

# **How can lifelong habits such as physical activity be promoted more effectively? Analysing the post 16 gap via a qualitative analysis**

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## **Abstract**

Physical inactivity remains one of the most important factors contributing to global morbidity and mortality, with inactivity estimated to result in as many as 5 million deaths globally per annum. It is evident that adolescence is an influential time for forging change and promoting lifelong physical activity (PA). It is estimated that 60% of young people will not participate in PA post compulsory education; a phenomenon that has been labelled the 'post-16 gap'. 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 mobilises theory to investigate why young people discontinue participation in exercise, sport and PA, whilst analysing reasons for this post compulsory education decline.

**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 and conclusion:** Several key barriers and facilitators of participation in PA were identified. Previous negative experiences within PE contexts were perceived as a major barrier to continued PA. Respondents thought that PE Teachers focused primarily on physically capable students, leading to feelings of incompetence in others. Most respondents equated PA 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.

## Introduction

Nurturing the life-long physical health of its citizens is a key policy imperative for many countries. Good health habits are understood to be a fundamental prerequisite of healthy communities whilst the cost of prevention, as outlined by Wanless (2004), is diminutive in comparison to those associated with providing health services for an unhealthy population (Calderwood, 2017; Cowley, Kiely and Collins, 2017; Wanless, 2004). However, understanding how various factors interact to influence health promoting behaviours is a complex endeavour. Despite the development of a recent action plan by the World Health Organisation (WHO, 2018), physical inactivity remains one of the most important factors contributing to global morbidity and mortality, with inactivity estimated to result in as many as 5 million deaths globally per annum (Pratt et al., 2019). The evidence base for physical activity in the prevention of non-communicable disease is strong and well documented (Cooper and Hancock, 2011; Hardman and Stensel, 2009). Recent findings from the Active Healthy Kids Global Alliance compared 49 countries from six continents assessing global trends in physical activity. This report concluded that physical inactivity had reached a Global crisis level, with only one country, Slovenia, attaining 80% of all 5-19 year olds meeting the Global Recommendations on Physical Activity for Health, which proposes that children and youth accumulate at least a 60 minutes' average of moderate - to vigorous - intensity of physical activity per day. At the other end of the scale, the recent *Active Healthy Kids* report card showed that Scottish children are among the least active in the world. Further national level analysis ranked Scotland in the poorest category for overall physical activity levels: amongst 11-15 year olds, only 21% of boys and 15% of girls met the international recommendation of a minimum 60 minutes of daily PA of at least moderate intensity (Reilly et al., 2016).

'Adolescence' is a critical time for establishing life-long health habits, such as PA (Pearson, 2009).<sup>1</sup> However, this transition period is characterised both by sharp declines in PA, and by changes in the types of activities in which adolescents participate (Belanger et al., 2009; Bélanger et al., 2015). This decline is particularly prominent between ages 15-16, and has implications for PA participation in later life (Niven et al., 2009; Bélanger et al., 2015).

In the UK an estimated 60% of young people do not participate in structured physical activities post compulsory education: a phenomenon labelled the post 16 gap (Honeybourne et al., 2004). Amongst 11-15 year olds, only 21% of boys and 15% of girls in Scotland met the Scottish, UK, and international recommendation of at least 60 minutes of daily PA of at least moderate intensity (Reilly et al., 2016). The existing literature investigating this area tends to focus on quantitative aspects of this decline, with few qualitative studies conducted that investigate adolescents' views on the factors that turn them away from PA (NICE, 2009).

This paper aims to address this gap in qualitative research that surrounds the decline of physical education, physical activity and sport (PEPAS) in adolescents, and mobilises a range of theories in relation to these empirical findings so as to identify ways of addressing these concerns.

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<sup>1</sup> Adolescence is defined by the World Health Organisation as any person between ages 10-19, although here we are concerned with the educational transition phase of 16-18 (WHO, 2018).

