



DE GRUYTER

**International Journal
of Adolescent
Medicine and Health**

**The post 16 Gap: How do young people conceptualise PE?
An exploration of the barriers to participation in Physical
Education, physical activity and sport in senior school
pupils.**

Journal:	<i>International Journal of Adolescent Medicine and Health</i>
Manuscript ID	IJAMH.2021.0003.R1
Manuscript Type:	Review
Date Submitted by the Author:	29-Apr-2021
Complete List of Authors:	Cowley, Joe; University of Stirling Faculty of Social Sciences, Initial Teacher Education-Physical Education McIntosh, Ian; University of Stirling, Faculty of Social Sciences Kiely, John; University of Central Lancashire Collins, Dave ; University of Edinburgh Institute for Sport Physical Education and Health Sciences
Keywords:	Physical education, inactivity, barriers to participation, past experience, physical activity

SCHOLARONE™
Manuscripts

Cowley JG, McIntosh I, Kiely J & Collins DJ (2021) The post 16 gap: how do young people conceptualise PE? An exploration of the barriers to participation in physical education, physical activity and sport in senior school pupils. *International Journal of Adolescent Medicine and Health*. <https://doi.org/10.1515/ijamh-2021-0003>

1
2
3 1
4
5
6 2
7
8
9 3
10
11
12 4 **The post 16 Gap: How do young people conceptualise PE? An exploration of the**
13
14 5 **barriers to participation in Physical Education, physical activity and sport in senior**
15
16 6 **school pupils.**

17
18
19
20 7 **Abstract**

21
22
23 8 Previous studies have identified several key barriers to Physical Education, Physical activity
24 9 and Sport (PEPAS). However, there is a paucity of qualitative evidence investigating why
25
26 10 young people do and do not participate in PA and the relationship between their levels of
27
28 11 participation at different stages of life. This study builds on a previous study and aims to
29
30 12 investigate the barriers to PEPAS in adolescents at transition stage. The extant literature
31
32 13 highlights that instilling regular PA throughout life strongly relies on developing physical
33 14 literacy through participation in high quality physical education. Despite the understanding of
34
35 15 the importance of high quality physical education, there is an over emphasis on the short term
36
37 16 outcomes of physical education (PE) sessions which have been noted to overemphasise
38
39 17 immediate physical activity rather than focus on educational outcomes important to physical
40
41 18 literacy. Anecdotally, the recent Covid 19 Global pandemic and subsequent lockdown has
42
43 19 resulted in a digitalisation of PE in schools and a subsequent reliance of PA programmes
44
45 20 based on adult fitness classes, which may not necessarily be categorised as PE in its true
46
47 21 sense..

48
49 22 **Methods:** Twenty-four respondents aged 16-19 were divided into five focus groups. Data
50
51 23 were analysed verbatim using NVivo following the guidelines by Braun and Clark (2006) on
52
53 24 thematic analysis.

54
55 26 **Findings:** The findings indicated that most respondents equated PE with team sports.
56
57 27 Findings suggest that Physical Educators need to acknowledge how past and present
58
59 28 experience of PE impacts young people's future motivation to continue PA beyond school
60

1
2
3 29 Delivery of traditional PE lessons, prioritising sporting ability, can act as a participation
4
5 30 barrier to pupils who consider themselves “non-sporty”. Accordingly, a shift towards
6
7 31 inclusive pedagogical models with an emphasis on a holistic approach, may best promote the
8
9 32 physical literacy necessary for the competence and confidence to continue movement in a
10
11 33 lifelong capacity.

12 34

13
14
15 35

16
17
18 36

19
20
21 37

22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

For Preview Only

38

39 Introduction

40 Despite the development of a recent action plan by the World Health Organisation
41 (WHO), physical inactivity remains one of the most important factors contributing to global
42 morbidity and mortality, with inactivity estimated to result in as many as 5 million deaths
43 globally per annum[1]. The evidence base for physical activity (PA) in the prevention of non-
44 communicable disease is strong and well documented [2,3]. Recent findings from the Active
45 Healthy Kids Global Alliance[4] compared 49 countries from six continents assessing global
46 trends in physical activity. This report concluded that physical inactivity had reached a
47 Global crisis level, with only one Country, Slovenia, having 80% of all 5-19 year olds
48 meeting the Global Recommendations on Physical Activity for Health, which proposes that
49 children and youth accumulate at least a 60 minutes' average of moderate - to vigorous -
50 intensity of PA per day. At the other end of the scale, the recent *Active Healthy Kids* report
51 card showed that Scottish children are among the least active in the world. Further national
52 level analysis ranked Scotland in the poorest category for overall physical activity levels:
53 amongst 11-15 year olds, only 21% of boys and 15% of girls met the international
54 recommendation of a minimum 60 minutes of daily PA of at least moderate intensity[4].

55 The extant literature highlights that instilling regular PA throughout life strongly
56 relies on developing physical literacy through participation in high quality physical education
57 [5]. Despite the understanding of the importance of high-quality physical education, there is
58 an over emphasis on the short-term outcomes of physical education (PE) sessions which have
59 been noted to overemphasise immediate physical activity rather than focus on educational
60 outcomes important to physical literacy [6]. Additionally, the OECD highlighted the
61 importance of a physical education curriculum that emphasises the need of a holistic
62 curriculum focussing on physical, social, and psychological competencies. Indeed,

1
2
3 63 differentiating between short term physical activity outcomes and the more holistic aspects of
4
5 64 high quality physical education is essential to ‘spark change’ [6]. Additionally, the recent
6
7 65 Covid 19 Global pandemic and subsequent lockdown has resulted in a digitalisation of PE in
8
9 66 schools and a subsequent reliance of PA programmes based on adult fitness classes, which
10
11 67 may not necessarily be categorised as PE in its true sense [7].
12
13
14

