research team in each country conducted the questionnaire and the PE teacher was not present during that time. The researcher clarified the study purposes, confidentiality of the data and volunteering in participating in the study.

### Statistical analysis

Descriptive statistics were used to assess the sample of students per country and to describe the perceived PE main aims by country and gender. One-way ANOVA was used to compare the PE attitude, PE importance and PE perception of competence across countries (table 2). Series of Student's  $t$ -tests were used to compare the PE attitude, PE importance and PE perception of competence of boys and girls within each country (table 3). The level of significance was set at  $p < 0.05$ . All statistical analyses were performed using IBM SPSS Statistics 25.0 (New York City, NY).

### Results

Table 1 presents the students socio-demographic characteristics by country.

The student views towards PE by country are presented in table 2. Overall, the students had a positive attitude towards

Table 1.  
Sex and age characteristics of the participants by country.

Variables	Croatia	Lithuania	Poland	Portugal
Participants (n)	299	325	305	315
Males (n)	149	174	155	157
Females (n)	150	151	150	158
Age ( $M \pm SD$ )	14.9 $\pm$ 0.6	14.5 $\pm$ 0.9	14.1 $\pm$ 0.9	13.7 $\pm$ 1.2

M, Mean; SD, standard deviation.

PE. The Portuguese students had the most positive attitude towards PE when compared to students from all other countries ( $p < 0.05$ ). The Polish students revealed the least positive PE attitude and differed significantly from the Croatian and the Portuguese students ( $p < 0.05$ ). Croatia and Lithuanian's students attributed the higher and lower importance to PE, respectively. A significant difference on the PE importance was found ( $p < 0.05$ ) between Croatian and Portuguese students and between the Lithuanian and the students from all other countries. As for the perceived competence in PE, students' felt to be competent within PE. Croatian students perceived as the most competent and the Polish students as the least competent. A significant difference ( $p < 0.05$ ) was found across students from all countries, except between the Portuguese and the Lithuanian students. On the perceived PE aims, the promotion of active and healthy lifestyles was the most selected by the Croatian and the Portuguese students. Lithuanian (35.9%) and Polish students (29.2%) mentioned the promotion of physical fitness (35.9%). Fair play and knowledge promotion were the least mentioned main aims of PE across all countries.

Table 2.  
Views of students towards physical education, by country.

Variables	Croatia	Lithuania	Poland	Portugal	TOTAL	$p$	$F$
PE attitude ( $M \pm SD$ )	3.77 $\pm$ 0.93	3.66 $\pm$ 0.98	3.49 $\pm$ 1.16	4.10 $\pm$ 1.00	3.75	<0.05	20.45
PE importance ( $M \pm SD$ )	3.88 $\pm$ 0.96	3.17 $\pm$ 1.12	3.69 $\pm$ 0.98	3.62 $\pm$ 1.01	3.59	<0.05	26.06
Perception of competence in PE ( $M \pm SD$ )	4.22 $\pm$ 0.92	3.82 $\pm$ 0.88	3.45 $\pm$ 0.87	3.83 $\pm$ 0.90	3.83	<0.05	36.96
PE main aim (n, %)							
To promote learning and to improve techniques	37 (12.4%)	59 (18.1%)	26 (8.5%)	62 (19.7%)			
To promote active and healthy lifestyles	<b>162 (54.2%)</b>	85 (26.1%)	70 (23%)	<b>136 (43.2%)</b>			
To promote enjoyment	34 (11.4%)	28 (8.6%)	71 (23.3%)	28 (8.9%)			
To promote physical fitness	40 (30.4%)	<b>117 (35.9%)</b>	<b>89 (29.2%)</b>	52 (16.5%)			
To promote knowledge for taking care of their body after leaving school	15 (5%)	32 (9.8%)	22 (7.2%)	18 (5.7%)			
To promote rules of fair play and cooperation	11 (3.7)	5 (1.5%)	27 (8.9%)	4 (1.3%)			

M, Mean; SD, standard deviation; PE, physical education

Table 3 provides evidence of the comparisons of boys and girls PE views by country. As for the PE attitude, statistically significant differences exist ( $p < 0.05$ ) between boys and girls in each country, with boys revealing a higher and positive attitude towards PE. The greatest gender difference was observed in Portugal and the smallest in Croatia. Gender differences were also found in the students' view of the importance attributed to PE with boys giving a significant higher importance to PE than girls in all countries except for Poland. Boys perceived themselves to be more competent than girls in all countries ( $p < 0.05$ ). As for the PE main aims, most boys and girls agreed about the main purpose of PE, as well as for the least important ones, within each country.

