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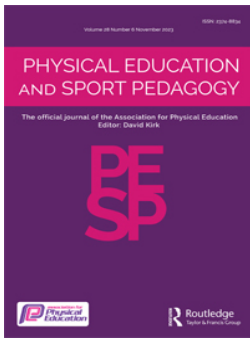
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A national survey of gendered grouping practices in secondary school physical education in England

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ABSTRACT

Background: Gendered grouping practices and curriculum provision are matters of long-standing contention and debate in physical education (PE) policy, research, and practice internationally. In England, there is a long tradition of single-sex grouping in PE in secondary schools, with accompanying gendered patterns of staffing and many boys and girls taught different activities in the curriculum. Research on the incidence of single- and mixed-sex grouping in PE is however scarce, dated, and limited in scale. At a time when education, sport, and society are challenged to move beyond binary discourses and critically review structures and practices that uphold stereotypical and established gendered power relations, this study sought to provide an evidence base and stimulus for researchers, policy-makers, and PE professionals to (re-) engage with grouping practices in PE. Specifically, the study was designed to provide a national picture of current single- and mixed-sex grouping arrangements in PE in secondary schools in England.

Method: Data were collected by a web-based survey of all 2873 mainstream state-funded co-educational secondary schools in England. The survey was addressed to Subject Leaders of PE and was open between September and October 2021. A total of 818 surveys were completed giving an overall response rate of 28.5%.

Results: The responses indicated that single-sex grouping is the most common arrangement in core (compulsory, non-examination) PE in Key Stage 3 (Years 7–9) and Key Stage 4 (Years 10–11), whilst mixed-sex grouping is dominant in General Certificate of Secondary Education (GCSE) and/or Business and Technology Education Council (BTEC) PE in Key Stage 4. It was noticeable, however, that very few schools were using the same arrangement for all PE lessons in Key Stages 3 and 4, and some were using single-sex grouping within mixed-sex PE lessons, particularly in physical contact activities such as rugby and football. The responses highlighted that single- and mixed-sex grouping decisions in PE are complex and contingent on several interrelated factors, including curriculum content and structures, school timetabling, staffing arrangements and preferences, the nature of the student cohort, and specific considerations relating to safety in some sport contexts. Data indicated that in many instances grouping arrangements in secondary school PE in England serve to reproduce and legitimate restrictive binary gender discourses. There was some but limited evidence of grouping approaches positively supporting gender diversity within PE,



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with a small number of schools organising PE in mixed-sex classes to be more inclusive of transgender and non-binary students.

Discussion and conclusion: This study highlights the role that grouping approaches play in either impeding or advancing work to strengthen gender equity and inclusion in PE and identifies teachers' knowledge, skills, and understandings relating to grouping approaches and gender diversity as an important focus for initial teacher education and professional learning. The paper also calls for engagement from research and professional communities internationally to inform future policies and practices regarding the use of grouping approaches in PE.

Introduction

At a time when many arenas of society, including education and sport, are being challenged to strengthen policies and practices that purport to speak to inclusion and more specifically, gender diversity¹, this paper re-engages with systemic practices that have defined many students' experiences of physical education (PE) in secondary schools in England. Gendered provision of PE, including single-sex grouping, sex-differentiated curricula, and gendered patterns of staffing, has been a prominent and persistent feature of secondary school PE in England for many years (Fletcher 1984; Hargreaves 1994; Kirk 1992; Penney 2002; Scraton 1992; 1993). From the nineteenth century to the present day, secondary school PE has been heavily premised on a commitment to separate and different curricula, with boys taught activities such as football, rugby, and cricket and girls taught activities such as dance, gymnastics, and netball in single-sex groups (Department for Education and Science [DES] (1975); Scraton 1992; 1993; Stride et al. 2022). Research over the past two decades has affirmed that stereotypically gendered discourses and grouping practices continue to feature prominently in core (compulsory, non-examination) secondary PE particularly (Harris and Penney 2000; Lines and Stidder 2003; Stride et al. 2022; Wilkinson, Penney, and Allin 2016). Yet the limits to current knowledge about contemporary grouping practices and gender in secondary school PE in the United Kingdom (UK) and internationally are also evident. Much of the preceding research has been based on a small number of secondary schools within a specific region, has drawn on retrospective experiences of single- and/or mixed sex grouping in PE as students and/or teachers, and/or lacks currency having been conducted in the early 1990s or 2000s (e.g. Harris and Penney 2000; Lines and Stidder 2003; Scraton 1992; 1993). While prior research has provided some indication of trends in the adoption of different practices, such as an apparent preference for mixed-sex grouping in PE in the upper secondary years (Year 10 and 11 in England) (Bayliss 1984; Scraton 1992; 1993), there is a lack of detailed and contemporary large-scale empirical data about gender and grouping practices in PE across the years of secondary schooling in England, or indeed, other countries internationally.

As researchers and teacher educators invested in advancing equity in PE, we regard the absence of such data as inhibiting informed professional debates about the social significance of pedagogical decisions, such as those relating to grouping, and limiting critical exploration of the ways in which inclusive pedagogy is being understood and enacted in PE. From our perspective, expanding knowledge about how and why single- and mixed-sex grouping practices are *variously* being employed within and across schools, including the use of these approaches simultaneously (with, for example, students organised into single-sex groups within mixed-sex PE lessons) is essential as a basis from which to prospectively move the profession and pedagogic practice towards more nuanced engagement with grouping approaches and gender in PE. Such engagement will recognise that grouping approaches, and the ways in which they are enacted, will influence the extent to which all students regard PE as a context that is welcoming and supportive of diversity – including but not limited to gender diversity. As we evidence later in the paper, intersectional perspectives (Flintoff, Fitzgerald, and Scraton 2008) arguably have a crucial part to play in moving grouping debates beyond the simplistic binary categorisation of single- and mixed-sex grouping.