15 68 Additionally, over the past twenty years a growing body of evidence has highlighted
16
17 69 the need for a curriculum shift away from the traditional PE lesson, which tends to prioritise
18
19 70 pupils of a high sporting capability, towards a more inclusive, student centred approach [8-
20
21 71 11]. The dominance of a multi games based, skill centred curriculum may tend to prioritise
22
23 72 those of white, masculine backgrounds with a high level of motor competence [9,10]. Despite
24
25 73 this acknowledgement, it may appear that the understanding of inclusive practice in PE may
26
27 74 still be somewhat narrow [9]. Indeed, the revelation that the traditional, multi activity PE
28
29 75 curriculum lacks inclusion, equity and depth of learning has been the focus of a growing body
30
31 76 of evidence proposing that a more widespread implementation of pedagogical models may
32
33 77 have much more to offer young people. As reiterated by Casey and Kirk,(2021)the
34
35 78 development of an innovative models-based practice (MBP) approach to PE holds the
36
37 79 potential for multiple —psychomotor, social, affective, and cognitive— health benefits, and
38
39 80 has been suggested to increase participation by increasing intrinsic motivation amongst
40
41 81 pupils[8,11]. MBP is considered an umbrella term and involves the delivery of the curriculum
42
43 82 through a number of models rather than structuring the curriculum around the sport or
44
45 83 activity [11].
46
47
48
49
50
51

52 84 Traditionally the PE curriculum in the UK usually follows a set structure, beginning
53
54 85 with a block of fitness testing and subsequently leading to fitness development lessons,
55
56 86 followed by a block of games and aesthetic activities with an emphasis on teacher-directed
57
58 87 activities. A similar format follows in a lesson-based context where traditionally games
59
60

1
2
3 88 lessons are composed of a warmup, skills based drills followed by a competitive game [12].
4
5 89 The use of fitness testing in modern PE has previously been severely questioned with doubts
6
7 90 raised over the reliability, validity and educational purpose of this (usually compulsory) topic
8
9
10 91 [13]. Furthermore, Cale and Harris [13] highlighted that the overuse of fitness testing in PE
11
12 92 may not only fail to promote healthy lifestyles and PA but could deter young people from
13
14 93 future participation, where resultant, past negative experiences deter individuals from current
15
16
17 94 and future participation [14].
18
19

20 95 Our previous work focussed on a younger cohort of Secondary aged children and
21
22 96 reported that delivery of traditional PE lessons, prioritising sporting ability, can act as a
23
24 97 participation barrier to pupils who consider themselves “non-sporty” [8-14]. Considering
25
26 98 this, it was deemed necessary that we investigate an older cohort at the transition stage of
27
28
29 99 education-namely those who were around the age of transition between compulsory
30
31
32 100 schooling and further education/work.
33

34 101 Greater attention might also be given to the role that theory plays in framing some of
35
36 102 the key issues that have been identified in the literature considered above. Here, two inter-
37
38 103 linked factors are analysed in particular: firstly, moves beyond a limited temporal horizon
39
40 104 within current PE that is largely present-focussed, and secondly, a concern with
41
42
43 105 understanding young peoples’ motivation and the ways in which past and present experience
44
45 106 impacts their future lifestyle choices, with particular reference to PA. These twin concerns
46
47 107 with regard to temporal horizon and motivation can be linked through a consideration of the
48
49 108 concept of agency; for as Emirbayer and Mische (1998) [15] observe, if the complexities of
50
51 109 behaviour change are to be addressed, it is necessary to acknowledge how past and present
52
53 110 experience impact future intentions,. Some such consideration is necessary if one of the
54
55
56 111 emergent aims of PE is have a positive impact on young peoples’ lifestyle choices regarding
57
58
59 112 their continuing engagement in PA. This also has far-reaching implications for the ways in
60

1
2
3 113 which practitioners make changes to the curriculum to have an impact on the lifelong
4
5 114 learning and physical activity of young people [10].
6
7

8 115 The research study reported upon here sought out the views of young people in the
9
10 116 16–18-year age group, to identify barriers and facilitators at this crucial stage of transition.
11
12
13 117 One of the insights that emerged from a focus on considering young peoples' views in
14
15 118 conjunction with theory is that the effects of previous PE experiences need to be more
16
17 119 thoroughly understood and acknowledged within a broader pedagogical perspective, so as to
18
19 120 inform future interventions and curriculum design. The present study focuses on
20
21 121 individuals, 16-18 years, who are no longer within the age of compulsory education, a positive
22
23 122 PE experience in a school environment is one of the most influential factors in determining
24
25 123 the sustainability of activities. In the country where the study is set, it is a legal requirement
26
27 124 for PE to be taught as a compulsory subject until S4 (approx. age of 16 years), where schools
28
29 125 must provide at least 2 period per week. However, during the senior curriculum phase, the
30
31 126 decision on PE delivery is based at a school level [16]. Whilst short termism for health
32
33 127 benefits may be important, a positive PE experience can help build on the autonomy,
34
35 128 relatedness and to enable PE to achieve its raison d'être of lifelong PA [8,14]. For this reason,
36
37 129 it is viewed important to seek out the views of those who are in the 16 -18 years age group to
38
39 130 identify barriers and facilitators at the transition stage. To understand adolescent motivation
40
41 131 the effect of previous PE experiences need to be understood, particularly from a qualitative
42
43 132 perspective to inform future interventions and curriculum design.
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

134 **Rationale and research questions**

135 Historically, research in physical education, physical activity and schools sport
136 (PEPAS) participation has tended to adopt quantitative methods which, whilst successful in
137 evaluating strengths of trends in participation, do little to offer an in-depth insight into
138 individuals' attitudes and perceptions as to what motivates them to participate in physical
139 activity. Most of the studies are carried out 'on' children/adolescents, instead of work
140 exploring qualitatively young people's views as to both the barriers and drivers in relation to
141 their continued participation in PEPAS. Through listening to the voices of young people new
142 insight may be gleaned that can enable PE practitioners to design future curricula more
143 attuned to longer term health needs [14,17-19]. This study is a contribution towards that
144 broader aim through its aims to explore:

- 147 1. How do senior pupils conceptualise PEPAS?
- 148 2. What effect does school-based PE have on young people as they leave or
149 prepare to leave school?

