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Gender equity in physical education: The use of language

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Abstract—This study analyzed Spanish teachers' behavior and the transmission of gender stereotypes. We observed 48 physical education lessons given by four Spanish teachers (two men and two women). Descriptive codes, which were generated iteratively, were clustered, categorized, integrated, recoded, and re-categorized. They allowed us to identify four major themes related to the transmission of gender stereotypes of teachers: male generics, stereotyped expressions, nominative attention, and priority order. We used a coding sheet as well as audio and video recordings to register the categories. The Kruskal-Wallis test produced significance levels lower than .05, resulting in the rejection of the null hypothesis. Sexist behavior was found in the male generics, nominative attention, and priority order. However, we found no difference in stereotyped expressions.

Keywords: teacher student interaction, gender, observation methods, physical education

Resumo—“Igualdade de gênero em educação física: O uso da linguagem.” O objetivo do estudo foi analisar o comportamento dos professores espanhóis na transmissão de estereótipos de gênero para os seus alunos. Observou-se 48 aulas de educação física dadas por quatro professores espanhóis (dois homens e duas mulheres). Os códigos descritivos, que foram gerados de forma iterativa, foram agrupados, categorizados, integrados, recodificados e reclassificados. Identificou-se quatro variáveis relacionando o professorado e a sua transmissão dos estereótipos de gênero: masculinos genéricos, expressões estereotipadas, atenção nominativa e ordem de prioridade. Utilizou-se uma folha de codificação, bem como gravações de áudio e vídeo para os registros. Níveis de significância no teste de Kruskal-Wallis inferiores 0,05 permitiram rejeitar a hipótese nula. Comportamentos sexistas foram encontrados no uso de masculino genérico, a atenção nominativa e ordem de prioridade. No entanto, não foi encontrada diferenças nas expressões estereotipadas.

Palavras-chave: interação professor aluno, gênero, metodologia de observação, educação física

Resumen—“La equidad de género en la educación física: El uso del lenguaje.” El objetivo de este estudio es analizar el comportamiento de los profesores españoles en la transmisión de estereotipos de género hacia su alumnado. Para ello, se han observado 48 clases de educación física impartidas por cuatro profesores españoles (dos hombres y dos mujeres). Los códigos descriptivos que se generaron de forma interactiva, fueron agrupados, categorizados, integrados, recodificados y recategorizados. Se identificaron cuatro variables relacionadas con el profesorado y su transmisión de estereotipos de género: masculino genérico, expresiones estereotipadas, atención nominativa y orden de prelación. Para el registro de las categorías se utilizó una hoja de observación, junto con grabaciones de audio y vídeo. Niveles de significación en el test de Kruskal-Wallis inferiores a ,05 permitieron rechazar la hipótesis nula. Se encontraron comportamientos sexistas en el uso del masculino genérico, la atención nominativa y el orden de prelación. Sin embargo, no se encontraron diferencias en las expresiones estereotipadas.

Palabras clave: interacción profesor alumno, género, metodología observacional, educación física

Introduction

Gender socialization processes have received much attention in recent years (e.g., Devide *et al.*, 2011), and in particular the influence of the use of language as an element that transmits gender inequalities through the different sexist stereotypes of a population (Chalabaev, Sarrazin, Fontayne, Boiché, & Clément-Guillot, 2013; Mora, Cruz, & Sousa, 2013; Prewitt-Freilino, Caswell, & Laakso, 2012). From this standpoint, the effect of teachers on gender socialization through their use of language in class is a topic that has raised interest in Spain (Ayala, Guerrero, & Medina, 2002; Castillo, Romero, González, & Campos, 2012; Mora, Cruz, & Sousa, 2013; Valdivia, López, Lara, & Zagalaz, 2012) and internationally (Johnson, 2009; Parks & Roberton, 1998a; Slater & Tiggemann, 2010; Staurowsky *et al.*, 2007).

