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Are gender stereotypes still prevalent in physical education? Spanish teachers' and students' beliefs and attitudes toward gender equity

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1 Are gender stereotypes *still* prevalent in physical education? Spanish teachers' and
2 students' beliefs and attitudes towards gender equity.

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4 Marina Castro-García^{a,b*}, Carmen Barquero-Ruiz^a, Cristina López-Villar^b

5
6 ^a *Department of Physical Education and Sport Sciences, University of Limerick, Ireland*

7 ^b *Department of Physical Education and Sport, Universidade da Coruña, Spain*

8
9 *Marina Castro-García, Department of Physical Education and Sport Sciences, University
10 of Limerick. Newcastle (Limerick, Ireland). Email: marina.castrogarcia@ul.ie

11 Beliefs and attitudes towards gender equity

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Abstract

Purpose: Grounded in Doing Gender theory, the purpose is to explore physical education teachers' and students' beliefs and attitudes towards gender equity in physical education and sports, and to identify possible aspects to be addressed.

Method: This is a cross-sectional study, where a random sampling by multistage clusters was followed. Participants included 90 physical education teachers and 644 secondary school students, who completed two different questionnaires. Data were analysed using descriptive statistics and t-tests, one-factor ANOVA, and two-way ANOVA comparisons.

Findings: Most students and teachers show equitable beliefs and attitudes at a sociocultural level. The intersection of teachers' age and self-identified sex/gender, and the self-identified sex/gender of students, play a significant role in the stereotypes. There is a gap between teachers' results and students' perceptions.

Conclusion: Findings emphasize the need to implement critical feminist curricular approaches, especially with pre-service teachers. Moreover, it is important that these approaches work on masculinities.

Keywords

Secondary school, adolescent, doing gender theory, gender, critical studies

48 **Are gender stereotypes *still* prevalent in physical education? Spanish teachers'**
49 **and students' beliefs and attitudes towards gender equity**

50 In the twenty-first century, 'you throw like a girl' can still be considered one of the
51 most dreaded insults in sports (Schailée et al., 2021). This fact shows that despite many
52 advances made in the field of gender equity in sports, for example, in terms of opportunities
53 for girls or improvements in women's sports participation, the end of gender discrimination
54 in sports and physical education has not been achieved (Scraton, 2018). Some of the issues
55 detected and studied during the last decades (e.g., Dewar, 1986; Vertinsky, 1992) are still
56 prevalent (e.g., Marttinen et al., 2020; Stride et al., 2022; Turelli et al., 2022), and multiple
57 studies show that physical education teachers continue to (re)produce gender stereotypes
58 (Gerdin & Larsson, 2018; Walseth et al., 2017); a fact that has a direct impact on the
59 beliefs, attitudes, and experiences of the students. This paper has the purpose of exploring
60 how gender stereotyping operates in relation to Spanish physical education, clustering
61 teachers' and students' responses, and offering the whole picture to understand the possible
62 issues that need to be addressed.

63 Thus, the purpose is to investigate the profile towards gender equity of physical
64 education teachers, and the beliefs about gender in physical education and sports of
65 secondary school students. We aim to expand the knowledge about gender stereotypes in
66 Spanish physical education, exploring the differences in attitudes and beliefs based on the
67 school area, type of school, self-identified sex/gender, and age of the participants. To our
68 knowledge, this is the first study that explores those variables related to gender equity and
69 sports in a Spanish population; thus, our purpose is to understand how gender stereotyping
70 operates in relation to physical education. Moreover, since critical and feminist approaches

71 to physical education require attention to the specific characteristics of the group (Dewar,
72 1991; Fitzpatrick, 2013; Kirk, 2000), this paper also has the purpose of identifying the
73 topics that need to be addressed by future curricular approaches.

74 We begin by presenting an overview of how gender stereotypes are constructed in
75 physical education and Spanish physical education, as well as the theory of *Doing Gender*
76 (West & Zimmerman, 1987). These are followed by the methodological considerations of
77 this research. After presenting the findings, teachers' attitudes towards gender equity and
78 students' beliefs are clustered and discussed using the theory of *Doing Gender*. We
79 conclude the paper by offering overarching issues on which attention should be focused on
80 future critical approaches in Spain.

81 **Gender stereotypes and (Spanish) physical education**

82 Despite the consistent call for critical physical education (Fernández-Balboa, 1993;
83 Kirk, 1986; Tinning, 2017), the field is still dominated by gendered discourses that
84 consolidate, (re)produce, and maintain hegemonic (Connell, 2008) and heteronormative
85 forms of masculinity and femininity (Azzarito et al., 2006; Metcalfe, 2018). Among other
86 reasons, this is due to the patriarchal dominance in physical education, which results in an
87 androcentric curriculum and passive teachers that continue to (re)produce heteronormative
88 gender binarism discourses and stereotypes (Fisette, 2013; Gerdin, 2017; Walseth et al.,
89 2017). Through teaching practice, which is never a neutral action (Kirk, 1990), teachers
90 legitimate values and beliefs.