## **Barriers and facilitators**

Previous school-based studies have cited infrastructural issues such as the stigma and cost associated with PE uniforms, inadequate changing facilities and mixed gender classes as barriers to school PE participation in children under 16 years of age (Mitchell et al., 2015; Martins et al., 2015). Here, lack of facilities, poor body image and perception of competence have all featured as perceived barriers to continuing activity participation in both younger and older adolescents (Martins et al., 2015; Gray et al., 2008; MacNamara et al., 2015). More recently, the role of social media platforms and ‘fitness influencers’ on social media platforms, such as Instagram, have been seen as promoting physical exercise as an important tool in creating the ‘perfect’ body image (MacIsaac, 2017). Additionally, the influence of PE teachers, socialising, friends and family have all been cited as important in the promotion of PA sustainability (Allender et al., 2006; Allender et al., 2008).

## **Types of activity that influence sustainability**

Recent literature has identified which types of activities are more likely to promote PA sustainability into adulthood, (Bélanger et al., 2015). Some qualitative studies previously identified that team games dominate PE, with several studies proposing that the curriculum include more individualised activities so as to have a greater ‘carry over’ value into adult life (Fairclough et al., 2002). Conversely, one recent longitudinal study focussed on 12-13 year olds, over a 13-year period, concluded that adult PA levels may be predicted by participation in activities such as running, walking and sports (Bélanger et al., 2015). However, activities such as fitness classes and dance-based activities were not found to be correlated with higher PA levels in adulthood. Previous literature identified that adolescent females, in particular, perceived team sports to be a barrier to PA, as they felt marginalised by the practice of some teachers and associated their putative competence in games with their future inability to participate in activities (Cardinal et al., 2013; Rees et al., 2006; Brunton et al., 2005). A Canadian based qualitative study focussing on a sample of 15-16-year olds, reported that immediate health benefits and an impact on body image were important as an activity facilitator, whereas access to facilities was identified as a barrier to continued participation (Bélanger et al., 2011).

## **The adolescent dip in activity levels**

Emerging literature highlights that the adolescent dip in PA levels is linked to early participation in specific types of activities, which increase the likelihood of participation in the same activity into adulthood (Bélanger et al., 2015). For example, taking part in martial arts from an early age, endurance sports such as running and horse riding, are positively associated with higher adult PA levels (Telama and Yang, 2000; Tammelin et al., 2003; Trudeau et al., 2004). Additionally, adolescents who participated in ball games, jogging, aerobics and bodybuilding at age 15 were more likely to participate in these activities 8 years later (Kjønniksen et al., 2008). Research conducted by Shepherd and Trudeau (2000) and Trudeau et al., (2004) found that adherence to higher PA levels also correlates with an early, positive PE experience at the primary school stage.

Transition based studies in young people have focused primarily on individuals attending university, with very few investigating the reason for the decline from the participants' perspective. Gibson and colleagues (2016) suggested an inverse relationship between increasing anxiety and decreasing PA levels in students during the early phase of their degree (Gibson et al., 2016; Crombie et al., 2009; Koehn et al., 2016). There is, however, a paucity of evidence relating to those who do not attend university (Koehn et al., 2016; Nelson et al., 2008; Nelson et al., 2006).

### *The role of PE*

The school environment is argued to be highly influential in determining physical identity and future participation in PA (Coleman et al., 2008). Furthermore, other research suggests that negative PE and PA experience at school may act as a barrier to future participation (Allender et al., 2006). Primary school age PE is considered a vital pre-requisite in enabling development of physical literacy<sup>2</sup>, often considered necessary for building the skills required for a physically active life beyond school (Giblin et al., 2014b). In the light of this it has been argued that PE, particularly for younger children, should oriented to improving physical competence rather than focusing on their short-term fitness (Giblin et al., 2014a; Giblin et al., 2014b; MacNamara et al., 2015).

The aforementioned decline and lack of sustainability in post-16 PA, suggests that traditional PE programmes in schools appear to be making little progress in building a foundation for lifelong PA (Jess and Collins, 2003). Whilst curriculum content has been the focus of much of the above research, others have proposed replacing traditional PE teaching methods, seen so often in schools, with a more student centred, curriculum models-based approach, which aims to engage every learner (Casey and Goodyear, 2015).