151 These two questions are specifically pertinent to sustaining PA into adulthood in the
152 transition from childhood to early adulthood.

154 **Methods**

155 *Study design*

156 A cross sectional, qualitative approach was used to explore previous experience of PE and
157 to investigate young people's perception of PE, PA Sport and health. Focus groups were
158 chosen as the method of data collection, as such an approach is reported to provide the richest
159 data in relation to public views of priorities in similar types of research [20]. Furthermore, the
160 use of focus group-based discussions may generate comments that are more critical than
161 those observed in individual one-to-one interviews [20-22].

162 *Participants*

163 Twenty-four participants aged 16-18 years (mean age 17.36 ± 0.23) were recruited from
164 five community and education settings across urban and rural areas in and around the West of
165 Scotland. All participants were of British ethnicity, 60% were female.

1
2
3 166 ***Focus group topic guide***
4

5 167 A semi-structured topic guide was developed to identify both barriers and facilitators to
6
7 168 PEPAS. The focus group topic guide was piloted on three 16-year-old senior school pupils,
8
9 169 not involved in the study, and some minor amendments were made to the ordering of the
10
11 170 questions. Whilst research has been carried out in the *PA for Adolescents in Scotland Survey*
12
13 171 in 2008 and the *Active Healthy Kids Report Card* in 2016 [4], these did not qualitatively
14
15 172 determine barriers and facilitators for those in the transition phase between leaving school
16
17 173 and attending further education institutes and / or apprenticeships.

17 174 ***Procedures***

18
19 175 The study was approved by the relevant *University Ethics Committee* according to the
20
21 176 *Declaration of Helsinki*. Focus groups were conducted in a tertiary education centre; the data
22
23 177 collection took place during the month of June with the average recording lasting 48 minutes.

24
25 178 ***Data analysis***

26
27 179 The research questions were addressed via an inductive thematic analysis, using a bottom
28
29 180 up approach as proposed by Braun and Clarke, 2006[21] . A thematic framework was applied
30
31 181 to all the data. Inductive, thematic analysis does not primarily rely on existing, pre-
32
33 182 determined, theoretical perspectives, but instead gives a formative and guiding role to the
34
35 183 data itself, thereby providing a degree of theoretical flexibility. Transcripts were read and
36
37 184 reread for data familiarisation and to derive raw data themes; data was organised and
38
39 185 imported into NVivo.QSR London.

40 186 **Results**

41
42 187
43 188 Analysis of data from the focus groups identified three main themes:
44

- 45 189
- 46 190 1. Misconceptions surrounding the prioritisation of short term PA levels
 - 47 191 2. Previous negative experience of PE at school was seen a barrier to future
48 192 participation. Sub-themes included:
 - 49 193 a. The importance of perceived competence
 - 50 194 b. the content of the curriculum and pupil choice of activities.
 - 51 195
 - 52 196 3. The importance of self-image.
 - 53 197
 - 54 198
 - 55 199
 - 56 200
 - 57 201
 - 58 202
 - 59 203
 - 60 204

1
2
3 198 There is a growing evidence base, highlighting the rise of non-participation in
4
5 199 traditional school physical education. Much of the research has an over dominant
6
7 200 focus on the short-term priority of increasing physical activity levels. [14].
8
9 201

202 **Theme 1 Misconceptions around the prioritisation of short term PA levels**

203 Most members of the focus groups had a clear understanding of the definition of PA
204 and its comparison with exercise, despite this, during each of the focus groups there was a
205 tendency for most participants to associate PE with competitive sports. Additionally,
206 although many were aware of the benefits and public health message encouraging PA,
207 confusion existed as to what constituted PA and the difference between this and PE. Some
208 members of each focus group did not understand the difference as clearly as others.
209 Barriers and facilitators cited by respondents were similar to those described in previous
210 studies involving school children participating in formal PE. However, participants tended to
211 have the belief that short term PA was the main goal of their PE lesson, and they felt that if
212 they were hot and sweaty and out of breath, then the teacher had done their job
213

214 *Our teacher gave us football and badminton, the warm up meant we were doing*
215 *plenty of laps of the park or hall and we worked quite hard.*

216 *(Male, John, aged 17)*

217
218 The idea of short term fitness activities and a prioritisation of short term PA being one of the
219 major ‘outcomes’ of PE is highlighted by the following respondents:
220

221 *Both boys and girls always got fitness testing and fitness at the start of the year and*
222 *we completed a wee tracking booklet.*

223
224 Similarly, when speaking about barriers to participation, pupils did not think that the overly
225 competitive atmosphere that fitness testing caused was inviting to participation.
226

227 *Ah absolutely hated the first term, having to all line up and do the beep test. The*
228 *teachers used to push you. All the fitter ones seen it as a competitive hing.*

229
230 *Oh I hated it in PE when we had to all line up and do the multi stage test and press*
231 *ups and that...*