This study was thus designed to address identified limitations of research and knowledge pertaining to single- and mixed-sex grouping practices in PE in secondary schools in England, while simultaneously pursuing an agenda of advancing gender equity in PE research, policy, and practice in the UK and internationally. Specifically, we sought to achieve national reach in research investigating the following two research questions, and in so doing generate depth of insight as well as scale in the dataset. The research questions reflected the intent to explore differences in grouping arrangements in PE across year groups as well as between schools.

- How prevalent are single- and mixed-sex grouping in PE for Years 7–11 (aged 11–16) in mainstream state-funded co-educational secondary schools in England?²
- Why are single- and mixed-sex grouping arrangements variously used in PE for Years 7–11 in mainstream state-funded co-educational secondary schools in England?

The gendered history of secondary PE and grouping practices in England

As indicated, the prominence of single-sex grouping in PE in secondary schools in England has a long history and has been underpinned by several factors. These include binary constructions and representations of gender, essentialist assumptions about the physiological differences between boys and girls, presumptions about teacher and student preferences, and the tradition of single-sex teacher training in PE (until the mid-1980s³), with course content preparing future PE teachers to teach gender-specific curriculum activities (DES 1975; Fletcher 1984; Lines and Stidder 2003; Scraton 1992; 1993).

In the 1980s, the content and organisation of secondary school PE came under increasing scrutiny from a gender equity perspective in England and Wales (and elsewhere, including the United States [US]) (Bayliss 1984; Evans et al. 1987; Griffin 1984; Leaman 1984; Scraton 1986). During this time, there was increasing recognition that single-sex PE reinforced stereotypical gender-appropriate behaviour and undermined the principles of inclusion by formally preventing boys and girls from accessing all areas of the curriculum (Evans et al. 1987; Humberstone 1990; Scraton 1986; Talbot 1993). As Hargreaves (1994, 153) explained, the result was that most ‘boys [were] systematically shut off from an expressive movement experience and schooled into physical robustness and aggressive competition, whilst girls [were] schooled into creativity and co-operation’. Research also highlighted that single-sex grouping contributed to the reproduction of gender power relations in PE because the activities offered to girls were generally of lower status and prestige to those offered to boys (Humberstone 1990; Leaman 1984; Scraton 1986; Talbot 1993).

Mixed-sex grouping was perceived as an important means of challenging sex-role stereotyping, ensuring that boys and girls had equal access to activities that were formerly restricted to a particular sex (Bayliss 1984; Griffin 1984; Scraton 1993). Relatedly, mixed-sex grouping was also seen as a mechanism for providing boys and girls with equal opportunities to learn and enjoy activities together in PE (Bayliss 1984; Griffin 1984). However, as Scraton (1993, 149) trenchantly observed, ‘the simple equation of [mixed-sex grouping] with equal opportunities is problematic. Equality of access in any aspect of schooling, including PE, does not result automatically in equality of outcome and practice’. Research affirmed that mixed-sex grouping resulted in several unintended outcomes in PE, particularly for girls, but also for some boys (Griffin 1984; Scraton 1992; 1993; Vertinsky 1992). For example, it was shown that although mixed-sex grouping ensured that boys and girls had equal access to a common curriculum in PE, many schools internationally adopted a male-dominated, traditional, team-sport oriented curriculum, with activities (e.g. football, basketball, and cricket) more closely aligned with boys’ interests, experiences, and abilities than with girls’ (Scraton 1986; 1992; 1993; Vertinsky 1992). Hence, mixed-sex grouping often provided girls with ‘equal access to an unequal situation in PE’ (Scraton 1986, 89). Research also suggested that

boys tended to receive a larger proportion of teachers' time and attention than girls in mixed-sex PE lessons and that boys often alienated and marginalised girls by dominating play in game situations, leading to most girls being discouraged from participating fully in PE (Griffin 1984; Leaman 1984; Scraton 1986; 1993; Talbot 1993). These findings have been reinforced by more recent research (e.g. Hills and Croston 2012; Lines and Stidder 2003; Stride et al. 2022). By contrast, in some activities such as outdoor education, where boys and girls are often equally inexperienced, mixed-sex grouping has been shown to support challenges to traditional forms of gender stereotyping and have a positive impact on learning and engagement in PE (Humberstone 1990).

A small body of research revealed that by the mid-1980s and into the early 1990s, although secondary PE in England remained predominantly single-sex, mixed-sex grouping was increasingly common in the upper years of many secondary schools (Bayliss 1984; Scraton 1992). In a survey of secondary schools in London, for example, Bayliss (1984) concluded that a growing number were experimenting with mixed-sex PE lessons, particularly in Year 10 (aged 14–15) and 11 (aged 15–16). Similarly, in a survey of all secondary schools in a city-based local education authority in England, Scraton (1992) found that most mixed-sex grouping occurred in Year 10 and 11 when optional activities were introduced into the PE curriculum. However, Scraton (1992; 1993) noted that mixed-sex grouping in PE in many schools was the outcome of pragmatic considerations related to finances, the availability of staff, the number of students per year group, and/or the organisation of the timetable rather than 'a clearly thought through educational rationale' (Scraton 1993, 141). Furthermore, Scraton (1992) reported that most schools retained single-sex grouping in all or most PE lessons, with boys' and girls' PE continuing to be organised around different types of activities.

