

Quality education and gender equality as objectives of sustainable development in education: an experience with teachers in Spain

Educación de calidad e igualdad de género como objetivos del desarrollo sostenible en la educación: una experiencia con docentes en España

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Abstract: This paper aims to assess the opinions of Physical Education teachers (PET) about their teaching intervention at a coeducational level. A further objective was to analyse PETs self-perceptions of their mixed and training interventions to describe possible training gaps. The qualitative study involved 191 high school PET from Andalusia (Spain). Some questions were conducted about three dimensions: gender stereotypes and attitudes in PE; teaching performance in coeducation, and coeducational teachers' professional development in PE. The study's main results indicated that most teachers had neither different expectations of boys and girls nor a different way of treating them and, more than half of the participants considered themselves to be competent in coeducation. They preferred to receive training other than coeducational training. However, almost three-quarters of the sample had not received any coeducation training, or it was self-taught. The main conclusion is that PET consider that they have proper coeducational behaviour. The results showed that current teachers had improved their teaching intervention regarding gender equality compared to previous studies. The present study has had a contribution to the Sustainable Development Goals (SDG) goals 4 and 5, quality education and gender equality, respectively and can be a reference for future research related to coeducation for teachers.

Keywords: gender; teacher intervention; physical education; sustainable development goals; professional development

Resumen: Este trabajo tiene como objetivo evaluar la opinión de profesorado de Educación Física (PET) sobre su intervención docente en un nivel coeducativo. Otro de los objetivos fue analizar las autopercepciones de los PET (del inglés Physical Education Teacher, "PET") sobre sus intervenciones coeducativas y formativas para describir posibles lagunas formativas. En este estudio cualitativo han participado 191 PET de secundaria y bachillerato de Andalucía (España). Se realizaron preguntas sobre tres dimensiones: estereotipos y actitudes de género en EF; desempeño docente en coeducación y desarrollo profesional del profesorado coeducativo en EF. Los principales resultados del estudio indicaron que la mayoría de los docentes no tenían expectativas diferentes entre niños y niñas ni una forma diferente de tratarlos y más de la mitad de los participantes se consideraban competentes en coeducación. Preferían recibir cursos de especialización distintos a cursos de coeducación. Sin embargo, casi las tres cuartas partes de la muestra no había recibido ninguna formación en coeducación o era autodidacta. La principal conclusión es que los PET consideran que tienen un comportamiento coeducativo adecuado. Los resultados mostraron que los docentes actuales habían mejorado su intervención docente en materia de igualdad de género en comparación con estudios previos. El presente estudio pretende contribuir a las metas de los Objetivos del Desarrollo Sostenible (ODS) 4 y 5, educación de calidad e igualdad de género respectivamente y puede ser un referente para futuras investigaciones relacionadas con la coeducación en docentes.

Palabras clave: género; intervención docente; Educación Física; objetivos del desarrollo sostenible; desarrollo profesional

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Introduction

PE has become increasingly important in recent years. The evidence associates physical activity (PA) in childhood and adolescence with improved physical (Álvarez-Bueno et al., 2017), cognitive (Donnelly et al., 2016) or psychological health (Biddle & Asare, 2011). However, a recent study has estimated that 80 per cent of young people (11–17 years) worldwide do not reach the minimum recommendation of 60 minutes of moderate or vigorous PA per day (Aubert et al., 2018). This physical inactivity is even more notable in the case of girls (Janz et al., 2000), despite evidence shows that girls who practice PA have more significant social, physical and psychological health, and better self-esteem and personal satisfaction (Clark et al., 2011; Flintoff et al., 2017; Spencer et al., 2015). For these reasons, PE classes should be an opportunity for both genders to practice PA (Tanaka et al., 2018) equally. The potential of PE as a subject that generally improves social relations is widely supported in previous literature (An-

derson-Butcher., 2019). This is mainly due to the context generated in PE sessions, as it allows for participatory and equitable spaces to be generated through learning situations. For example, recent reviews have shown a positive relationship with improving social and personal relationships (Opstoel et al., 2020). As gender attitudes are reinforced during PE practice, PE is an opportunity to develop gender attitudes and develop social and personal relationships (Evan, 2017; Sánchez-Hernández et al., 2018). Therefore, PE should be considered an essential tool that helps to improve sustainable attitudes among students (Lindsey & Chapman, 2017; UNESCO, 2017). To this idea, one must add the emerging global concern for the improvement of sustainable development. UNESCO (2014) established the concept of Education for Sustainable Development (ESD) to establish a set of indications, tips and guidelines for teachers to improve the sustainability attitudes of their students. ESD considers teachers as essential agents of change, as their beliefs and behaviours are essential to transmit conduct favouring the planet's

sustainability in its three dimensions. However, the changes required for ESD imply a profound transformation of thinking and action, and the collaboration of all individuals, entities and governments (Olsson et al., 2016). Recent studies have shown how PETs positively value how physical education can contribute to the achievement of the SDGs. However, potential ambiguity has been found in the application of the SDGs to physical education lessons, and there is a need to clarify how this could be done. In addition, they also point to lack of time and institutional support as the main constraint (Baena-Morales, Prieto-Ayuso, 2022).