In the current investigation we study physical education (PE) teachers' behavior in Seville, Spain, relative to the transmission of gender stereotypes through language. We wanted to assess whether teachers use the same language in classroom with boys and girls in relation to events such as: the male generic, stereotyped expressions, nominative attention, and order of priority. Our intention was to establish possible relationship of these events with gender socialization and gender inequality. From this point of view, there are various factors that allow us to take a closer look at the transmission of gender stereotypes. To identify these factors, we focused on two methods: one inductive, derived from direct observation of our classes, and the other deductive, from the studies done in Spain by Castellano and Hernández (2003), Menéndez (2006), and Subirats and Tomé (1992). Once we identified the factors, we grouped them and determined mutual exclusivity. This allowed us to discard those variables that provided redundant or unnecessary information (Anguera, 2005). Finally, the observation categories were established and defined in relation to the transmission of gender stereotypes in PE classes through the language spoken by teachers to students. We used an observation sheet as the primary method of data collection because it enabled an open, exploratory, and interpretive study about the effect teachers have on gender socialization.

This study may provide teachers with a reliable diagnostic tool about the sexist interactions of teachers, offering the possibility of preventing gender inequities. The issue of gender inequity has a great social and educational interest. On this subject, Wasserman and Weseley (2009) have tried to identify the relation between the grammatical gender of language and sexist attitudes. In a previous study conducted by our research group we analyzed a particular issue, such as the use of information (Castillo *et al.*, 2012). They found that several types of behaviors require more detailed observation if they are to provide a fuller picture of teachers' behavior (Santos, 2010). We are convinced that more research is needed to determine the relationship between language and gender equality. Our study provides unique information about PE teachers' behavior in terms of their gender, their relation with the learning curriculum unit and teaching styles. These are overlooked variables in our review of the literature about effects teachers have on the transmission of gender stereotypes. We assume that PE teachers' language has an important effect on shaping gender stereotypes, as Deutscher (2010) has already demonstrated for the general population.

Current Spanish society has established coeducational schooling in public and private schools for students up until their 16 years of age. The coeducational schooling model has been designed to foster a non-sexist system between boys and girls. To do so, two laws were passed in 2006 and 2007 to encourage schools to provide a gender-equitable educational experience: one on social equity (Organic Law 3/2007, March 22) and one on educational matters (Organic Law of Education 2/2006, May 3, together with its adaptations to each autonomous region; in this case Andalusia's Law of Education 17/2007, December 10). Regarding these regulations, several authors have adopted coeducational approaches with the goal of eliminating gender differences within the classroom (Colás, 2007), and in order to understand gender differences effects on the development of the characteristics of each individual (Zagalaz *et al.*, 2000). However, in spite of these guidelines, Spanish secondary schools teachers still bear witness to the widespread use of traditional teaching paradigms (Castillo, 2009). In other words, the teachers of this educational process inherently practice sexism and discrimination in education (Brown & Chu, 2012). Recent studies have shown that male and female teachers do not contribute to gender inequities in the same proportions as shown in Spain by Castillo and Corral (2011). They found that male PE teachers gave greater qualitative and quantitative feedback using more positive language with male students. Outside Spain, several studies have emphasized the influence of teacher's gender in the transmission of sexism in the classroom: for example, in the United States, Leaper and Brown (2008) suggested that male and female teachers behaved differently in the classroom, and this difference was reflected in the behavior of their male and female students. This last conclusion is shared by authors such as Hopf and Hatzichristou (1999) and Trouilloud, Sarrazin, Martinek, and Guillet (2002) in the European context of France and Greece, respectively. Furthermore, research studies in the United States (Davis, 2003), Canada (Duffy, Warren, & Walsh, 2001), and France (Lentillon, Cogérino, & Kaestner, 2006) have demonstrated that teachers contribute to the process of creating gender inequality because they encourage male students more than their female peers or, for example, spend more time speaking and interacting with male students than females.

In the communicative process between teachers and students, language becomes a crucial key for observing sexist relations within the classroom (Leaper & Bigler, 2004; Johnson, 2009; Parks & Roberton, 1998a).

Gender biased language

The Spanish language raises sexist issues as it is loaded with certain anthropocentric features which place control of public spaces, prestige, power and knowledge in the male sphere. Language, which is a cultural construct, contributes to transmitting (or modifying) the reality that people know (Mora, Cruz, & Sousa, 2013). In spoken and written messages, language is not just a vehicle for communicating ideas, thoughts, feelings and information. Instead, it also conveys the ideology and power relations of contextual society (Menéndez, 2006). Academic

and professional organizations, including the American Psychological Association, have joined the effort to eradicate discrimination by prohibiting gender-biased language in their printed and technological materials (Madson y Hessling, 1999; Sheldon, 2004). In a comparable move, several official Spanish bodies have published practical guides to encourage the general public to use non-sexist language (Menéndez, 2006). These manuals indicate that there are several factors that deserve a more detailed analysis to establish their possible link with the transmission of sexism in the classroom.