### Discussion

This study sought to investigate the views of middle school students from four European countries towards PE. The main findings provide evidence that students had a good attitude and perceived competence in PE. Furthermore, students had identified either the promotion of active and



Table 3.  
Views of students towards physical education, by country and gender.

Variables	Croatia		p	t	Lithuania		p	t	Poland		p	t	Portugal		p	t
	Boys	Girls			Boys	Girls			Boys	Girls			Boys	Girls		
PE attitude ( <i>M±SD</i> )	3.86±1.00	3.67±0.86	>0.05	1.67	<b>3.85±0.90</b>	<b>3.44±1.02</b>	<0.01	<b>3.89</b>	<b>3.78±1.10</b>	<b>3.17±1.16</b>	<0.01	<b>4.69</b>	<b>4.48±0.76</b>	<b>3.73±1.06</b>	<0.01	<b>7.16</b>
PE importance ( <i>M±SD</i> )	3.95±1.01	3.82±0.92	>0.05	1.17	<b>3.37±1.10</b>	<b>2.95±1.11</b>	<0.01	<b>3.36</b>	3.72±1.13	3.69±1.06	>0.05	0.29	<b>3.83±0.98</b>	<b>3.42±1.00</b>	<0.01	<b>3.74</b>
Perception of competence in PE ( <i>M±SD</i> )	<b>4.45±0.78</b>	<b>4.01±0.98</b>	<0.01	<b>4.24</b>	<b>3.94±0.88</b>	<b>3.68±0.88</b>	<0.01	<b>2.68</b>	3.53±0.85	3.37±0.87	>0.05	1.65	<b>4.10±0.86</b>	<b>3.56±0.85</b>	<0.01	<b>5.65</b>
PE main aim (n, %)																
To promote learning and to improve techniques	29 (20.0)	5 (3.5)			34 (19.4)	25 (16.6)			12 (7.7)	14 (9.3)			32 (21.3)	30 (20.0)		
To promote active and healthy lifestyles	68 (46.9)	89 (62.2)			40 (22.9)	45 (29.8)			36 (23.2)	34 (22.7)			71 (47.3)	65 (43.3)		
To promote enjoyment	16 (11.0)	15 (10.5)			16 (9.1)	12 (7.9)			39 (25.2)	32 (21.3)			11 (7.3)	17 (11.3)		
To promote physical fitness	19 (13.1)	21 (14.7)			70 (40.0)	47 (31.1)			44 (28.4)	45 (30.0)			23 (15.3)	29 (19.3)		
To promote knowledge for taking care of their body after leaving school	8 (5.5)	7 (4.9)			13 (7.4)	19 (12.6)			8 (5.2)	14 (9.3)			10 (6.7)	8 (5.3)		
To promote rules of fair play and cooperation	5 (3.4)	6 (4.2)			2 (3.4)	3 (2.0)			16 (10.3)	11 (7.3)			3 (2.0)	1 (0.7)		

M, Mean; SD, standard deviation; PE, physical education

healthy lifestyles or physical fitness as PE main aims. Several differences were identified across countries and across gender in each country, with boys presenting a higher opinion of PE than girls in all countries. These differences will be discussed with regards to the contextual elements of the represented countries, initially considering the whole-country responses and then considering the breakdown of boys vs girls within and across countries.