These findings have prompted a noticeable shift in recent literature with regard to the aims of PE and its potential role in optimising the sustainability of PA (Bailey et al., 2009). For example, one proponent of model-based practice in PE, conducted a survey on an adult population in the UK, to quantitatively investigate the effects of previous school experience of PE on current PA levels. Their findings reported that 37% of women and 26% of men rarely enjoyed PE, while 47% reported that PE had not helped them to be more physically active as adults (Goodyear, 2016). There are, however, relatively few qualitative studies that have investigated perceptions of PE based on individuals' past school experience (Goodyear, 2016) notwithstanding the influence this may have on PA participation levels in adulthood. Whilst a short term focus may lead to immediate health benefits, a positive PE experience can have a longer term impact on intrinsic motivation and, therefore, participation levels through its focus on, for example, building capacities for autonomy, relatedness and lifelong PA. In this connection, Lewis (2014) has argued that if there is to be wider participation in PE, teachers will need to provide greater diversity in their choices of activity. Research strongly indicates that a positive PE experience in a school environment is one of the most influential factors in determining the sustainability of activities (Cardinal et al., 2013; Lewis, 2014; Kirk, 2005).

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<sup>2</sup> The International Physical Literacy Association (IPLA) defines physical literacy as motivation, confidence, physical competence knowledge and understanding necessary to engage in physical activities for life (IPLA,2017).

Greater attention might also be given to the role that theory plays in framing some of the key issues that have been identified in the literature considered above. Here, two inter-linked factors are analysed in particular: firstly, moves beyond a limited temporal horizon within current PE that is largely present-focussed, and secondly, a concern with understanding young peoples' motivation and the ways in which past and present experience impacts their future lifestyle choices, with particular reference to PA. These twin concerns with regard to temporal horizon and motivation can be linked through a consideration of the concept of agency; for as Emirbayer and Mische (1998) observe, if the complexities of behaviour change are to be addressed, it is necessary to acknowledge how past and present experience impact future intentions. Some such consideration is necessary if one of the emergent aims of PE is to have a positive impact on young peoples' lifestyle choices in regard to their continuing engagement in PA. This also has far-reaching implications for the ways in which practitioners make changes to the curriculum so as to have an impact on the lifelong learning and physical activity of young people (Biesta et al., 2015).

The research study reported upon here sought out the views of young people in the 16-18 year age group to identify barriers and facilitators at this crucial stage of transition. One of the insights that emerged from a focus on considering young peoples' views in conjunction with theory is that the effects of previous PE experiences need to be more thoroughly understood and acknowledged within a broader pedagogical perspective, so as to inform future interventions and curriculum design.

### **Rationale and research questions**

Historically, research in 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 (Forsyth, 2014). This study is a contribution towards that broader aim through its aims to explore:

1. What are older adolescents' perceptions of PEPAS and health?
2. What are the barriers and facilitators to post 16 PA?
3. What effect does school-based PE have on young people as they leave or prepare to leave school?
4. In conjunction with the empirical findings from this research, how might theory afford new insight into the development of new initiatives to promote young people's engagement in lifelong PA?

The final 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 health research (Martins et al., 2015). In this connection, the use of focus group-based discussions may generate comments that are more critical than those observed in individual one-to-one interviews (e.g., Thomas et al., 2015).

### **Participants**

Twenty-four participants aged 16-18 years (mean age  $17.36 \pm 0.23$ ) 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 (Reilley, 2016), 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 (Braun and Clarke, 2006). 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.

## **Results**

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

1. Previous negative experience of PE at school was seen a barrier to future participation. Sub-themes included:
  - a. the role of PE teachers and how they engage and deliver lessons,
  - b. the content of the curriculum and pupil choice of activities.
2. The role of 'image'<sup>3</sup> and its importance as a barrier and/or facilitator in exercise, PE and PA.
3. Social context and participation and suggestions to improve participation in PA.

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<sup>3</sup> Image here relates to how the adolescent believes they are perceived by themselves and others.

### ***Previous negative experiences of PE***

Most members of the focus groups had some understanding of the definition of PA<sup>4</sup> and its comparison with exercise more generally, although during each session there was a tendency for most participants to associate PA and exercise with competitive sports. Additionally, although many were aware of the benefits and public health messages encouraging PA, there appeared to be some confusion as to what constituted PA and the difference between this and PE. (Thirty percent of the members of each focus group did not appear to understand this difference clearly.) Whilst many of the barriers and facilitators cited by respondents mirrored those described in previous studies involving school children participating in formal PE (Martins et al., 2015), respondents also identified their previous negative experiences of PE as constituting a major barrier to PA participation. This finding - that previous educational experience may contribute to the post 16 gap - is novel. Three quarters of the respondents cited this as one of the main reasons as to why they dislike the idea of exercise participation even after leaving school. The data was consistent with previous findings related to single sex PE classes which found that there was a preference for single sex classes taught by a teacher of the same gender. For 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 this particular theme is dominant within the existing literature (Mitchell et al., 2015; Coleman et al., 2008; NICE, 2007) respondents in this study also identified a wide range of other issues, from pedagogy, competence, curriculum content and opportunities for choice.