Male generics

In Spain, language is based on a traditional use of the masculine subject to refer to both males and females (male generics). An increasing number of researchers have recognized this gender asymmetry in the lexicon as an element that encourages stereotypes and, therefore, social gender inequalities between men and women (Schneider 2004). Authors like Medina (2002) indicate that the Spanish language represents mainly the masculine sex through the frequent use of the masculine gender. Thus, the brains of men do not have to pay attention to gender and do not have to differentiate the value it is expressed with (generic and specific) or the group they are in (unisex or mixed): they will always be included. In contrast, women must always ask whether they are included in the discourse.

For the learning process based on the traditional paradigm, teachers' use of language is very important: they must avoid sexist language to achieve a more balanced social development in terms of gender (Burns & Richards, 2009). This idea was studied earlier in the United States by Cole, Martin, Peeke, Seroczynski, & Fier (1999), who found that teachers provoke the masculinization of their classes through the language they use; or Yanowitz and Weathers (2004), who pointed out that male characters were also portrayed as engaging in stereotypically masculine activities significantly more often than female characters. This gendered language has been corroborated for the Spanish context by international studies such as Prewitt-Freilino et al (2012).

In the specific case of PE classes in Spain, greater use is made of generic masculine language. This increases the visualization of male pupils, something which is exacerbated if the language's form also has gender bias (Lomas, 2006). We found studies in Spain that demonstrated an increased use of gendered language by PE teachers when communicating with students, with a positive language in favor of the masculine gender (Vázquez, Fernández, & Ferro, 2000).

Educators in the United States have studied gender bias, proposing methods for avoiding it, and creating curriculums which demand gender-neutral language (Parks & Robertson 1998b; Evans & Davies 2000).

Stereotyped expressions

The origin of stereotyped expressions lies in gender stereotypes understood as a set of cognitive constructs which depend on the personal attributes of a social group, referring to

aspects of personality, role behavior, physical and occupational characteristics, in relation to the person's gender (Morales & Moya, 1996). A result of the use of language as a basic element of communication includes expressions that appear to reflect characteristics associated to a specific gender.

In Spanish, stereotyped expressions produce a gender-biased language because the positive preference of the masculine usually prevails over the feminine (Castillo 2009). As a result of these sexist stereotyped expressions there is a depreciation and subordination of the feminine gender (e.g., "you are weaker than a girl"), and the exclusion of women from other masculinized activities (e.g., "girls are not good at soccer") (Blández, Fernández, & Sierra, 2007; Lomas, 2006; Moreno, Hellín, & Hellín Rodríguez, 2006; Subirats & Tomé, 1992).

The context of PE is a mirror of social reality, and associates norms and expectations linked to the role of women which are unlike the norms and expectations linked to the role of men. Physical education in Spain presents stereotyped expressions (descriptive and prescriptive) towards each gender that points in the following direction: a man is dominant, intelligent, strong, active, while for a woman, there is a prevalence of submissiveness, sensitivity, weakness and passiveness (Blández *et al.*, 2007). The same authors call masculine stereotyped expressions those linked to masculine stereotypes such as aggressiveness, leadership, originality, method, competitiveness, resistance, independence and objectivity. From this point of view, the sexist use of language through the stereotyped expressions used by teachers effectively turns what is masculine into the norm and model of what one should do and how one should do it (Medina, 2002).

Nominative attention

Another aspect of language that relates to gender discrimination is a greater nominative attention paid to students of a specific gender, which leads to their reinforcement within the group as they become more visible and conspicuous

(Castillo, 2009). This idea is supported by Moreno *et al.* (2006), who point out that in Spain, nominative attention is more positively appraised when teachers address a male group of students. A predominance of nominative attention in favor of males has been found in Spanish secondary PE (Moreno, Sicilia, Martínez, & Alonso, 2008; Vázquez *et al.*, 2000). The above-mentioned behavior of teachers leads to classes being conducted with a sexist bias in *male terms*. This idea has been supported by several studies in the United States which have shown that, generally, classes are inherently sexist (Bigler, 1995; Bigler, Jones, & Lobliner, 1997; Bigler & Liben, 2007).