### *Students Views on PE at Country-Level*

Overall results show that the students' attitudes towards PE were mainly positive, but differences exist across the students from the four European countries. This is of relevance because, despite the sociocultural differences between countries, a positive attitude toward PE is always considered as a necessary component in encouraging an active lifestyle (Dismore & Bailey, 2011; Hashim, Grove, & Whipp, 2008; Kjønneksen, Anderssen, & Wold, 2009). Portuguese students revealed the highest PE attitude, probably because they found more enjoyment and fun in their PE classes, something that Silverman (2017) stated as something intrinsic to develop a positive attitude toward PE. On the contrary, the Polish students had the lowest PE attitude. The cultural tradition inherited from the soviet ideology, for the polish school PE system, places more value in the collective development which tends to be more difficult to instil in the students a positive attitude toward PE, as part of their individual development (Bronikowski, 2014).

The students' importance attributed to PE in Croatia and Poland is higher when compared to their mean attitude towards PE. Since the beginning of the 20<sup>th</sup> century, several changes occurred in eastern countries in the school PE systems, with changes of the purposes of PE, curricula, time allocated, teacher education and more holistic-oriented projects involving PE and PA in communities trying to change the image and the status of PE (Klein & Hardman, 2008; UNESCO, 2014). Lithuanian students' lower importance attributed to PE could be justified with the prevalence of social and cultural heritage that still values physical fitness and some sports, as basketball. Moreover, in Lithuanian schools, even though there is a legal basis, it is difficult to put regulations into practice and a lot of schools still do not achieve the minimum time of PE classes as defined by the national educational system (Puisiene, Volbekiene, Kavaliauskas, & Cikotiene, 2005). In Portugal, the students had a good attitude but attributed a lower importance to PE which might be explained with the downgrading of the PE assessment status to a low-stakes system in 2012.

The main identified aims of PE were the promotion of active and healthy lifestyles by the Portuguese and Croatian students, in line with the aims presented in the official documents of both countries (Onofre et al., 2012b). Although recent changes in educational laws about PE (2006 for Lithuania and 2009 for Poland) introduced a holistic perspective to PE development in their educational systems, the promotion of physical fitness mentioned by the Polish and Lithuanian students as the main aim of PE could be explained by the fact that head teachers and parents still have a major influence from of the old system (Klein & Hardman, 2008). The Polish students also mentioned highly the promotion of enjoyment and of active and healthy lifestyles. The focus on active and healthy lifestyles is in line with available evidence about student's opinions and with international statements about the PE curriculum (Eurydice, 2013; OECD, 2019; UNESCO, 2014).

### *Girls' and Boys' Views on PE Within and Across Countries*

Concurring with current evidence (Dismore, Bailey, & Izaki, 2006; Silverman, 2017), our study found that girls consistently presented a lower PE attitude and gave a lower PE importance than boys in all countries. Most pronounced differences were found particularly in Portugal and Lithuania across all constructs. This is important as both countries show concerning levels of PA participation, especially considering adolescent girls compared to boys in Lithuania at 6% and 14%, respectively (WHO, 2018b) and in Portugal at 5% and 19%, respectively (WHO, 2018d). While the PA levels are not particularly high in Croatia (boys at 25% and girls at 12%) (WHO, 2018a) and Poland (boys at 30% and girls at 19%) (WHO, 2018c), they are still considerably higher than in Lithuania and Portugal, especially among girls. The fact that there are less significant differences in student views in Croatia and Poland compared to Portugal and Lithuania, along with the higher levels of PA across gender in the former countries, raises the need to further explore and compare the different countries to identify the reasons for such differences.

PE is, for many adolescents and girls, the only context where they can have access to quality PA experiences delivered by a PE specialist (OECD, 2019). Thus, it is urgent to close the gender gaps concerning the PE and PA amount and types of opportunities that exist between boys and girls, and concrete actions should be taken within PE (Góis et al., 2020). Importantly, school-based PA and a PE provision that addresses the unique needs of girls can change girls' views

and participation (Camacho-Minano, LaVoi, & Barr-Anderson, 2011). Pedagogical and scientific engagement with girls, such as actively listening to their voices (Corr, McSharry, & Murtagh, 2019; León-Díaz, Arija-Mediavilla, Muñoz, & Santos-Pastor, 2020; Martins, Marques, Sarmento, & Carreiro da Costa, 2015; O'Sullivan & MacPhail, 2010) and co-constructing the curriculum by participatory action research strategies (Enright & O'Sullivan, 2010), has been identified as an important way for developing meaningful PE and PA opportunities.