91 Within the Spanish context, the reality is not different (e.g., Devís-Devís et al.,
92 2018, Piedra de la Cuadra, 2017). Nevertheless, Spain has concrete characteristics that may
93 have affected the evolution of physical education. From 1939 to 1975, Spain was under a

94 dictatorship where education was controlled under a model that emphasized indoctrination
95 in Catholic national-syndicalist ideology. The Church was in charge of education, which
96 resulted in the prohibition of mixed-sex classes, and the establishment of different content
97 for girls and boys in physical education (e.g., girls were banned from certain sports such as
98 football, and boys were prohibited from rhythmic activities), reinforcing gender stereotypes
99 (Ramírez-Macías, 2014).

100 From 1970 onwards, Spanish authorities ruled mixed-sex classes for the entire
101 educational system, involving all curriculum subjects. However, nowadays, private schools
102 (which are mainly catholic) can continue to maintain segregation, and some state-integrated
103 schools continue to do so, although the law does not allow it. Although this mandatory
104 change entailed a common physical education curriculum for all students, the hidden
105 curriculum continues to be present. Physical education teachers use stereotyped language
106 (López-Villar et al., 2014), give less or lower quality feedback to female students
107 (DelCastillo-Andrés et al., 2012), are more tolerant with female students and more
108 demanding with male students (Alvariñas-Villaverde & Pazos-González, 2018; Serra
109 Payeras et al., 2020), marginalize trans students (Devís-Devís et al., 2018), and promote
110 sport-based physical education (Valencia-Peris et al., 2020).

111 In relation to this promotion of sport-based physical education, it is important to
112 note that, unlike other countries, Spain does not have undergraduate Physical Education
113 Teacher Education (PETE) programs that qualify graduates to become secondary school
114 teachers. Instead, aspiring teachers need to complete a one-year postgraduate certification
115 program to obtain their teaching license. Most pre-service teachers who enrol in these
116 certification programs are graduates from undergraduate Physical Education Sport-Tertiary

117 Education (PESTE) programs. These programs are typically offered by sports and physical
118 education departments and aim to prepare professionals in the fields of health, physical
119 activity, and education, giving specific characteristics to Spanish physical education.

120 Despite this reality, research in Spain also shows that physical education teachers
121 are making efforts to hide or conceal sexist behaviours, there being a significant difference
122 between formal and informal discourse, with more sensitivity shown in public discourses.
123 This indicates a deficit in teaching practice itself (Díaz & Anguita, 2017; Piedra de la
124 Cuadra et al., 2014; Rebollo et al., 2011). In addition, a new form of subtle, normalized,
125 and invisible sexism has emerged in recent times (Camacho-Miñano & Girela-Rejón,
126 2017).

127 These subtle forms of invisible sexism are (re-)produced worldwide within sports
128 and physical education, where there are socialising values, beliefs, and expectations that
129 influence the field. In this sense, bodies are constructed according to perceived gender.
130 Women are often expected to be less skilled than men, thin, and more reserved (Enright &
131 O'Sullivan, 2012; Fisette, 2011). Men, on the other hand, are expected to be muscular,
132 athletic, strong, and heterosexual (Devís-Devís et al., 2018; Kirk, 2010). This conception of
133 bodies not only focuses on differences but also reproduces hierarchies that can marginalise
134 those who do not conform to normalised gendered and bodily expectations (Flintoff, 2000;
135 Flores et al., 2020).

136 In this regard, gender is understood in a dichotomous and contrasting way in
137 Western societies under the belief that it is an attribute of individuals, or a reflection of
138 natural differences rooted in biology. Nevertheless, gender is socially constructed through
139 dynamic and fluid processes in the interrelation with others (Azzarito & Salomon, 2009,

140 Fitzpatrick, 2013; Flintoff, 2000; Tischler & McCaughtry, 2014). Yet, gender is
141 continuously “enacted, negotiated and recreated” (Crawford & Chaffin, 1997, p. 93). This
142 social construction of gender has been theorised by many scholars, however, the theory of
143 *Doing Gender* proposed by West and Zimmerman (1987), has reached near canonical status
144 (Jurik, 2009). Given that this theory offers a comprehensive framework through which to
145 study and understand the gendering processes at all the levels that influence people, it is
146 going to be used as the theoretical lens that guides this study.

147 **Doing Gender theory**

148 Under *Doing Gender* theory, gender involves micropolitical, interactional, and
149 perceptual activities that are socially guided, with the objective of establishing masculine
150 and feminine ‘natures’ (West & Zimmerman, 1987). In this sense, Crawford and Chaffin
151 (1997) pointed out that gender is not something inherent to the person, but occurs in the
152 interactions *between* people; therefore, gender is an individual task and, in turn, social
153 (West & Zimmerman, 1987). As such, gender should be understood as a social system
154 based on three levels: sociocultural, interpersonal, and individual.

155 At a sociocultural level, gender is recognised as an ideological device that
156 (re)produces choices based on sex category, normalizing them, and limiting personal
157 options (West & Zimmerman, 1987). Governments, laws, schools, media, and even
158 scientific knowledge maintain the gender hierarchy within this level. Therefore, physical
159 education, and sport as an institution, also contribute to this “social construction of gender
160 as a complex relation of power and to the reproduction of gender inequality” (Kirk, 2010, p.
161 64). At this level, not only sports and physical activities are gendered and regulated, but
162 also body shapes, sizes, and abilities (Azzarito & Solmon, 2009; Gorely et al., 2003).

