Children's perceptions of factors that influence PE enjoyment: A qualitative investigation

Abstract

Background. Physical education (PE) is a key setting for children to engage in health-enhancing physical activity (PA). Factors influencing PE enjoyment in secondary schools are well researched. Less is known, however, about the factors children in elementary schools perceive to be important in promoting enjoyment, and how the current PE delivery framework in UK primary schools (combining specialist external coaches and generalist teachers) impacts on children's motivational experiences. According to self-determination theory (SDT), enjoyment of activities is an intrinsic motivator for sustained engagement. Understanding children's perceptions of PE is therefore critical if PE instructors are to increase enjoyment and the promotion of PA within and beyond PE.

Purpose. To investigate children's perceptions of factors that influence PE enjoyment, and interpret findings in the context of SDT and the promotion of autonomous motivation.

Participants. Primary school pupils recruited from a cluster of four schools within a socio-economically deprived area of a large city in the North-West of England.

Data collection and analysis. Eight focus groups were conducted with 47 children (23 boys) aged 7-11. Mixed gender focus groups included 4-6 children clustered by school years 3-4 (ages 7-9 years) and 5-6 (ages 9-11 years). Children were asked about their PE experiences and factors that influenced their perceived PE enjoyment. Transcripts were transcribed verbatim and analysed thematically using NVivo10 analysis software.

Findings. Factors reported to influence children's perceived PE enjoyment included 1) individual preferences, 2) peer behaviour, 3) instructor behaviour. Findings were interpreted in

relation to SDT, and recommendations are given to help instructors and schools create a PE environment that enhances children's enjoyment of PE.

***Conclusion*s.** PE instructors and peers are important in creating an environment that supports children's psychological needs for autonomy, competence and relatedness, which influence PE enjoyment. To consistently provide children with enjoyable PE lessons, primary schools are advised to support the ongoing development of generalist teachers and facilitate better working relationships between generalist teachers and specialist coaches. SDT can be used by instructors to guide practice that enhances children's enjoyment of PE.

Keywords

Motivation, Physical Activity, School, Qualitative, Self-determination theory

Introduction

Physical activity (PA) is positively associated with physical, psychological and social health in children (Füssenich et al. 2015; Janssen and LeBlanc 2010; Parfitt, Pavey, and Rowlands 2009). In recognition of these benefits, United Kingdom (UK) guidelines suggest children and youth aged 5-18 years should achieve at least 60 minutes of moderate-to-vigorous intensity PA (MVPA) daily (Department of Health 2011). Indeed, only 23% of boys and 20% of girls aged 5-15 years in England meet this guideline (Health Survey for England 2016). Consequently, primary schools have been identified as a target setting to promote children's PA, with physical education (PE) a key opportunity for children to accrue MVPA (Fairclough and Stratton 2005).

To increase children's school-based PA levels, the UK government recently introduced premium funding to improve the provision of PE and sport (Department of Education 2015). This is supported by evidence that generalist primary school teachers lack competence and subject knowledge to deliver PE (Sloan 2010; Domville et al. 2018). The increased funding has led to an upsurge in privatised specialist coaching companies delivering or co-delivering primary school PE with existing generalist teachers (Jones and Green 2015), however, the impact of this delivery approach on children's PE experiences are unknown. Coaches, while having coaching

qualifications, are not trained educators and therefore may lack basic pedagogical skills needed to motivate and encourage student learning and engagement in lessons (Griggs 2010). Thus, it is important to understand how current delivery approaches in UK primary schools influence pupil enjoyment for PE.

One theoretical approach that has increased in popularity in primary school PE literature is Self-Determination Theory (SDT; Ryan and Deci 2000). SDT proposes a continuum through which motivation varies in quality from 'controlled' to 'autonomous' forms (Deci and Ryan 2008). Controlled motivation is characterised by either an external pressure (e.g. punishment, reward) or an internal pressure (e.g. guilt, pride) to engage in an activity (Deci and Ryan 2008). Within a PE setting, controlled motivation can lead to negative feelings such as boredom and lack of effort (Karagiannidis et al. 2015; Taylor et al. 2010). Autonomous motivation however is characterised by volitional engagement and a feeling that participation in PE is of the student's own choice and willing. Autonomous motivation is associated with improved psychological well-being, interest, persistence and long-term behavioural engagement (Ryan and Deci 2000) and has been associated with increased enjoyment of PE and increased PA outside of school (Jaakkola et al. 2017; Karagiannidis et al. 2015).

The most internalised form of autonomous motivation is intrinsic motivation, characterised by engagement in an activity for its inherent satisfactions (Ryan and Deci 2000). Enjoyment is a central component of intrinsic motivation and relates to feelings of fun, liking and pleasure (Scanlan and Simons 1992). While more value-based forms of autonomous motivation are specified within SDT (e.g. identified regulation which focusses on achievement of a personally valued outcome), intrinsic motivation may hold the most relevance for children (Sebire et al. 2013), whose motivation between the ages of 7 and 11 years tends to focus on fun and enjoyment (Kirk, 2005). Higher levels of PE enjoyment are associated with long lasting PE participation and increased habitual PA outside of school, whereas limited enjoyment in PE is associated with low effort, boredom and lack of perceived competence, especially in girls (Cairney et al. 2012; Jaakkola et al. 2017; Leptokaridou, Vlachopoulos, and Papaioannou 2015). Early positive PE experiences therefore appear vital if children are to benefit from a physically active lifestyle.