1
2
3 232
4
5 233
6
7 234
8
9 235
10 236
11
12 237
13
14 238
15 239
16
17 240
18
19 241
20
21 242
22
23 243
24 244
25
26 245
27
28 246
29
30 247
31 248
32
33 249
34 250
35
36 251
37
38 252
39
40 253
41
42 254
43 255
44
45 256
46
47 257
48
49 258
50
51 259
52
53 260
54 261
55 262
56
57 263
58
59 264
60

Theme 2 Previous negative experiences of PE –perceived image and curriculum content

This study highlights several barriers of participation; importantly, previous negative experiences of PE were perceived as major barriers to future PA participation. Furthermore, the idea that previous educational experience may contribute to a post 16 gap in PA levels is somewhat novel. Many respondents cited this as one of the main reasons as to why they dislike the idea of exercise participation even after leaving school. Within the data, there was support for the previous findings related to single sex PE classes and the role of gender. This is one aspect which is dominant in the existing literature [14,15,16]. By way of example respondents expressed concern relating to their teachers' gender:

*It should be a wummin teacher for the lassies and a man teacher for the guys. It's sometimes a bit creepy if they (PE teacher) are old men.
(Female, Janey, aged 17)*

Whilst some respondents felt that the teachers did not set a good example and that their teaching methods were poor:

*Some of the PE teachers were too old and had fat bellies. Some of them just stand about and do nothing, but just expected you to do it. They didn't really expect you to do it at your own ability, just to do what they had asked.
(Male, Simon, aged 18)*

This was echoed by another participant from a different focus group:

*It was as if they (the teachers) canny dae it themselves and show you it (poorly) once and expect you to dae it...you get asked to dae sumfin and other people start laughing 'cos you are asked to demonstrate and cannae dae it.
(Female, Mandy, aged 18).*

Perceived competence was highlighted as a major driver of future PA participation. Respondents perceived that PE teachers focused primarily on physically capable students. Several participants felt that the teachers bullied them and made them self-conscious, leading to a negative perception of themselves and ultimately demotivating them:

1
2
3 265 *Sometimes the teachers push you too hard and shout at ye in front of everyone and*
4
5 266 *you get embarrassed that makes you not want to take part. Then you get made fun of if*
6
7 267 *ye are not good at games like football.*
8
9 268 *(Male, Simon, aged 18).*

10 269
11
12 270

13 271 *The role of 'image'¹ and its importance as a barrier and/or facilitator in exercise, PE and*
14
15 272 *PA.*

16
17 273

18
19 274 The role of perceived competence fuelled by self-image and the perception of what
20
21 275 other people may think about them is of prime importance in this data. Perception of
22
23 276 competency, self-perception and body image appeared to be a main factor in determining
24
25 277 previous participation in school PE.

278 These factors were a major determinant for future participation in PA and exercise.
 279 One of the main reasons for either wanting to participate in PA or not to, was the issue of
 280 body weight, how fat ‘you feel’ or how important it is seen to lose weight.

281 *Now I’d exercise to lose weight, for a good image...so I look good for others. (Female,*
 282 *Lisa, aged 18)*

283 *I’ve got really chubby. Lose weight for how I look. I want to look better”*

284 *(Male, Simon aged 18).*

285 *Ah hated (PE) as I was overweight. I had a huge bust and didn’t want to do it”*

286 *(Female, Fiona, aged 17)*

287

288 As adolescents approach the age of 16 and the cessation of compulsory PE and they
 289 face college/vocational workplace transition, the idea of self-image, confidence and
 290 competence features as a dominant theme as a barrier to uptake/sustainability.

291 *When I got to 16 I found my confidence was lower, I felt tired all the time*

292 *(Male, Allan, aged 17).*

293

294 *Image could stop you taking part... What puts me off if I’ve not ate anything and if*
 295 *I’ve felt heavier I become self-conscious. I don’t then want to do anything. (Female,*
 296 *Jane, aged 19).*

297

298 **Theme 3: Self-image as a barrier**

299

300 The limited qualitative evidence that does exist from the current literature has touched
 301 on the role of self-image as a barrier to PA and school based PE. The following participant
 302 provided the first indication in this study that self-image may be a key theme in determining
 303 participation:

304 *If you started fancying boys you’d get embarrassed. I hated if the boys and girls were*
 305 *in the same class and I felt uncomfortable. A felt uncomfortable wearing shorts but*
 306 *bitchiness ae lassies too. It still happens, girls judge you on how you look and look*
 307 *you up and down. (Female, Mandy, aged 18).*

308

309

310 The importance of image, how the young people are perceived by others and being in a
 311 relationship features in the following response:

1
2
3 312
4
5 313 *Weekends...Depends if you are single. When you are single, you like try and lose*
6
7 314 *weight or keep in shape, but once you get a boyfriend it changes. I mean Darren goes*
8
9 315 *to the gym before he comes up every night. I just lie about on my bed waiting on him*
10
11 316 *coming up. Cos, you have a boyfriend you dinnae care. Unless it's coming up to the*
12
13 317 *holidays or that. I then eat hunners of takeaways and junk food n stuff. (Female,*
14
15 318 *Lauren, aged 16).*

15 319
16
17 320 The idea of being competent at sports and having confidence in yourself, together
18
19 321 with judgmental peers appears to be one of the main factors in determining past and future
20
21 322 PA and exercise. This is highlighted by the following participants:

22 323
23
24 324 *Self-confidence is one of my main reasons for not doing much. But in primary*
25
26 325 *(school)they didn't care but towards end o high school and in college they are all*
27
28 326 *watch h you and think look at her trainers and pure judging you.*

29 327 *(Male, Alexander, aged 18).*

30 328 *(I'd exercise) For yourself... no for others. So that other people admire ye (Female,*
31
32 329 *Isla, aged 17).*

33 330
34
35 331 The circumstances of the transition period between leaving compulsory schooling to
36
37 332 gain further qualifications, possible work and the development of different relationships and
38
39 333 social circumstances also featured heavily in determining PA participation. This is
40
41 334 particularly important as it forms the main part of the data required to investigate the main
42
43 335 research questions in this study.

