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Gendered grouping practices in secondary physical education in England: Listening to student voice

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journals.sagepub.com/home/epe**Shaun D. Wilkinson** 

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Abstract

There is substantial international literature on single- and mixed-sex grouping in physical education (PE), much of which focuses on the relative impact on students' physical activity levels, perceived self-confidence and/or interactions with teachers and peers. A smaller body of research has explored students' perspectives on single- and/or mixed-sex grouping in PE. However, much of this research is dated, limited in scope to a relatively small number of students from a small number of schools and/or dominated by binary thinking, with little recognition that students may express preferences for a combination of grouping approaches. This study was designed to extend previous research by generating large-scale data relating to cisgender students' preferences for single-sex grouping, mixed-sex grouping or a combination of these approaches in secondary school PE. The study used an online survey to generate data from 2073 boys and 2161 girls ($n = 4234$) from 47 co-educational secondary schools located throughout England. Analysis of responses revealed that, overall, most boys and girls preferred single- (52.7%, $n = 2231$) to mixed-sex grouping (23.1%, $n = 979$) or combined arrangements in PE (24.2%, $n = 1024$). Further exploration of preferences showed variations by demographic and situational factors, including gender, ability, cultural background, familiarity with a particular approach and/or the nature of the learning situation. Discussion pursues the potential benefits and challenges that schools may face in adopting flexible, situation-specific, gendered grouping practices in PE. The paper affirms the importance of student voice in decisions that powerfully shape learning opportunities and experiences and in potentially assisting in advancing gender equity in PE.

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Single-sex grouping, mixed-sex grouping, co-education, physical education, gender, student voice

Introduction: historical grouping practices and gender (in)equity in PE

Since the beginning of mass compulsory schooling in England, physical education (PE) in secondary schools has traditionally taken the form of single-sex groups, with gendered patterns of staffing and curriculum provision (Bayliss, 1984; Lines and Stidder, 2003; Scraton, 1992, 1993). Recent research affirms that single-sex grouping remains the dominant approach in core (non-examined) PE in Key Stage 3 (Year 7–9) and Key Stage 4 (Year 10–11) (Stride et al., 2022; Wilkinson and Penney, 2023). Comparatively, most primary schools adopt mixed-sex grouping for PE, although they occasionally group students into smaller single-sex groups within mixed-sex classes, particularly in activities requiring direct bodily contact (Wilkinson et al., 2024). Thus, many students experience a change in grouping practices and learning environment when moving from primary to secondary school PE.

The rationale for single-sex grouping in PE has invariably been based on perceptions of biological sex differences, with boys and girls reported as having different physical abilities and/or interests, thus requiring different provision (Lines and Stidder, 2003; Stride et al., 2022; Wilkinson and Penney, 2023). It is also argued that single-sex grouping provides a more supportive space for boys and girls to publicly display their bodies and develop their physical competencies without pressures of performing in front of the opposite sex (Cameron and Humbert, 2020; Scraton, 1992; Stride et al., 2022; Wilkinson and Penney, 2023). Yet, the merits of single-sex grouping have repeatedly been questioned from a gender equity perspective and recently from a gender diversity perspective. Historically, research has identified single-sex grouping as depriving boys and girls of access to a common PE curriculum, whilst reinforcing normative ideas about gendered behaviours by socialising boys and girls into activities that have underlying associations with masculinity or femininity (Hills and Croston, 2012; Scraton, 1992, 1993; Wright, 1996).

Recent research indicates that, despite maintaining single-sex grouping, many secondary schools are broadening their PE curriculum to include activities that transgress traditional gender boundaries, particularly for girls (Roberts et al., 2020; Stride et al., 2022; Wilkinson and Penney, 2023). While there are also reports of students having greater choice and voice in curriculum decisions in PE, particularly in Key Stage 4 (Enright and O'Sullivan, 2010; Timkin et al., 2019; Wilkinson and Penney, 2023), this has been shown to potentially consolidate existing gender divisions, with students selecting curriculum activities based on who they prefer to be in a class with and/or that more closely align with gender stereotypes and expectations, rather than interest in the activity itself (Cameron and Humbert, 2020; Fisette, 2013). The process of enabling student choices has also often failed to extend to grouping arrangements that challenge the gender binary. Instead, transgender (trans) and non-binary students are frequently 'forced' to participate in boys-only or girls-only classes that are inconsistent with their gender identity (Ferguson and Russell, 2023; Kettley-Linsell et al., 2024; Wilkinson and Penney, in press).

Mixed-sex grouping has been advocated as a means of addressing many of these gender equity concerns, by providing boys and girls with access to the full range of curriculum activities, including those that have previously only been offered to either boys or girls (Lines and Stidder, 2003; Scraton, 1993; Wilkinson and Penney, 2023). Nonetheless, research spanning several decades

has shown that mixed-sex grouping does not necessarily create a less gendered learning environment (Hills and Croston, 2012; Scraton, 1992, 1993; Wallace et al., 2020; Wright, 1996). The choice of activities offered in mixed-sex grouping has often remained skewed towards the abilities, interests and/or experiences of boys. This reinforces notions of gender difference and expectations that girls are less skilled, competitive, interested and/or motivated than boys in PE (Hills and Croston, 2012; With-Nielsen and Pfister, 2011; Wright, 1996). This setting also demonstrates boys belittling the capabilities of girls and/or dominating teacher attention, space and playing time in game situations, leaving many girls (and some boys) feeling marginalised and unwilling to participate to their full potential (Fisette, 2013; Sánchez-Hernández et al., 2018; Stride, 2014). Fisette (2013) found that many girls fluctuated between active engagement, blending in (a cross between standing around and getting into the action in PE), making themselves invisible or not participating at all in mixed-sex lessons. Cameron and Humbert (2020) affirm the varied ways girls express their agency in PE. They found girls constructing relationships of support and solidarity with other girls to challenge inequitable behaviours and practices in mixed-sex PE, most notably by refusing to be relegated to defensive positions by boys and/or only passing to other girls in team games to experience success. That these actions functioned to reproduce a gender binary provides an important reminder of the complexities and challenges schools and teachers face in seeking to ensure curriculum provision, pedagogical approaches and learning environments support gender equity.