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) cannae 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)*

The perceived competence/ability of teachers was highlighted by respondents as a major driver of their future PA participation. According to respondents, 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 which was experienced as demotivating:

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<sup>4</sup> PA is defined by the WHO as any bodily movement produced by skeletal muscles, which requires energy expenditure (WHO,2007).

*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)

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

*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)

Some respondents expressed concern over favouritism, perceiving that some teachers only seemed to spend time teaching those who excelled at games-based PE. This was seen as a form of sexism by some:

*Teachers favoured me cos I was good at sport 'cos a done that fitness cos ae their body shape a mean that does still happen. Teachers still do that.*  
(Female, Angela, aged 19)

*I didn't like the teacher. She didn't like the girls. She didn't do anything and favouritised the boys.*  
(Female, Beth, aged 17)

*One o' the male teachers were very sexist oh you can't do it cos boys are better.* (Female, Angela, aged 19)

Curriculum content was also regarded as a major barrier to participation, both for PE participation at school, and in future life stages. Consequently, many participants felt that their PE experiences left them with a lasting negative attitude towards exercise and PA. In this connection, a lack of pupil choice coupled with prescriptive aspects of the curriculum were identified as having a negative impact:

*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)

One respondent highlighted the difference in curriculum content when comparing what they had received during PE lessons to what their friends had experienced in another school located in a more affluent social area. Other participants saw the content of the curriculum as narrow in regard to choice and availability of activities:

*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)

In contrast, one respondent highlighted that in their school, the pupils were given some choice in lessons, as to what was to be delivered:

*We got a choice. We'd all go into the big hall and get voting on different things like aerobics, volleyball and gymnastics.*  
(Female, Lauren, aged 16)

The experience of having participated in competitive sports was associated with negative memories for some participants. This was evident in both males and females who reiterated the view that competitive sports, taught in a traditional way, has an adverse effect on the majority of older adolescents. Many respondents identified PA with team sports, and consequently these adolescent school leavers identified PA primarily with competitive sport:

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

*I mean just after I left school I couldn't be bothered exercising as I think that PE had sickened me, lots of people made fun of you if you weren't good at games like football... but, I am more active now.*  
(Male, Aaron, aged 19)

PE as a subject at school also gave rise to some negative experiences associated with its environment, especially with regard to changing rooms and the facilities available:

*The teachers push you too much, like timing you in fitness testing, and while the trampolining was good being timetabled last period was bad. You didn't get much time, then there was the mingin<sup>5</sup> changing rooms.*  
(Female, Janey, aged 17)

*We didn't even have hair straighteners.*  
(Female, Simone, aged, 18)

### ***The power of image: its importance as a barrier and/or facilitator in exercise, PE and PA***

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 (Allender et al., 2006). 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 as lassies too. It still happens, girls judge you on how you look and look you up and down.*  
(Female, Mandy, aged 18)

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<sup>5</sup> Minging is colloquial Scottish language for smelly, dirty, and / or ugly.

A dominant theme voiced by respondents related to concerns over image, specifically in relation to body awareness, physical competency and how they were assessed in a public space. Indeed, these appeared to be key factors in determining the level of previous participation in school PE and PA, PA outside the school setting and future involvement in PA and exercise. One of the main reasons given for either wanting to participate in PA or not doing so, was the issue of body weight, how fat 'you feel' and the importance attached to losing 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)*

Self-image, confidence and competence feature as dominant themes that in turn act as barriers to further uptake and continuation of PA, especially at a time when compulsory participation in PE ceases and adolescents make the transition beyond school.