Applying SDT to investigate the development of children's PE motivation is valuable, as the psychological conditions underpinning motivation are specified (Sebire et al. 2013). SDT

suggests three basic psychological needs are important for the development/maintenance of intrinsic motivation, namely *competence* (perceived ability to carry out a task effectively), *autonomy* (perception that behaviour is self-determined) and *relatedness* (perceived social connections with peers and teacher) (Cox, Duncheon, and McDavid 2009; Ryan and Deci 2000). These psychological conditions are influenced by an individual's social environment, including a child's teacher and peers, with student-teacher interactions shown to support and undermine student motivation (Cox, Duncheon, and McDavid 2009). Several teaching strategies are available to support autonomy (e.g. offering meaningful choice, nurturing self-interest and exploration, minimising controlling language [Reeve 2009]) competence (e.g. offering structure, tailored support and feedback, communicating clear guidelines and expectations [Sierens et al. 2009]) and relatedness (e.g. energetic and eager delivery, listening to children, coming from the child's perspective [Haerens et al. 2013]). Teaching styles reminiscent of a disengaged, controlling and chaotic environment however are believed to typically thwart a student's basic needs, which can lead to an undermining of motivation and learning (Ryan and Deci 2000).

A growing body of quantitative research shows PE climates that are supportive of student's basic psychological needs are associated with greater enjoyment and more autonomously regulated behaviour (Haerens et al. 2015; Hastie, Rudisill, and Wadsworth 2012; Karagiannidis et al. 2015; Sun, Li, and Shen 2017). Studies that have used elementary populations are however less numerous. Furthermore, even less is known about the factors children perceive to be important in promoting enjoyment, and how the current PE delivery framework in UK primary schools (combining specialist external coaches and generalist teachers) impacts on children's motivational experiences. Such open questions are not easily addressed through quantitative methodologies, and require qualitative approaches that allow for rich and context-specific investigation of the phenomenon of interest (Krueger and Casey 2009). For the first time, this study employed a qualitative approach to investigate how children themselves perceive their PE environment and factors that influence their enjoyment within the current PE delivery framework in UK primary schools. The study was a formative phase of a larger programme of research aimed at developing an SDT-informed school-based PA intervention. As such, an aim of the current study was to explore the extent to which children's own perceptions aligned with current SDT literature and to gather insights from children themselves to inform future delivery of intervention components.

Methods

Study design

Participants and setting

Participants were recruited from a cluster of four primary schools within a socio-economically deprived area of a large city in the North-West of England. Participants were recruited for the study due to each school's interest in taking part in a new school-based PA intervention. Two schools held multi-academy trust status (i.e. self-governed schools; schools 2 and 4), and two schools were local authority run (school 1 and 3). After obtaining written informed gatekeeper consent, all children from years 3-6 (aged 7-11 years) were invited to participate in the study via a verbal presentation at the school by the first author. Sixty children returned written informed child assent and parent/guardian consent forms. We planned to conduct eight focus groups (one with year 3-4 pupils (age 7-9 years) and one with year 5-6 pupils (age 9-11 years) in each school), each with a maximum of 6 children, as per recommendations of Morgan et al. (2002). Therefore, a random sampling method (stratified by school years) was used to select 48 children from the interested 60. Resultantly, eight mixed-gender focus groups were conducted with 47 children (23 boys) aged 7-11 years (one child was not present on the day of the focus group). The study adhered to the consolidated criteria for reporting qualitative research (COREQ) checklist (Tong, Sainsbury, and Craig 2007) ensuring transparent reporting of key study components. Ethical approval was obtained from the institutional research ethics committee.

Focus groups

Focus groups lasted between 30 and 45 minutes, ensuring children remained engaged with the discussion topics (Gibson 2007). Focus groups were conducted in a quiet room with only the first author (male moderator, trained in qualitative methods) and children present. School premises were chosen for convenience and to provide a familiar location to reduce child anxieties (Kennedy, Kools, and Krueger 2001). At the start of the focus group, the moderator introduced himself and provided name badges for the children. Throughout, the moderator tried

to display important characteristics such as patience, warmth, respect and active listening. Autonomous engagement was encouraged by offering children choices (e.g. choosing to sit on chairs or the floor) and providing a supportive relationship and opportunities where children could voice their needs and opinions (Shier 2001). Children were positioned around the moderator in a circular position to project a non-authoritarian climate (Gibson 2007). Once the children were seated, the moderator read aloud ground rules to set boundaries and establish expectations. This information covered the moderator's role, the study aim, confidentiality, safeguarding, and how the group would operate (Morgan et al. 2002; Gibson 2007). In an attempt to reduce the power imbalance that can arise when an adult facilitates a children's focus group, it was made clear the moderator was not a teacher, there were no right, or wrong answers and the children were free to express their own opinions (Morgan et al. 2002). The moderator then facilitated an ice-breaker activity, with each child saying their name, age and favourite sport/PA into the Dictaphone, before listening to their answers. Throughout the focus groups, the moderator made efforts to involve quieter group members and ensure all participants were encouraged to express their opinions, even if these differed from peers (Morgan et al. 2002).