While past research has provided important insights into the limitations of single- and mixed-sex grouping arrangements in PE, it has arguably failed to move understanding and practice beyond binary discourses, and as such has reinforced hegemonic ideas about gender difference. While necessarily using the terms single- and mixed-sex grouping, this research is directed towards reframing professional debates and practice to engage with multiple possibilities for gendered grouping practices in PE. We contend that moving to talk of *gendered grouping practices*, emphasising pluralities (in gender identities and in grouping practices), is itself an important step in pursuit of gender equity in PE. Furthermore, we are conscious that, in many instances, previous research exploring grouping practices in PE has not foregrounded student perspectives and interests. Accordingly, this research sought to raise the profile of student voices in research and debates about grouping practices in PE, while also extending the scale of inquiry pertaining to gendered grouping practices in PE. Before we turn attention to our study, the following section summarises the main findings from research examining students' perspectives on gendered grouping practices in PE.

Students' perspectives on gendered grouping practices in PE

Research has consistently shown that, overall, boys and girls are more likely to favour single- than mixed-sex grouping in PE, particularly in team-based activities (Lirgg, 1993; Timkin et al., 2019; Treanor et al., 1998; Wallace et al., 2020; Youth Sport Trust, 2023a, 2023b). In a recent national report of over 18000 girls and 6000 boys (aged 7–18) in England, the Youth Sport Trust (2023a, 2023b) found that 59% of girls wanted single-sex PE, 24% did not mind how they were grouped for PE and 16% wanted mixed-sex PE. Comparatively, 52% of boys wanted single-sex PE, 32% did not mind how they were grouped for PE and 15% wanted mixed-sex PE. While in this instance it is notable that over 50% of girls and boys expressed a preference for single-sex grouping, previous research from the last 30 years has reported that girls are more likely than boys to prefer this arrangement in PE (Lirgg, 1993; Scraton, 1993; Treanor et al., 1998; Wallace et al., 2020). Other

research prompts consideration of the grouping practices that students have experienced in their schooling and that they are inevitably drawing on in expressing their preferences. While not all studies have explored this relationship, there is some evidence to indicate that students are more likely to favour the type of PE class grouping with which they are most familiar (Treanor et al., 1998; Wilkinson and Penney, 2024).

Girls' preference for single-sex grouping in PE has frequently been associated with them being less self- and/or body-conscious performing in front of same-sex peers (Hills and Croston, 2012; Scraton, 1993; Timkin et al., 2019; Wallace et al., 2020). This issue is particularly important for Muslim girls who wish to embody their religion in ways that do not permit them to expose their bodies to boys for modesty and privacy reasons. A growing body of research has shown how single-sex grouping and curriculum provision (particularly the monocultural curriculum) are antithetical to the religious and cultural traditions of Muslim girls, creating challenges for them to engage in PE (Benn et al., 2011; Stride, 2014; Stride and Allen, 2024). Girls also suggest that they receive more practice opportunities and are less fearful of injury in single-sex PE classes (Hills and Croston, 2012; Scraton, 1993; Timkin et al., 2019; Wallace et al., 2020).

Boys have been identified as often perceiving that they compete harder, behave better and learn more in single-sex PE classes because they do not have to limit or adjust their behaviour (e.g. their levels of aggression) to compensate for assumed sex differences in ability (Treanor et al., 1998; With-Nielsen and Pfister, 2011; Wright, 1996). Relatedly, boys also frequently express concerns about the impact of girls, and particularly their apparent lack of skill and passivity, on their learning, motivation and/or enjoyment in mixed-sex PE classes (Hay and Macdonald, 2010; Sánchez-Hernández et al., 2018; With-Nielsen and Pfister, 2011). In With-Nielsen and Pfister's (2011) study of mixed-sex PE in Denmark, boys were convinced that girls 'by nature' did not have the required abilities, including toughness, strength or aggressiveness, to compete in the 'male domain' of sport, although some girls were accepted by boys if they did not bring their 'girliness onto the field' (653).

Other research has provided an important reminder of the need to avoid generalisations about preferences that imply homogeneity amongst any group of students and/or that risk affirming binary discourses that are known to marginalise some students. This research has revealed differences in preferences between girls from different ability levels and cultural backgrounds, with less able girls and Muslim girls particularly favouring single- over mixed-sex grouping in PE (Benn et al., 2011; Stride, 2014; Stride and Allen, 2024). By contrast, some more able girls have reported preferences for mixed-sex grouping in PE because they feel that competing against boys provides them with a greater level of challenge and difficulty (Flintoff and Scraton, 2001; Wallace et al., 2020; With-Nielsen and Pfister, 2011).

More recently, there has been growing recognition that single-sex grouping reproduces and legitimates restrictive binary gender discourses, which is problematic for students who identify as trans or non-binary and can leave them feeling marginalised, excluded and/or dysphoric in PE (Ferguson and Russell, 2023; Kettley-Linsell et al., 2024; Sáenz-Macana et al., 2024). A small body of emerging research has found that trans and non-binary students frequently express preferences for mixed-sex grouping in PE, most notably because it reduces the likelihood of them being misgendered (e.g. by being assigned to a class that is incongruent with their internal sense of gender identity) and/or does not require them to feel positioned within a specific gender category (e.g. the girls' or the boys' class) (Ferguson and Russell, 2023; Kettley-Linsell et al., 2024; Wilkinson and Penney, in press). Single-sex grouping is especially problematic for non-binary students, who are

often left to accept disaffirmation of their identity to participate in PE (Ferguson and Russell, 2023; Sáenz-Macana et al., 2024; Wilkinson and Penney, in press).

