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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.**

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**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.**

**Abstract**

Previous studies have identified several key barriers to Physical Education, Physical activity and Sport (PEPAS). However, there is a paucity of qualitative evidence investigating why young people do and do not participate in PA and the relationship between their levels of participation at different stages of life. This study builds on a previous study and aims to investigate the barriers to PEPAS in adolescents at transition stage. The extant literature highlights that instilling regular PA throughout life strongly relies on developing physical literacy through participation in high quality physical education. Despite the understanding of the importance of high quality physical education, there is an over emphasis on the short term outcomes of physical education (PE) sessions which have been noted to overemphasise immediate physical activity rather than focus on educational outcomes important to physical literacy. Anecdotally, the recent Covid 19 Global pandemic and subsequent lockdown has resulted in a digitalisation of PE in schools and a subsequent reliance of PA programmes based on adult fitness classes, which may not necessarily be categorised as PE in its true sense..

Methods: Twenty-four respondents aged 16-19 were divided into five focus groups. Data were analysed verbatim using NVivo following the guidelines by Braun and Clark (2006) on thematic analysis.

Findings: The findings indicated that most respondents equated PE with team sports. Findings suggest that Physical Educators need to acknowledge how past and present experience of PE impacts young people’s future motivation to continue PA beyond school

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

For Preview Only

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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,

differentiating between short term physical activity outcomes and the more holistic aspects of high quality physical education is essential to 'spark change' [6]. Additionally, the recent Covid 19 Global pandemic and subsequent lockdown has resulted in a digitalisation of PE in schools and a subsequent reliance of PA programmes based on adult fitness classes, which may not necessarily be categorised as PE in its true sense [7].

Additionally, over the past twenty years a growing body of evidence has highlighted the need for a curriculum shift away from the traditional PE lesson, which tends to prioritise pupils of a high sporting capability, towards a more inclusive, student centred approach [8-11]. The dominance of a multi games based, skill centred curriculum may tend to prioritise those of white, masculine backgrounds with a high level of motor competence [9,10]. Despite this acknowledgement, it may appear that the understanding of inclusive practice in PE may still be somewhat narrow [9]. Indeed, the revelation that the traditional, multi activity PE curriculum lacks inclusion, equity and depth of learning has been the focus of a growing body of evidence proposing that a more widespread implementation of pedagogical models may have much more to offer young people. As reiterated by Casey and Kirk,( 2021)the development of an innovative models-based practice (MBP) approach to PE holds the potential for multiple —psychomotor, social, affective, and cognitive— health benefits, and has been suggested to increase participation by increasing intrinsic motivation amongst pupils[8,11]. MBP is considered an umbrella term and involves the delivery of the curriculum through a number of models rather than structuring the curriculum around the sport or activity [11].

Traditionally the PE curriculum in the UK usually follows a set structure, beginning with a block of fitness testing and subsequently leading to fitness development lessons, followed by a block of games and aesthetic activities with an emphasis on teacher-directed activities. A similar format follows in a lesson-based context where traditionally games