Therefore, considering its importance, special attention should be paid to teachers' professional development, since it has been shown to be essential to improve teachers' skills, knowledge and practice (Darling-Hammond, 2017). Thus, transferring the key aspects from previous studies could enhance PE in terms of relevant progress in sustainable education. Achieving gender equality is one of the goals adopted by the United Nations. Although encouraging all students to be physically active, PE activities are gender stereotyped regarding the socioeconomic and cultural circumstances in which boys and girls grow up (Benn et al., 2011). Over the past two decades, significant efforts have been dedicated to analysing interventions that could improve the inclusion and active engagement of all girls in PE (Vertinsky, 2016). An example of this is a PE intervention programme based on an activist methodology, with a variety of activities and possibilities, that showed a positive environment for teachers and students in a coeducational context (Lamb et al., 2018). In contrast to traditional interventions, these modern interventions should be approached with PE teachers to achieve equitable education between girls and boys. Therefore, PE has several characteristics that could help to improve sustainable development, namely the social dimension and coeducation. From a sustainable development perspective, PE has been documented as a subject with a special relationship with the sustainable development goals (SDG) (Baena-Morales et al., 2021). Baena-Morales et al., (2021) present an analysis of the 169 targets that make up the 17 SDGs proposed by the United Nations (United Nations, 2020). This relationship of PE with SDGs 5 and 4 has been defended in previous works, showing how the use of more cooperative methodologies could be a strategy that promotes gender equality (Baena-Morales & González-Villora, 2022). For example, it has been pointed out how different practice-based models can contribute to target 4.5 (reduction of gender disparities in education and equality of vulnerable people), 5.1 (elimination of discrimination against all women and girls), or 5.5 (women's participation and equal opportunities), among others.

Therefore, the different conditioning factors that could influence a coeducational teaching intervention should be studied to contribute to the achievement of the SDGs. The first dimension aims to determine the methodological actions and behaviours of PETs at the coeduca-

tional level. The second dimension seeks to assess the training sources and the professional development intentions of PETs in coeducation (Figure 1).

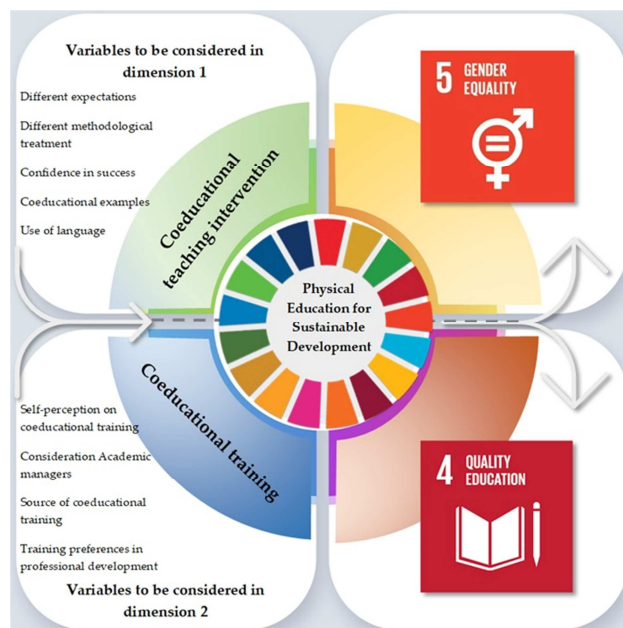


Figure 1. Relationship between the dimensions assessed and SDG 4 (quality education) and SDG 5 (gender equality)

Gender stereotypes and attitudes in PE classes: influence of teaching practice on girls' attitudes in PE class

Recent research has studied the relationship between gender stereotypes and PE (Alvariñas-Villaverde & Pazos-González, 2018; Pastor-Vicedo et al., 2019; Serra et al., 2020; Granda et al., 2018). PE is an ideal setting for change and the reproduction of gender stereotypes since it is a subject in which traditional gender stereotypes and unequal relationships become more evident (Serra et al., 2020). Some studies have reported that girls with more stereotypes practise fewer sports activities, while boys with more stereotyped beliefs perform more PA (Granda et al., 2018).