Achieving scale and embracing plurality in gendered grouping research in PE

While the preceding sections reflect that there is a significant body of international literature addressing single- and mixed-sex grouping in PE, there is an absence of contemporary large-scale research investigating students' perspectives on these practices (the notable exception being the Youth Sport Trust, 2023a, 2023b). The current research sought to extend the scope and scale of previous research by generating large-scale data relating to cisgender students' preferences for various gendered grouping arrangements in PE across schools in England.¹ In pursuing this intent, the research sought to advance understandings of these students' grouping preferences and encourage teachers, teacher educators and researchers to explore grouping practices in PE with an openness to multiple perspectives and identities. The study aimed to answer the following two research questions:

- What preferences do cisgender secondary school students in England express for single-sex grouping, mixed-sex grouping or a combination of these approaches in PE?
- How do cisgender students explain their preferences?

Research context and methodology

The research reported in this paper is part of a larger project aimed at exploring students' preferences for gendered grouping practices in PE. The project includes a total sample of 4488 students from 47 mainstream state-funded co-educational secondary schools in England.² In this paper, we focus attention on the perspectives of 4234 students who identified as either a boy ($n = 2073$) or a girl ($n = 2161$).

The design and administration of the survey

A convergent mixed-methods approach (Creswell and Creswell, 2018) was adopted to provide a comprehensive and nuanced understanding of students' gendered grouping preferences in PE. The convergent design used an online survey created through JISC Online Surveys and was piloted with a convenience sample of 32 students not involved in the main study. The survey consisted of a range of multiple-choice and free-text questions. Multiple-choice questions focused on the extent to which students preferred single-sex grouping, mixed-sex grouping or a combination of these approaches in PE, while free-text questions were used to explore the reasons for their preference. The survey also elicited demographic information from students (e.g. their age, gender and ability) to understand the make-up of the sample and account for any factors that may have led to differences in their responses. A summary of the questions asked, and the response options provided, is provided in the supplementary material.

Two emails were sent, one month apart, to subject leaders of PE in participating schools. The schools were recruited to the study following their participation in a previous national survey of grouping practices in PE that was directed to teachers (Wilkinson and Penney, 2023). The first email provided an explanation of the purpose of the study, provided assurances of confidentiality and anonymity, and requested that participant information and consent forms were shared with

parents or guardians of students in Key Stage 3 and Key Stage 4. The second email provided a hyperlink to the online survey to be passed on to those who had received permission to participate in the study. The first page of the survey included a cover letter that explained to students the purpose of the study, their right to refuse participation and the confidentiality of their responses. Students were required to provide electronic assent before they could proceed to access the survey questions and could exit the survey at any time by closing the browser window. Students were also provided with a unique receipt number upon completion of the survey (matching their response identification code), which they could use to withdraw their data. The survey opened on 4 May 2022 and closed on 25 July 2022 with a return rate of approximately 9.7%. Several factors contributed to this relatively low return rate, including the opt-in method of consent and/or logistical issues in administering the electronic survey to students in core PE lessons (e.g. a lack of access to computers). The demographic characteristics of participating boys and girls are summarised in Table 1. While we acknowledge that students' race, social class and disability (and their intersections) may influence their experiences of single- and/or mixed-sex grouping PE, comparisons between these groups could not be performed in the current study.

Analysis of survey responses

The survey data were analysed in two ways. First, frequencies and percentages of responses to multiple-choice questions were calculated and compared. This analysis was performed on all responses to each multiple-choice question and subsequently filtered by demographic characteristics to identify any differences in responses by gender, ability, current year group and reported grouping arrangement for PE. Next, responses to the free-text question which asked boys and girls to explain the reasons for their grouping preference were analysed using an inductive approach to thematic analysis (Braun and Clarke, 2006). While nearly all boys and girls provided a response to this question, many ($n = 466$) stated that they were 'unsure' or 'did not know' why they had a particular preference, and some others ($n = 261$) did not provide a relevant or meaningful response. The process of analysis involved reading and rereading the corpus of free-text comments to identify patterns of meaning and issues of potential interest, which were organised into initial codes (Braun and Clarke, 2006). Free-text responses were further assessed to determine the accuracy and comprehensiveness of these initial codes, with overarching and sub-themes formed where initial codes appeared to form a coherent pattern (Braun and Clarke, 2006). A selection of quotes was then identified to capture the essence of each theme. Following independent analysis of the quantitative and qualitative datasets, findings from each dataset were compared to identify points of convergence and divergence (Creswell and Creswell, 2018). This process involved comparing themes with statistics of responses to multiple-choice questions to unpack the reasons for the prevalence of students' gendered grouping preferences.

Preferences for single- and/or mixed-sex grouping arrangements in PE

As shown in previous research (Treanor et al., 1998; Wilkinson and Penney, 2024), students' grouping preferences need to be understood as nuanced and contextual. Students in this study were therefore asked to self-report how they were currently grouped for PE in their school, as well as their past experiences. More students reported currently being taught in single- (59.3%) than mixed-sex groups (26.6%), although nearly all had experience of both single- (82.7%) and/

Table 1. Characteristics of participating students.