44 336 *As you begin to leave school your social life takes over. Just going out...it comes to*
45
46 337 *weekends you dinny want to be going to college and gym you'd rather go n see friends*
47
48 338 *and relax and stuff. Not having enough time now is the main thing.*

49 339 *(Female, Megan, aged 16).*

50 340
51
52 341 Surprisingly, environmental factors such as availability of facilities and cost of leisure
53
54 342 facilities did not seem to act as a major barrier to PA. This could be due to the fact that many
55
56 343 of the respondents lived in a suburban area However, those respondents who lived in smaller
57
58 344 outlying villages felt that facility availability was a barrier, as highlighted by the following
59
60 345 respondent:

1
2
3 346 *I mean, my village, has nothing, there is no gym or sports centre and to be honest I*
4
5 347 *wouldn't really want to go out walking (Female, Andrea, aged 17).*
6
7 348

8 349 *They dinny realise they are bullying you, they just think they are pushing you but it's*
9
10 350 *their teaching methods, they think they are motivating you, but they aren't. it just puts*
11
12 351 *me off exercise now. (Female, Lauren, aged 16)*
13
14 352

15 353

17 354 Curriculum content was also seen as a major barrier to participation, both for PE
18
19 355 participation at school, and in future life stages. Many participants felt that their previous PE
20
21 356 experiences left them with an attitude that reveals that exercise and PA are negative
22
23 357 experiences. The following statement highlights the lack of pupil choice and prescriptive
24
25 358 aspects of the curriculum:

26 359 *We didn'y get choices they telt ye what you were doing (Male, Andy, aged 18).*

27 360 *Aye we were the same we had to do table tennis cos all the boys wanted it. A mean*
28
29 361 *our teacher taught dance but couldn't do it (Female, Andrea, aged 17).*
30
31 362

32 363

33 364 Others felt that they had experienced bullying from their PE teacher and that this had
34
35 365 put them off exercise:

36 366

37 366 *Good choices in PE are needed... getting good demonstration would made it better,*
38
39 367 *stuff like Dancefest and more choices. Glen Academy has a different type of PE from*
40
41 368 *(what we had) it's the better school in a better area.*

42
43 369 *(Female, Megan, aged 18)*

44 370 *Choices were limited. It went by the seasons. There was really poor choices. ...They*
45
46 371 *wouldn't let us do trampolining 'til we were in 5th an 6th year.*

47
48 372 *(Female, Jane, aged 19)*
49
50 373

51 374

52 374 In contrast, one respondent highlighted that in their school, the pupils got a
53
54 375 democratic choice before some lessons as to what was delivered:

55 376

56 377 *We got a choice. We'd all go intae the big hall and get voting on different things like*
57
58 378 *aerobics, volleyball and gymnastics.*

59
60 379 *(Female, Lauren, aged 16).*

380

381 Additionally, the notion of competitive sports held bad memories for some
382 participants. This was evident in both males and females who reiterated the notion that only
383 those competitive sports, taught in a traditional method puts off the majority of older
384 adolescents. Many respondents identified PA with team sports, and consequently these
385 adolescent school leavers identified PA primarily with competitive sport:

386

387 *Sometimes girls can be more judgemental than boys sometimes...but boys can be*
388 *quite competitive. That put me off...I was quite glad when it was an all-girls class. I*
389 *really don't like competitive stuff*
390 *(Female, Simone, aged 18).*

391

392

393 Furthermore, the topic of PE at school raised some common barriers, not only related
394 to the teaching of fitness testing as previously discussed, but to the whole environment
395 relating to changing rooms and the facilities available:

396

397 *The teachers push you too much, like timing you in fitness testing, and while the*
398 *trampolining was good being timetabled last period was bad. You didn't get much*
399 *time, then there was the mingin'3 changing rooms. (Female, Janey, aged 17)*
400 *We didn't even have hair straighteners. (Female, Simone, aged, 18).*

401

402 Discussion

403 The data presented within this study strengthens the previous research in this area. In
404 our previous paper we highlighted that younger pupils felt that the traditional PE lessons with
405 fitness testing and an over emphasis on competition-based lessons, presented a barrier to their
406 participation or enjoyment and, potentially, exposed pupils to an increased risk of bullying.
407 The use of fitness testing in modern PE has previously been severely questioned with doubts
408 raised over the reliability, validity and educational purpose of this (usually compulsory) topic
409 [13,14]. Furthermore, Cale and Harris (2009)[13], highlighted that the overuse of fitness
410 testing in PE may not only fail to promote healthy lifestyles and PA but could deter young
411 people from participation.