More recent research has indicated that single-sex grouping remains the dominant approach in PE in Key Stage 3 (Years 7–9) in secondary schools in England, with the practice less frequent in Key Stage 4 (Years 10–11), particularly in General Certificate of Secondary Education (GCSE) or Business and Technology Education Council (BTEC) PE lessons.⁴ For example, although Wilkinson, Penney, and Allin's (2016) research focused primarily on ability grouping arrangements in PE, their survey of 155 PE departments in the North-East of England revealed that of those co-educational schools using setting⁵ (92 in total), 81.5% were using single-sex grouping in all Key Stage 3 PE lessons, 2.2% were using mixed-sex grouping in all Key Stage 3 PE lessons, and 16.3% were using a combination of these grouping arrangements in Key Stage 3 PE lessons. By comparison, 4.4% of those schools using setting were using single-sex grouping in all (core and GCSE/BTEC) Key Stage 4 PE lessons, 54.3% were using mixed-sex grouping in all Key Stage 4 PE lessons, and 41.3% were using a combination of these grouping arrangements in Key Stage 4 PE lessons (Wilkinson, Penney, and Allin 2016). Wilkinson, Penney, and Allin (2016) noted that mixed-sex grouping was especially prevalent in GCSE/BTEC PE (but did not provide comparative data for core and GCSE/BTEC PE in Key Stage 4). In Stride et al.'s (2022) more recent but smaller scale analysis of gender power relations in PE, it was reported that boys and girls were 'predominantly' taught PE in single-sex groups in all four of the schools studied, although it was not specified whether this was at Key Stage 3 and/or 4. Various explanations were offered for single-sex grouping in PE in these schools, including boys' physical superiority to girls, staff specialisms, the supervision of changing rooms, the gender differentiated curriculum, and/or the nature of the cohorts, with three of the four schools having a high percentage of Muslim students (Stride et al. 2022).

Internationally, the picture of gendered grouping practices in PE is varied and research offering scale and depth is similarly lacking. Nonetheless, single-sex PE is reported as a common feature of secondary schools in the US, Finland, and many Muslim countries, whereas mixed-sex PE is more prevalent in secondary schools in countries such as Germany, Denmark, Norway, and Sweden (United Nations Educational, Scientific and Cultural Organization 2020). Research extending understandings of grouping practices in PE therefore has relevance for the international community.

Method

The design and administration of the survey

The research questions were addressed through an online survey developed using the JISC Online Survey platform (<https://www.onlinesurveys.ac.uk/>). The survey consisted of multiple-choice and free-text questions covering three main issues: the incidence of single- and/or mixed-sex grouping in PE, justifications for single- and/or mixed-sex grouping in PE, and future plans for single- and/or mixed-sex grouping in PE. For questions relating to the incidence of single- and/or mixed-sex grouping in PE, the survey provided a range of options for respondents to choose from: 'fully single-sex', 'fully mixed-sex', 'mostly single-sex', 'mostly mixed-sex', or 'a balance of single- and mixed-sex grouping'. The study received ethical approval from the Ethics Committee of Northumbria University.

The survey was piloted with a convenience sample of six former Subject Leaders of PE prior to distribution and minor changes were made to the survey based on the feedback received, including refining the wording and ordering of some questions to enhance clarity and comprehensibility. The survey was then distributed by email to all (2873 at the time of study) mainstream state-funded co-educational secondary schools in England. School contact details were sourced directly from the Department for Education and individual school websites were searched to find contact details for the Subject Leader of PE (although these were not always available). Two emails were then sent one week apart, either directly to the Subject Leader of PE, or to the school administrator, who was asked to forward the emails to the Subject Leader of PE. The Subject Leader of PE was also encouraged to forward the emails to another member of the PE department if they were unable to participate in the study (e.g. because of time constraints) and/or lacked knowledge of single- and mixed-sex grouping arrangements in PE (e.g. because they had only been in post for a short period of time).

The first email explained the purpose of the study, assured anonymity of responses, and requested participation in the study. This approach was based on research indicating that personalised pre-notification emails can prime respondents for the arrival of a survey and thereby optimise response rates (Cook, Heath, and Thompson 2000; Dillman, Smyth, and Christian 2014). The second email provided the hyperlink to the survey and general instructions about how to complete the survey. A participant information sheet was embedded on the first page of the survey and respondents were required to select a box either agreeing or declining to participate in the study before progressing to the survey questions. Participation in the study was incentivised by an invitation to enter a draw to win one of eight Amazon gift cards valued at £50 each. The survey was open for a month and non-respondents received a reminder email two weeks before the survey closed. A total of 818 surveys were completed giving a response rate of 28.5%. The characteristics of the participating schools are presented in Table 1.

Analysis of survey responses

The survey data were analysed in two ways. First, descriptive statistics were gathered from JISC Online Surveys to determine the frequencies and percentages of responses to multiple-choice questions. Next, data generated by the free-text questions were analysed using content analysis (Bardin 2011). Initially, the data were read several times to obtain a sense of the whole. The data were then read word-for-word to determine the presence of certain words or phrases that appeared to capture key thoughts or concepts. These words or phrases were assigned a provisional category label and data were further assessed to determine their accuracy and comprehensiveness. Frequency counts were then calculated by summing the total number of times a category label appeared in the data. The findings from the analysis of the survey data are presented in the following section.

Table 1. Characteristics of responding schools.