		Survey Frequency	(<i>n</i> = 4234) %
Location	East	431	(10.2%)
	East Midlands	527	(12.4%)
	Greater London	182	(4.3%)
	North-East	904	(21.4%)
	North-West	164	(3.9%)
	South-East	832	(19.6%)
	South-West	540	(12.7%)
	West Midlands	465	(11%)
Current year group	Yorkshire	189	(4.5%)
	Year 7	1086	(25.6%)
	Year 8	966	(22.8%)
	Year 9	1160	(27.4%)
	Year 10	906	(21.4%)
	Year 11	116	(2.8%)
Gender	Male	2073	(49%)
	Female	2161	(51%)
Ability	High ability	1341	(31.7%)
	Average ability	2380	(56.2%)
	Low ability	390	(9.2%)
	Did not say	123	(2.9%)
Gender/ability	Male/high	853	(41.1%)
	Male/average	1004	(48.4%)
	Male/low	173	(8.4%)
	Male/did not say	43	(2.1%)
	Female/high	488	(22.6%)
	Female/average	1376	(63.7%)
	Female/low	217	(10%)
	Female/did not say	80	(3.7%)
Current grouping in PE	Single-sex	2509	(59.3%)
	Mixed-sex	1125	(26.6%)
	Combination	600	(14.1%)
Experienced single-sex PE	Yes	3503	(82.7%)
	No	731	(17.3%)
Experienced mixed-sex PE	Yes	3720	(87.9%)
	No	560	(13.2%)

or mixed-sex grouping (87.9%). Thus, the vast majority of students were making decisions about preferences based on experience of different grouping practices in PE.

In concordance with much previous research (Lirgg, 1993; Timkin et al., 2019; Treanor et al., 1998; Youth Sport Trust, 2023a, 2023b), the data showed that, overall, more students in the total sample preferred single- (52.7%, *n* = 2231) to mixed-sex grouping (23.1%, *n* = 979) in PE. Data for the boys showed a slightly greater preference for single- and mixed-sex grouping (55.1% and 24.6%) in PE than girls (50.4% and 21.7%). This finding contrasts with previous research which

has shown that girls are typically more likely to favour single-sex grouping than boys (Lirgg, 1993; Treanor et al., 1998; Wallace et al., 2020; Youth Sport Trust, 2023a, 2023b). This discrepancy in findings may be due to the increased number of girls expressing a preference for a combination of grouping approaches (27.9% of girls compared to 20.3% of boys) and the lack of this option for this grouping preference in previous research.

In total, just under a quarter (24.2%, $n = 1024$) of students expressed a preference for a combination of single- and mixed-sex grouping approaches in PE, slightly more than those who expressed a preference for mixed-sex grouping. This finding is unique in the literature and signals the importance of schools moving beyond binary grouping practices in PE to recognise and accommodate the plurality of students' perspectives, identities and needs. Schools should consider using grouping approaches that are situationally responsive and adjusted to best align with multiple considerations, including group composition, learner characteristics and preferences, learning contexts and learning outcomes.

The data also showed that boys who identified as high ability were more likely to report preferences for single-sex grouping in PE (58.3%) than girls who identified as high ability (38.5%). A broadly similar percentage of boys and girls who identified as average or low ability were likely

Table 2. Preferred grouping approaches.

		Single-sex	Mixed-sex	Combination
Current year group	Year 7	514 (47.3%)	294 (27.1%)	278 (25.6%)
	Year 8	533 (55.2%)	195 (20.2%)	238 (24.6%)
	Year 9	611 (52.7%)	267 (23%)	282 (24.3%)
	Year 10	512 (56.5%)	188 (20.8%)	206 (22.7%)
	Year 11	61 (52.6%)	35 (30.2%)	20 (17.2%)
Gender	Male	1142 (55.1%)	509 (24.6%)	422 (20.3%)
	Female	1089 (50.4%)	470 (21.7%)	602 (27.9%)
Ability	High ability	685 (51%)	336 (25.1%)	320 (23.9%)
	Average ability	1255 (52.7%)	525 (22.1%)	600 (25.2%)
	Low ability	225 (57.7%)	93 (23.8%)	72 (18.5%)
	Did not say	66 (53.7%)	25 (20.3%)	32 (26%)
Gender/ability	Male/high	497 (58.3%)	206 (24.1%)	150 (17.6%)
	Male/average	533 (53.1%)	242 (24.1%)	229 (22.8%)
	Male/low	97 (56.1%)	48 (27.7%)	28 (16.2%)
	Male/did not say	15 (34.9%)	13 (30.2%)	15 (34.9%)
	Female/high	188 (38.5%)	130 (26.6%)	170 (34.9%)
	Female/average	722 (52.5%)	283 (20.5%)	371 (27%)
	Female/low	128 (59%)	45 (20.7%)	44 (20.3%)
	Female/did not say	51 (63.7%)	12 (15%)	17 (21.3%)
Current grouping in PE	Single-sex	1666 (66.5%)	306 (12.1%)	537 (21.4%)
	Mixed-sex	338 (30%)	556 (49.4%)	231 (20.5%)
	Combination	227 (37.8%)	117 (19.5%)	256 (42.7%)
Experienced single-sex PE	Yes	1997 (57%)	630 (18%)	876 (25%)
	No	237 (32.4%)	349 (47.7%)	145 (19.9%)
Experienced mixed-sex PE	Yes	1897 (51%)	895 (24%)	928 (25%)
	No	353 (63%)	98 (17.5%)	109 (19.5%)

to report preferences for single- or mixed-sex grouping in PE. Furthermore, there was a tendency for boys and girls to express preferences for their current grouping arrangement in PE. Table 2 provides further details of the frequencies and percentages of responses based on the characteristics of boys and girls in the sample.

Next, we explore the reasons boys and girls provided for their grouping preference in PE. In doing so, we use actual numbers of student responses and percentage figures to provide greater clarity about the extent to which particular themes and patterns were evidenced in the free-text comments. The percentages reported were calculated as a proportion of those who provided insight into their reasons for preferring single-sex grouping ($n = 1067$ girls, $n = 1105$ boys), mixed-sex grouping ($n = 444$ girls, $n = 474$ boys) or a combination of these approaches ($n = 562$ girls, $n = 382$ boys).