Women have traditionally tended to stay away from sports practices as these were associated with the male sex to demonstrate their strength, endurance and power. Sports practices do not correspond to the feminine ideal associated with beauty, delicacy or fragility. Although the incorporation of women into sports practices has been increasing in recent years, different stereotypes persist, indicating to women that it is not a suitable space for them, or, at least, not as much as for men (Solom, 2014). Slater and Tiggemann (2011) added that adolescent women often feel more uncomfortable and self-conscious when performing PE due to the possibility of getting dirty, sweating or not being allowed to take a shower after the completion of the class. Therefore, this set of conditions may result in decreased PA in school-aged girls.

Previous studies have evaluated several gender stereotypes related to girls and the PE class. Firstly, although it is

highlighted that girls associate body image or physical performance with the concept of health (Clark et al., 2011), some girls' rejection biases have been identified, who associate and perceive sports practice as a masculine activity, even leading to a loss of femininity when it comes to participating (Azzarito et al., 2006). Girls accept this masculinisation of sport to the point of worrying about the image that other female colleagues might have of them when doing PE (Slater & Tiggemann, 2011).

Female students recognise the dominance of boys in physical exercise and even perceive unequal treatment regarding gender by PE teachers (Flintoff et al., 2017; Barr-Anderson et al., 2008). Solmon (2014) adds that teachers form different expectations of students, and their positive beliefs will enhance the active participation of their students and vice versa. In addition to the expectations that teachers have of boys and girls, Soler (2007) indicates that teachers reproduce gender models and relationships based on the following mechanisms: communication with students in the classroom; their didactic resources; the organisational mechanisms of the session and the evaluation methodologies. It is essential to be aware of these mechanisms, since PA habits in adults are mainly acquired during school age (Janz et al., 2000); therefore, this situation is reflected beyond the PE class, since it has been observed that male adolescents are more active during their free time, while females spend more time socialising (Ferrar et al., 2012). Furthermore, PE has been influenced by a traditional model focused on content that reinforces physical fitness in which girls, due to physiological differences, can perform at a lower level (Azzarito et al., 2006). Boys register a substantially higher performance than girls in physical tests involving muscular strength, power, endurance, speed or agility.

One of the issues to be resolved in PE focuses among others on gender attitudes. To this end, the need for teacher and student training is emphasised (Weiner, 2000). In fact, several programmes have been developed in order to help teachers' professional development. However, assessing the impact of these programmes in terms of sustainable changes in the educational practice is necessary (Hubers et al., 2020). In fact, despite the development of different strategies, teachers return to their old behaviours when they finish their training (Wolthuis et al., 2020). It is important to determine if such programmes achieve their expected results, and to identify the key factors to be improved and the effective characteristics of professional development (Hubers et al., 2020)—in other words, why change works, for whom and in what context (Cohen & Meta, 2017). In this regard, guidelines to assist schools in selecting professional development programmes could be helpful in order to consider the limitations or opportunities that a particular context provides (Schachter et al., 2019). In conclusion, the professional development programmes could be updated in order to optimise their effectiveness, and this could be held in the framework for sustainable educational change (Hubers et al., 2020).

Moreover, the magnitude of sex differences increases with age, and more rapidly from 12 years (Tomkinson et al., 2018). This context may lead to girls' negative self-evaluation in PE classes, as they do not perceive an equitable environment. Therefore, girls' low PA levels could partly explain their perception of PE and previously generated potentially harmful experiences (Cairney, 2012). As a consequence of this context, it is essential to know the impressions and behaviours of PETs at a coeducational level. Obtaining this information will allow us to detect potential differences and weaknesses that could improve future teaching interventions in PE. In this way, it will be possible to improve SDG 4 (quality education) and SDG 5 (gender equality).

Objective and Methods

Objectives

This research aims to describe PE teachers' self-perception of their coeducational interventions and training to identify their potential needs. For this purpose, how they perceived their teaching interventions during their PE classes was explored and the training process related to coeducation analysed.

Method

In order to achieve this objective, a qualitative methodology was chosen, given the ability of this approach to investigate social and human problems in their natural environment (Creswell, 2013). Within the qualitative tradition, the technique of content analysis, which classifies oral or written information into units of meaning (Kyngäs et al., 2020), was used. Specifically, we performed a conventional, summative study (Hsieh & Shannon, 2005) once the framework was configured, based on the emerging information, and considered the narratives' quantification. This last strategy allowed us to assess latent meanings, because it revealed the emphases on the different units of meaning present in participants' discourses. All narratives were identified with an alphanumeric code to guarantee anonymity.