		Survey (n = 818)		National (n = 2873)	
		Frequency %		Frequency %	
Location	East	95	(11.6%)	310	(10.8%)
	East Midlands	71	(8.7%)	272	(9.5%)
	Greater London	94	(11.5%)	383	(13.3%)
	North-East	64	(7.8%)	132	(4.6%)
	North-West	103	(12.6%)	409	(14.2%)
	South-East	148	(18.1%)	439	(15.3%)
	South-West	73	(8.9%)	273	(9.5%)
	West Midlands	93	(11.4%)	351	(12.2%)
	Yorkshire and Humber	77	(9.4%)	304	(10.6%)
School type	Academy converter	413	(50.5%)	1199	(41.7%)
	Academy sponsor-led	179	(21.9%)	696	(24.2%)
	Community	72	(8.8%)	330	(11.5%)
	Voluntary	56	(6.9%)	221	(7.7%)
	Foundation	50	(6.1%)	194	(6.8%)
	Free	47	(5.7%)	168	(5.8%)
	Technical college	1	(0.1%)	48	(1.7%)
	Studio school	0	(0%)	17	(0.6%)
	Number of students	Less than 700	134	(16.4%)	578
From 701 to 1,300		448	(54.8%)	1469	(51.1%)
More than 1,300		222	(27.1%)	723	(25.2%)
Not recorded		14	(1.7%)	103	(3.6%)
Admission policy	Selective	12	(1.5%)	53	(1.8%)
	Non-selective	806	(98.5%)	2820	(98.2%)
Ofsted rating	Outstanding	98	(12%)	353	(12.3%)
	Good	440	(53.8%)	1518	(52.8%)
	Requires improvement	119	(14.5%)	419	(14.6%)
	Special measures	10	(1.2%)	49	(1.7%)
	Serious weaknesses	3	(0.4%)	34	(1.2%)
	Data is not available	148	(18.1%)	500	(17.4%)
	Not recorded	14	(1.7%)	103	(3.6%)
Progress 8 score	Well above average	66	(8.1%)	220	(7.7%)
	Above average	137	(16.7%)	382	(13.3%)
	Average	308	(37.7%)	1052	(36.6%)
	Below average	137	(16.7%)	525	(18.3%)
	Well below average	71	(8.7%)	297	(10.3%)
	Data is not available	99	(12.1%)	397	(13.8%)
FSM proportion	Less than 15%	318	(38.9%)	957	(33.3%)
	From 15 to 30%	334	(40.8%)	1200	(41.7%)
	More than 30%	150	(18.3%)	614	(21.4%)
	Not recorded	16	(2%)	102	(3.6%)

Note: Where data is not available, this is because these schools recently changed their type (e.g. became an academy), re-opened after the closure of a previous school, or opened as a new school. A small proportion of mainstream state-funded secondary schools in England are academically selective grammar schools.

Use of mixed- and/or single-sex grouping arrangements in PE

A significant proportion of schools were using single-sex grouping arrangements in core PE in Key Stages 3 and 4. 69.6% of schools were 'fully' or 'mostly' using single-sex grouping in core PE in Year 7 (aged 11–12), rising to 76.5% in Year 8 (aged 12–13) and 78.8% in Year 9 (aged 13–14). For core PE in Key Stage 4, 68.1% of schools were 'fully' or 'mostly' using single-sex grouping in core PE in Year 10, falling slightly to 63.5% in Year 11.

Comparatively, 28.9% of schools were 'fully' or 'mostly' using mixed-sex grouping in core PE in Year 7, falling to 22% in Year 8 and 19.5% in Year 9, before rising to 29.7% in Year 10 and 34% in Year 11. A very small proportion of schools were using a balance of mixed- and single-sex grouping arrangements in core PE in Key Stage 3 and/or 4 (e.g. where students had two lessons of PE per week, one lesson was fully mixed-sex, and the other was fully single-sex).

In stark contrast to these findings relating to core PE in Key Stages 3 and 4, mixed-sex grouping was dominant in GCSE and/or BTEC PE in Key Stage 4. 88.5% of schools were 'fully' or 'mostly'

Table 2. Single- and/or mixed-sex grouping by year groups in PE in Key Stage 3.

Description	Year 7	Year 8	Year 9
Fully single-sex	324 (39.6%)	339 (41.5%)	352 (43%)
Mostly single-sex	245 (30%)	286 (35%)	293 (35.8%)
Fully mixed-sex	189 (23.1%)	138 (16.9%)	103 (12.6%)
Mostly mixed-sex	47 (5.8%)	42 (5.1%)	56 (6.9%)
A balance of single- and mixed-sex	11 (1.3%)	11 (1.3%)	13 (1.6%)
Not-applicable	2 (0.2%)	2 (0.2%)	1 (0.1%)

Note: Where respondents answered not applicable, this was either because their school was new and therefore did not have any students in Year 7 or Year 8, or their school was a University Technical College and only enrolled students aged 14 and over.

Table 3. Single- and/or mixed-set grouping by year groups in PE in Key Stage 4.

Description	Year 10 (Core)	Year 10 GCSE/BTEC	Year 11 (Core)	Year 11 GCSE/BTEC
Fully single-sex	278 (34%)	20 (2.5%)	251 (30.7%)	32 (3.9%)
Mostly single-sex	279 (34.1%)	56 (6.9%)	268 (32.8%)	51 (6.3%)
Fully mixed-sex	142 (17.4%)	619 (75.7%)	162 (19.8%)	612 (74.8%)
Mostly mixed-sex	101 (12.3%)	105 (12.8%)	116 (14.2%)	100 (12.2%)
A balance of single- and mixed-sex	11 (1.3%)	10 (1.2%)	9 (1.1%)	9 (1.1%)
Not applicable	7 (0.9%)	8 (0.9%)	12 (1.4%)	14 (1.7%)

Note: Where respondents answered not applicable, this was either because their school was new and therefore did not have any students in Key Stage 4, they did not offer or failed to recruit students to GCSE and/or BTEC PE courses, or they offered something different to core PE – typically a PE-related qualification such as the Sports Leadership Award or the Cambridge National in Sport Studies.

using mixed-sex grouping in GCSE and/or BTEC PE in Year 10, falling slightly to 87% in Year 11. Only 9.4% of schools were 'fully' or 'mostly' using single-sex grouping in GCSE and/or BTEC PE in Year 10, rising slightly to 10.2% in Year 11, and as was the case for core PE, only a small proportion were using a balance of single- and mixed-sex grouping arrangements in GCSE and/or BTEC PE.

Only 1.2% of schools were using single-sex grouping in all (core and GCSE/BTEC) PE lessons in Key Stages 3 and 4, whereas 6.8% were using mixed-sex grouping in all PE lessons in Key Stages 3 and 4.