Interestingly, the construct of perception of competence was the one which showed larger gender differences in students from Croatia, Lithuania and Portugal. Such result indicates that girls are perceiving to be less competent than boys, thus pointing to the need to further explore the nature of the learning experiences and of the curriculum contents delivered, especially considering that collective games tend to be the most taught content in a number of European countries (Holzweg, Scheuer, Costa, & Onofre, 2019). By country, the gender differences in the perception of competence are significant and had the strongest expression in Portugal. Croatian boys and girls had the highest opinion about themselves as PE students. Perceived competence has been identified as an important factor associated with PA, both in quantitative (Biddle, Atkin, Cavill, & Foster, 2011) and qualitative studies focused on young people's voices (Corr et al., 2019; Martins et al., 2015). The perception of competence is a basic psychological need in the self-determination theory (Ryan & Deci, 2000), highly dependent on the PE lessons motivational climate. Creating a PE motivational climate that is task oriented, safe, inclusive, offering challenging activities to all, as well as providing autonomy and support might help students, and girls in particular. This seems to be essential to raise their self-perception and motivation in PE towards the adoption of physically active lifestyles (Haerens, Kirk, Cardon, De Bourdeaudhuij, & Vansteenkiste, 2010; Vega, Mayorga-Vega, Ornelas, Pérez, & García, 2019) and to provide more meaningful PE experiences (Beni, 2017).

The above finding is particularly important considering that, for the PE main aims, similar trends were found among boys and girls within each country. Students were aware of the positive influence that PE has in health and their fitness and that should be used in the learning process as a motivational factor. It was especially interesting in this study to find that, despite living in a different country and attending different schools with different curricula, there was a great deal of agreement about the main aims of PE. This finding allows to begin establishing a common understanding on the nature, purpose and curriculum aim of PE in schools (Hardman & Marshall, 2009; OECD, 2019; UNESCO, 2014), despite perceptions that PE seems to be neither personally meaningful, nor aligned with out-of-school lifestyles (UNESCO, 2014). As there is a shared perspective on the development of physical fitness and promotion of healthy and physically active lifestyles between boys and girls, the development of their positive attitudes and perception of competence should allow accomplishing this aim. At the same time, it needs to be considered the reasons why students do not value the importance of PE to develop fundamental values

of respect and fair play to a greater extent in any of the four countries as a more humanistic and cultural contribute to their overall development. This raises the question on whether other countries in Europe find the students to value this and other dimensions of PE.

### *Limitations and strengths of the study*

This study carries some limitations that need to be acknowledged. Firstly, as a cross-sectional study with non-representative samples, the results yield limited statistical generalisation power and do not allow drawing causal inferences. As such, the findings allowed us to point to some cross-national differences that warrant further exploration as regards to the collection tools and to the context elements that can provide explanations towards causal inferences. Yet, this study is among the few ones which allow to compare the views of students about their PE experience in different countries, all in non-English speaking contexts, delivering a comparative analysis perspective warranted by a number of international institutions and researchers (Eurydice, 2013; OECD, 2019; Onofre et al., 2012a; Silverman, 2017). The use of a common validated tool, focused on key variables of student views affecting engagement with PE, provided relevant data on existing differences that can now be further explored within these countries and by other countries, with larger samples. Also, this single-item approach on relevant constructs showed to be economic yet valid and reliable (Hoepfner et al., 2011), which is essential for large-scale comparative analysis.

### **Conclusion**

This study provided evidence that, despite the sociocultural and educational differences between the four countries and an overall positive view of PE among all students, boys have a more positive attitude, gave more importance to PE and perceived themselves as more competent than girls. Moreover, students showed differences across countries across all constructs at different levels. This should motivate more comparative studies in order to have more in-depth interpretations for such gendered results. While the reasons for the cross-national and gendered differences are left to interpretation and further exploration, this type of studies might contribute at a cross-national level for PE to reposition and reinforce its intrinsic value and increase the contribute to promote more active and healthy lifestyles among middle-school adolescents across Europe, particularly amongst girls.

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