Reasons for preferring single-sex grouping in PE

Consistent with previous research (Hills and Croston, 2012; Scraton, 1993; Timkin et al., 2019; Youth Sport Trust, 2023a, 2023b), many boys and girls agreed that single-sex grouping provided the most effective learning environment in PE, although there were marked differences in the reasons they provided. For some girls (32.4%, $n = 346$), single-sex grouping made them feel more comfortable and/or confident in PE (and/or alleviated the emotional anxieties they experienced in mixed-sex PE) because their bodies, physical competencies and/or performances were not subjected to scrutiny and judgement by boys. A further reason given by girls was the ability to work together with ‘most’ of their friends (25.4%, $n = 271$). This too has been identified as a means of providing comfort and emotional support in an environment that operates on surveillance (Stride, 2014; Wilkinson and Penney, 2024) and was the biggest motivator for girls being active at school in the recent Youth Sport Trust Girls Active Survey (2023a). In line with research by Benn et al. (2011) and Flintoff and Scraton (2001), swimming, dance, gymnastics and athletics were highlighted as areas of discomfort for many girls due to increased body exposure and/or the public nature of learning in these activities, as these comments demonstrate:

It [single-sex grouping] makes me feel less anxious about what the boys think in swimming and gymnastics. They tend to shame the girls for their ‘lack’ of skill or how their bodies look in PE uniform. (Girl, Year 8, Average ability)

I prefer single-sex because then I’m not being watched or judged by the boys. I think body issues increase as you get older too. (Girl, Year 11, Average ability)

Some of these girls ($n = 167$) associated these feelings of comfort and/or confidence in single-sex classes with increased levels of engagement, participation and/or progress in PE:

Single means I don’t feel self-conscious and embarrassed to participate. (Girl, Year 9, Average ability)

I learn more because I’m more comfortable when I’m with my friends. (Girls, Year 8, Average ability)

Considerable research supports this finding (Lyu and Gill, 2011; Scraton, 1993; Treanor et al., 1998; Wallace et al., 2020). Wallace et al. (2020) found that girls spent significantly more time undertaking moderate-to-vigorous physical activity in single-sex PE compared with mixed-sex

PE. Girls also report enhanced feelings of perceived competence, enjoyment and/or effort when there are no boys present in PE (Lyu and Gill, 2011; Treanor et al., 1998).

Echoing the findings of Benn et al. (2011) and Stride (2014), a small number of Muslim girls ($n = 18$) reported feeling anxious and uncomfortable about mixed-sex grouping in PE because their bodies were exposed and vulnerable to the male gaze, particularly in swimming. A smaller number of Muslim girls ($n = 8$) noted their preference for single-sex grouping, as it allowed them to participate in PE without wearing their headscarf. These findings are reinforced in a recent scoping review of Muslim students' experiences of PE (Stride and Allen, 2024). Two girls explained:

I don't like it [mixed-sex grouping] when it's swimming because me and many other Muslim girls won't be able to take part due to our religion. (Girl, Year 8, High ability)

I really like it [single-sex grouping] because I wear a hijab, and I don't need to wear it if there are only girls. (Girl, Year 10, High ability)

In concordance with how girls have reported feeling in previous research (Fisette, 2013; Hills and Croston, 2012; Sánchez-Hernández et al., 2018; Scraton, 1993; Wallace et al., 2020), some girls (14.7%, $n = 157$) explained that single-sex grouping created a less competitive and/or physically threatening learning environment in PE. This point was often made in relation to the challenges they faced in mixed-sex PE classes, with the domineering and physically aggressive behaviour of some boys reported as limiting their capacity to participate and/or leaving them feeling ignored and invisible. The following comment was typical of the responses of girls:

I like it [single-sex grouping] because we can all participate without the boys taking over, excluding and harassing us. So, it's a nicer atmosphere because there's less pressure from the boys and it means we can take part more. (Girl, Year 10, Average ability)

A smaller number of girls (7.1%, $n = 76$) suggested that differences in physical development between 'most' boys and girls meant that single-sex grouping was necessary to ensure 'safe' and 'fair' competition, particularly in team games, as illustrated in the following comments:

Boys are generally stronger than girls. So, they have an unfair advantage, especially when competing. It's better being all girls because it's fairer. (Girl, Year 9, Average ability)

I really like it [single-sex grouping] because it'd be a lot rougher with boys and most girls would be too scared to participate. (Girl, Year 7, Average ability)

The small number of girls associating gender with differences in physical size and strength is interesting given that this remains one of the key arguments for maintaining single-sex provision in some competitive sports. Furthermore, as we note later, a small number of girls challenged generalised understandings of physiological differences between the sexes by suggesting that they were stronger and more skilled than boys in PE.

The perceptions of some boys (14.3%, $n = 158$) were also based on perceived physiological differences between the sexes, particularly in Key Stage 4, where these differences were seen as being

most pronounced. This attitude is typified by the following comments, where dominant discourses of male athletic superiority and female inferiority are drawn upon:

Boys become stronger, bigger and faster with age, so putting us together with the girls for sports like rugby would be unsafe. (Boy, Year 10, Average ability)

It allows fair and more challenging competition because boys are stronger than girls and there's a smaller ability gap between boys. (Boy, Year 10, High ability)

Just over one-third of boys (34.9%, $n = 383$) preferred single-sex grouping in PE because it enabled them to 'compete harder' and/or 'be more physical' in lessons. For the most part, this was because they felt that they did not have to modify their behaviour to accommodate the safety needs of girls in mixed-sex PE lessons (e.g. purposefully avoid tackling a girl in rugby for fear of injuring them). These concerns resonate with research showing boys' reluctance to modify their own play to accommodate perceived differences in girls' abilities and attitudes (With-Nielsen and Pfister, 2011; Wright, 1996). Two boys explained:

I think we're held back from reaching our full potential in mixed-sex PE because we've got to go easier and softer on the girls. (Boy, Year 9, High ability)