163 Regarding the interpersonal level, gender is a signal or a mark that determines how
164 people should behave when interacting with others. It is interesting to note that, at this
165 level, behaviour is often unconscious, an aspect that agrees with the aforementioned
166 normalization that, in turn, is influenced by the sociocultural context. Thus, sociocultural
167 learning derives into sexist stereotypes that are learned, assumed, and accepted, serving to
168 define the appropriate characteristics and acts according to the sex of each person
169 (Kollmayer et al., 2018) and privileging some over others, because enacting in a non-
170 normative way implies repressions. Therefore, gender acts as a form of symbolic violence
171 (Metcalfe, 2018).

172 Finally, at the individual level, gender is assumed in a dichotomous,
173 complementary, contrasting way (Duncan, 2006) and hierarchical; in addition, it is
174 understood as a value or characteristic that resides *in* the person (e.g., hobbies,
175 expectations). Thus, people come to accept these gender distinctions as their own, assuming
176 certain roles, traits, or behaviours that are traditionally accepted for their sex in their
177 sociocultural context (Crawford & Chaffin, 1997); which, in turn, entails certain gender
178 beliefs and stereotypes, that are (re)produced by interpersonal practices.

179 Therefore, gender is socially constructed through interactions with the context,
180 which leads to the internalization, appropriation, and privilege of some attributes and
181 characteristics over others. However, everybody is not influenced by sexist and dominant
182 discourses in the same way and challenges the *status quo* by resisting actions, enacting and
183 showing other narratives (Azzarito et al., 2006; Piedra de la Cuadra et al., 2014). As such,
184 the purpose of this paper is to explore how physical education teachers and students are

185 affected by these constructs, analysing their beliefs about gender in physical education and
186 sports.

187 **Methods**

188 This paper is a cross-sectional study, which is part of a larger participatory action
189 research design that critically examines the development and implementation of a critical
190 feminist curriculum unit in Spanish physical education.

191 **Participants**

192 The study was conducted with a representative sample of the province of A Coruña
193 (Spain), composed of two groups: 90 physical education teachers (age 45.82 ± 7.411), and
194 644 secondary school students (age 15.23 ± 1.129). A random sampling by multistage
195 clusters with a sampling error of 4% was applied. The minimum number of participants
196 was determined from the total number of students and physical education teachers enrolled
197 in compulsory secondary education in the province of A Coruña (193,886 students, and 104
198 teachers).

199 The schools were considered the clusters that would facilitate access to students and
200 teachers. The sample was stratified by the school area (densely, moderately, and sparsely
201 populated areas), taking as a reference the classification of municipalities according to the
202 Galician Institute of Statistics. From the total of 93 municipalities, nine were selected. The
203 type of school (state, and private/state-integrated) was taken as a reference for the second
204 level of stratification. For the students' sample, the third level of stratification was by
205 school year (1st, 2nd, 3rd, and 4th year of compulsory secondary school¹). Schools were

¹ In Spain, Compulsory Secondary Education only lasts 4 years (from the age of 12, until the age of 16). Students can repeat a year if necessary and may attend ordinary secondary schools until age 18.

206 randomly selected assigning numbers to all of them using computer-generated random
207 numbers. The distributions of the variables (Table 1) are consistent with the general
208 distribution of the population².

209 <Table 1>

210 **Data collection**

211 Two validated questionnaires were used to collect the data for this study.
212 Importantly, all demographic data were gathered through open-ended questions (i.e., how
213 old are you?). In relation to participants' sex/gender, we used the question 'How would you
214 define your sex/gender?' following the suggestions made by Braun et al. (2021) to
215 minimize marginalizing categorizations.

216 **Teachers' data collection.** For the collection of teachers' data, the School Doing Gender
217 /teachers scale (SDG/t; Rebollo et al., 2011) was used. This scale aims to determine
218 teachers' attitudes towards gender equity, and consists of 30 items, with Likert-type
219 response options (ranging from 1, strongly disagree; to 5, strongly agree). The scale, based
220 on the theory of *Doing Gender* (West & Zimmerman, 1987), is organised around three
221 factors: sociocultural (10 items related to equity legislation and school organization; e.g.,
222 current legislation on gender equity benefits and promotes women over men), relational (10
223 items related to teaching practice, and gender relations; e.g., when I have to give an
224 example to explain a concept, I avoid using the traditional image of men and women), and
225 personal (10 items related to values and beliefs regarding gender; e.g., leadership is more
226 innate in boys than in girls). The scale presents adequate levels (Taber, 2018) in general (α

² The latest data available at the time of the study, published by the Spanish Ministry of Education and Vocational Training, were taken as a reference.

227 =.852) and in each factor, sociocultural ($\alpha =.677$), relational ($\alpha =.800$) and personal (α
228 =.765).

229 Following Rebollo et al. (2011), the sum of the items (globally or in each factor)
230 allows for obtaining a score to determine the teachers' profiles towards equity. Depending
231 on the obtained sum, teachers are organised into three profiles: blocking (≤ 89 points in
232 general, or ≤ 29 in each factor), adaptative (90-119 points in general, or 30-39 in each
233 factor), and gender-sensitive (≥ 120 points in general, or ≥ 40 in each factor). The blocking
234 profile refers to an explicit and open rejection towards gender-sensitive laws or proposals.
235 The adaptative profile is related to the recognition of the inequities that are present in the
236 social discourse, but showing only a politically correct position, without acting towards
237 transformation. Finally, the gender-sensitive profile implies the recognition of inequities,
238 publicly valuing the proposals and initiatives aimed at eradicating them, and showing a
239 clear attitude of collaboration in the promotion of values of gender equity.