Tables 2 and 3 provide the frequencies and percentages of single- and mixed-sex grouping arrangements by year groups in PE in Key Stages 3 and 4.

Reasons for single-sex grouping arrangements in PE

The most frequently reported reason for using single-sex grouping in core PE was to provide a safer and more secluded space for students, and particularly girls, to publicly display their bodies, physical competences, and performances ($n = 127$). A smaller number of respondents reported that single-sex grouping in core PE was a pragmatic approach to dealing with a balance of boys and girls in a particular year group ($n = 16$), the organisation of the school timetable (e.g. where more than one group was timetabled PE together enabling a single-sex arrangement) ($n = 35$), and/or staff preferences in the department ($n = 15$).

Most respondents who provided comment on single-sex grouping believed that students were less self- and/or body-conscious performing in front of same-sex peers in core PE, with this resulting in greater levels of participation and increased levels of confidence. This was exemplified by the following comment:

We find that single-sex classes work better as many students struggle with body confidence and this seems to be compounded in mixed-sex classes where they need to perform in front of the opposite sex. Single-sex classes provide a safer space for students to enjoy PE and we find that their engagement and participation levels are a lot higher (Female Subject Leader of PE).

In a similar vein, single-sex grouping was seen as critical to supporting the inclusion of Muslim girls in core PE, with a smaller number of respondents ($n = 40$) noting that its principles and practices

were more in line with the Islamic requirements for body modesty and privacy than mixed-sex grouping. These requirements were seen to be more of a concern in activities where individual public performance was required of students, including gymnastics, dance, and health-related fitness. This was explained in the following way by one respondent:

We have a high proportion of Muslim students [in the school]. So, we use single-sex grouping to try to be sensitive to their religious and cultural needs. It ensures that they are taught by a teacher of the same sex and avoids them from having to directly expose their bodies to boys in PE, which is important in activities like dance and gymnastics (Female Subject Leader of PE).

It was also evident that single-sex grouping in PE was a student-centred approach in many schools, with several respondents ($n = 94$) indicating that they had consulted students about their preferences and experiences (typically using a survey) and taken these into account when making grouping decisions, particularly in core PE. Again, concerns relating to body image were highlighted, as is evident in the following comment:

We completed a survey and 86% of students said they preferred single-sex grouping. Feedback, particularly from the girls, was that they preferred taking part in PE with other girls due to body image, confidence, and the physicality of the boys in certain sports (Male Subject Leader of PE).

Amidst efforts to foreground 'student voice', there are clear dangers that some voices remain marginalised or silenced and that the possibilities for grouping arrangements that are considered in PE are limited to arrangements that are consistent with binary gender discourses. The reproduction of binary discourses was further evident in comments indicating that single-sex grouping arrangements were necessary in core PE, particularly in Key Stage 3, because boys and girls followed a different curriculum ($n = 90$) and/or because of staffing arrangements in the department ($n = 54$). Comments such as this clearly echoed previous research (see Scraton 1992; 1993) and highlighted the continued reproduction of established gendered practices in PE:

We use single-sex grouping in Key Stage 3 because we follow a traditional PE curriculum of 'boys' sports and 'girls' sports. These classes are mostly taught by a teacher of the same sex because they typically have expertise in a particular area of the curriculum (Male Subject Leader of PE).

Sex-differentiated patterns of staffing in core PE also meant that some respondents ($n = 24$) were reluctant to move away from single-sex grouping arrangements because they had little experience and/or confidence in their ability to teach students of the opposite sex. They were also aware of the difficulty of providing a common curriculum that would meet the specific and shared needs and interests of boys and girls in PE. The absence of discourses that speak to gender diversity was again evident in the following statement:

We have a tradition of teaching boys and girls separately in PE. So, it would be a challenge to teach them together and come up with a curriculum that appeals to both of their interests. So, it's probably easier to keep things as they are (Male Subject Leader of PE).

The requirement to supervise same-sex changing rooms was also highlighted by some respondents ($n = 62$) as an important factor in the decision to use single-sex grouping in core PE, with one respondent commenting:

The biggest reason we use single-sex grouping in PE is to ensure that boys' and girls' changing rooms are supervised by a member of the same-sex. If you're the only member of staff teaching a mixed-sex group, there would be issues around safeguarding if you had to enter the girls' or boys' changing room (e.g. to deal with an emergency) (Male Subject Leader of PE).

There was also notable consensus among some respondents ($n = 87$) that differences in physical development between boys and girls (e.g. in their physical ability and capacity) meant that activities involving physical contact, including football and rugby, would be unsafe in mixed-sex groups. This was regarded as particularly pertinent in Key Stage 4, with one respondent explaining:

Key stage 4 groups are single-sex because by this age physical differences between boys and girls are more noticeable. On the grounds of safety (e.g. in rugby), it is therefore felt that boys and girls are better off in their own group (Male Subject Leader of PE).

Such comments again affirmed established gender-differentiated sport-based curriculum as central to gendered discourses and grouping practices. Concerns to retain single-sex grouping arrangements were frequently related to injunctions about safety. A small number of respondents ($n = 32$) explained that the rules of the Rugby Football Union (RFU) meant that boys and girls were not permitted to participate together in rugby in certain year groups.⁶ Single-sex grouping was therefore predominantly used in rugby to abide by the rules of the RFU, as the following comment demonstrates:

The decision to use single-sex grouping is informed by guidelines relating to mixed-sex participation (e.g. mixed-sex rugby is only allowed to be played up to a certain age) (Female Subject Leader of PE).

Respondents in schools using mixed-sex grouping for rugby explained that, where space resources permitted, boys and girls were often formed into separate single-sex groups and provided with modified or alternative activities. This was explained as follows:

For certain activities and groups such as Year 11 rugby, we might revert back to single-sex grouping for safety measures, or we might use single-sex grouping within mixed-sex lessons and offer girls and boys different versions of rugby – tag or full contact (Male Subject Leader of PE).