Participants

A total of 191 PE secondary teachers (133 males and 58 females) from the Autonomous Community of Andalusia (Spain) participated. The age of the participants was evaluated through different ranges: 21–30 years old (34); 31–40 years old (77); 41–50 years old (63), and 51 years old or older (17). Regarding the academic level taught by the teachers, several grades were structured, resulting in a total distribution in which 72 taught in the first cycle (first and second years of secondary school; 12-13 years), 62 in the second cycle (third and fourth years of secondary school; 14-15 years), and 57 in high school (16-17 years). In order to place the teachers within an academic level, the number of hours taught was taken into account, the course with the highest number of hours being the one used to

organise the sample.

Data collection

The instrument used for data collection consisted of 12 questions, of which three were closed-ended and nine were open-ended. The first were used to collect socio-demographic information (gender, age and grade). Consistent with the objectives of the study, the remaining nine were about teaching interventions in coeducation (5) and training received in this area (4). The design of the instrument was validated by three experts in educational research from the University of Alicante (Spain), the institution to which the members of the research team belong. The instrument was submitted to them via email together with an evaluation form. In it, they were asked to write down their opinion on the level of relevance and pertinence of each question with respect to the themes and objectives proposed. To do so, they were provided with a series of indicators: (1) Not at all relevant (the question was not linked to the objectives and themes analysed), (2) Relevant (the question was related to the objectives and themes, but was not fundamental) and (3) Very relevant (the question was crucial and should therefore be included in the instrument). They were also asked to rate the wording, syntax and clarity of formulation. In addition, they were given the opportunity to raise possible suggestions and even to propose alternative questions. According to the evaluation, only a few grammatical changes were necessary.

Given the difficulty of collecting data in the exceptional circumstances of the COVID-19 pandemic, the PETs were asked to complete the questionnaire through a link created in Google Forms. The average duration of completion of the form was 15 minutes. We found some limitations when disseminating the questionnaire as it was online. These limitations were overcome thanks to informal networks and by contacting directly the workplaces of the participants. Ethical aspects were respected following

the regulations of the authors university; the participants were informed of the study's objective and its voluntary character, along with their anonymity and the confidentiality of the information provided. The PETs had to confirm that they were in active service for their responses to be accepted. All participants gave written consent for the scientific diffusion of the data. The questionnaire was disseminated through different educational institutions, encouraging sharing with other colleagues. Data collection was carried out over four weeks (30 November to 31 December 2020).

Data analysis

The interpretative analysis of the data was carried out with the help of AQUAD 7 software (Huber & Gürtler, 2013). This tool was selected for its ability to categorise and organise the information into units of meaning. After an iterative and recurrent reading process, the framework of categories and codes was designed. It was validated by the same experts who had previously validated the data collection instrument. The analysis instrument served as the basis for the coding of the information, which was finally organised into two categories and 36 codes.

Results

The results of the qualitative analysis are presented below. The information is organised into two categories, as shown in Table 1. The first category, coeducational teaching intervention, was analysed through five questions ascertaining the teachers' perceptions of the relevant aspects to ensure a coeducational methodology. The second category includes four questions to determine the coeducational teacher training received. Both units of meaning encompass a set of codes that allow us better to understand the study's reality from a qualitative perspective. Each code is presented with the absolute frequency (AF) and its percentage.

Table 1. Descriptive data of research codes

Categories	Codes	AF	AF%
Category 1. Coeducational teaching intervention			
1. Do you have different expectations of boys and girls? Do you think that student performance depends on curricular content?	1.1 No, I have the same expectations	166	86.9
	1.2 Depending on the type of content	11	6.3
	1.3 Yes, I consider that being a boy/girl determines my expectations	12	6.3
	1.4 Sometimes this happens	2	1
	Total	191	100
2. Do you consider that PE teachers treat boys and girls differently at a methodological level?	2.1 I don't think so	124	69.6
	2.2 Sometimes	31	17.4
	2.3 Have not thought about it	13	7.3
	2.4 I do consider students' sex	10	5.62
	Total	178	100
3. Do you perceive greater confidence in boys' ability and success than girls' in your PE class?	3.1 I do not think so	142	74.3
	3.2 Depends on the group or the student	26	13.6
	3.3 I have not thought about this question	13	6.8
	3.4 There is a greater masculine capacity	6	3.1
	3.5 Other	4	2
Total	191	100	
4. Are you aware of whether you try to use cases of men and women equally when giving examples of successful athletes?	4.1 Yes, I always do	167	87.9
	4.2 No, I haven't thought about it	17	8.9
	4.3 Other	6	3.2
	Total	190	100