240 ***Students' data collection.*** In the case of students, we used the Gender Beliefs and
241 Stereotypes in Physical Activity and Sport questionnaire (Granda Vera et al., 2018). This
242 questionnaire aims to measure gender stereotypes and beliefs in physical activity and sport
243 in adolescents, and consists of 24 items, with Likert-type response options (ranging from 1,
244 strongly disagree; to 4, strongly agree). Items are organised into five factors: (F1)
245 Differences associated with gender and its relationship with physical activity and sport
246 (seven items related to gender differences in possibilities and interests of practicing
247 physical activities; e.g., males are superior to females in any sport thanks to their physical
248 capacity), (F2) Sport and gender (four items related to barriers and difficulties faced in
249 sport; e.g., males get more benefits from their effort in sport), (F3) Stereotypes about

250 physical activity and sport associated with gender (five items related to gender stereotypes
251 in sports and physical activity; e.g., contact sports like boxing, rugby, karate, etc., are for
252 boys and should not be practiced by girls), (F4) Beliefs about physical activity and sport
253 and gender (four items related to physical possibilities and technical development of pupils
254 in physical activities: e.g., girls can play football as well as boys do), and (F5) Physical
255 Education classes and gender (four items related to student's experiences in physical
256 education; e.g., physical education teachers tend to require more of boys than girls). The
257 scale presents adequate levels (Taber, 2018) in general ($\alpha = .786$) and in each factor; F1 (α
258 $= .653$), F2 ($\alpha = .689$), F3 ($\alpha = .680$), F4 ($\alpha = -.678$) and F5 ($\alpha = .689$).

259 **Procedure**

260 This study was conducted during one academic year. Randomly selected schools
261 were contacted by telephone in the first half of September, to fully explain the study,
262 request their collaboration, and obtain authorization. Written consent and agreement to
263 participate were collected both, for teachers and students (and their parents or guardians, in
264 the case of the minor students), before beginning the study. Importantly, each school took
265 responsibility for informing the families or guardians of the minor students. All data was
266 processed following the ethics committees of the participating schools and the current data
267 protection regulations in Spain. Participation in the study was voluntary, and anonymity
268 and confidentiality of the data obtained were guaranteed.

269 The students' questionnaires and the teachers' scales were administered and
270 completed in person during school hours, under the supervision of an expert (researcher). It
271 took around 15 minutes. Before administering the instruments, a brief explanation of them
272 was given, which included answering possible questions and emphasizing the

273 confidentiality and anonymity of responses. The participants were also reminded of the
274 importance of responding truthfully.

275 **Data analysis**

276 Tests of normal distribution and homogeneity (one sample Kolmogorov–Smirnov
277 test) were conducted before analysis. In consequence, independent sample t-tests were
278 developed to examine the differences between self-identified sex/gender and type of school
279 for both teachers and students. Cohen's d was calculated to determine the effect size and,
280 following Cohen (1988), it was considered as small ($.2 < d < .5$), moderate ($.5 \leq d < .8$) and
281 large ($d \geq .8$). One-factor ANOVA was developed to explore the differences between
282 different population areas and ages for both teachers and students. Eta square (η^2) was used
283 to calculate the effect size. Finally, a two-way ANOVA was developed to study: (1) the
284 interaction between the independent variables of self-identified sex/gender and group of
285 age on the dependent variable 'attitudes towards gender equity' for teachers; and (2) the
286 interaction between the independent variables of self-identified sex/gender, group of age
287 and type of school on the dependant variable 'beliefs and stereotypes about gender' for
288 students. Eta Partial Square (ηp^2) was used to calculate the effect size. For r family of
289 effect sizes (η^2 and ηp^2), according to Cohen (1988), we considered the effect size small
290 ($.01 < \eta^2$ and $\eta p^2 < .06$), medium ($.06 \leq \eta^2$ and $\eta p^2 < .14$), and large (η^2 and $\eta p^2 \geq .14$).
291 Statistical significance was set at $p < .05$ for all the analyses. The analysis was carried out
292 with the statistical package IBM SPSS v27.

293 **Findings**

294 **Physical education teachers' attitudes**

295 The descriptive analysis showed that teachers presented high punctuations in the
296 general scale ($M 133.55 \pm 10.9$), and all the punctuations in each sub-scale were higher than
297 40 points. This means that they showed a gender-sensitive profile in general, and in each
298 factor. However, it is interesting to look at the percentages of each profile depending on the
299 factor. In the sociocultural factor ($M 42.37 \pm 3.1$), the percentage of teachers with a gender-
300 sensitive profile was 97.8 %, and with an adaptative profile was 2.2%. In the relational
301 factor ($M 46.12 \pm 5.78$), the percentage of gender-sensitive profile was 72.2%, of adaptative
302 profile was 25.2%, and of blocking profile was 2.2%. Finally, when analysing the personal
303 factor ($M 45.07 \pm 4.48$), 92.2% of teachers demonstrated a gender-sensitive profile, 5.6% an
304 adaptative profile, and 2.2% a blocking profile. This suggested that although most teachers
305 were aware of the inequities and did not show gender stereotypes (sociocultural and
306 personal factors), they revealed more difficulties to avoid them in their teaching practice
307 (relational factor).