*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)*

The importance of image and being in a relationship features in the following response:

*Weekends...Depends if you are single. When you are single, you like try and lose weight or keep in shape, but once you get a boyfriend it changes. I mean Darren goes to the gym before he comes up every night. I just lie about on my bed waiting on him coming up. Cos, you have a boyfriend you dinnae care. Unless it's coming up to the holidays or that. I then eat hunners of takeaways and junk food n stuff. (Female, Lauren, aged 16)*

The idea of being competent and having confidence in yourself, particularly in relation to the perceptions of peers, came across as one of the main factors in determining past and future PA and exercise. This is highlighted by the following participants:

*Self-confidence is one of my main reasons for not doing much. But in primary (school) they didn't care but towards end o high school and in college they are all watch you and think look at her trainers and pure judging you.  
(Male, Alexander, aged 18)*

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

Whilst the importance of peer support is featured by the next respondent, overall there was a paucity of data supporting the idea of peer support as a facilitator of exercise and PA.

*Although I didnae like the body image when I turned 17 I wouldn't just say aw let's go tae the gym.... I do think it is to do with who your group of friends are.  
(Female, Lisa, aged 18)*

### ***Barriers and facilitators: The influence of social circumstances and environment***

The circumstances of the transition period between leaving compulsory schooling to gain further qualifications, possible work and the development of different relationships and social circumstances also featured heavily in determining levels of PA participation.

*As you begin to leave school your social life takes over. Just going out...it comes to weekends you dinny want to be going to college and gym you'd rather go n see friends and relax and stuff.  
(Female, Megan, aged 16)*

*Not having enough time now is the main thing.  
A come hame fae college and a sit and watch telly all night.... what would make you do something, hmm.  
(Male, Allan, aged 17)*

*Somebody to do it with me. Am a lot less active now...am tired all the time...  
Computers and that don't help. Just end up sitting about  
(Nadia, Female, 18)*

*I used to be quite active up until last year just before a left school...Then a became lazy...  
What sort of things made that happen...Boys, social life, fags n drink (Female, Andrea, aged 17)*

Surprisingly, environmental factors such as availability of facilities and cost of leisure facilities did not seem to act as a major barrier to PA. This could be due to the fact that many of the respondents lived in a suburban area and had facilities nearby. However, those respondents who lived in smaller outlying villages felt that facility availability was a barrier, as highlighted by the following 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)*

### ***Participation, improving PA and PE***

The above data suggests that participation in PA can be curtailed due to concerns around body identity and image coupled with concerns over social acceptance by other adolescents. Previous literature has highlighted the idea that participation in high quality PE lessons aims to promote lifelong PA (Kirk 2013). However, evidence from this study also suggests that if lifelong PA is to be

promoted as desirable, it is important to acknowledge young peoples' past and present experiences in PE. The data assembled here provides evidence that young people are heavily influenced by the educational experience during the school years and that this will also impact their future orientation with regard to PA. The international drive behind health and wellbeing in the curriculum is to holistically prepare young people to be physically active and healthy for the rest of their lives (Kirk,2013; Horrell et al, 2015).

Given the significance that most participants placed on their previous PE experiences, a major theme emerged relating to how they thought PE might in future be improved so as to promote a more positive approach to healthy living. Much of the ensuing discussion focused on gym-based exercise and the type of PA on offer from commercial and local authority-based leisure centres. For example, Martin (Male, aged 18) stated that it would be more beneficial to continue with the type of exercise that the school showcased during a health week experienced in the final year of school and that this type of exercise was the type that should be offered in PE in an attempt to promote PA and exercise to those who are not interested in competitive sport:

*We should have got more health education about yer diet. (in PE) we needed stuff like Zumba, Metafit. Zumba, Like, the stuff that they done at health week. That's more enjoyable, as everybody joins in. It was like ropes, bootcamp stuff we all loved it, but after the instructors went, we ended up doing ping pong and stuff (with the PE teachers).*  
(Male, Martin, aged 18)

Many of the comments related to individually led activities that could still be undertaken in a class format which could be enjoyed by all.