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3 88 lessons are composed of a warmup, skills based drills followed by a competitive game [12].  
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5 89 The use of fitness testing in modern PE has previously been severely questioned with doubts  
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7 90 raised over the reliability, validity and educational purpose of this (usually compulsory) topic  
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10 91 [13]. Furthermore, Cale and Harris [13] highlighted that the overuse of fitness testing in PE  
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12 92 may not only fail to promote healthy lifestyles and PA but could deter young people from  
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14 93 future participation, where resultant, past negative experiences deter individuals from current  
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17 94 and future participation [14].  
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20 95 Our previous work focussed on a younger cohort of Secondary aged children and  
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22 96 reported that delivery of traditional PE lessons, prioritising sporting ability, can act as a  
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24 97 participation barrier to pupils who consider themselves “non-sporty” [8-14]. Considering  
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26 98 this, it was deemed necessary that we investigate an older cohort at the transition stage of  
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29 99 education-namely those who were around the age of transition between compulsory  
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32 100 schooling and further education/work.  
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34 101 Greater attention might also be given to the role that theory plays in framing some of  
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36 102 the key issues that have been identified in the literature considered above. Here, two inter-  
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39 103 linked factors are analysed in particular: firstly, moves beyond a limited temporal horizon  
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41 104 within current PE that is largely present-focussed, and secondly, a concern with  
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44 105 understanding young peoples’ motivation and the ways in which past and present experience  
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46 106 impacts their future lifestyle choices, with particular reference to PA. These twin concerns  
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48 107 with regard to temporal horizon and motivation can be linked through a consideration of the  
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51 108 concept of agency; for as Emirbayer and Mische (1998) [15] observe, if the complexities of  
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53 109 behaviour change are to be addressed, it is necessary to acknowledge how past and present  
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55 110 experience impact future intentions,. Some such consideration is necessary if one of the  
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58 111 emergent aims of PE is have a positive impact on young peoples’ lifestyle choices regarding  
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60 112 their continuing engagement in PA. This also has far-reaching implications for the ways in

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3 113 which practitioners make changes to the curriculum to have an impact on the lifelong  
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5 114 learning and physical activity of young people [10].  
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8 115 The research study reported upon here sought out the views of young people in the  
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10 116 16–18-year age group, to identify barriers and facilitators at this crucial stage of transition.  
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12 117 One of the insights that emerged from a focus on considering young peoples' views in  
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14 118 conjunction with theory is that the effects of previous PE experiences need to be more  
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16 119 thoroughly understood and acknowledged within a broader pedagogical perspective, so as to  
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18 120 inform future interventions and curriculum design. The present study focuses on  
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20 121 individuals, 16–18 years, who are no longer within the age of compulsory education, a positive  
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22 122 PE experience in a school environment is one of the most influential factors in determining  
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24 123 the sustainability of activities. In the country where the study is set, it is a legal requirement  
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26 124 for PE to be taught as a compulsory subject until S4 (approx. age of 16 years), where schools  
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28 125 must provide at least 2 period per week. However, during the senior curriculum phase, the  
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30 126 decision on PE delivery is based at a school level [16]. Whilst short termism for health  
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32 127 benefits may be important, a positive PE experience can help build on the autonomy,  
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34 128 relatedness and to enable PE to achieve its *raison d'être* of lifelong PA [8,14]. For this reason,  
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36 129 it is viewed important to seek out the views of those who are in the 16–18 years age group to  
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38 130 identify barriers and facilitators at the transition stage. To understand adolescent motivation  
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40 131 the effect of previous PE experiences need to be understood, particularly from a qualitative  
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42 132 perspective to inform future interventions and curriculum design.  
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**Rationale and research questions**

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

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

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

**Methods**

*Study design*

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

*Participants*

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

### ***Focus group topic guide***

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

### ***Procedures***

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

### ***Data analysis***

The research questions were addressed via an inductive thematic analysis, using a bottom up approach as proposed by Braun and Clarke, 2006[21] . A thematic framework was applied to all the data. Inductive, thematic analysis does not primarily rely on existing, pre-determined, theoretical perspectives, but instead gives a formative and guiding role to the data itself, thereby providing a degree of theoretical flexibility. Transcripts were read and reread for data familiarisation and to derive raw data themes; data was organised and imported into NVivo.QSR London.

### **Results**

Analysis of data from the focus groups identified three main themes:

1. Misconceptions surrounding the prioritisation of short term PA levels
2. Previous negative experience of PE at school was seen a barrier to future participation. Sub-themes included:
  - a. The importance of perceived competence
  - b. the content of the curriculum and pupil choice of activities.
3. The importance of self-image.

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

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

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)*

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:

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.*

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.