Focus groups were semi-structured and focussed on children's PE experiences and perceptions of factors that influence PE enjoyment. Focus group schedules were pilot tested with LG and PW before the final agreement on questions were reached. The focus group schedule (appended as supplementary file) included questions of 'What do you like and what do you dislike about PE?', 'What would make school PE more fun?', 'What are your thoughts of your school PE teachers/specialist coaches?', and, 'How do your PE teachers/specialist coaches make you feel during PE?' To help children describe their feelings and emotions, they could select from a range of paper-based emoticons (pictorial representations of facial expressions; e.g. bored, happy). Subsequent probing questions asked why they felt that way. Emoticons helped children's experiences remain the centre of the research process (Hyvönen et al. 2014), promoted enjoyment, and gave each child the opportunity to express their opinions (Hill, Layboum, and Borland 1996).

Data analysis and representation

Focus group data was transcribed verbatim and each transcript read several times by the first author. Staying close to the data was an important way of ensuring that data interpretation, where possible, was undertaken through the eyes of the child, rather than researcher (Janesick 1994). Transcripts were imported into NVivo10 qualitative analysis software and analysed by the first author using the principles of thematic analysis (Braun and Clarke 2006). Thematic analysis was chosen as the preferred analytical technique as the analysis process allows the researcher to identify, analyse and report patterns (themes) within a particular data set (Braun and Clarke 2006). Whilst we were interested in exploring the extent to which children's perceptions mapped onto SDT constructs, the primary objective was to extract the factors that children themselves perceived to be important in influencing enjoyment. As such, an inductive approach to analysis was taken to ensure perceptions of factors that influence PE enjoyment, that did not readily fit the SDT framework were not missed. This began by segmenting the data and coding it to allow specific codes and categories to emerge. The assigning of specific quotes, conversations and paragraphs were then further analysed to allow broader themes to emerge from the data to best encapsulate participants' meanings. This process, known as open coding, is considered to enhance credibility when analysing semi-structured data collection techniques (Morse 2015). Regular meetings between all authors took place to discuss emerging codes and refine codes as appropriate until consensus was reached. The emergent themes were then reviewed for their relevance to SDT and interpreted in relation to existing academic literature.

Results

Three themes emerged as influential on children's enjoyment of PE: 1) individual preferences, 2) peer behaviour and, 3) instructor behaviour. The themes include factors that facilitate and negate children's PE enjoyment. Each theme will be discussed in turn, with illustrative quotes to support the narrative. For quotes that do not compare generalist teachers and specialist coaches, the term 'instructors' is used. Participants were anonymized and pseudonyms are given throughout.

Individual preferences

While most children were positive about participating in PE, some expressed a desire to do PE more regularly *('I think we should do it more often'* – Sarah, School 1, Year5/6) and for longer *('They don't let us go out for long enough'* – Edward, School 4, Year3/4). Children believed PE would be more enjoyable if it was tailored to their individual preferences.

The majority of children were interested in a variety of sports/activities, but perceived PE to provide few of these. Consequently, children wanted more choice in PE activities, and to do more of the PE activities they enjoyed.

> *The children should get a bit more choice of what they're doing, and like we shouldn't just have to do like the same things every week.* (Ethan, School 3, Year 5/6)

> *Because we do one half term of one sport, and then another half term of a different sport, and to be honest, I only like a couple of sports, and we don't really get to do them very much.* (John, School 1, Year 3/4)

Preferences for sports were particularly important for the children, as many children expressed feelings of boredom when they took part in activities that they personally did not enjoy.

> *It depends what the sport is, say if it's like football or rounders, or like netball or basketball, its things I enjoy. But if it's like tennis or things I don't like, so it's boring.* (Anna, School 4, Year 5/6)

Accordingly, some children wanted to vote on what sports/activities they did in PE.

Charlotte *'I reckon we could get to vote for which sport we do, and the* [instructors] *still get to choose every sport, and then we vote, and which one has the most votes we get to do.'*

Tommy *'Yes, and you don't get to choose what you're doing.'*

Danny *'Like Charlotte said, we would vote on what sport we should do, because I think it's like everyone's opinion counts, saying what they want to do, not just the* [instructors']*.'*

(School 4, Year 5/6)

Through a voting system, children believed sports/activities that held inherent interest should be provided more regularly to increase enjoyment and engagement. A link between choice and enjoyment was further evidenced within a pupil's suggestion of a 'freestyle week'.

> *We could go on the field and do whatever we want, and get skipping ropes on it, and have hula hoops, and bats and balls, and all them. That would just be really, really fun if we could have a freestyle week.* (Sarah, School 2, Year 3/4)

Peer behaviour

Arguments between peers, perceived unfair teams and pupil disengagement often reduced children's PE enjoyment through perceptions of an undesirable learning environment. This was especially prevalent when instructors had to stop lessons to re-explain rules or re-engage pupils.

> *I feel bored because most of the time we have to stop doing the lesson because either the two boys in my class who are dead naughty and always arguing…and then we have to stop the games while the* [instructor] *goes to sort them out…* [and] *we have to wait there for five minutes sometimes, and it's our PE time.* (Fred, School 4, Year 5/6)

> *Sometimes people are listening, and then you get other people that just think about themselves and they don't think about the team, and they never listen, so then like say someone who's like talking to someone,* [the instructor] *would go, "Oh, everyone, I'll tell you again, and I'll tell you again", and it just gets really boring, because we've listened, but they haven't.* (Maisy, School 2, Year 5/6)

Peer-to-peer interactions also influenced PE enjoyment, with one child highlighting how the presence and absence of peer support can affect their feelings and PE motivation.