*Circuits, gym Zumba and boxercise are stuff I would have liked even the boys would've like to do it. I know some of the boys would say aw look at that it's a girl's thing, but we had a day of it at school and they all liked it.*  
(Female, Victoria, aged 17)

Some of the dominant themes relating to image and health related exercise were captured in the following conversation:

*We needed (at school) an emphasis on health-related exercise at school. I mean image could stop you taking part, but we need more choices and individual classes. (for me now) it has to be local enough, with good prices as classes can be dear.*  
(Female, Jane, aged 19)

*Definitely, last year we had PSE, and hardly any PE in 6<sup>th</sup> year, they should put it altogether into a fun package.*  
(Male, Mark, aged 18)

## **Discussion**

There is a paucity of qualitative evidence relating to the decline in PEPAS and exercise participation as young people reach the ages of 16-18 years and prepare to leave compulsory schooling. The findings presented here highlight that previous negative experiences of school PE were as a major barrier to continuing PA. Respondents commented that PE teachers often focus primarily on physically capable students, leading others to feel incompetent and marginalised. This is an important

finding as such feelings of physical awkwardness and lack of competency may have a major negative effect on future participation in PA (Giblin, 2014). These findings, moreover, also chime with theoretical accounts that draw attention to the significance of memory of previous experience influencing subsequent choice (Kahneman & Tversky 2000; Pill 2019). 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 (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'. Proposing a health club model, Timkin et al, (2019) argued that PE teachers and future PE teachers be educated in ways that promote the autonomy and relatedness of their pupils; they recommended that teachers move towards alternative curricular and pedagogical models. Similarly, in proposing a health club approach, Prusak et al, (2011) 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. This perception of low competency in PEPAS has been previously identified in the limited, existing qualitative literature (Martins et al., 2015; Brooks and Magnusson, 2007; Gray et al., 2008; MacNamara et al., 2015). A concern with PEPAS was a predominant theme in the study reported here, particularly in relation mixed gender PE classes (Allender et al., 2006). Respondents who commented that they felt incompetent, although affected by previous PE experiences, thought that they would now look at some form of individual activities. This concurs with the findings of Cox et al, (2006) who reported that adolescents felt that they would not be as self-conscious participating in activities if there were beginners 'fitness type' classes available, as this would help them overcome the stigma attached to school PE.

The use of focus groups permitted a detailed insight into young people's perspectives of PEPAS. Consistent with previous studies focussing on school children and PE, the adolescents in this study identified similar environmental factors together with complex infrastructures relating to previous school-based PE experience that acted as barriers to participation. Similarly, previous reviews have highlighted that access to adequate facilities and poor recreational infrastructures were perceived as major barriers to participation particularly in those from a low socio-economic status (SES) (Allender et al., 2006). However, availability of facilities and amenities based in the community did not feature strongly as a barrier in this study, when respondents were commenting on their current circumstances and how it relates to PA levels. This builds on previous findings in the literature highlighting that PA during transition phases is heavily influenced by social networks (MacIssaac et al., 2018). Nevertheless, the development of these interests can be fostered by opportunities arising as a result of positive school experiences of PEPAS and exercise (Coleman et al., 2008; Cox et al., 2006; Martins et al., 2015). The issue of PA decline as a direct result of attending further or higher education was identified as a barrier by several respondents. This may occur not only as a result of gaining independence from school, but as a result of the accumulation of life stressors compounded by anxieties in relation to exams and coursework: all factors which may ultimately impact PA participation (Gibson et al., 2016).

However, the strongest views expressed in this study, relate to the teaching methods experienced during PE lessons, the activities on offer and the fact that many of the respondents believe that this may be a main determinant as to whether or not they continue activities after they leave school. By

way of example, a large majority of the respondents relate PA, and the PE taught in school, to competitive sport. The data highlights that most respondents, often negatively, identified PA with team sports. This perception, coupled with a belief that they were incompetent at sport, is correlated with a higher probability of declining PA participation. These views echo the findings of Sproule et al., (2011) who found that those who disliked games that were taught in a traditional style did so because of what they viewed as their low level of perceived competence and ability at such sports.

Such findings have led some to conclude that there is a pressing need to change aspects of the PE curriculum (e.g., Kirk 201). In giving consideration to the form that such change might take it may be helpful to consider the empirical findings presented here in conjunction with theory that, in foregrounding how sense is made of the data, can help in articulating a new trajectory. In this connection, Emirbayer and Mische (1998) provide a way of linking the respondents' views concerning the influence of past, present experiences of PE to their future orientation to PA through a temporally inflected account of agency. Agency within these terms is understood as a configuration of influences from the past, engagement with the present, which are inextricably linked with orientations towards a future. These three dimensions are characterised as the iterational, the practical–evaluative, and projective dimensions, respectively. In practice, all three dimensions play a role in any situation where agency is exercised. For the participants in this study, the effects of past experiences of PE are sustained over time and, as we have seen, constrain the likelihood of future PA. Such an account of agency not only provides insight into the decisions taken by young people, however; it is also relevant to thinking through the implications in practice of re-designing the PE curriculum so as to better support and promote PA is young peoples' present and future orientations.