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.*

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...*

## 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:

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*Sometimes the teachers push you too hard and shout at ye in front of everyone and you get embarrassed that makes you not want to take part. Then you get made fun of if ye are not good at games like football.*  
*(Male, Simon, aged 18).*

*The role of ‘image’<sup>1</sup> and its importance as a barrier and/or facilitator in exercise, PE and PA.*

The role of perceived competence fuelled by self-image and the perception of what other people may think about them is of prime importance in this data. Perception of competency, self-perception and body image appeared to be a main factor in determining previous participation in school PE.

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

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

*I've got really chubby. Lose weight for how I look. I want to look better"*

*(Male, Simon aged 18).*

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

*(Female, Fiona, aged 17)*

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

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

*(Male, Allan, aged 17).*

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

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

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

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

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

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5 313 *Weekends...Depends if you are single. When you are single, you like try and lose*  
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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).*

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

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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  
30 327 *(Male, Alexander, aged 18).*  
31  
32 328 *(I'd exercise) For yourself... no for others. So that other people admire ye (Female,*  
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34 329 *Isla, aged 17).*

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36 331 The circumstances of the transition period between leaving compulsory schooling to  
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38 332 gain further qualifications, possible work and the development of different relationships and  
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40 333 social circumstances also featured heavily in determining PA participation. This is  
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42 334 particularly important as it forms the main part of the data required to investigate the main  
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44 335 research questions in this study.

45 336 *As you begin to leave school your social life takes over. Just going out...it comes to*  
46  
47 337 *weekends you dinny want to be going to college and gym you'd rather go n see friends*  
48  
49 338 *and relax and stuff. Not having enough time now is the main thing.*  
50  
51 339 *(Female, Megan, aged 16).*

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



*I mean, my village, has nothing, there is no gym or sports centre and to be honest I wouldn't really want to go out walking (Female, Andrea, aged 17).*

*They dinny realise they are bullying you, they just think they are pushing you but it's their teaching methods, they think they are motivating you, but they aren't. it just puts me off exercise now. (Female, Lauren, aged 16)*

Curriculum content was also seen as a major barrier to participation, both for PE participation at school, and in future life stages. Many participants felt that their previous PE experiences left them with an attitude that reveals that exercise and PA are negative experiences. The following statement highlights the lack of pupil choice and prescriptive aspects of the curriculum:

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

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

Others felt that they had experienced bullying from their PE teacher and that this had put them off exercise:

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

*(Female, Megan, aged 18)*

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

*(Female, Jane, aged 19)*

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

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

*(Female, Lauren, aged 16).*



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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:

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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).*

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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:

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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, aged17)*  
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.

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

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

Although it could be argued that the use of appropriate, pupil centred approaches and the move away from a skills and drills, multi block approach can increase enjoyment and motivation in both primary and secondary aged children [21-25]. The data in this paper concurs with the previous literature which emphasised that there may be an overreliance on performance related sports taught using “repetitive, uninspiring lessons, and disconnected

skills”, whilst many lessons emphasised questionable practice such as fitness testing which the participants have highlighted.

Interestingly, the data presented here qualitatively highlights that previous negative PE experience was reported to affect future participation in PA in those individuals in the post 16 years old age group. This is a novel finding, and has important implications when considering the role that PE is reported to have in ensuring lifelong PA. Despite this, there remains a lack of evidence pointing us in the direction of remediating those in the 16-18-year-old age group who may be lacking in physical literacy, and therefore, who hold a low level of perceived competence. The issue remains open to debate as clearly PE needs to reinvent itself to adjust to the 21st century. Whether this reinvention is dependent on a change of teaching methods, the addition of more recreational activities in the curriculum content or a combination of these is an area receiving limited attention. What is evident, nevertheless, is that despite a growing body of evidence towards the need for curriculum change and a need for a change in teaching practice, is that some PE teachers are “impervious to change” [5,26]. Kirk (2013) states that although many teachers are aware of the need to ‘renovate’ the curriculum, this would require a great deal of work on the teachers and schools’ behalf. Additionally, resistance to change seems to exist as a legacy from outdated teacher education practices, which also requires reform. In short, some PE teachers have become acculturated [5].