1
2
3 412 The focus on short term fitness goals and an increase in PA that is measurable over a
4 413 short period of time is seen by many as the dominant outcome of physical education. This
5 414 misunderstanding of what constitutes PE may not have its roots in physical educators
6 415 ideology, but the use of poor content in lessons, which focus on short term measurement
7 416 gives priority to such outcomes. Whilst there remains the argument that PE is not solely about
8 417 improving short term health goals for the nation [18]. Great debate remains around the fact
9 418 that PA in the long term may play a major part in helping to solve these health problems [18].
10 419 Ultimately, we must look beyond the short-term accumulation of PA during PE lessons and
11 420 aim to instil movement confidence from an early age [17,19]. Indeed, the implementation of
12 421 PE into the health and wellbeing area of the curriculum in Scotland is one such move aimed
13 422 at promoting holistic health through lifelong PA. The drive towards a holistic approach has
14 423 emphasised that PE should have two main goals: (1) To prepare for a lifetime of PA through
15 424 movement education and (2) to engage pupils in moderate to vigorous PA [21](Kohl and
16 425 Cook, 2013, pp 197-201).
17 426

18 427 Whilst ensuring PA during PE lessons is maximised can be seen as a positive
19 428 ambition, this should not be at the sacrifice of learning during PE lessons. Particularly when
20 429 at the expense of maximising the movement education necessary to establish a “solid
21 430 foundation for further and future PA opportunities” [17]. The move towards a more holistic,
22 431 inclusive approach requires a transformation of PE to an increased emphasis on learner
23 432 centred lessons. The overreliance on short term outcomes can be borne out in the theoretical
24 433 aspects as explained by Embirayer and Misch,[15] where temporal horizon and motivation
25 434 can be linked through a consideration of the concept of agency; if the complexities of
26 435 behaviour change are to be addressed, it is necessary to acknowledge how past and present
27 436 experience impact future intentions. However, the consideration of short term (present)
28 437 outcomes and an overreliance on immediately measurable changes may compromise the
29 438 concept of lifelong physical activity.
30 439

31 440 Although it could be argued that the use of appropriate, pupil centred approaches and
32 441 the move away from a skills and drills, multi block approach can increase enjoyment and
33 442 motivation in both primary and secondary aged children [21-25]. The data in this paper
34 443 concurs with the previous literature which emphasised that there may be an overreliance on
35 444 performance related sports taught using “repetitive, uninspiring lessons, and disconnected
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 445 skills”, whilst many lessons emphasised questionable practice such as fitness testing which
4
5 446 the participants have highlighted.

6
7 447 Interestingly, the data presented here qualitatively highlights that previous negative
8
9 448 PE experience was reported to affect future participation in PA in those individuals in the
10
11 449 post 16 years old age group. This is a novel finding, and has important implications when
12
13 450 considering the role that PE is reported to have in ensuring lifelong PA. Despite this, there
14
15 451 remains a lack of evidence pointing us in the direction of remediating those in the 16-18-
16
17 452 year-old age group who may be lacking in physical literacy, and therefore, who hold a low
18
19 453 level of perceived competence. The issue remains open to debate as clearly PE needs to
20
21 454 reinvent itself to adjust to the 21st century. Whether this reinvention is dependent on a change
22
23 455 of teaching methods, the addition of more recreational activities in the curriculum content or
24
25 456 a combination of these is an area receiving limited attention. What is evident, nevertheless, is
26
27 457 that despite a growing body of evidence towards the need for curriculum change and a need
28
29 458 for a change in teaching practice, is that some PE teachers are “impervious to change” [5,26].
30
31 459 Kirk (2013) states that although many teachers are aware of the need to ‘renovate’ the
32
33 460 curriculum, this would require a great deal of work on the teachers and schools’ behalf.
34
35 461 Additionally, resistance to change seems to exist as a legacy from outdated teacher education
36
37 462 practices, which also requires reform. In short, some PE teachers have become acculturated [5].

38
39 463 These findings, moreover, also chime with theoretical accounts that draw attention to
40
41 464 the significance of memory of previous experience influencing subsequent choice[27,28]. The
42
43 465 agency principle orientates individuals to the past, the present and the future, where past
44
45 466 experiences can govern the present situation and have an effect on future possibilities. In this
46
47 467 respect, current situations of non-participation in PA have been attributed to negative past
48
49 468 experiences [22-28] (Biesta et al., 2015; Emirbayer and Mische 1998). This negative
50
51 469 experience has been seen by Prusak et al, (2011) as deriving from PE teachers’ ‘resistance to
52
53 470 change’, where there is an over emphasis on ‘sports skills and motor competency through
54
55 471 team games [15,26]. Current research in the area of alternative teaching approaches, has
56
57 472 reflected a change in pupil autonomy, decision making and enhanced enjoyment as a result of
58
59 473 a change in teacher behaviour where the emphasis is on self-regulated skills for the learner
60
474 [21]. Additionally, in proposing a health club approach, Prusak et al[26] emphasised that if
475
476 teachers were prepared adequately through physical education teacher education (PETE) to
477
478 become involved in health and lifestyle management programmes, then PE could incorporate
479
480 a much more individualised, inclusive approach that can address multiple domains of

1
2
3 478 learning whilst a greater deal of autonomy and self-regulation could be afforded. The
4
5 479 perception of low competency in PEPAS has been previously identified in the limited,
6
7 480 existing qualitative literature and relies upon the teacher building a high level of autonomy
8
9 481 and relatedness to ensure perceived competence [29,30-38].

10 482

11 483 **Methodological limitations and strengths**

12 484

14 485 There are several limitations but also strengths to this study. Firstly, generalisability
15
16 486 from focus groups may be limited. Accordingly, the findings of this study may not
17
18 487 necessarily extrapolate to a whole population. Nevertheless, although generalisation in focus
19
20 488 groups should be treated with caution, tentative inferences maybe appropriate where
21
22 489 participants share commonalities to comparison populations, such as those from similar
23
24 490 backgrounds and socio-economic strata Consequently, suggesting that these study findings
25
26 491 are likely to be broadly generalisable across similar adolescent populations within Scotland.
27
28 492 Additionally, focus groups and the nature of group interactions may compel participants to
29
30 493 concur with opinions they do not necessarily hold. Furthermore, bias due to the presence of
31
32 494 socially dominant participants, or an overly dominant moderator, may also compromise
33
34 495 validity.