Order of priority

In our review of the literature, we found no studies looking into the *order of priority* factor. By order of priority, we mean the discriminatory effect produced by the number of times that male and female teachers use the male-female order of priority

to address their male and female students. We assume that giving priority to a certain gender will encourage greater visibility, involvement, and motivation of this gender in the class.

Following our review of the literature, we presume that in Spanish secondary schools, the object of the current study, there is transmission of sexism in favor of males, in the use that teachers make of the language regarding male generic, stereotyped expressions, nominative attention, and order of priority.

Thus, if female students receive a different education in PE because of their gender, they suffer gender discrimination, and this is reinforced by their evident invisibility which stems from the different teaching practices derived from the masculine concept of PE (Blández *et al.*, 2007; Vázquez *et al.* 2000; Williams & Woodhouse, 1996).

Therefore, the purpose of this study was to examine male and female teachers' behaviors transmitted through language they use in order to assess the extent of sexism toward their students. We drew up four main hypotheses:

- Hypothesis 1. Female PE teachers will use the male generic to address girls in their 1st year of secondary education when teaching sports abilities through direct command.
- Hypothesis 2. Male PE teachers will use stereotyped expressions with boys in their 1st year of secondary education when teaching sports abilities through direct command.
- Hypothesis 3. Male PE teachers will use nominative attention with boys in their 1st year of secondary education when teaching sports abilities through direct command.
- Hypothesis 4. Female PE teachers will use a male-female order of priority with girls in their 1st year of secondary education when teaching sports abilities through direct command.

We tested these hypotheses with students in their first and second year of secondary education, aged 12-14. We chose this age range because it is an important period in the development of gender identity (Colás, 2007).

Method

The method has been reported elsewhere (Castillo *et al.*, 2012).

Sample

In the current investigation, the data was gathered from two public secondary schools in Seville (southern Spain) with a low to middle socioeconomic status.

The sample of teachers consisted of two men and two women selected to represent both genders, they were all Spanish, white, and middle class. Their average age was 37.5 years ($SD = 1.25$).

Individual meetings were held with all teachers to explain the basic characteristics of the research and find out whether the observation instrument could be applied in their classes. Likewise, teachers were informed of the methodology that was

going to be used to collect data (audio and video recording, as well as the observers' in-person data registry for the observation scales for each of the recorded sessions). None of the teachers had received specific instruction on gender equity and they all gave their written consent to be observed during the sessions.

The study involved 240 students (129 males and 111 females), aged between 12 and 14 ($M = 13.1$, $SD = 0.75$). All students and their parents were informed that they would be recorded on audio and video, and all agreed to participate. Students were also assured of the confidentiality of the recordings. The ratio of students to teachers per classroom was 30:1.

Procedure

The observational study began with the development of a category system. The coding scheme was reviewed and amended repeatedly by clustering similar codes, looking for overlaps, and eliminating redundancies. The codes were categorized and re-categorized until four themes related to teachers' contributions through language to gender socialization emerged as a result of the categorization and clustering in the reiterative process of content analysis: male generic, stereotyped expressions, nominative attention, and order of priority.

The data were collected by nine observers, consisting of the researcher (male) and another eight observers (four males and four females). Each observer was given detailed definitions of the categories to be analyzed and how to record them (see "Appendix"), and the frequency of the behaviors was recorded. The data were recorded on the coding sheets during 48 PE lessons (two 1 hour lessons per week). A total of 12 hours of class time was recorded for each teacher (6 hours of sports abilities and 6 hours of corporal expression).

Instrument

The coding sheet is part of an instrument called *Observation scale of teachers' educative equity with regard to gender* (Castillo, 2009).

The reliability of this observational study was demonstrated with the Kappa index, which was established for nine observers working independently while observing the same behaviors. Before data collection, the nine observers received specific training to ensure coherence and objectivity in their work. Therefore, each observer was given detailed definitions of the categories to be analyzed and how to record them (see "Appendix"). This was done over four 1 hour sessions (240 minutes total) to establish inter-observer reliability for each of the categories of analysis. The recordings produced Kappa index values of .72 for male generic, .85 for stereotyped expressions, .86 for nominative attention, and .75 for order of priority. The reliability did not demonstrate bias due to gender of the observers. Thus, we felt comfortable with the reliability of the coding procedure and used all the authors' categorizations in our analyses.