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 (Biesta et al, 2015). 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 (Prusak et al., 2011). 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 (Bailey et al., 2009b).

It is clear from the data presented here, that many young people are concerned about image whilst some feel incompetent due to being overweight, and that this makes them self-conscious and, in some cases, intimidated by the school PE environment. As reported above, respondents emphasised that such image based social environments mean that PE classes could present a space where others are

open to judgement by their peers and teachers. Kirk (2013b) highlighted the necessity of a move away from traditional PE lessons towards a pupil centred, pedagogical model approach in order to foster a greater level of intrinsic motivation. This relies on the PE teacher to create a warm supportive environment that addresses issues such as autonomy, competence and relatedness (Deci and Ryan 1985; 2002). The issue of lack of activity choice, poor perceived competence and non-supportive PE teachers all feature in the data presented above. This emphasises a need for change in how PE is structured and delivered in some schools in order to enhance its role in promoting lifelong health and activity (Kirk, 2013b). There is, in short, a need for physical educators to place greater emphasis on teaching strategies that create a motivational climate for learning that is, encouraging, and, therefore increasing perceived competency whilst engaging the learner in a choice of tasks that help to promote lifelong PA.

### *Methodological Strengths and Limitations*

The use of a qualitative based study was deemed necessary to gain an in-depth insight into the barriers and facilitators in regard to engagement in PA, for those at the transition stage of adolescence. The procedure of a purposive sampling methodology ensured a sample representative of the requirements of the study, allowing comparisons between views expressed within various schools. The use of a core set of questions within a moderately structured focus group helped eliminate moderator bias, whilst minimising ‘monopolisation of the discussion’ by participants (Morgan et al., 1998).

### **Conclusion**

Young peoples’ physical inactivity is now recognised as a significant global concern given its established links to incidences of morbidity and mortality. This study contributes to literature that aims to address this crisis through its empirical focus on the views of young people and its theoretical reflections on new ways forward the light of this. Findings suggest that PE as a subject has the potentiality to either provide a remedy for this situation, or a barrier that further compounds young peoples’ aversion to PA. In this connection, findings presented here suggest that there continues to be an overemphasis on a ‘gifted’ sportsperson model within the practice of PE. This, in turn, impacts negatively upon the broader student body, creating barriers to young peoples’ further engagement in PA. More specifically:

1. Evidence is presented that demonstrates how past and present experience of PE impacts young people’s motivation to continue PA beyond school. In the light of this it is desirable that PE practitioners acknowledge broader temporal horizons in the design of curricula.
2. Theory has a role to play in making sense of factors that impact young peoples’ motivation and how these inter-relate. Here, an acknowledgement of the theoretical concept of agency was drawn upon so as to address how past and present experience impact future intentions. Such theoretical reflection has an important role to play in the creation of a motivational climate that promotes sustainable PA.
3. Provision of PE for all pupils above 4<sup>th</sup> year in secondary school is desirable; this should have an element of autonomy, making it attractive in terms of both content and delivery.
4. Additionally, a multi-dimensional approach for encouraging pupil engagement within school PE is recommended: this should involve advocating more ‘choice’ during school PE with greater diversity of activities and, the implementation of a pedagogical model-based approach to PE teaching across all phases, as outlined by Casey (2014).
5. Further exploratory initiatives should be focussed on increasing the attractiveness of mandatory PE, embracing choice whilst ensuring commitment to an educational rationale for PE.

Crucially, the messages emanating from this study should not be interpreted as being against competitive games. Instead, an educationally informed approach to teaching games is recommended (Gray et al., 2017). In particular, the use of contemporary models-based teaching with a focus on student-centred PE strategies is suggested as a means of promoting participation and working beyond the existing barriers to participation in PE identified in this research.

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John I'anson lectures on the Initial Teacher Education (ITE) programme within the Faculty of Social Sciences at Stirling. Having previously acted as the director of ITE. John's research to date research to date has both an empirical and theoretical orientation and I draw upon a variety anthropological and post-structuralist writers.

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