33 496

35 497 Finally, the sampling strategies employed in the present study may be vulnerable to
36
37 498 bias. Indeed, as the participants were all volunteers, there may be an inherent self-selection
38
39 499 bias, whilst the nature of a focus group design involves a relatively small number of
40
41 500 participants. Despite these limitations this study had several strengths. The use of focus
42
43 501 groups enables the capture of richly detailed data, while allowing adolescents to articulate
44
45 502 their beliefs, concerns and aspirations on health issues [29]. The use of a core set of questions
46
47 503 within a moderately structured focus group helps eliminate moderator bias, and minimised
48
49 504 monopolisation of the discussion' by individual participants [29]. Additionally, the use of a
50
51 505 purposive sampling methodology ensured the sample was representative of the requirements
52
53 506 of the study: thereby permitting comparisons between opinions of various schools and
54
55 507 surrounding areas.

54 508

56 509 **Conclusion**

58 510 As regards a critical analysis of the PE curriculum, it is noteworthy that previous
59
60 511 work by Kirk (2013) concludes that PE tends to focus on the 'here and now' of PA. This is at

1
2
3 512 the expense of a concern with acknowledging the influence of young peoples' past
4 513 experiences, and the importance of encouraging a projective orientation, that focuses upon
5 514 future aims and intentions, such as maintaining PA beyond the horizon of school. In this, PE
6 515 teachers, in common with colleagues in other subject areas, tend to focus on short term
7 516 outcomes, with less emphasis on the longer-term significance and impact [8]. Thus,
8 517 traditional PE, through its focus on sports, puts a greater emphasis upon immediate, present
9 518 goals rather than taking a broader understanding of both agency and purpose. The data from
10 519 the study reported here, highlights the importance of past and present experience of PE and
11 520 how this may have a significant impact on future PA participation.
12
13
14
15
16
17
18
19 521

20
21 522 The current study presents novel findings in that it highlights young people's critique
22 523 of existing orderings coupled with their call for change, both in the existing content of the
23 524 curriculum and the way that some teachers deliver this. Previous authors have reported that
24 525 leisure-based choices in PE are essential to promoting lifelong PA [26]. While curriculum
25 526 content may be an issue, many of the respondents focussed on the teaching methods used by
26 527 their PE teachers. The issue of traditional teaching methods in PE and their role in promoting
27 528 an ethos of lifelong health has recently resulted in an emerging body of evidence in the
28 529 literature, that argues for a move away from didactic, teacher-led approaches towards more
29 530 consultative approaches[25,36-38].
30
31
32
33
34
35
36
37 531

38 39 532 **References**

- 40
41 533
42 534
43 535
44 536
45 537
46 538
47 539
48 540
49 541
50 542
51 543
52 544
53 545
54 546
55 547
56 548
57 549
58
59
60
1. Pratt M, Ramirez Varela A, Salvo D, *et al* Attacking the pandemic of physical inactivity: what is holding us back?*Br J Sports Med* 2020;**54**:760-762.
 2. Cooper K, Hancock C. Review: The benefits of physical activity for health and well-being. UK: C3 Collaborating for Health. 2011.
 3. Hardman AE, Stensel DJ. Physical activity and health: the evidence explained. Routledge; 2009 May 7.
 4. Tremblay MS, Barnes JD, González SA, Katzmarzyk PT, Onywera VO, Reilly JJ, Tomkinson GR. Global matrix 2.0: report card grades on the physical activity of children and youth comparing 38 countries. *J Phys Act Health*. 2016 Nov 1;**13**(s2):S343-66.
 5. McLennan N, Thompson J. Quality physical education (QPE): Guidelines for policy makers. UNESCO Publishing; 2015 Feb 2.

- 1
2
3 550
4 551 6. Howells K. The future of education and skills: education 2030: the future we
5 552 want.OECD
6 553
7 554
8 554 7. Roe A, Blikstad-Balas M, Dalland CP. The Impact of COVID-19 and Homeschooling
9 555 on Students' Engagement With Physical Activity. *Frontiers in Sports and Active*
10 556 *Living*. 2021 Jan 26;2:205.
11 557
12 558
13 559 8. Kirk D. What is the future for physical education in the twenty-first century. *Debates*
14 560 *in physical education*. 2013:220-31.
15 561
16 562 9. Makopoulou K, Penney D, Neville R, Thomas G. What sort of ‘inclusion’ is
17 562 Continuing Professional Development promoting? An investigation of a national CPD
18 563 programme for inclusive physical education. *International journal of inclusive*
19 564 *education*. 2019 Jul 30:1-8.
20 565
21 566
22 567 10. Penney D, Jeanes R, O'Connor J, Alfrey L. Re-theorising inclusion and reframing
23 568 inclusive practice in physical education. *International Journal of Inclusive Education*.
24 569 2018 Oct 3;22(10):1062-77.
25 570
26 571 11. Casey A, Kirk D. *Models-Based Practice in Physical Education*. Routledge; 2020 Dec
27 572 14.
28 573
29 574 12. Casey A and Goodyear VA. (2015) Can cooperative learning achieve the four
30 575 learning outcomes of physical education? A review of literature. *Quest* 67: 56-72.
31 576
32 577 13. Cale L, Harris J. Fitness testing in physical education—a misdirected effort in
33 578 promoting healthy lifestyles and physical activity?. *Phys Educ Sport Pedagogy*. 2009
34 579 Jan 1;14(1):89-108.
35 580
36 581
37 582
38 583
39 584 14. Cowley JG, Kiely J, Collins D. What makes young people tick? A qualitative analysis
40 585 of the beliefs and perceptions of school aged children towards PE and healthy living
41 586 in “the sickest area of Europe”. *Int J Adolesc Med Health*. 2017 Jul 26;31(5).
42 587
43 588
44 589 15. Emirbayer M, Mische A. What is agency? *Am. J. Sociol*. 1998 Jan;103(4):962-1023.
45 590
46 591
47 592 16. Education Scotland Physical education, physical activity and sport-Parentzone. 2018
48 593 Available at [https://education.gov.scot/parentzone/learning-at-home/supporting-](https://education.gov.scot/parentzone/learning-at-home/supporting-health-andwellbeing/Physical%20education,%20physical%20activity%20and%20sport)
49 594 [health-](https://education.gov.scot/parentzone/learning-at-home/supporting-health-andwellbeing/Physical%20education,%20physical%20activity%20and%20sport)
50 595 [andwellbeing/Physical%20education,%20physical%20activity%20and%20sport](https://education.gov.scot/parentzone/learning-at-home/supporting-health-andwellbeing/Physical%20education,%20physical%20activity%20and%20sport). Date
51 596 accessed 02/06/18.
52 597
53 598