This strategy was also used in both single- and mixed-sex classes to provide safer, more private spaces for students to participate in PE. As one respondent remarked:

We also sometimes split our single- and mixed-sex classes into smaller groups to reduce the public element of performance. Most girls feel more comfortable performing in front of smaller groups in PE (Female Subject Leader of PE).

Reasons for mixed-sex grouping arrangements in PE

The most frequently cited reasons for using mixed-sex grouping in core and GCSE/BTEC PE related to pragmatic considerations, including timetabling, staff availability, the composition of student cohorts, and/or student numbers. Many respondents ($n = 106$) explained that timetable constraints meant that single-sex grouping was not a viable option in core PE in Key Stages 3 and 4. This was particularly associated with situations where students were required to stay in their mixed-sex form classes (this was particularly so following COVID-19 restrictions) or their sets from other subjects in the school. One respondent explained:

We have no control. It's [mixed-sex grouping] based on timetabling against other subjects, COVID-19 restrictions (where students were kept in mixed-sex form groups for all subjects), and/or balancing class sizes (if there's an imbalance of boys or girls in a year group we have to go mixed as one of the groups would be too big) (Female Subject Leader of PE).

A large number of respondents ($n = 98$) explained that their school had a disproportionate number of boys or girls in a particular year group, meaning that class sizes would be too large or small if students were separated into single-sex groups in core PE. Similarly, several respondents ($n = 68$) noted that there were often not enough students opting for GCSE and/or BTEC PE courses in Key Stage 4 to accommodate single-sex classes. One respondent summed up this situation as follows:

We have mixed-sex groups for GCSE and BTEC PE because we don't have enough students choosing these options to create separate boys' and girls' classes (Female Subject Leader of PE).

The number and availability of teaching staff in the department was also frequently reported by respondents ($n = 55$) as an important factor in the use of mixed-sex grouping in core and/or GCSE/BTEC PE. As the following comments illustrate, in smaller schools with only one member

of staff in the PE department, or in situations where only one member of the PE department was timetabled to teach PE at a given time, mixed-sex grouping was identified as the only feasible approach:

If there's only one group down [to teach for PE] and/or one member of staff available to teach that group, then students have to remain together in mixed-sex groups (Female Subject Leader of PE).

We're a very small school and I'm the only member of staff in the department. So, I don't have the option to split students into two single-sex classes (Male Subject Leader of PE).

Several respondents (n = 58) noted that mixed-sex grouping was important in ensuring that boys and girls had equal access to a wider variety of activities and learning opportunities in core PE, including those that provided scope to challenge sex-differentiated patterns of participation, gender stereotypes, and/or neutralise perceived gender differences in levels of competence. The greater flexibility inherent in the curriculum in Key Stage 4 meant that in many schools, core PE was able to encompass pathway-specific activities. These pathways were diverse and ranged from more individualised, lifestyle activities to more traditional gendered activities. Two respondents explained their approach as follows:

We offer a choice-based curriculum to students in core PE in Key Stage 4. We focus on more individualised, lifestyle activities and we try to keep these activities as non-gender specific as we can to enable students to participate on more equal terms (Male Subject Leader of PE).

The curriculum is a bit more flexible in core PE in Key Stage 4. So, we offer a variety of optional activity pathways on a mixed-sex basis. Students select between two pathways, the team (e.g. football and hockey) or the individual (e.g. gymnastics and tennis) (Female Subject Leader of PE).

Some of these respondents were keen to point out that although boys and girls were free to choose to follow either pathway, they tended to select different pathways based on gender stereotypes and expectations and/or to remain with their friends. This often resulted in a disproportionate number of boys or girls in particular pathway groups. The following comment was typical:

In Key Stage 4, students get the choice of pathways, but most end up going with the stereotypical activities. So, the pathways can often come up with more boys or girls (Female Subject Leader of PE).

We suggest that data such as this highlights the need for focused pedagogical work in PE that overtly challenges gender stereotypes and that aligns with support for gender diversity. As Ullman (2017) emphasises, teachers are implicated in many ways in gender diverse students' sense of well-being, connection, and belonging. We recognise grouping strategies as prospectively significant in supporting gender diverse students in PE.

Encouragingly from our perspective, the survey facilitated some consideration of the ways in which gender diversity is to some degree presenting challenges to established discourses and practices relating to PE curriculum, pedagogy, and infrastructure. Several respondents (n = 43) explained that the increasing presence of transgender (trans) and non-binary students had prompted them to reconsider the prevalence of binary practices in PE, including single-sex grouping, PE uniform, and/or toilet and changing room provision. Mixed-sex grouping was seen by these respondents as important in fostering a learning environment that was inclusive, safe, and respectful of a range of gender identities, most notably because it did not require students to feel positioned in a specific gender category (e.g. boy or girl). This attitude is typified by the following comments:

This year there is a noticeable rise in the number of non-binary/transitioning students. I was at a PE conference yesterday and everyone was saying that the number of students expressing themselves in this way is rising as there is more acceptance/momentum of them, rightfully so of course. So, everyone is reviewing their single-sex groupings, kit, changing rooms, etc (Male Subject Leader of PE).

Mixed-sex grouping is safer and more comfortable for trans and non-binary students because it means they won't be in a class that doesn't correspond with their gender identity (Female Subject Leader of PE).

Relatedly, a small number of respondents ($n = 22$) explained that students were given increased curriculum choice in core PE in Key Stage 4. This was seen as enabling those students who identified as trans or non-binary the option to select their group and curriculum activities based on their internal sense of gender (as well as their interests) rather than their biological sex. The following comment was typical:

Option choices support us with students who identify in a different way to their biological sex. So, they are not allocated to a single-sex group but can pick their own group (and curriculum activities) based on where they want to be and where they feel most comfortable (Male Subject Leader of PE).