All analyses were performed using the Statistical Package for Social Sciences (SPSS, version 19.0 for Windows; SPSS Inc.,

Chicago, IL), and the level of significance was set at $p < .05$. The normality of the variables was evaluated by the Kolmogorov-Smirnov test, which demonstrated the non-normality of the distribution of the variables.

Results

We used the Kruskal-Wallis test to compare the independent variables (teacher's gender, student's gender, learning unit, teaching styles, and course) with the dependent variables (male generic, stereotyped expressions, nominative attention, and order of priority). Standard descriptive statistics (means and standard deviations) were applied to the data determined to be significant.

Our predictions were tested by observing four PE teachers with the classroom characteristics shown in Table 1. The following results were observed.

Male generic

We used the Kruskal-Wallis test to test our prediction that, female PE teachers would use the male generic to address 1st year girls when teaching sports abilities through direct command. The students' gender was compared with the teachers' gender, learning unit, teaching styles, and course.

We found significant differences with regard to the male generic with female students (Table 2).

When analyzing students' gender (Table 3) in relation to teachers' gender, learning unit, teaching styles, and course, we found significant differences in the use of the male generic by female teachers with female students. Concerning the learning unit, the descriptive statistics showed that female teachers used the male generic more with female students when working on sports abilities. Likewise, we observed for the teaching styles variable, that female teachers used the male generic more when addressing female students to teach direct command sessions. Finally, Table 3 indicates greater use of the male generic by female teachers with female 1st year students

Stereotyped expressions

To test our prediction that male PE teachers would use stereotyped expressions with 1st year boys when teaching sports abilities through direct command, we used the Kruskal-Wallis test to compare students' gender with the teachers' gender, learning unit, teaching styles, and course. For students, the inferential statistics demonstrated the following values (Table 4):

The descriptive data about the stereotyped expressions (Table 3) showed that male teachers did not use stereotyped expressions to a significant degree. However, our data did indicate the use of some stereotyped expressions by male teachers when teaching sports abilities through direct command to their male 1st year students..

Table 1. Student's distribution in relation to the teacher's gender.

	Teacher 1 (male)	Teacher 2 (male)	Teacher 3 (female)	Teacher 4 (female)
Class 1 (boys $n = 65$; girls $n = 55$)				
Boys, n	14	10	23	18
Girls, n	16	20	7	12
Total, n	30	30	30	30
Class 2 (boys $n = 64$; girls $n = 56$)				
Boys, n	19	13	20	12
Girls, n	11	17	10	18
Total, n	30	30	30	30

Table 2. Descriptive analysis of male generic/student's gender.

	Male			Female		
	Chi-square	df	Asymp. Sig.	Chi-square	df	Asymp. Sig.
Teachers' gender	9.043	1	.343	7.905	1	.005
Learning unit	4.447	1	.122	6.656	1	.001
Teaching styles	6.733	1	.067	8.489	1	.001
Course	6.963	1	.142	5.786	1	.004

Note: The systematic observation was carried out on 48 sessions; Asymp. Sig. = probability value; df = degrees of freedom.

Table 3. Descriptive analysis of students (boys $n = 65$; girls $n = 43$)