> *People always shout at you, like not for doing it right, and then people on my team,* [they say] *"Oh, come on. Why are you out?" and things like that…it's like they always hit it* [the ball], *and you never do, so like you feel a bit, you feel as if you've let your team down… But like when you've got a positive team, and like they're really nice, they'll keep cheering you on, and you'll keep making you do more, like to believe in yourself.* (Gina, School 2, Year 5/6)

As well as affecting children's feelings during PE, negative peer comments were thought to deter some children from future PE participation.

> *I think some people don't want to do PE because some people* [other children] *might have said something to them about they're not very good at it, and so it might put them down a bit, so that's why they don't want to do it.* (Julie, School 4, Year 5/6)

Instructor behaviour

Teacher presence

Children noted they liked it when their teachers were involved in PE, since it gave the impression they cared.

Billy	*'Because everyone then learns things, and like everyone can show people how to do things, and like if you get stuck, the teachers can help you, and like pair up with you and do something.'*
Researcher	*'Yes, that's a great point.'*
Gem	*'It shows us that they actually care about our PE.'*
Researcher	*'Your learning and your PE. Great.'*
Ethan	*'And it also shows that they do want us to stay healthy and fit.'*

(School 3, Year 5/6)

Despite the perceived benefits of teachers being involved in PE, children described how this was rarely the case and when teachers were involved, they showed little interest.

Fin	*'Like our teacher doesn't play, and he has a whistle and stands to the side.'*
Lucy	*'And they just go off. The teachers just go off, and they won't watch you.'*
Billy	*'Sometimes teachers just like stay at the side, tell you what to do.'*

(School 3, Year 5/6)

Tailoring to children's abilities

Children highlighted the role of the instructor in encouraging children to persist with activities, try new skills and build confidence.

> *Well, it makes you feel comfortable because you know that if you get something wrong, they're* [instructor] *just going to help you and try again, and they'll tell you to try again, and then eventually when you get it, they'll say that we've made progress and still help us build up the confidence.* (Sarah, School 1, Year 5/6)

Children however perceived a difference in the ability of the teachers and the specialist coaches to progress skills to a level that challenged their abilities. This was particularly the case in areas such as gymnastics and dance, where teachers were perceived to repeat what the specialist coaches had already taught.

> *Like when you do gymnastics…when like the* [specialist] *coach, she sees what you can do she makes it that bit harder. Cos like I go to this dance school, and like the teacher* [school teacher] *doesn't make it that hard.* (Elizabeth, School 3, Year 3/4)

> *Specialist coaches, they're teaching us things that we don't know, but then they teach us to show us. But then after the* [specialist] *coaches have gone…the teachers are teaching us the things that the specialist coaches have already taught us.* (Tom, School 4, Year 3/4)

On the flip side, some children described instances in which teachers asked children to do activities that were too difficult, leading to limited enjoyment and lack of engagement.

> *Sometimes she* [teacher] *makes us do more like a bit harder physical stuff, and sometimes not everyone likes to do it, so a lot of people get grumpy and things. And they start like not wanting to join in, and they start saying like they feel ill, just so they can get out of it.* (Gina, School 2, Year 5/6)

As a result, children spoke about their preference to be taught by specialist coaches who were perceived better equipped to teach PE.

They're better, the specialist coaches, they're better than the teachers, the class teachers. The class teachers are supposed to teach you literacy, while the specialist coaches, they're supposed to teach sports. (Edward, School 4, Year 3/4)

Relationships with specialist coaches

Whilst children felt some interpersonal relationships with specialist coaches were good, others were poorly developed (e.g. not knowing names, or being unsupportive), which appeared to influence enjoyment.

I think some of the [specialist coaches] *are good because they encouraged us, but then we've had other* [specialist coaches]*, and they sometimes put us down a bit, saying, "You can do better", but they said it in a mean way. They didn't say it in a supportive way.* (Sandra, School 4, Year 5/6)

Because they [specialist coaches] just go like, "You", or "You in the red bib" or like, "Number Seven". Like learn my name. I don't like getting called number seven or you in the red bib. (Amy, School 1, Year 5/6)

Children did however speak of positive interactions with specialist coaches, and perceived PE to be more enjoyable when coaches were understanding, showed children respect, and were able to display positive personality traits (e.g., the ability to have a laugh and a joke).

If you accidentally did something, they wouldn't sit you out. They'd just start laughing and saying, "It's all right. Just remember to do that". (Jack, School 1, Year 5/6)

I think our lacrosse teacher was really fun and funny, and because he was from America, most of the girls started saying, "Please say hamburger", and things like that, so he used to say it, and we always used to laugh at him saying it. (Emma, School 3, Year 3/4)

Discussion

To the best of our knowledge this is the first study to qualitatively investigate children's perceptions of factors that influence PE enjoyment, interpreted from a SDT perspective to inform psychological need support recommendations. Children's perceived enjoyment of PE appeared to be influenced by individual preferences, peer behaviour, and instructor behaviour. The factors

reported as influential on children's enjoyment complement existing SDT research in PE (Cox, Duncheon, and McDavid 2009; Haerens et al. 2013; Xiang, Gao, and Mcbride 2011) and provide insight in to the ways in which the psychological needs may play a role in PE environments. The following section discusses the study findings in relation to SDT and the ways in which psychological needs for autonomy, competence and relatedness may increase students' PE enjoyment.