The same number of respondents ($n = 22$) reported that mixed-sex grouping was used to increase opportunities for students to learn from one another in core and GCSE/BTEC PE. Notably, it was boys who were framed as benefitting the most from these opportunities, with some respondents ($n = 19$) solely referring to the positive influence of girls on their behaviour, attitude to learning, and progress in PE. By contrast, a much smaller number of respondents ($n = 3$) suggested that more able girls benefited from the increased challenge of mixed-sex PE lessons. The following comments were indicative:

I think the boys benefit more from the presence of girls, particularly in Key Stage 4. They seem to be a bit more mature and make more progress when they are in mixed-sex groups (Male Subject Leader of PE).

Mixed-sex groups provide an appropriate level of challenge for the more able girls (Female Subject Leader of PE).

Other less frequently reported reasons for using mixed-sex grouping were to foster positive interactions between students ($n = 15$), to promote a sense of familiarity and continuity for students transitioning from primary school (where most PE lessons are taught in mixed-sex groups) to secondary school core PE in Year 7 ($n = 12$), and to facilitate opportunities for PE teachers to expand their repertoire of instructional strategies and techniques ($n = 10$).

From our data it is also pertinent to note that responses to questions about recent or planned changes to gendered grouping practices revealed that very few schools had changed practices or were considering change. There was evidence of a slight move towards mixed-sex grouping. 5% of respondents reported that they had moved to this grouping arrangement in the last five years. Overall, however, practices appear relatively set, albeit with variations in the arrangements used across and within schools.

Discussion: the role of grouping in the reproduction or transformation of gendered practices in PE

The structural dimension of gendered cultures in PE

The findings of this study reaffirm that single-sex grouping remains a significant structural feature of PE in many mainstream state-funded co-educational secondary schools in England (e.g. Bayliss 1984; Lines and Stidder 2003; Scraton 1992; Wilkinson, Penney, and Allin 2016). That said, this study revealed a higher incidence of mixed-sex grouping in core PE than has previously been reported and a dominance of mixed-sex grouping in GCSE and/or BTEC PE in Key Stage 4. Pragmatic justifications were presented for both single- and mixed-sex arrangements, with discourses of pragmatism shown in several instances to simultaneously express and legitimate established and often stereotypical gendered practices in PE. Perhaps most notably, findings from our study suggest that sex-differentiated patterns of curriculum provision and staffing remain widespread in core PE, particularly in Key Stage 3, with these long-standing practices serving to perpetuate the continuation of single-sex grouping arrangements in the subject (Harris and Penney 2000; Lines and Stidder 2003; Scraton 1992). Furthermore, while our findings aligned with previous studies (Flintoff and Scraton 2001; Hills and Croston 2012; Stride et al. 2022) in generating evidence that some schools

were broadening their curriculum, particularly in core PE in Key Stage 4, to include activities that challenged gender boundaries and encouraged boys and girls to participate together on ‘more equal terms’, we suggest that the lower secondary years of schooling are critically influential in shaping students’ understandings of and attitudes towards gender in PE, sport, and society. The evidence from our research highlights that in Key Stage 3 currently, grouping strategies and associated curriculum and staffing structures appear likely to contribute to narrow and gender- stereotypical understandings and attitudes.

Engaging with gender diversity

Encouragingly, a small number of PE departments were recognising single-sex grouping as exclusionary for an increasing number of students who identified themselves as trans or non-binary. An emerging body of research has shown that single-sex grouping can act as a significant barrier to trans and non-binary students’ participation, sense of self, and sense of belonging in PE, most notably because they often find themselves assigned to a class (i.e. single-sex boys’ or single-sex girls’) that conflicts with their own internal sense of gender (Drury et al. 2022; Kettley-Linsell 2022; Phipps and Blackall 2021). Hence, most trans and non-binary students have expressed preferences for mixed-sex PE classes, reporting increased feelings of safety, comfort, and/or connection to others due to what they see as the relaxation of rigid gender norms and expectations in this setting (Kettley-Linsell 2022; Drury et al. 2022).

Other data from our study reaffirmed Flintoff, Fitzgerald, and Scraton’s (2008) emphasis of the importance of intersectional perspectives being brought to curriculum planning and grouping debates in PE. Our research sought to particularly pursue relationships between ability and gender groupings in PE (see Wilkinson and Penney 2023 for further detail relating to ability and groupings in PE), while also providing teachers with opportunities to highlight further influential considerations pertaining to students’ identities. Comments from some teachers drew attention to the contradictory cultural and gendered dimensions of single- and mixed-sex grouping in PE. PE teachers were sensitive to the requirement that Muslim girls were taught in single-sex groups in PE but were also aware of the difficulties that this arrangement presented for students who identified themselves as trans or non-binary. This raises interesting questions about how PE teachers can frame grouping arrangements in ways that are responsive to the needs and interests of Muslim girls and students who identify as trans or non-binary, particularly if they are in the same lesson. This recognition of the inherent complexities (from an equity perspective) of grouping arrangements in any specific school and lesson context point to the need for schools to consider utilising varied arrangements and to also commit to involving teachers, students, parents, and school governors in localised decision-making on these matters (see Dagkas, Benn, and Jawad 2011). No one arrangement will consistently offer the best prospects of advancing gender equity and strengthening inclusion in PE, nor necessarily be acceptable to all stakeholders. As Dagkas, Benn, and Jawad (2011) emphasise, ‘situation-specific’ policies and arrangements offer the best prospect of advancing inclusion for all students in PE.