	5.1 Yes, I use inclusive language.	144	75.8
	5.2 No, but I should take it more into account	17	8.9
5. Do you consider the use of inclusive and coeducational language when interacting with students?	5.3 No, I don't think it's necessary to use the feminine	13	6.8
	5.4 No	10	5.2
	5.5 The masculine is neutral	6	3.1
	Total	190	100
Category 2. Coeducational training			
	6.1 Yes, it is sufficient	115	60.5
6. Do you consider that you have adequate coeducational training?	6.2 No, it should be improved	70	36.9
	6.3 I have not considered it	5	2.6
	Total	190	100
	7.1 Yes, in general	116	60.7
7. Do you think that the management team of your centre has assisted you in your coeducational training?	7.2 Not as much as it should	57	29.8
	7.3 It is not necessary	18	9.4
	Total	191	100
	8.1 Reading books or articles	83	43.5
8. Mostly, how have you been trained in coeducation?	8.2 Attending courses	53	27.7
	8.3 Internet courses	47	24.6
	8.4 I do not consider it important	6	3.1
	8.5 Other	2	1
	Total	191	100
	9.1 Specific courses on PE	94	49.2
9. If you had the opportunity to take training courses in this field, would you take them, or would you prefer to train in other areas?	9.2 I am already trained; I would prefer other topics	75	39.3
	9.3 Coeducation	11	5.7
	9.4 Other	11	5.7
	Total	191	100

First category. Coeducational teaching intervention

The first category included codes referring to PET's perceptions of their coeducational interventions during their teaching activities. The majority of teachers stated that they did not have different performance expectations between sexes: 86.94 per cent considered that they had exactly the same expectations. It is worth highlighting the constant mentions in their speeches of the lack of differentiated expectations of boys and girls (AF% = 86.94), as seen in the following extracts.

Expectations do not differ from a competency perspective; performance will always depend on capabilities and effort made. (PET_171)

I do not have different performance expectations between boys and girls. (PET_85)

In contrast, it is interesting to note the existence of some text segments, albeit a very small minority (AF% = 12.6), that did recognize the influence of their stereotypical beliefs on the physical performance of students. Among them, the content type was coded as a factor determining performance expectations (AF% = 6.3).

I think that subconsciously if I have certain prejudices, it is inevitable to think that boys can perform better than girls in the physical aspects. Of course, content is the key, and there is no doubt that girls can offer better performance in other aspects. (PET_65)

The only difference is a higher expectation of girls in rhythmic activities and of boys in eye-foot coordination. (PET_89)

No. The differences in my expectations are not due to gender but to their physical condition. Furthermore, depending on the content, there can be different performances, but not because of being a boy or a girl, but because of their previous experience. (PET_44)

The aim of the second question in this category was to ascertain PETs' perception of whether they treat students

differently at the methodological level according to their gender. It should be noted that the testimonies of the participants showed, above all, an egalitarian stance and denied the existence of gender discrimination (AF% = 69.6).

I don't think so nowadays. We take coeducation very much into account. Nevertheless, I imagine that there might still be some teachers who think differently. (PET_91)

Not at all, I just see that gender does not determine my intervention at all. (PET_12)

However, it was also possible to identify some voices that recognised certain methodological biases caused by gender (AF% = 17.4). The following text fragment testifies to this:

I do not believe that there are differences at the methodological level. The use of language is indeed difficult to control sometimes, but it is also true that in some cases, I don't know when to use a neutral or not. (PET_88)

Finally, a very small minority of voices (AF% = 5.62) stated that their teaching intervention was indeed deeply conditioned by gender stereotypical beliefs. Here, groupings by sex and carelessness in neutral language were highlighted as the main problems.

I try to avoid it, but sometimes to prevent groupings by sex is inevitable due to more significant affiliation. (PET_22)

The next question aimed to understand whether possible changes at the methodological level could be conditioned by a perception of greater capacity or success in boys' performance compared to girls. The highest number of comments regarding this question indicates that teachers did not perceive this type of behaviour a priori (AF% = 74.3). Mainly, it was mentioned that the teacher's confidence depends more on personality than on sex, and the organisation of the classes, in which cooperation and not individualisation is encouraged, avoids a perception of

higher performance in boys.

Self-confidence is an aspect to work on in each student, I do not perceive differences based on gender. (PET_32)

I do not perceive boys as superior to girls. The physical factor is present, but in my methodological approaches, cooperation prevails above individual performances. (PET_26)

However, against this majority trend, it was possible to note some accounts that did relate higher performance to the male gender (AF% = 3.1).

In games, some more competitive boys make the difference and are preferred among their peers to achieve victory. (PET_174)

Specifically, those who were part of this discourse stated that this was not a general condition, but rather something specific to a particular group of students (AF% = 13.6).