308 Regarding their attitudes depending on the studied variables, Table 2 presents the
309 results of the t-test to determine the difference in each factor according to the self-identified
310 sex/gender (male/man, female/women) and type of school (state, private/state-integrated
311 school) of teachers. When analysing the results depending on self-identified sex/gender,
312 significant differences were found in the general scale ($p < .001$; $d = -.81$), as well as in
313 every factor: sociocultural ($p = .047$; $d = -.42$), relational ($p < .001$; $d = -.93$), and personal
314 ($p = .025$; $d = -.47$), where women obtained higher punctuation, presenting a more gender-
315 sensitive profile as compared to men. When comparing teachers' punctuations depending
316 on the type of school where they teach, no statistically significant differences were found in
317 the general scale nor in each factor, so the type of school did not influence their profile

318 towards gender-sensitive teaching. On its behalf, Table 3 shows the results of the one-factor
319 ANOVA to compare the differences in the punctuations depending on the population area
320 where they teach (sparsely, moderately, or densely populated areas) and the group of age
321 (<30, 31-40, 41-50, >51 years). No statistically significant differences were found in the
322 general scale or in each factor regarding both variables, except for the relational factor ($p =$
323 $.044$; $\eta^2 = .01$) regarding the age group. That means only the relational factor was affected
324 by age, where the group over 51 presented more punctuation, hence a more gender-
325 sensitive profile.

326 <Table 2 - 3>

327 In the case of two-way ANOVA, the results showed a main significant effect in the
328 interaction between self-identified sex/gender and age with a high effect size in general
329 (Wilks' Lambda = .799; $F(6.6653) = 7.356$; $p = .001$; $\eta p^2 = .155$) and in every factor,
330 sociocultural (Wilks' Lambda = .799; $F(6.348) = 6.348$; $p = .003$; $\eta p^2 = .137$), relational
331 (Wilks' Lambda = .799; $F(3.148) = 3.148$; $p = .0481$; $\eta p^2 = .073$), and personal (Wilks'
332 Lambda = .799; $F(5.228) = 5.228$; $p = .007$; $\eta p^2 = .116$). This suggested that, when age and
333 self-identified sex/gender were considered together, older women presented better attitudes
334 towards gender equity in all factors (see Figure 1).

335 <Figure 1>

336 **Secondary school students' beliefs**

337 The descriptive analysis showed that students presented moderate punctuations in
338 the general scale ($M 2.91 \pm .36$), and in each factor: F1 ($M 3.17 \pm .5$), F2 ($M 2.44 \pm .7$), F3 (M
339 $2.96 \pm .63$), F4 ($M 2.92 \pm .32$), F5 ($M 3.08 \pm .69$). Higher scores in F1, F3, and F4 indicate
340 fewer gender stereotypes. Therefore, in general, it appears that students did not show many

341 stereotypes in relation to gender and the practice of physical activity and sports. However,
342 high scores in F2 imply less critical awareness of reality. As a result, this descriptive
343 analysis indicated moderate awareness of reality. Finally, high scores in F5 mean that
344 experiences in physical education are gender stereotyped. Therefore, students appeared to
345 be generally experiencing stereotyped classes.

346 The results of the T-test to determine the difference in each factor according to the
347 self-identified sex/gender and type of school (state, private/state-integrated school) of
348 students are presented in Table 4. When analysing the results depending on self-identified
349 sex/gender, significant differences were found in the general scale ($p = .013$; $d = .36$), as
350 well as in factors: F1 ($p < .001$; $d = .49$), F2 ($p < .001$; $d = .49$) and F3 ($p < .001$; $d = .61$).
351 Female students presented lower values in F2, meaning a greater critical consciousness of
352 the reality; and higher values in the general scale, F1 and F3, showing less stereotyped
353 beliefs. When comparing students' results depending on the type of school, significant
354 differences were found in general ($p = .033$; $d = .36$) and in F1 ($p = .033$; $d = .50$), F2 ($p =$
355 $.012$; $d = .69$), F3 ($p = .006$; $d = .62$) and F5 ($p = .007$; $d = .69$). In this case, the punctuation
356 of state schools denoted greater critical consciousness of the reality and less stereotypical
357 beliefs comparing to private/state-integrated schools.

358 Table 5 shows the results of the one-factor ANOVA to compare the differences in
359 the punctuations depending on the population area of their schools (sparsely, moderately, or
360 densely populated areas), and age group (13-14 years, 15-16 years, >17 years). In relation
361 to the population area, no statistically significant differences were found, except for F3, (p
362 $= .016$; $\eta^2 = .01$) and F5 ($p < .001$; $\eta^2 = .026$). Therefore, students from densely populated
363 areas showed less stereotyped beliefs (lower punctuation in F3), and students from sparsely

364 populated areas showed less stereotypical experiences in physical education (lower
365 punctuation in F5). Regarding the group of age, significant differences were found in
366 general ($p < .001$; $\eta^2 = .03$), and in F1 ($p < .001$; $\eta^2 = .03$), F2 ($p < .001$; $\eta^2 = .03$) and F5 (p
367 $< .001$; $\eta^2 = .03$). According to the results, younger students between the ages of 13 to 14
368 showed higher scores, indicating that they had fewer stereotypes (F1) but also less critical
369 consciousness (F2). It was also found that they tended to have more stereotypical
370 experiences in physical education (F5).