The children in this study expressed a desire for a greater choice of activities within PE, as not all children enjoy the same things. It has been shown elsewhere that meaningful choice is an important tenant in the development of pupils' autonomous motivation for PE (Xiang, Gao, and Mcbride 2011; Ntoumanis and Standage 2009). Our qualitative data provides an insight into the mechanisms through which this increase in autonomous motivation may occur. For choice to be meaningful, choices should align with and reflect pupils goals, interests and values (Assor, Kaplan, and Roth 2002). While there are different ways instructors can offer meaningful choice (Xiang, Gao, and Mcbride 2011), children in our study suggested procedural choice (e.g. asking pupils which activities they would like to engage in) was important for increasing PE enjoyment. Such procedural choice was linked to an increased sense of autonomy, through giving children a feeling that "everyone's opinion counts" and that they were being listened to. There were also examples however where lack of choice (i.e. being "made" to do activities that were too difficult) diminished children's sense of competence, which in turn reduced their enjoyment and engagement with PE. Perceived competence is thought to be closely related to the enjoyment element of intrinsic motivation (Reeve 1989) and our data supports this notion. Children noted that teachers in particular (compared with specialist coaches) struggled to tailor activities appropriately to children's ability, which led to boredom (if too easy) or disengagement (if too difficult). The ability to get to know children's abilities, listen to their needs, and tailor activities accordingly is also important in enhancing children's sense of relatedness (Reeve and Halusic 2009) and thus an inability to align sessions with children's needs may have a poor effect on their relatedness. Whilst choice is often associated with the basic psychological need of autonomy (Ryan and Deci 2000) our qualitative data suggests choice may also be important for improving children's sense of competence and relatedness in PE.

Within the UK, elementary school teachers are required to achieve standardised learning objectives as part of the national PE curriculum. It is important to note that giving children choice in the activities they do need not compromise these learning objectives. Indeed, children in our study appeared cognisant of the requirements on teachers to deliver certain activities, in suggesting a process of "guided choice", such that teachers allow children to "vote" for options from a pre-defined programme, thus voicing opinions and providing input into PE lessons, key components of autonomy support (Assor, Kaplan, and Roth 2002). Children seemed however to lack confidence in their teachers' competence to effectively deliver PE, which in turn impacted negatively on the children's sense of competence and enjoyment (through lack of tailored progression and feedback, thus children did not feel optimally challenged). It is possible also that children sensed the teachers' own lack of perceived competence and knowledge (Sloan 2010; Domville et al. 2018) which in turn led them to de-value the teachers' attempts to deliver a structured learning environment. A well structured environment is believed to be fundamental in the development of children's perceived competence (Ryan and Deci 2000), and involves clearly framing learning activities, integrating activates that are of optimal challenge and providing clear guidance and feedback (Skinner, Kindermann, and Furrer 2009; Skinner and Belmont 1993). There was little evidence in our findings to suggest generalist teachers were achieving this aim, which ultimately impacted (negatively) on children's enjoyment of PE. Such findings are worrying given many generalist teachers are responsible for delivering PE-specific skills in primary schools and developing child competencies that prepare children for, and promote, life-long engagement in health-enhancing PA (Ntoumanis and Standage 2009). Accordingly, improving teacher competence and motivation for PE delivery could not only support children's short-term learning but could improve children's perceived competence and autonomous motivation for PA in the longer term.

Similar to previous investigations (Cox, Duncheon, and McDavid 2009), children in this study suggested instructor behaviour can impact children's feelings of relatedness, and consequently their PE enjoyment. Children described use of controlling language from specialist coaches (e.g. saying things "in a mean way" or shouting "you in the red bib!"), denoting a poor sense of relatedness that impacted negatively on their PE enjoyment. Conversely, children spoke of teachers showing they "care" through taking an active role in sessions, and suggested specialist coaches who were "fun" and showed "a sense of humour" created a more enjoyable PE

environment relating to the provision of autonomy support as gaining an interest in children is also a component of autonomy support. While relatedness is thought to have a more distal role in the development of autonomous motivation than autonomy and competence (Ryan and Deci 2000), individuals are more likely to internalise values and skills in a well-supported relatedness context (Ryan et al. 2009) and positive pupil-instructor connections are deemed essential for child enjoyment and engagement in PE (Haerens et al. 2013). Use of controlling language by social agents (i.e., parents, teachers and coaches) has been shown to undermine motivation and is associated with need frustration, leading to negative cognitive, affective and behavioural outcomes (Ntoumanis et al. 2017). Researchers have suggested training teachers and/or coaches to communicate with students in more need-supportive style and found some positive results related to greater student satisfaction and enjoyment of lessons, as well as increased teacher motivation for PE delivery (Cheon, Reeve, and Moon 2012; Reeve and Cheon 2014). While various communication techniques have been suggested to help increase need supportive communication, a relatively simple communication technique such as using children's first names (which was highlighted as important by the children in our study) has been shown to increase autonomous motivation and children's perceived connection with instructors (Vidourek et al. 2011). Evidence from this study highlights how students notice the use of controlling language and respond negatively toward it, thereby supporting suggestions that controlling language should be minimised in the PE setting to increase lesson enjoyment.