I can also be more physical and concentrate better in single-sex groups because I don't have to worry about hurting the girls by mistake. (Boy, Year 8, Average ability)

A smaller number of boys (7.4%, $n = 82$) suggested that their enjoyment and/or learning would be compromised by what they perceived to be the non-engaging behaviour and/or low skill levels of girls in PE. There was limited acknowledgement of the presumed non-engaging and/or low skill levels of other boys in the class, demonstrating the strength of binary thinking and perceptions of sex differences among the boys. These points are evident in the following comment:

The girls don't try in PE, so it would make the experience less enjoyable for us boys. (Boy, Year 9, Average ability)

These sentiments echo broader concerns in competitive sport in England. The Rugby Football Union (RFU) prohibit the mixing of boys and girls in contact rugby from the age of 12 onwards 'due to physical and psychological development changes brought about by puberty' (RFU, 2018: 188). This policy reifies binary sex differences despite overlaps between the physical abilities of boys and girls in these sports (Hills et al., 2021; Wilkinson and Penney, in press). It also marginalises other non-physiological factors that are important for success and/or performance in rugby, including tactical and technical knowledge (Hills et al., 2021; Wilkinson and Penney, in press).

Some boys (17.9%, $n = 198$) preferred single-sex grouping in PE because they felt that being able to work alongside their same-sex friends made lessons more fun and enjoyable. Other boys (3.7%, $n = 41$) noted that they felt more comfortable in single-sex groups in PE, although this was often less to do with insecurities about their body image (except with swimming) and more to do with expectations about gender-appropriate behaviour and roles. A small number of boys who identified as average or low ability (2.5%, $n = 16$) were keen to avoid mixed-sex grouping in PE because they were concerned that being 'beaten by a girl' or 'messing up' would undermine

their masculinity and subsequently leave them at risk of being stigmatised and marginalised by their peers. Two boys summed up their feelings as follows:

I'd feel awkward and embarrassed messing up in front of girls. (Boy, Year 9, Low ability)

If I got beaten by a girl it wouldn't go down well. (Boy, Year 8, Average ability)

Previous research has similarly found that the involvement of high ability girls in mixed-sex PE classes may be problematic for low ability boys because it places them under additional pressure to be better than girls, particularly in team activities (Wright, 1996; Wilkinson and Penney, 2024). Relatedly, research has repeatedly highlighted the peer pressure on boys who fail to display hegemonic forms of masculinity in single- and mixed-sex PE, and the subsequent harassment experienced (With-Nielsen and Pfister, 2011; Wright, 1996).

Reasons for preferring mixed-sex grouping in PE

The most frequently reported reasons for preferring mixed-sex grouping in PE related to social inclusion and the provision of equal opportunities. Many boys (43.7%, $n = 207$) and over half of girls (51.1%, $n = 227$) were enthused by the opportunities that mixed-sex grouping provided to extend their social circle and/or to learn together with those of the same and opposite sex. This is clear in the following comments:

Mixed-sex grouping makes everyone feel included because both sexes can work together, help one another and accept each other. (Girl, Year 10, High ability)

I prefer it [mixed-sex grouping] because I have friends who are boys and girls ... It's also a great way to make more friends and mix with different people. (Boy, Year 7, Low ability)

Some girls (12.6%, $n = 56$) also reported a preference for mixed-sex grouping in PE because it provided access to a greater range of curriculum activities, including those that crossed traditional gender boundaries. The perceptions of these girls were often related to their previous experiences of single-sex grouping in PE, with many expressing frustration and disappointment that the sex-differentiated curriculum limited their participation to traditionally female activities that were not necessarily reflective of their interests and/or experiences. Two girls commented:

Single-sex is unfair because the boys get to do a variety of sports that the girls don't get to do. I want to participate in things like rugby and cricket, but I'm made to do girls' sports like dance and gymnastics. (Girl, Year 9, High ability)

It [mixed-sex grouping] gives the understanding that you're not limited to a particular sport because of your sex. (Girl, Year 10, Average ability)

Similar sentiments were expressed by a smaller number of boys (8.9%, $n = 42$), although they were less open to experience traditionally female activities in PE. The following comments highlight the pressure felt by some boys to conform to sex-role stereotypes and exhibit sex-appropriate

behaviour in PE. They also affirm the persistence of stereotypical assumptions about the suitability of certain activities for boys and girls in PE:

It's good because we get to do sports that we don't normally do, but I wouldn't want to do some of the sports that girls usually do. (Boy, Year 9, Average ability)

I think there's a stigma about being a boy and doing girl things like netball and aerobics. (Boy, Year 10, Average ability)

Previous research (Flintoff and Scraton, 2001; Hills and Croston, 2012; Martino, 1999; With-Nielsen and Pfister, 2011) indicates that boys are often more reluctant than girls to participate in non-gender conforming activities in PE because of the greater cultural status and value attached to activities associated with boys in the subject and/or the risk to their masculinity. Martino (1999) found many boys defining their masculinity within a set of cultural and social practices which involved a rejection and denigration of attributes and behaviours associated with femininity. His research also pointed to a regime of normalising practices and relations where boys were incited to conform to dominant masculine and heterosexual norms to avoid surveillance and abuse within their peer group.