Complexities, pragmatics, and the limits of gender inclusive practices

In some respects our data spoke to single- and/or mixed-sex grouping decisions in PE as complex and contingent on many interrelated factors, including the planning and organisation of the school timetable, the nature of the student intake (e.g. size, religion, gender identity), the number and availability of PE staff, rules on competitive sport, and/or the nature of the activity being taught in PE. It is also apparent that discourses of gender diversity, equity, and inclusion are not necessarily at the fore of grouping decisions in PE. Rather these decisions were often pragmatic and/or contextually driven, and a combination of single- and mixed-sex arrangements often regarded as the only practical way of grouping students in PE. For example, as has been found in previous research

(Harris and Penney 2000; Hills and Croston 2012; Scraton 1992; 1993), there was a commonly held belief among respondents that single-sex grouping was necessary in activities requiring bodily contact between students, whereas mixed-sex grouping was seen to be more suited to more individualised lifestyle activities that minimised differences in competence, reduced competition, and/or encouraged teamwork. Several comments from respondents in our study point particularly to a need for further research critically examining discourses of safety and inclusion in PE. Comments relating to safety concerns in relation to some team sports arguably also point to the accompanying need to question the standing of some activities as important and/or central to PE curriculum provision within schools in England. As Penney et al. (2018) emphasised, established curriculum structures and content provide a narrow frame for inclusion and inclusive practice in PE.

In many instances, our data also reflected that teachers' approaches to provision of safe, supportive, and inclusive learning environments in PE may simultaneously serve to promote binary and stereotypical gender discourses. For example, in this and preceding research single-sex grouping is identified as a preference for many girls (Flintoff and Scraton 2001; Hills and Croston 2012; Lirgg 1994). Yet, when this grouping is inherently tied to binary discourses, it risks marginalising those students who do not identify as girl or boy. Single-sex grouping was also reported as being used within some mixed-sex classes in this study, with safety cited and framed in relation to physical contact and/or to provide girls with separation from a male gaze. Again, we recognise that while such moves are clearly well intentioned, they may fail to affirm some students' gender identities. Hence, we recognise the need for further research to enhance understanding of the efficacy of single- and/or mixed-sex grouping in supporting and meeting the needs of all students in PE. We highlight the importance of engaging with the potentially diverse perspectives of all students within and beyond established binary groupings.

Student voice and choice

Choice has frequently been identified as a key strategy in capturing the interests of students in PE (Lines and Stidder 2003; Scraton 1992; Talbot 1993), with previous research identifying a need to involve students in co-creating the curriculum, rather than making these decisions on their behalf (Flintoff and Scraton 2001; Hills and Croston 2012; Scraton 1992). Notably, many schools in this study purported to adopt a student-centred approach to gendered grouping practices in PE that enabled students to have choice and voice in the decision-making process. While we cannot claim to have an in-depth understanding of the arrangements via which students are afforded opportunities to express preferences and make choices about curriculum activities, pathways and/or groupings, our previous research focusing on ability grouping practices in PE prompts further investigation of these matters (Wilkinson et al. 2021; Wilkinson and Penney 2021; 2022a; 2022b).

Conclusion

This research has generated a national picture of grouping practices in PE that has previously been absent from the literature. The findings point to the contemporary significance of gender in considering grouping arrangements and equity in PE and provide an important prompt for further investigation across research and professional communities. In many ways this study affirms that grouping arrangements remain a mechanism that invariably serves to reproduce binary gender norms and practices. Gender discourses have been shown to be interwoven with other discourses (such as safety) in justifications for particular arrangements, and at the same time, appear somewhat unresponsive to contemporary social and cultural complexities that are reflected in student populations and wider society. The small number of respondents expressing positive engagement with gender diversity point to an important focus for research and professional learning, directed

towards supporting teachers to expand their pedagogical knowledge, skills, and understandings in relation to gender and understandings in relation to gender equity and inclusive practice in PE.

The data set is acknowledged as limited to schools in England, but from our perspective, raises important issues for international researchers and teacher educators to also consider. This research provides an important stimulus and foundation for studies that can bring teachers, students, and researchers together to achieve shared understandings of the ways in which grouping arrangements are variously enacted, perceived, and experienced in PE. We recognise a need particularly for research that overtly supports teachers to extend their understandings of gender equity and pedagogy in PE, and work with their students and other stakeholders to explore what changes to practice will constitute meaningful progress towards greater equity in any given setting. We again echo Dagkas, Benn, and Jawad (2011) in emphasising the importance of research exploring and disseminating situationally responsive examples of such progress. We also suggest a need for further research examining the perspectives and experiences of students who identify as trans or non-binary in single and mixed-sex PE settings, with much of the existing research based on small sample sizes and/or retrospective accounts of a small number of trans and non-binary adults.

Notes

1. 'Gender diversity' is used as an umbrella term to describe gender identities that demonstrate a diversity of expression beyond the binary framework (Ullman 2017; A Gender Agenda 2023).
2. Reference to 'mainstream state-funded co-educational schools' reflects that the education system in England includes a wide variety of types of schools. Children and young people can attend state-funded (mainstream, non-fee charging) or independent schools (non-mainstream fee-charging), and these may be single-sex or co-educational. Further, children and young people with special educational needs or disabilities (SEND) can attend state-funded, independent, or special schools (non-mainstream) that cater specifically for their needs.
3. The restructuring of teacher training institutes in England and Wales in the 1980s resulted in a gradual shift from single- to mixed-sex secondary PE courses (Lines and Stidder 2003; Scraton 1992).
4. All students who attend state-funded secondary schools in England receive a core (or practical) PE curriculum in Key Stages 3 and 4. They can also opt to study either GCSE or BTEC PE courses in Key Stage 4. GCSEs and BTECs are academic qualifications assessed mainly on written examinations, although in PE there are also elements of coursework and practical activities.
5. Setting is a form of grouping where students are assigned to classes in a subject based on their attainment in that subject (Francis, Taylor, and Tereshchenko 2020).
6. The 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).

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