Koekoek and Knoppers (2015) suggest the PE environment is unique, with students consistently negotiating their abilities and preferences to work alongside peers and friends through challenges inside and outside their comfort zone. Children in our study perceived the PE environment (created by the instructor) to allow negative peer behaviour to impact (negatively) on their PE enjoyment. For example, children expressed frustrations related to the way teams were picked (frustrating the needs for relatedness and competence if criticised by other team members), or the way the class was disciplined (frustrating the need for autonomy, in having to "pay the price" for others' misbehaviour; and frustrating the need for competence, in wasting PE time that could be spent on skill development). Instructors are in a position of power to prevent and manage poor behaviour, plan opportunities for children to build social connectedness with peers, and, use knowledge of peer relationships to guide decisions important for children, such as team allocation (Standage, Duda, and Ntoumanis 2005). Accordingly, instructors must recognise

their role in creating a positive PE environment that supports children's psychological needs for autonomy, competence and relatedness and fosters PE enjoyment.

In the present study, various situations were described whereby teachers had limited involvement in the lessons, or watched from the side, telling pupils "what to do", which is reminiscent of controlling techniques and may thwart a child's need for autonomy, competence and relatedness. It appears vital therefore for generalist primary teachers to receive more appropriate and sufficient training for PE delivery before working in schools. More specifically, it would benefit children and teachers learning if more robust working relationships were developed, whereby two-way knowledge transfer supports teachers and specialist coaches to develop their competence and confidence to deliver PE. This may promote greater interaction between teachers and coaches in PE lessons and co-delivery of PE, which may reduce child frustrations associated with uninvolved instructors and facilitate their enjoyment and learning in PE.

Strengths and limitations

To our knowledge, this is the first qualitative paper to explore children's perceptions of factors influencing their PE enjoyment, with a unique insight into perceptions of PE delivery by generalist teachers and specialist coaches. Further, this is the first study to interpret these influences from a SDT perspective. The application of focus groups across different age groups and schools allowed for a rich understanding of how instructors and peers impact children's perceived PE enjoyment, and how their behaviours can be interpreted in the context of psychological needs support. The findings do not however allow conclusions to be drawn on the mechanisms through which the identified factors influenced perceived enjoyment, as questions did not specifically address psychological needs satisfaction or motivational orientations of the children. Further research is needed to elucidate the impact of PE experiences on children's satisfaction of autonomy, competence and relatedness and the quality of motivation that results. While the authors felt data saturation was reached, caution is warranted before generalising the study findings to schools outside of low-socioeconomic areas in the North-West of England.

Conclusion and recommendations

Taking a SDT perspective, this study investigated children's perceptions of factors influencing their PE enjoyment. Findings suggest both instructor and peer behaviours influence children's perceived PE enjoyment. In the context of SDT, children's views indicate the importance of psychological need support to enhance their effort, persistence, enjoyment and autonomous motivation to engage in PE. In particular, our data evidenced the importance of offering meaningful choice to increase children's lesson enjoyment. While meaningful choice is often associated with autonomy support, limited choice also appeared to impact children's perceived competence (i.e., when activities provided where to hard or to easy) and thus reduce perceived relatedness (i.e., when instructors did not take not listen to children/tailor activities accordingly to meet their needs). Furthermore, the limited perceived competence of instructors appeared to impact children's perceived enjoyment of lessons, often when instructors were not able to appropriately support children's skill progression or structure the environment in motivationally adaptive ways. Accordingly, given the current climate of PE in the UK, where a dual-delivery responsibility is shared between coaches and teachers, instructors should try to ensure that working relationships are robust to promote child competence for engagement and teacher competence for delivery. As a final note, the use of controlling language by instructors was noticed by children and was largely perceived to negate their PE enjoyment, as was the perceived lack of interest of some instructors toward getting to know the children (i.e., their names). Fundamentally, the present investigation provides a unique insight from the perspectives of children, highlighting the importance of instructors to be aware of the environment they create and the impact this has on peer-to-peer interactions & relatedness, competence, autonomy. Collectively awareness of these actions may help enhance children's perceived enjoyment and engagement with PE and support the development of children's autonomous motivation for PA in the longer-term.

Summary for practitioners

PE instructors can help support a child's enjoyment and engagement in PE by providing a positive learning environment, guided by an appropriate pedagogical approach. One such approach is provided through a need-supportive environment, as specified in SDT. Pragmatically, PE instructors could (a) offer a wide range of involvement choices to pupils,

coinciding with lessons that are appropriately structured to meet pupils individual competency needs and delivered in a supportive and non-controlling manner (b) receive the necessary training and support to structure the PE environment in motivationally adaptive ways, including both content (i.e., what) and pedagogical knowledge (i.e., how), and (c) provide a supportive and caring environment where the emphasis of engagement in PE is built on enjoyable experiences, peer support and skill development. Finally, it is schools that have a responsibility to ensure that specialist coaches, external to the school, are providing children with positive learning experiences and supporting generalist teachers to develop their competence and confidence for PE delivery. This will support generalist teachers to deliver high quality PE when specialist coaches are not present.