Slightly fewer girls (5.2%, $n = 23$), particularly those who identified as high ability ($n = 16$), preferred mixed-sex grouping in PE because they perceived that playing with and against boys increased the competitive nature of lessons and thereby provided them with a greater level of challenge and enjoyment. Some of these girls ($n = 12$) also challenged normative expectations of sex differences by highlighting that girls could be superior in size, strength and/or speed to boys. Hence, these girls were motivated by the opportunities that mixed-sex grouping provided to 'challenge' the boys' dominance and/or expectations about their capabilities in PE, as demonstrated in the following comments:

I like being in mixed groups because the boys are more competitive and give us more of a challenge. (Girl, Year 9, High ability)

It gives us a chance to go against the boys, stop them taking over and prove that we can be just as good as them ... Most of the time girls are the same if not stronger than boys. (Girl, Year 10, High ability)

While some of these girls felt positively about demonstrating their credibility to the boys (e.g. to earn their respect and acceptance), their desire to do so reflects the unequal power relations between boys and girls in mixed-sex PE. As previous research has indicated, while mixed-sex grouping provides girls and boys with equal access to activities in PE, it has not necessarily removed gender inequalities and, in some instances, has provided girls with access to an openly male-oriented curriculum that has legitimated the status of particular types of physicality and reinforced unequal gendered power relations through PE (Hay and Macdonald, 2010; Scraton, 1993; Stride et al., 2022). Stride et al. (2022) affirmed that even when all students are offered the same activities, teachers' expectations of boys and girls differ, contributing to different kinds of experiences. For example, the focus for boys in areas like health-related fitness and gymnastics was success, physical challenge and competition, whereas for girls the emphasis was on creativity and moderating their bodies. Stride et al. (2022) argue that these are significant differences that influence students' beliefs about their abilities and their place in the world. Previous research has also consistently

highlighted the difficulties that girls face in reconciling sporting competence with the social and cultural demands of femininity (Cameron and Humbert, 2020; Hay and Macdonald, 2010; Hills and Croston, 2012; Scraton, 1993; With-Nielsen and Pfister, 2011). In With-Nielsen and Pfister's (2011) study a small number of girls resisted dominant gender expectations by striving to emulate the abilities of boys but felt a need to compensate for this to avoid stigma by accentuating their femininity through their behaviour, appearance and/or peer associations.

Other less frequently reported reasons for boys and girls preferring mixed-sex grouping in PE included that it provided a sense of continuity between PE in primary and secondary school (3.2%, $n = 14$ girls; 5.5%, $n = 26$ boys) and that it created a more inclusive and affirming environment for trans and non-binary students (2.3%, $n = 10$ girls; 3.4%, $n = 16$ boys). Although this is only a small number of students, recent research has indicated that acceptance and social support from peers are essential in enabling trans and non-binary students to sustain their gender identity and overcome negative experiences in PE (e.g. by challenging transphobic bullying) (Ferguson and Russell, 2023; Sáenz-Macana et al., 2024).

Reasons for preferring a combination of single- and mixed-sex grouping in PE

The most frequently reported reason for preferring a combination of single- and mixed-sex grouping was to experience something 'different' or 'new' in PE (45.5%, $n = 174$ boys; 32.7%, $n = 184$ girls). Furthermore, some boys (24.9%, $n = 95$) and girls (21.2%, $n = 119$) articulated the importance of flexible and varied grouping arrangements in PE. This was particularly related to the multi-faceted nature of the PE curriculum, with single-sex grouping identified as being necessary in activities: where direct physical contact was unavoidable; where boys' and girls' bodies were very openly on display; and/or where one sex had 'more experience' or 'ability' than the other. By comparison, mixed-sex grouping was seen to be more suited to activities: that did not require bodily contact between boys and girls; that were more socially oriented in nature; where skill imbalances were minimal; and/or where learning was less of a public display. The following comments reflect these views:

Mixed-sex when it's non-contact sports. Single-sex when it's contact sports. Boys can get too aggressive and competitive in rugby and football. They also refuse to include girls because they think we're less able. (Girl, Year 8, Average ability)

I'd prefer a mix because there's different types of PE. Single for sports you feel uncomfortable doing in front of girls. Mixed when there aren't massive differences in ability/when we're encouraged to socialise a bit more. (Boy, Year 10, Average ability)

Some boys and girls were also of the belief that a combination of single- and mixed-sex grouping would enable PE teachers to leverage the benefits of both approaches (while mitigating their limitations) to optimise learning experiences. A small number of girls (9.8%, $n = 55$) suggested that a combination of approaches would provide a balance between feeling comfortable and challenged in PE, while a smaller number of boys (9.7%, $n = 37$) suggested that a combination of approaches would provide a balance between cooperation, safety and competition in PE. One boy and one girl commented:

I'd be able to compete harder in more physical sports without worrying about injuring a girl. I'd also be able to work alongside girls in less physical sports. (Boy, Year 11, High ability)

I'd be comfortable working with just the girls in some lessons and feel more challenged competing against just the boys in others. (Girl, Year 8, Average ability)

Conclusion

This paper has affirmed that grouping approaches in PE play a pivotal role in either maintaining or changing curriculum and pedagogical practices and discourses that constitute the fabric of PE. A sustained body of past research evidencing the gendered nature and impact of that fabric on learning opportunities and experiences provided the backdrop to this exploration of how secondary school students in England experience and perceive various grouping approaches in PE. In this concluding discussion we direct attention to the agendas and strategies for progress in gender equity in PE that our data have generated.

A case for enacting more flexible and varied grouping approaches in PE

The perspectives of students are crucial for determining the effectiveness and impact of single- and mixed-sex grouping, and for providing a stronger and more robust evidence-base for decisions about these practices in PE. The evidence presented in this study supports previous research (Lirgg, 1993; Timkin et al., 2019; Treanor et al., 1998; Youth Sport Trust, 2023a, 2023b) in showing that, overall, most boys and girls prefer single- to mixed-sex grouping in PE, although preferences varied in relation to demographic and situational factors, including gender, ability, cultural background and/or the nature of the learning environment. The findings also provide a more nuanced perspective of preferences, showing that many boys and girls wanted to be taught using combinations of single- and mixed-sex classes across different activities and learning situations in PE. As such, we point to the potential shortcomings of strategies that seek to support all students in the same way in PE. Instead, we advocate for exploration of more nuanced and flexible grouping approaches that are responsive to changes in the learning environment, the curriculum and/or the diverse needs and perspectives of students. This could involve providing single-sex classes as an option alongside mixed-sex classes and allowing students to choose the type of class they would prefer and/or feel most comfortable in. This approach would also be more inclusive of non-binary students because their choice of class would not be restricted to binary male and female categories and would enable trans and non-binary students to select their desired class without feeling pressured to reveal their gender identity to others (Kettley-Linsell et al., 2024; Sáenz-Macana et al., 2024; Wilkinson and Penney, in press). Pragmatically, it is likely that one of the most viable ways in which to advance a greater range of grouping options for students is to explore within-class groupings, whereby multiple arrangements are offered for small group work. Such provision can foreground explicit recognition that different learning preferences are respected, and all learners are valued in PE. These complexities underscore the need for further studies that explore students' experiences of multiple forms of gendered grouping practices in PE.