371 <Table 4 - 5>

372 In the case of two-way ANOVA (Table 6), the results did not show any significant
373 effect in the interaction between self-identified sex/gender and age, self-identified
374 sex/gender and type of school, type of school and age neither type of school, age and self-
375 identified sex/gender, either in general or any factor except for type of school and age in F5
376 (Wilks' Lambda = .964; $F(3.471) = 7.539$; $p < .001$; $\eta p^2 = .023$). When age and type of
377 school were considered together, younger students from private/stated-integrated schools
378 encountered more stereotypical experiences in physical education, such as teachers
379 demanding more from boys than girls.

380 <Table 6>

381 **Discussion**

382 Our purpose in this paper was to study Spanish physical education teachers' profiles
383 towards gender-sensitive teaching, as well as secondary school students' beliefs about
384 gender, physical education, and sports. In line with previous research conducted in Spain
385 (e.g., Piedra de la Cuadra et al., 2014; Rebollo et al., 2011), our study highlighted that, in
386 general terms, physical education teachers showed gender-sensitive profiles. However, we

387 have also analysed their profiles in relation to different variables, as well as students'
388 stereotypes and perceptions. As a result, this work contributes to the literature by
389 emphasizing important issues that need to be addressed.

390 Drawing on the *Doing Gender* theory (West & Zimmerman, 1987), our findings
391 suggested that, on a sociocultural level, older female teachers showed more gender-
392 sensitive profiles. It is noteworthy that women tend to have more equitable attitudes as they
393 age, whereas men are less likely to do so. Female students are also the ones who obtained
394 significantly lower scores on F2, a factor that is related to the opportunities that people have
395 in the sports context. A lower score means a greater critical consciousness of the reality
396 where, indeed, women face more barriers than men (Bevan et al., 2021), limiting both their
397 access to sports and the recognition they receive (Antunovic & Whiteside, 2018; Scraton,
398 2018). The fact that male students were the ones who demonstrated a lower degree of
399 critical consciousness, represents a function of their own privilege (Alemany et al., 2019;
400 Schailleé et al., 2021). This point is relevant because it would be precisely this
401 consciousness that would allow the transformation of sociocultural discourses (Freire,
402 1970; hooks, 1994). Nevertheless, if this rise of consciousness is going to occur in physical
403 education, teachers need to practice an explicitly anti-sexist pedagogy (Gorely et al., 2003).

404 Teachers' findings regarding the relational level, which is related to their
405 pedagogical practices, revealed that 25% of teachers showed adaptative profiles. This may
406 suggest that teachers lack sufficient skills to enact gender-sensitive and transforming
407 practices (Muros & Fernández-Balboa, 2005). In addition, female teachers seemed to be
408 statistically more committed to gender-sensitive teaching practice; which is consistent with
409 previous studies (Alemany et al., 2019; Martínez-Marín & Martínez, 2019). In this factor, it

410 is interesting to note that no differences were found when analysing the type of school in
411 relation to the teachers. However, when looking at students' results (F5), adolescents from
412 private/state-integrated schools pointed out that teachers demand more from boys than from
413 girls, compared to adolescents from state schools. Therefore, this result could agree with
414 the study of Díaz and Anguita (2017), recognizing that there is a greater effort on behalf of
415 teachers to hide certain sexist representations publicly, there being a great difference
416 between formal (what they answer in the questionnaire, for instance) and informal (what
417 they do and students perceive) discourse.

418 When analysing teachers' results in the relational factor regarding the group of age
419 and self-identified sex/gender, findings suggested that older female teachers are more likely
420 to score significantly higher than older male teachers. This result might add relevant data to
421 others' studies (e.g., Mateo-Orcajada et al., 2021), where older teachers (based on age and
422 years of experience) showed more stereotypes. However, it is also important because it
423 suggests that, despite the changes on a sociocultural level (i.e., legislative changes and
424 educational reforms taking place in Spain), new teachers are not receiving the necessary
425 training that would allow them to transform their teaching practices and are deeply
426 influenced by social discourses and sexist values (González-Calvo et al., 2022). This is
427 consistent with the latest studies on Spanish Physical Education Teacher Education (PETE)
428 programs, showing that they often marginalise teaching gender equity and (re)produce
429 dominant narratives around sex, gender, and the body (Serra et al., 2018) and, as such,
430 many pre-service teachers are socialised into (re)producing dominant discourses (Serra et
431 al., 2019).