These findings, moreover, also chime with theoretical accounts that draw attention to the significance of memory of previous experience influencing subsequent choice[27,28]. The agency principle orientates individuals to the past, the present and the future, where past experiences can govern the present situation and have an effect on future possibilities. In this respect, current situations of non-participation in PA have been attributed to negative past experiences [22-28] (Biesta et al., 2015; Emirbayer and Mische 1998). This negative experience has been seen by Prusak et al, (2011) as deriving from PE teachers’ ‘resistance to change’, where there is an over emphasis on ‘sports skills and motor competency through team games [15,26]. Current research in the area of alternative teaching approaches, has reflected a change in pupil autonomy, decision making and enhanced enjoyment as a result of a change in teacher behaviour where the emphasis is on self-regulated skills for the learner [21]. Additionally, in proposing a health club approach, Prusak et al[26] emphasised that if teachers were prepared adequately through physical education teacher education (PETE) to become involved in health and lifestyle management programmes, then PE could incorporate a much more individualised, inclusive approach that can address multiple domains of

learning whilst a greater deal of autonomy and self-regulation could be afforded. The perception of low competency in PEPAS has been previously identified in the limited, existing qualitative literature and relies upon the teacher building a high level of autonomy and relatedness to ensure perceived competence [29,30-38].

### **Methodological limitations and strengths**

There are several limitations but also strengths to this study. Firstly, generalisability from focus groups may be limited. Accordingly, the findings of this study may not necessarily extrapolate to a whole population. Nevertheless, although generalisation in focus groups should be treated with caution, tentative inferences maybe appropriate where participants share commonalities to comparison populations, such as those from similar backgrounds and socio-economic strata. Consequently, suggesting that these study findings are likely to be broadly generalisable across similar adolescent populations within Scotland. Additionally, focus groups and the nature of group interactions may compel participants to concur with opinions they do not necessarily hold. Furthermore, bias due to the presence of socially dominant participants, or an overly dominant moderator, may also compromise validity.

Finally, the sampling strategies employed in the present study may be vulnerable to bias. Indeed, as the participants were all volunteers, there may be an inherent self-selection bias, whilst the nature of a focus group design involves a relatively small number of participants. Despite these limitations this study had several strengths. The use of focus groups enables the capture of richly detailed data, while allowing adolescents to articulate their beliefs, concerns and aspirations on health issues [29]. The use of a core set of questions within a moderately structured focus group helps eliminate moderator bias, and minimised monopolisation of the discussion' by individual participants [29]. Additionally, the use of a purposive sampling methodology ensured the sample was representative of the requirements of the study: thereby permitting comparisons between opinions of various schools and surrounding areas.

### **Conclusion**

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

the expense of a concern with acknowledging the influence of young peoples’ past experiences, and the importance of encouraging a projective orientation, that focuses upon future aims and intentions, such as maintaining PA beyond the horizon of school. In this, PE teachers, in common with colleagues in other subject areas, tend to focus on short term outcomes, with less emphasis on the longer-term significance and impact [8]. Thus, traditional PE, through its focus on sports, puts a greater emphasis upon immediate, present goals rather than taking a broader understanding of both agency and purpose. The data from the study reported here, highlights the importance of past and present experience of PE and how this may have a significant impact on future PA participation.

The current study presents novel findings in that it highlights young people’s critique of existing orderings coupled with their call for change, both in the existing content of the curriculum and the way that some teachers deliver this. Previous authors have reported that leisure-based choices in PE are essential to promoting lifelong PA [26]. While curriculum content may be an issue, many of the respondents focussed on the teaching methods used by their PE teachers. The issue of traditional teaching methods in PE and their role in promoting an ethos of lifelong health has recently resulted in an emerging body of evidence in the literature, that argues for a move away from didactic, teacher-led approaches towards more consultative approaches[25,36-38].

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