		Teacher's gender		Learning unit		Teaching styles			Course		
		Male $M(SD)^a$	Female $M(SD)^a$	Sports abilities $M(SD)^b$	Corporal expression $M(SD)^b$	DC $M(SD)^c$	TA $M(SD)^c$	LD $M(SD)^c$	FE $M(SD)^c$	First Year $M(SD)^d$	Second Year $M(SD)^d$
Male generic	M	10.4(0.2)	16.7(7.7)	5.8(6.1) ^{ll}	2.5(4.2)	2.4 (2.7) ^{ll}	0.9(2.3)			13.7(5.8) ^{ll}	6.6(1.4)
	F	9.6*(2.8)	26.4*(13.6)	7.8**(6)	4.5*(4.2)	3.8**(1.7)	0.6(1.6)			18*(7.4)	12.5(6.8)
Stereotyped expressions	M	0.5(0.2)		1.7(0.6) ^l		0.3(0.9) ^l			6.5(3.6) ^l		
	F										
Nominative attention	M	23.6*(9.4)	12.4(2.9)	51.7**(12.1) ^l	38.2*(18)	26.5*(6.8) ^l	5.8(2.2)	1.7(0.4)	3.6(2.3)	50.9**(13.1) ^l	39*(18)
	F	6.2(2.2)	3.5(0.3)	36.2(11.3)	22.2(10.1)	12.5(4.3)	3.8(0.2)	0.6(0.9)	1.6(1.3)	8.9(3.1)	3(1.8)
Order of priority (boys-girls)	M	0.06(2.4)		2.9(0.3)					3.7(0.8) ^{ll}		3.6(1.4)
	F	1.6*(6.9)		6.6**(1.4) ^{ll}		2.9(6.1)		0.7**(0.2) ^{ll}			2.5*(2.5)

Note: M = Male students; F = Female students; ^lMale teacher; ^{ll}Female teacher; DC = Direct command; TA = Task assignment; LD = Level diversification; FE = Free exploration.

^aMean number of times teachers use male generic, stereotyped expressions, nominative attention and order of priority (boys-girls); ^bMean number of times teachers use male generic, stereotyped expressions, nominative attention and priority order (boys-girls) in relation to the learning unit; ^cMean number of times teachers use male generic, stereotyped expressions, nominative attention or priority order (boys-girls) in relation to the teaching style; ^dMean number of times teachers use male generic, stereotyped expressions, nominative attention or order of priority (boys-girls) in relation to the course.

* $p < .05$; ** $p < .001$.

Table 4. Descriptive analysis of stereotyped expressions/student's gender.

	Male			Female		
	Chi-square	df	Asymp. Sig.	Chi-square	df	Asymp. Sig.
Teachers' gender	4.265	1	.059	4.079	1	.154
Learning unit	3.452	1	.100	8.771	1	.238
Teaching styles	2.488	1	.105	10.984	1	.335
Course	5.793	1	.125	9.063	1	.098

Note: The systematic observation was carried out on 48 sessions; Asymp. Sig. = probability value; df = degrees of freedom.

Nominative attention

To test our prediction that male PE teachers would address male 1st year students using their first names more often when teaching sports abilities through direct command, we used the Kruskal-Wallis test to compare students' gender with teachers' gender, learning unit, teaching styles, and course. We found significant differences concerning nominative attention, specifically for male students (Table 5).

According to these indicators the data in Table 3 show that male teachers used nominative attention differently depending on students' gender. When crossing the nominative attention dimension with the learning unit, teaching styles, and course

dimensions, the descriptive analysis of these data showed that male teachers addressed male 1st year students using their first names more often when teaching sports abilities through direct command.

Order of priority

The Kruskal-Wallis test was used to test our prediction that female PE teachers would use a male-female order of priority with female 1st year students when teaching sports abilities through direct command, comparing the gender of students and teachers' gender, learning unit, teaching styles, and course.

Table 5. Descriptive analysis of nominative attention/student's gender.

	Male			Female		
	Chi-square	df	Asymp. Sig.	Chi-square	df	Asymp. Sig.
Teachers' gender	5.390	1	.020	4.126	1	.344
Learning unit	9.202	1	.001	5.871	1	.765
Teaching styles	8.412	1	.004	5.921	1	.222
Course	19.030	1	.000	3.348	1	.186

Note: The systematic observation was carried out on 48 sessions; Asymp. Sig. = probability value; df = degrees of freedom.

Table 6. Descriptive analysis of order of priority/student's gender.

	Male			Female		
	Chi-square	df	Asymp. Sig.	Chi-square	df	Asymp. Sig.
Teachers' gender	10.984	1	.356	4.264	1	.039
Learning unit	10.212	1	.100	6.233	1	.001
Teaching styles	12.659	1	.321	22.301	1	.000
Course	4.210	1	.558	7.285	1	.007

Note: The systematic observation was carried out on 48 sessions; Asymp. Sig. = probability value; *df* = degrees of freedom.

Differences were found when female teachers used a male-female order of priority to address female 1st year students when teaching sports abilities through direct command (Table 6).