432 This learned socialization, translated into practices, is integrated on a personal level.
433 In this level, female teachers were the ones who had higher scores, that is, who were less
434 sexist. This result might suggest that men tend to have firmer gender stereotypes
435 (Marjanovič-Umek & Fekonja-Peklaj, 2017; Piedra de la Cuadra et al., 2014), especially
436 when they are older (Díaz-Aguado, 2022). Moreover, female students had fewer
437 stereotypes in relation to gender, physical activity and sports (F1, F3 and F4), being
438 consistent with other studies (Alemany et al., 2019; Martínez-Marín & Martínez, 2019).
439 This is important because there is a direct relationship between gender stereotypes and the
440 practice of physical activity (Alemany et al., 2019); in fact, these authors conclude that
441 while boys with more stereotypes are the ones who practice more physical activity, girls
442 with more stereotyped beliefs are the ones who do the least activity. Thus, gender
443 stereotypes are presented as a mediator that limits personal options and possibilities, acting
444 at the level of internal beliefs.

445 Finally, also in relation to the personal level, it is important to note that students
446 from state schools rejected stereotypical beliefs and images to a greater extent (F1 and F3).
447 Recent research indicates that there is a lower rate of peer violence in state schools
448 (Garaigordobil et al., 2015), a fact that could be related to the greater respect and
449 acceptance of diversity fostered in these schools (Molina García et al., 2018). Likewise,
450 authors such as León and Aizpurúa (2020) have shown that being a Christian believer or
451 having a more conservative ideology (as in the case of the private/ state-integrated schools
452 in this study), predicts more sexist attitudes. Therefore, the findings suggested not only that
453 gender stereotypes and unequal teaching practices are still prevalent in Spanish physical

454 education, but also the need to implement critical and feminist pedagogical approaches in
455 order to enact social justice in physical education settings.

456 **Conclusions**

457 Despite some limitations, such as the possible social desirability that is frequently
458 evoked in self-report measures, or the need to go deeper into the issue generating
459 qualitative data, the findings of this paper highlighted important conclusions. First, most
460 teachers and students show equitable beliefs and attitudes at the sociocultural level.
461 However, students' perceptions of teachers' practices are not related to teachers' results,
462 which may indicate a lack of skills to enact gender-sensitive and critical feminist practices.
463 Finally, female teachers and female students are the ones who show more equitable beliefs
464 and attitudes.

465 Therefore, this study shows the need to work in PESTE settings, in order to give
466 pre-service teachers the tools to enact critical feminist approaches. Moreover, as hooks
467 (2000) claimed two decades ago, if a real feminist transformation is to occur, we need to
468 empower *everybody*. As such, future critical feminist approaches need to work on new
469 masculinities, enacting pedagogical strategies that allow the development of a fairer
470 society. One of the goals of these pedagogical approaches is to raise critical consciousness
471 (Freire, 1970; hooks, 1994). Yet, criticality needs to be emplaced in the concrete reality of
472 the participants. Studies such as the one presented in this paper help to gain an
473 understanding of the local context, which is essential for developing culturally relevant
474 pedagogical approaches. For instance, *deportigualizate* (see Castro-García et al., Online
475 First) is a critical feminist curriculum that was developed based on this study's findings.

476 Therefore, it can be concluded that this manuscript illustrates how studies of this nature are
477 relevant not only for understanding the reality, but also for developing pedagogical
478 approaches that are culturally relevant and context-specific.

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Table 1. Sociodemographic characteristics of the sample.

Characteristic	Teachers		Students	
	<i>n</i>	%	<i>n</i>	%
Self-identified sex/gender				
Female	37	41.1	323	50.2
Male	53	58.9	321	49.8
Type of school				
State	73	81.1	508	78.9
Private/state integrated	17	18.9	136	21.1
Population area				
Sparsely populated	22	24.5	168	26.1
Moderately populated	20	22.2	130	20.2
Densely populated	48	53.3	346	53.7

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Table 2. Descriptive and comparative statistics for teachers depending on sex and type of school.

	Self-identified sex/gender									Type of school								
	Male/Man			Female/Woman			<i>t</i>	<i>p</i>	<i>d</i>	State			Private/State-integrated			<i>t</i>	<i>p</i>	<i>d</i>
	n=53			n=37						n=73			n=17					
	<i>M</i>	<i>SD</i>	<i>CV</i>	<i>M</i>	<i>SD</i>	<i>CV</i>	<i>M</i>	<i>SD</i>	<i>CV</i>	<i>M</i>	<i>SD</i>	<i>CV</i>	<i>M</i>	<i>SD</i>	<i>CV</i>			
Total sum	129.91	11.13	1.53	138.76	8.19	1.35	-4.11	.000**	-.81	133.56	11.62	1.36	133.5	7.27	1.76	-.02	.983	-.01
Sociocultural	45.58	3.35	.46	46.89	2.56	.42	-2.01	.047*	-.42	46.04	3.29	.39	46.44	2.12	.51	.48	.635	.13
Relational	40.15	5.79	.79	45.54	4.07	.67	-5.19	.000**	-.93	42.6	6.13	.72	41.35	3.87	.94	-1.06	.296	-.21
Personal	44.18	5.2	.71	46.32	2.78	.45	-2.78	.025*	-.47	44.92	4.77	.56	45.71	2.95	.72	.65	.516	.17

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Table 3. Descriptive and comparative statistics for teachers depending on group of age and population area.