It is an interesting fact, as this is very dependent on the group in which I teach the subject. For example, in some classes, I notice a greater climate of respect and cooperation than in others, which definitely leads to a stronger feeling of confidence in the girls. (PET_15)

There are always some students who still think that boys are better than girls in sports or are more capable. However, nowadays, this idea is changing because they see or we show them more and more female references in the sports world. (PET_47)

As for the use of examples of male and female athletes in lessons, this seemed to be common practice among the participants (AF% = 87.9). The reason most frequently stated by those adopting this stance was the need to highlight women in sport.

Yes, I am aware and I see it as absolutely necessary. We need to make women more visible in the sports world. (PET_50).

I consider this aspect necessary, and I believe that most teachers do so. (PET_71)

Conversely, those who admitted to not using examples of both male and female athletes equally (AF% = 8.9) emphasised that the essential factor is to mention the athlete, irrespective of gender.

I never consider this detail. If we work on badminton, I will talk about Carolina Marin; if we work on tennis, I will talk about Nadal and Muguruza. I emphasise the excellent athlete, regardless of gender. Can't Nadal serve as an example for girls? Would only Muguruza be useful? (PET_138)

Finally, since language is one of the channels for coeducational teaching intervention, the PETs were asked if they considered using coeducational language in their relationship with students. In this respect, participants repeatedly and insistently acknowledged that they used coeducational communication in their lessons (AF% = 75.8).

I take it into account more and more in explanations, notes, rubrics, examples. (PET_154)

However, it was also possible to see some respondents who admitted that they did not make use of inclusive language despite attaching a certain degree of importance to it (AF% = 8.9); those who did not consider it necessary (AF% = 6.8); and those who believed that the generic masculine is neutral and therefore valid to refer to both men and women (AF% = 3.2).

I am aware of the importance; however, during my classes, I am not conscious of whether I make proper use or not. (PET_79)

I don't see the need to force things, I use the feminine when I am referring only to girls. (PET_163)

Yes, but the dictionary itself recognises all as a valid concept for boys and girls. (PET_111)

Category 2. Coeducational teaching training

The second category sought to analyse how PETs were trained in coeducation. This category was analysed through four questions. With regard to the first question, aimed at finding out the PETs' perception of the adequacy of their training in coeducation, it was possible to ascertain by analysing the narratives that a priori the participants felt adequately trained (AF% = 60.5).

Yes. Studying aspects of coeducation and applying what I have learnt in a coherent way during my teaching intervention. (PET_137)

My training is sufficient, and I do not feel that I lack coeducational knowledge. (PET_08)

However, we cannot ignore the existence of some respondents who admitted the need to improve their training in this area (AF% = 36.9). This situation often led them to learn about coeducation in a self-taught way. The following text segments are illustrative of this.

I do not know if I have adequate training because I have not done any specific course on coeducation. But I like to read articles about this topic, activities, workshops directed to my students that talk about coeducation. (PET_99)

I have not done any exclusive training on coeducation. I think I have been trained mainly indirectly through what I have been hearing. (PET_187)

No, I have been trained in a particular way because of my interest in courses related to my subject. (PET_107)

To determine the source of this training, we asked whether the current management teams of their schools had facilitated training in the field of coeducation. According to their accounts, the schools had contributed to improvement in their training in coeducation (AF% = 60.7).

The centre and its management team are usually concerned about these issues. (PET_14)

Yes, I think they give the necessary importance to coeducation; as I commented on the designated days, we always hold events that help visualise the role of women in society. (PET_68)

I am a supply teacher and I frequently move from one centre to another, but coeducation has been important in the last few years. At least in the centres I have been in.

(PET_182)

On the other hand, negative responses were found in two areas. In the first instance, there were narratives that insisted on the lack of interest shown by their management teams in this issue (AF% = 29.8). But it was also possible to distinguish the existence of some voices, albeit infrequent, which considered that providing this training was not the responsibility of the schools (AF% = 9.4).

Except for the events, International Women's Day, that you always receive more information about, I have not received training at the centre in this regard. (PET_77)

I do not consider this to be a function of the management team. Each teacher should attend to his or her professional development needs. (PET_05)

The eighth question on the questionnaire aimed to analyse the source of training of the PETs on coeducational issues. The results showed that the primary training source was scientific literature such as books and articles (AF% = 43.5), followed by specific courses (AF% = 27.7%) and virtual formation (AF% = 24.6).