Acknowledgments

This work was supported by SOKKA Circus Franchising Ltd who match-funded a PhD studentship. SOKKA had no involvement or influence on the findings of the study. The authors state that no financial interest or benefit arose from the direct applications of this research.

References

Assor, Avi, Haya Kaplan, and Guy Roth. 2002. "Choice Is Good, but Relevance Is Excellent: Autonomy-Enhancing and Suppressing Teacher Behaviours Predicting Students' Engagement in Schoolwork." *The British Journal of Educational Psychology* 72 (Pt 2): 261–278. doi:10.1348/000709902158883.

Braun, Virginia., and Victoria. Clarke. 2006. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3: 77–101. doi:10.1191/1478088706qp063oa.

Cairney, John, Matthew Yw Kwan, Scott Velduizen, John Hay, Steven R Bray, and Brent E Faught. 2012. "Gender, Perceived Competence and the Enjoyment of Physical Education in Children: A Longitudinal Examination." *International Journal of Behavioral Nutrition and Physical Activity* 9 (1): 26. doi:10.1186/1479-5868-9-26.

Chen, Ang, and Catherine D. Ennis. 2004. "Goals, Interests, and Learning in Physical Education." *The Journal of Educational Research* 97 (6): 329–339. doi:10.3200/JOER.97.6.329-339.

Cheon, Sung Hyeon, Johnmarshall Reeve, and Ik Soo Moon. 2012. “Experimentally Based, Longitudinally Designed, Teacher-Focused Intervention to Help Physical Education Teachers Be More Autonomy Supportive Toward Their Students.” *Journal of Sport and Exercise Psychology* 34 (3): 365–396. doi:10.1123/jsep.34.3.365.

Cox, Anne, Nicole Duncheon, and Lindley McDavid. 2009. “Peers and Teachers as Sources of Relatedness Perceptions, Motivation, and Affective Responses in Physical Education.” *Research Quarterly for Exercise and Sport* 80 (4): 765–773. doi:10.5641/027013609X13088509982658.

Deci, Edward, and Richard Ryan. 2008. “Self-Determination Theory: A Macrotheory of Human Motivation, Development, and Health.” *Canadian Psychology/Psychologie Canadienne* 49 (3): 182–185. doi:10.1037/a0012801.

Department of Health. 2011. *Start Active, Stay Active A Report on Physical Activity for Health from the Four Home Countries’ Chief Medical Officer*. *Report*. London.

Domville, Matthew S, Paula M Watson, Dave J Richardson, and Lee E F Graves. 2018. “Educator Perspectives on Factors Influencing Children’s School-Based Physical Activity.” *Health Promotion International*, 1–10. doi:10.1093/heapro/day041.

Fairclough, S, and G Stratton. 2005. “‘ Physical Education Makes You Fit and Healthy ’. Physical Education ’s Contribution to Young People ’s Physical Activity Levels.” *Health Education Research* 20 (1): 14–23. doi:10.1093/her/cyg101.

Füssenich, Lotte, Lynne Boddy, Daniel Green, Lee Graves, Lawrence Foweather, Rebecca Dagger, Nicola McWhannell, et al. 2015. “Physical Activity Guidelines and Cardiovascular Risk in Children: A Cross Sectional Analysis to Determine Whether 60 Minutes Is Enough.” *BMC Public Health* 16 (1). BMC Public Health: 1–7. doi:10.1186/s12889-016-2708-7.

Gibson, Faith. 2007. “Conducting Focus Groups with Children and Young People: Strategies for Success.” *Journal of Research in Nursing* 12 (5): 473–483. doi:10.1177/.

Griggs, Gerald. 2010. “For Sale--Primary Physical Education. 20 British Pounds per Hour or Nearest Offer.” *Education* 38 (1): 39–46.

Haerens, Leen, Nathalie Aelterman, Lynn Van den Berghe, Jotie De Meyer, Bart Soenens, and Maarten Vansteenkiste. 2013. “Observing Physical Education Teachers’ Need-Supportive Interactions in Classroom Settings.” *Journal of Sport & Exercise Psychology* 35 (1): 3–17. doi:10.1348/000709902158883; Bartholomew, K., Ntoumanis, N., Ryan, R., Bosch, J.A., Thøgersen-Ntoumani, C., Self-determination theory and diminished functioning: The role of interpersonal control and psychological need-thwarting (2011) Personality and Social Psychology Bulletin, 37 (11), pp. 1459-1473. , PubMed doi:10.1177/0146167211413125; Baumeister, R.F., Leary, M.R., The need to belong: Desire for interpersonal attachments as a fundamental human motivation (1995) Psychological Bulletin, 117, pp.

Haerens, Leen, Nathalie Aelterman, Maarten Vansteenkiste, Bart Soenens, and Stijn Van Petegem. 2015. “Do Perceived Autonomy-Supportive and Controlling Teaching Relate to

Physical Education Students' Motivational Experiences through Unique Pathways? Distinguishing between the Bright and Dark Side of Motivation." *Psychology of Sport and Exercise* 16 (P3): 26–36. doi:10.1016/j.psychsport.2014.08.013.

Hastie, Peter, Mary Rudisill, and Danielle Wadsworth. 2012. "Providing Students with Voice and Choice: Lessons from Intervention Research on Autonomy-Supportive Climates in Physical Education." *Sport, Education and Society*, no. 18: 1–19. doi:10.1080/13573322.2012.701203.