The interpretation of data in Table 3 showed significant differences in the number of orders of priority (boys-girls) used by female teachers against female students in relation to the independent variables: teachers' gender, learning unit, teaching styles, and course.

Discussion

This study describes Spanish teachers' classroom interactions as an agent of sexism through the use of language in PE lessons in secondary schooling. Its main finding is that there is evidence of discrimination in the following dimensions: male generic, nominative attention, and order of priority. On the other hand, there was no evidence of sexist discrimination in stereotyped expressions. We did not come across the learning unit and teaching styles variables in any studies in our review of the literature. The discussion of these variables will be of a general nature but with specific references to our own findings.

Likewise, this study has shown that male and female teachers behaved differently in the classroom. Our data are consistent with the findings of authors in Spain (Castillo *et al.*, 2012), who pointed out that male teachers used information when teaching in a different way depending on the gender of the student and indicated that in physical education lessons, teachers direct the content of their classes around their own sporting interests, and these had marked difference in terms of gender; or Castillo and Corral (2011), who also found that male teachers gave greater qualitative and quantitative feedback to male students. Outside Spain, Hopf and Hatzichristou (1999) in France, Santos (2010) in Brasil, and Trouilloud *et al* (2002) in Greece suggested that male and female teachers behaved differently in the classroom. This last idea is shared by authors such as Leaper and Brown (2008) in the United States.

Male generic

The results obtained after the analysis and interpretation of the data, related to the male generic used by the teachers to give PE lessons, reveal that the male generic is clearly preferred as the main grammatical gender language system with their students. It was the most frequently used grammatical gender when teaching sports abilities to 1st year students through direct command.

In the same way, the frequency of use of the male generic leads us to confirm that female PE teachers use the male generic most when addressing their female students. Previous research has also noted that Spanish PE teachers prefer the male generic (e.g., Medina, 2002; Vazquez *et al.*, 2000; see also Prewitt-Freilino *et al.*, 2012).

Finally, it should be highlighted that female teachers used the male generic more with female students than male teachers did when teaching sports abilities using the teaching style of direct command; this behavior occurred more with 1st year female students (hypothesis 1).

In the light of the previous findings, we agree with the theories by Cole *et al.* (1999), Parks and Robertson (1998a), and Evans and Davies (2000) in which, for the context of the United States, masculinization of classes occurs through the biased use of language. If we take into account that the Spanish language only visualizes one of the two genders, in our case the subject of reference is masculine, we are discriminating against the female gender and, therefore, encouraging the transmission of sexism in our classrooms.

This study has shown that females received less attention than males when it came to receiving information from teachers owing to the majority use of the male generic, especially female teachers; consequently, treatment was not equal during the lessons. From this point of view, we corroborate the findings of authors such as Castillo (2009), Castillo and Corral (2011), Moreno *et al.* (2006), Lomas (2006), Subirats and Tomé (1992), and Vázquez *et al.* (2000) in Spain, and Davis (2003), Johnson (2009), Parks and Robertson (1998b) in the United States, or Slater and Tiggemann (2010) in Australia. They all demonstrated the existence of prevalent communication and support from teachers to male students through the use of sexist language.

Stereotyped expressions

The results obtained about stereotyped expressions do not show significant sexist behaviors in any of the independent variables. The use of stereotyped expressions is practically non-existent in our context of analysis. We can only point out the use of the occasional, insignificant, stereotyped expression by male teachers with male 1st year students when teaching sports abilities through direct command. Consequently, we found no element of gender discrimination transmission within this variable (hypothesis 2).

However, our data do not agree with findings in the studies by Blández *et al.* (2007), Castillo (2009), Lomas (2006), Medina

(2002) or Moreno *et al.* (2006), who found in Spain a depreciation and subordination of the female gender by teachers of both sexes through their use of stereotyped expressions in class.

Nominative attention

Concerning nominative attention and its relation to language, the analysis and interpretation of the corresponding data revealed that male teachers varied their use of nominative attention depending on students' gender. In the same way, male teachers used nominative attention in favor of boys, a finding which coincides with the study in Spain by Moreno *et al.* (2006). This behavior occurred mainly when they were teaching sports abilities to first year students using direct command (hypothesis 3).