My training has been entirely self-taught through scientific publications. (PET_95)

Above all, during the preparation for the competitive examination, I read topics and books that mentioned coeducation. (PET_137)

The last question sought to identify whether PETs would prioritise training in the field of coeducation. The qualitative analysis revealed, first of all, that the participants strongly preferred to take specific courses on PE (AF% = 49.2). The reason most frequently given for rejecting training in coeducation was that they felt adequately trained in this area (AF% = 39.3). In fact, only a small number of narratives showed a desire to further improve their professional development in coeducation (AF% = 5.7).

Instead of being trained in coeducation, I think that I need to undertake other more specific training in PE first. (PET_102)

Honestly, I do not find it necessary to take training courses in coeducation, I think it is something that can be developed by improving awareness a little bit. I would rather invest the time in more specific PE courses. (PET_89)

I have already done several; at the moment, I am focusing on another type of training. (PET_14)

Discussion

This study aimed to analyse PE teachers' perceptions of their teaching intervention and their training at the coeducational level. Analysis of their narratives allows us to affirm that most teachers are aware of the importance of adopting a coeducational attitude in the PE class, overcoming gender stereotypes and attitudes. However, the existence of some behaviours and methodologies that are not coeducational has been observed and the PETs' dis-

courses insist that they do not feel fully qualified in this area. In fact, some of their testimonies show that educational centres or institutions do not contribute adequately to their training in coeducation. As a consequence, they often resort to self-learning in order to improve their coeducation skills. However, it is not clear from their accounts that they want to increase their knowledge in this area. On the contrary, they prioritise their specific training in PE. Traditionally, PE was directly related to performance in collective sports, predominantly physical, and its primary results corresponded to the results obtained in physical fitness test batteries. Furthermore, PE could provide a marginalised context for personally relevant learning and for fostering social interaction due to, among other factors, a multitude of concerns, including gender (Thorburn, 2019). This situation has often meant that girls have experienced low performance, because of a PE-based model of masculinity (Opstoel et al., 2020). However, Fullana (2020) indicated that women's sport is currently undergoing a reversible process wherein the normalisation of women's sports practice is evident. Furthermore, PE from the girls' perspective does not support the development of communicative or self-compassionate bodies. It does, however, encourage the improvement of their bodies, treating them as objects, objects that constantly fall short of the ideal (Paechter, 2013). PE teachers play a fundamental role in this process of changing mentality, since their attitude in class regarding the transmission of gender stereotypes directly influences students' self-perception of their physical capacity (Deemer et al., 2014).

One of the dimensions analysed in this study evaluated teachers' perception of their possible gender attitudes. Bonal (1997) emphasised the importance of understanding this information, because teachers' behaviour during their intervention is essential for transmitting or avoiding gender stereotypes. Brown and Evans (2020) emphasised that physical ability or performance is the aspect that conditions gender expectations the most. Our results show the persistence of stereotypical beliefs in PE classrooms, especially in relation to the different expectations of performance of boys and girls. This type of behaviour may result in teachers behaving differently depending on the gender of their students (Fernández, 2008; Vázquez et al., 2000); in fact, some testimonies showed that the teaching methodology in lessons varies according to the gender of the students. In light of these findings, most PETs perform essential coeducational work; however, it has been reported that sexist teacher behaviours persist. The importance of these results is based on the fact that the teacher's attitude has been documented as a basic aspect in the transmission of values and hidden messages to students (Soler, 2006). Therefore, a reorientation of teacher professional development is required, where alternative ways of physically educating girls are found, helping them to accept their bodies as they are, enjoy and accept them, and use them to communicate openly with others (Paechter,

2013).

Piedra de la Cuadra and Vega (2010) presented some gender stereotypes in PE classes. Among them, the use of language and performance expectations were highlighted. The data obtained showed that 74.3 per cent considered that they did not believe that boys perform better than girls in PE class, but there were still approximately 15 per cent who either did believe in a higher performance of boys or considered that it depends on the content taught. Regarding the stereotypes transmitted through the hidden curriculum, it was possible to note the existence of certain discourses that had not considered the possibility of using examples of both male and female athletes. Another prevalent stereotype in the PE class is related to the use of language (Serra et al., 2020). Although the participants largely insisted that used inclusive language, it cannot be ignored that there were also voices that considered that this was not necessary and that the masculine gender does not make women invisible. These results seem to contradict those in other research that has focused on students' perceptions (Pastor-Vicedo et al., 2019; Camacho-Miñano & Girela-Rejón, 2017). In addition, recent qualitative research conducted by Lleixà, Soler and Serra (2020) showed that female PE students perceived lower demands and different feedback compared with males.