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646

17. Biesta G, Priestley M, Robinson S. The role of beliefs in teacher agency. *Teach.Teach.* 2015 Aug 18;21(6):624-40.
18. Forsyth S. Curriculum for excellence and the Donaldson Report: a coherent approach supporting teachers in the move towards evidence-based practice. *SATPE On-line Journal.* 2014 Dec 12;1(2).
19. Martins J, Marques A, Sarmiento H, Carreiro da Costa F. Adolescents' perspectives on the barriers and facilitators of physical activity: a systematic review of qualitative studies. *Health educ res.* 2015 Oct 1;30(5):742-55.
20. Braun V, Clarke V. Using thematic analysis in psychology. *Qual res.psychol.* 2006 Jan 1;3(2):77-101.
21. Kohl III HW, Cook HD, editors. *Educating the student body: Taking physical activity and physical education to school.* National Academies Press; 2013 Nov 13. 197-201.
22. Thomas JR, Nelson JK, Silverman SJ. Research methods in physical activity. *Human kinetics;* 2015 Jul 17.
23. Cowley J, P'Anson J.(2020) How can lifelong habits such as physical activity be promoted more effectively? Analysing the post 16-gap via a qualitative analysis. *Journal of Qual Res Sports Studies,* 14, 1, 187-208.
24. Mitchell F, Gray S, Inchley J. 'This choice thing really works...' Changes in experiences and engagement of adolescent girls in physical education classes, during a school-based physical activity programme. *Phys Educ Sport Pedagogy.* 2015 Nov 2;20(6):593-611.
25. Coleman L, Cox L, Roker D. Girls and young women's participation in physical activity: psychological and social influences. *Health educ res.* 2008 Aug 1;23(4):633-47.
26. Prusak K, Graser SV, Pennington T, Zanandrea M, Wilkinson C, Hager R. A critical look at physical education and what must be done to address obesity issues. *JOPERD.* 2011 Apr 1;82(4):39-46.
27. Foster C, Cowburn G, Allender S. The views of children on the barriers and facilitators to participation in physical activity: a review of qualitative studies. 2007

1
2
3 647
4
5 648
6 649
7 650
8 651
9 652
10 653
11 654
12
13
14 655
15 656
16 657
17 658
18 659
19 660
20
21 661
22
23 662
24 663
25 664
26 665
27 666
28 667
29
30 668
31 669
32 670
33 671
34 672
35 673
36 674
37 675
38 676
39 677
40 678
41 679
42
43 680
44
45 681
46 682
47 683
48 684
49 685
50 686
51 687
52
53 688
54
55 689
56 690
57 691
58
59
60 692

28. Kirk D. Educational value and models-based practice in physical education. *Educ Philos Theor*. 2013 Sep 1;45(9):973-86.

29. Corbin CB. Implications of physical literacy for research and practice: A commentary. *Res Q exercise sport*. 2016 Jan 2;87(1):14-27.

30. Miller A, Christensen E, Eather N, Gray S, Sproule J, Keay J, Lubans D. Can physical education and physical activity outcomes be developed simultaneously using a game-centered approach?. *Eur Phys Educ Rev*. 2016 Feb;22(1):113-33.

31. Gray S, Morgan K, Sproule J. Pedagogy for motivation, learning and development in physical education. *Trans Lear Teach Phys Educ*. 2017 Apr 7;7:139.

32. Gray S, Sproule J, Morgan K. Teaching team invasion games and motivational climate. *Eur Phys Edu Rev*. 2009 Feb;15(1):65-89.

33. Carse N. Primary teachers as physical education curriculum change agents. *Eur Phy Educ Rev*. 2015 Aug;21(3):309-24.

34. Bailey R, Armour K, Kirk D, Jess M, Pickup I, Sandford R, Education BP. The educational benefits claimed for physical education and school sport: an academic review. *Res Pap Educ*. 2009 Mar 1;24(1):1-27.

35. Kahneman D. Prospect theory: An analysis of decisions under risk. *Econometrica*. 1979;47:278.

36. SueSee B, Pill S, Edwards K. Reconciling approaches—a game centred approach to sport teaching and Mosston's spectrum of teaching styles. *EJPSS*. 2016;2(4):69-96.

37. Brooks F, Magnusson J. Taking part counts: adolescents' experiences of the transition from inactivity to active participation in school-based physical education. *Health educ. Res* 2006 Dec 1;21(6):872-83.

38. Sun H, Li W, Shen B. Learning in physical education: A self-determination theory perspective. *J Teach Phys Educ*. 2017 Jul 1;36(3):277-91.