Our data are consistent with the findings of other authors in Spain (Moreno *et al.*, 2008; Vázquez *et al.*, 2000) who found a predominance of nominative attention in favor of male students in secondary PE classes. Therefore, conducting PE classes on male terms makes the educational process inherently sexist, as several studies found in the United States: Bigler (1995), Bigler *et al.* (1997), and Bigler and Liben (2007).

Order of priority

The analysis and interpretation of the data corresponding to order of priority revealed that female teachers used the masculine-feminine order of priority against 1st year female students in PE lessons at these secondary schools in Seville, when teaching sports skills through direct command (hypothesis 4).

If we always put one gender in front of another in the daily use of language (e.g. masculine ahead of feminine) we will be transmitting who the main actor is and who is in the supporting role, leading to the subordinated visualization of the 'other' gender. In our context of analysis, it is the feminine gender, as in the study by Vázquez *et al.* (2000), which is discriminated in the PE classes, because the masculine gender is continuously given priority.

This study has explored gender-biased language in the information that teachers give their students. We can verify that the behavior of these physical education teachers from two secondary schools in Seville (Spain) is more likely to acknowledge the presence of male students in language and, therefore, transmit gender stereotypes in a PE classroom. Regarding the male generic, we observed that it is used almost exclusively in the classroom, particularly when the teacher is female and is giving classes on sports abilities through direct command to 1st year secondary school students. In turn, sexist behaviors were used by male and female teachers in nominative attention and order of priority, respectively. In both cases, this behavior is manifested more when teaching sports abilities through direct command to 1st year secondary school students. Likewise, we can state that the stereotyped expressions used by the teachers did not present any sexist characteristics in the transmission of gender stereotypes. In summary, to remove the sexist barrier built around the gender-biased language provided

by teachers, we defend the varied use of alternative grammatical forms to the male generic which, on the basis of non-sexist language addressed equally to both genders, will bring girls into the group of students (genderless languages). Furthermore, the nominative attention and order of priority used during the lessons needs to visualize both genders in the same way, calling male and female students by their names and alternating priority between masculine and feminine. Acting this way guarantees both genders equal treatment in PE lessons.

A significant limitation to this study was the number of teachers invited to participate. However, in the research's design and planning of objectives, we attempted to detect the reality of these teachers' classes in two schools in Seville, southern Spain, to be able to correctly observe possible sexist behaviors that the PE teachers transmit.

While this sample prevents us from generalizing about the results, the observation instrument has collected broader information than previous studies about sexist behaviors that teachers may use in class. The use of this observation scale will help teachers assess how they pass on information to their students in terms of transmitting sexism. This observation may lead teachers to examine themselves in a critical reflection of their own teaching behaviors in PE sessions, to reduce the discrimination that female students suffer in PE classes.

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Appendix.
Coding categories

	<i>Male generic</i>	<i>Stereotyped expressions</i>	<i>Nominative attention</i>	<i>Order of priority</i>
Categorical nucleus	Action of teachers addressing all students using the male generic.	Expressions uttered by teachers which may have a sexist leaning, using gender stereotypes which have implicit, pejorative connotations or which allude to a certain degree of subordination of one sex to another.	When teachers call their students by their first names.	Order in which teachers use the feminine or masculine gender (boys-girls; girls-boys) to refer to students.
Purpose	Allows us to verify the tendency of teachers to use the male generic, masculine or feminine when addressing the whole class.	Allows us to find out how much teachers use gender-stereotyped phrases depending on the gender of the student they are addressing.	This allows us to identify affinity or closeness to a gender in the tendency of teachers to call boys or girls by their first names	This allows us to quantify how often teachers use the masculine or feminine to address the group of students, thereby establishing an order of visibility.
Recording	This records the number of times teachers address pupils using the male generic, masculine or feminine.	This records each time teachers use gender-stereotyped phrases with male and female students.	This records the number of times teachers of both sexes use nominative attention with a female or male student.	This records the number of times that teachers use the feminine or masculine first when addressing all the students.
Procedure	A record is kept of each time teachers use the feminine, masculine or male generic when addressing their pupils.	Records the number of times that female or male teachers make gender-stereotyped allusions to male or female students.	Records each time a male or female teacher refers to a pupil by his or her first name.	Records each time teachers use one gender ahead of the other when addressing their students.