The aim of the second dimension assessed was, among other questions, to determine whether PE teachers considered that schools had sufficient coeducational approaches. According to the participants, the management teams had not passed on training plans or guidelines for coeducational action. This contradicts previous literature, where PE has been identified as an ideal setting for changing and reproducing gender stereotypes (Serra et al., 2020). PET must avoid the development of traditional gender stereotypes and unequal relationships to ensure coeducational education for students. Concerning this idea, some studies highlight that gender stereotypes directly influence the perception of physical sports activities in PE sessions (Deemer et al., 2014). Soler (2007) indicated that teachers have different expectations of boys and girls. However, the participants in our study iteratively stated that they have the exact same expectations of all participants. Even though PETs claim to be coeducational, some of the traditional gender stereotypes are still present. Perhaps this is because, despite their weak training, they feel competent and therefore training in this area is not a priority. Authors such as López-Morales et al., (2020), point out the importance of incorporating the gender perspective in regulated training. Regarding teacher training in co-education, Sánchez-Hernández et al. (2019) highlighted that teachers' attitudes and beliefs regarding co-education can lead them to situations of reproduction of stereotypes as well as others based on change and resistance to hegemonic gender models. Furthermore, Wolthuis et al. (2020), point out how teachers tend to repeat their old behaviours once they have completed their training. However, we observed in our result that 68.1% of PETs declared them-

selves self-taught (43.5% read books or articles and 24.6% attended online courses). Moreover, only 5.7% of PETs were interested in co-education courses, while 88.5% of PETs were not interested in them (49.2% preferred PE courses and 39.3% stated that they were already trained and preferred other topics). This discrepancy may lead us to think that the results obtained in the present manuscript could be biased by the coeducational training received by the PETs included in the sample. In any case, citing Weiner (2000), in order to avoid these attitudes and beliefs, teacher and student training is essential.

As has been observed, in general, the teachers interviewed consider themselves to be well trained in a co-educational approach. However, they may need to reflect on the extent to which their interventions are well targeted. For example, following Prat & Soler (2003) some teachers indicate the modification of the rules of the game as a technique that could improve coeducation, but this could have the opposite result as students could focus on the fulfilment or failure of the objective on those for whom some rules have been modified. Therefore, teachers may need to look beyond a simple methodological modification and analyse in more depth the consequences of such a modification. With the completion of this research, there is a need for further reflection on the state of co-education in PE. Future work could address questions that have not been addressed here, for example, how can it be that teachers consider themselves to be coeducational and sufficiently trained in coeducation and that there are reports of students indicating that PE is sometimes humiliating, degrading, violent; what training is available on co-education and what is its quality? Other insights could be to explore teachers' success in implementing blended lessons and their perceptions of best practices and thus identify which strategies might be most useful in our setting (Hills & Croston, 2012). In addition, these same authors raise the idea of "undoing" gender as an option to work on, leading to alternative interpretations of co-educational issues. PETs training on coeducation should be highlighted as one of the most important causes determining the present results. Certain limitations regarding this study must be taken into account. The work is a cross-sectional study, so the results cannot be generalised. Furthermore, the study should serve as an example of a specific sample of PE teachers. The fact that there is little previous work in the area of PE has made it difficult to discuss the results. In addition, it should be noted that only one instrument was used to collect information, which made it difficult to triangulate the results. For future research, it is suggested that other techniques, such as focus group discussions, be used to verify the interpretative process. However, the results could be used to contrast with other populations or samples. On the other hand, the research is based only on teachers' self-perception, so future studies using other techniques and strategies to triangulate the results, such as classroom observation or research workshops, are necessary.

Conclusions

The results of this study allow us to analyze the co-educational intervention of 191 PE teachers. The data obtained in this study allow us to analyse the current co-educational intervention of PE teachers. The main conclusion is that PE teachers consider that they have proper coeducational behaviour. The results show that current teachers have improved their teaching intervention regarding gender equality compared to previous studies. It has been shown that the participants consider that they do not have higher expectations of boys, use inclusive language and give examples of both men and women in sport. Another important conclusion is that, although most teachers consider their coeducational behaviour correct, many do not consider themselves trained at the coeducational level. The professional development of teachers in this area could be improved, since most of them have been self-taught and would prefer to receive other types of training rather than that related to coeducation. Finally, it was found that a large number of those surveyed considered that the management teams of the educational centres do not make sufficient efforts to promote coeducation, and some teachers are not even aware of the existence of their centre's equality plan. Although a favourable profile has been observed in terms of coeducational interventions in PE, teachers still do not provide coeducational teaching. Therefore it is necessary to improve coeducational training and raise teachers' awareness of its importance. The results obtained in this research can guide future works on improving the coeducational development of teachers of PE.

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