In conjunction with this, PE teachers need to undertake an accompanying review of established curriculum structures and recognise that equality of opportunity is not simply determined by providing students with access to the same curriculum. As noted, the choice of activities offered in mixed-sex PE can reflect and reproduce gender inequalities, especially when offerings align

more closely with boys' abilities, interests and/or previous experiences than with girls'. A broad and balanced curriculum with a variety of activities that emphasise values such as teamwork and cooperation (rather than competition) and/or that enable boys and girls to work together on more equal terms offers greater potential for challenging binary discourses that position boys as stronger, faster and/or fitter than girls and which sustain the traditional gender power hierarchy. More neutrally gendered activities such as outdoor education, quidditch, korfbal and climbing have been shown to reduce gender stereotyping, encourage boys and girls to appreciate the competencies of one another, strengthen feelings of inclusion and contribute to more equitable, nonhegemonic mixed-sex experiences in PE (Hills et al., 2021; Sánchez-Hernández et al., 2018; Wilkinson and Penney, 2023). In addition to adapting the curriculum, teachers must also ensure that all students are treated and cared for equitably in mixed-sex PE classes. This includes highlighting similarities and shared experiences to weaken the binary division of gender identities, using gender-inclusive language and building positive relationships with all students (Ferguson and Russell, 2023; Hills et al., 2021; Sáenz-Macana et al., 2024; Wilkinson and Penney, in press).

While noting the importance of schools expanding the range of activities offered in PE, we are conscious that this approach may do little to challenge dominant assumptions about the suitability of certain activities for boys and girls, and as such do little to change important elements of the gendered fabric of PE that decades of research have drawn attention to. Recent research has shown that while girls have increasing access to traditionally male activities in PE in many schools, there has not been an equivalent move to provide boys with greater access to traditionally female activities (Roberts et al., 2020; Stride et al., 2022; Wilkinson and Penney, 2023). For the most part this is because boys remain reluctant or resistant to participate in traditionally female activities because of the lower status attached to these activities and/or the threat this poses to their masculinity (Wright, 1996; Wilkinson and Penney, 2023). Moreover, previous research has shown that some male PE teachers are uncomfortable teaching these activities to boys because of their lack of knowledge and/or concern about boys' lack of interest (Lines and Stidder, 2003; Stride et al., 2022; Wilkinson and Penney, 2023). This may lead to a situation where boys lack clear role models who can help them challenge normalised gendered practices in PE and/or traditional gender stereotypes. Hence, schools should seek to work in partnership with students and other stakeholders, such as teacher education providers, to explore different ways in which PE can contribute towards challenging dominant gendered perceptions of certain activities, normalise boys' participation in traditionally female activities and explore what changes to practice will constitute meaningful progress towards greater equity for all students in PE.

Seeking and acting on student voice in decisions in PE

Previous research suggests that many teachers are committed to engaging the voices of students in PE (Enright and O'Sullivan, 2010; Oliver et al., 2009; Sánchez-Hernández et al., 2018; Wilkinson and Penney, 2024), and it remains critically important that they act upon these voices to address the diverse experiences, interests and gender identities of students in PE. Enright and O'Sullivan (2010) have shown the benefits of enabling girls to co-construct a curriculum (mostly individual, non-competitive activities) that is meaningful and relevant to the sociocultural contexts of their lives, with this approach leading them to feel more empowered, engaged and/or motivated to learn in PE. Similarly, other research has highlighted that working 'with' students can challenge and transform the barriers they face in PE and therefore increase their learning and enjoyment (Mooney and Gerdin, 2018; Oliver et al., 2009). Research has also highlighted the potential of using

video-stimulated reflections to encourage boys to reflect on and problematise gendered practices and power relations in PE (Mooney and Gerdin, 2018). We see this kind of collaborative work as important in schools wishing to engage their students in critical dialogue whilst supporting them to feel empowered to suggest grouping approaches that are responsive to their preferences and learning needs. Such research is crucial in establishing the efficacy of different grouping approaches by those who are at the receiving end of such arrangements to offer evidence to inform future practice. That said, we acknowledge that the limitations of our sample precluded us from adopting a more nuanced and, particularly, an intersectional approach to exploring differences in students' perspectives on gendered grouping arrangements in PE. Future research is needed to enhance understanding of the ways in which students' perspectives are shaped and mediated by other intersecting aspects of their identity, including their gender, religion, social class, ability and disability, to work towards greater equity and inclusion in PE.

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Supplemental material

Supplemental material for this article is available online.

Notes

1. The preferences of trans and non-binary students were explored and are reported elsewhere (Wilkinson and Penney, in press).
2. In total, 2073 of these students identified as male, 2161 identified as female, 122 identified as other and 132 preferred not to disclose their gender identity. Of those students who identified as other, 36 identified as 'trans' (broadly), 'trans male', 'trans female' or 'non-binary'. While this is the case, we recognise that some trans students (perhaps those most confident and affirmed in their identity) may have identified with binary gender categories and therefore may be included in the data reported in this paper.

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