	Group of age								Population area											
	<30		31-40		41-50		>51		<i>F</i>	<i>p</i>	η^2	Sparsely		Moderately		Densely		<i>F</i>	<i>p</i>	η^2
	<i>n</i> =6	<i>n</i> =9	<i>n</i> =51	<i>n</i> =21	<i>n</i> =33	<i>n</i> =20	<i>n</i> =48													
<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>					
Total sum	136.67	5.79	130.67	7.55	131.95	8.04	137.1	17.43	1.46	.231	.00	133.37	10.31	135.98	8.23	132.63	12.11	.67	.517	.01
Sociocultural	46	1.55	46.44	2.24	45.79	2.88	46.67	4.16	.428	.733	.00	46.55	2.91	47.18	2.51	45.48	3.31	2.46	.091	.02
Relational	44	2.68	40	5.54	41.34	4.91	45.05	7.64	2.83	.044*	.01	42.23	5.78	42.8	4.54	42.25	6.31	.07	.932	.09
Personal	46.67	2.07	44.22	2.64	44.82	3.59	45.38	7.17	.42	.737	.01	44.6	3.19	46	2.97	44.9	5.41	.58	.557	.02

Note. * $p < .05$, ** $p < .001$

Table 4. Descriptive and comparative statistics for students depending on sex and type of school.

	Self-identified sex/gender									Type of school								
	Male/Boy			Female/Girl			<i>t</i>	<i>p</i>	<i>d</i>	State			Private/State-integrated			<i>t</i>	<i>p</i>	<i>d</i>
	n=321			n=323						n=508			n=136					
	<i>M</i>	<i>SD</i>	<i>CV</i>	<i>M</i>	<i>SD</i>	<i>CV</i>	<i>M</i>	<i>SD</i>	<i>CV</i>	<i>M</i>	<i>SD</i>	<i>CV</i>	<i>M</i>	<i>SD</i>	<i>CV</i>			
Total	318	.39	.02	2.95	.33	.02	2.48	.013	.036	2.92	.36	.02	2.82	.37	.05	2.14	.033*	.36
F1	3.07	.54	.03	3.36	.44	.03	4.83	<.001**	.49	3.19	.5	.02	3.09	.51	.04	2.037	.042*	.50
F2	2.54	.67	.04	2.35	.71	.04	-3.35	<.001**	.69	2.48	.70	.03	2.31	.67	.06	2.53	.012*	.69
F3	2.81	.65	.04	3.09	.56	.03	5.81	<.001**	.61	2.99	.61	.03	2.83	.66	.06	2.77	.006*	.62
F4	2.91	.35	.02	2.93	.3	.02	.26	.794	.32	2.92	.31	.01	2.92	.36	.03	.102	.919	.32
F5	3.04	.71	.04	3.11	.66	.04	1.11	.267	.69	3.04	.69	.03	3.22	.65	.06	-2.719	.007*	.69

Note. * $p < .05$, ** $p < .001$

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Table 5. Descriptive and comparative statistics for students depending on group of age and population area. 705

	Group of age						Population area										
	13-14		15-16		>17		Sparsely		Moderately		Densely						
	n=153	n=379	n=112	<i>F</i>	<i>p</i>	η^2	n=168	n=130	n=346	<i>F</i>	<i>p</i>						
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>					
Total	2.98	.38	2.89	.34	2.75	.36	6.85	<.001**	.03	2.88	.33	2.97	.37	2.91	.36	2.58	.077*
F1	3.21	.51	3.17	.48	2.9	.49	7.41	<.001**	.03	3.18	.44	3.17	.51	3.16	.52	.11	.891
F2	2.59	.7	2.35	.69	2.45	.63	5.65	<.001**	.03	2.41	.68	2.55	.78	5.41	.67	1.93	.146
F3	2.99	.65	2.96	.59	2.75	.7	1.95	.121	.01	3.00	.59	3.06	.65	2.89	.63	4.14	.016*
F4	2.93	.31	2.92	.33	2.88	.37	1.42	.739	.00	2.89	.23	2.89	.3	2.94	.34	1.67	.189
F5	3.17	.65	3.04	.7	2.77	.66	5.63	<.001**	.03	2.89	.64	3.17	.63	3.12	.71	8.527	<.001**

Note. **p* < .05, ***p* < .001

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Table 6. Descriptive and comparative statistics for students depending on sex, group of age and population area.

	ANOVA											
	(Sex/gender x Group of age)			(Sex/gender x Type of school)			(Group of age x Type of school)			(Group of age x Type of school x Sex/gender)		
	<i>F</i>	<i>p</i>	ηp^2	<i>F</i>	<i>p</i>	ηp^2	<i>F</i>	<i>p</i>	ηp^2	<i>F</i>	<i>p</i>	ηp^2
Total	.323	.724	.001	.110	.740	.000	.416	.660	.001	.019	.891	.000
F1	.858	.425	.003	1.23	.267	.002	.112	.894	.000	.000	.997	.000
F2	.036	.964	.000	1.47	.225	.002	.401	.670	.001	.339	.561	.001
F3	.013	.988	.000	.088	.767	.000	.690	.502	.002	.034	.853	.000
F4	.661	.517	.002	.568	.451	.001	.134	.875	.000	.088	.767	.000
F5	.720	.487	.002	.034	.853	.000	7.539	< .001**	.023	.063	.802	.000

Note. * $p < .05$, ** $p < .001$