Health Survey for England. 2016. *Health Survey for England 2015 Physical Activity in Children*.

Hill, Malcolm, Ann Layboum, and Moira Borland. 1996. "Engaging with Primary-Aged Children about Their Emotions and Well-Being: Methodological Considerations." *Children & Society* 10 (2): 129–144. doi:10.1111/j.1099-0860.1996.tb00463.x.

Hyvönen, Pirkko, Eeva-Liisa Kronqvist, Sanna Järvelä, Elina Määttä, Arttu Mykkänen, and Kristiina Kurki. 2014. "Interactive and Child-Centred Research Methods for Investigating Efficacious Agency of Children." *Varhaiskasvatuksen Tiedelehti Journal of Early Childhood Education Research* 3 (1): 82–107.

Jaakkola, Timo, Sami Yli-Piipari, Vassilis Barkoukis, and Jarmo Liukkonen. 2017. "Relationships among Perceived Motivational Climate, Motivational Regulations, Enjoyment, and PA Participation among Finnish Physical Education Students." *International Journal of Sport and Exercise Psychology* 15 (3): 273–290. doi:10.1080/1612197X.2015.1100209.

Janesick, Valerie J. 1994. "The Dance of Qualitative Research Design: Metaphor, Methodolatry, and Meaning." In *Handbook of Qualitative Research*, edited by K Denzin and S Lincon, 209–219. Thousand Oaks, CA: Sage Publications.

Janssen, Ian, and Allana LeBlanc. 2010. "Systematic Review of the Health Benefits of Physical Activity and Fitness in School-Aged Children and Youth." *International Journal of Behavioral Nutrition and Physical Activity* 7 (1): 40. doi:10.1186/1479-5868-7-40.

Jones, Luke, and Ken Green. 2015. "Who Teaches Primary Physical Education? Change and Transformation through the Eyes of Subject Leaders." *Sport, Education and Society* 3322 (April): 1–13. doi:10.1080/13573322.2015.1061987.

Karagiannidis, Yannis, Vassilis Barkoukis, Vassilis Gourgoulis, and George Kosta. 2015. "The Role of Motivation and Metacognition on the Development of Cognitive and Affective Responses in Physical Education Lessons: A Self-Determination Approach." *Motricidade* 11 (1): 135–150. doi:10.6063/motricidade.3661.

Kennedy, Christine, Susan Kools, and Richard Krueger. 2001. "Methodological Considerations in Children's Focus Groups." *Nursing Research* 50 (3): 184–187. doi:10.1097/00006199-200105000-00010.

Koekoek, Jeroen, and Annelies Knoppers. 2015. "The Role of Perceptions of Friendships and Peers in Learning Skills in Physical Education." *Physical Education and Sport Pedagogy* 20

(3): 231–249. doi:10.1080/17408989.2013.837432.

Krueger, Richard A., and Mary Anne. Casey. 2009. *Focus Groups : A Practical Guide for Applied Research*. 4th ed. Sage PublicationsSage UK: London, England.

Leptokaridou, Elisavet T., Symeon P. Vlachopoulos, and Athanasios G. Papaioannou. 2015. "Associations of Autonomy, Competence, and Relatedness with Enjoyment and Effort in Elementary School Physical Education: The Mediating Role of Self-Determined Motivation." *Hellenic Journal of Psychology* 12 (2): 105–128.

Lewis, Kiara. 2014. "Pupils' and Teachers' Experiences of School-Based Physical Education: A Qualitative Study." *BMJ Open* 4 (9): e005277–e005277. doi:10.1136/bmjopen-2014-005277.

Morgan, David L. 2012. "Focus Groups and Social Interaction." In *The SAGE Handbook of Interview Research: The Complexity of the Craft*, 2nd ed., 161–176. 2455 Teller Road, Thousand Oaks California 91320 United States: SAGE Publications, Inc. doi:10.4135/9781452218403.n11.

Morgan, M, S Gibbs, K Maxwell, and N. Britten. 2002. "Hearing Children's Voices: Methodological Issues in Conducting Focus Groups with Children Aged 7-11 Years." *Qualitative Research* 2 (1): 5–20. doi:10.1177/1468794102002001636.

Morgan, Philip, and Sid Bourke. 2005. "An Investigation of Pre-Service and Primary School Teachers Perspectives of PE Teaching Confidence and PE Teacher Education." *ACHPER Healthy Lifestyles Journal* 52 (1): 7–13.

Morse, Janice. 2015. "Critical Analysis of Strategies for Determining Rigor in Qualitative Inquiry." *Qualitative Health Research* 25 (9): 1212–1222. doi:10.1177/1049732315588501.

Ntoumanis, Nikos., and Martyn Standage. 2009. "Motivation in Physical Education Classes: A Self-Determination Theory Perspective." *Theory and Research in Education* 7 (2): 194–202. doi:10.1177/1477878509104324.

Ntoumanis, Nikos, Eleanor Quested, Johnmarshall Reeve, Sung Hyeon Cheon, and (In Press). 2017. *Need Supportive Communication: Implications for Motivation in Sport, Exercise, and Physical Activity*. Edited by B Jackson, J. A Dimmock, and J Compton. *Persuasion and Communication in Sport, Exercise, and Physical Activity.* Abingdon, UK: Routledge.

Parfitt, Gaynor, Toby Pavey, and Ann V. Rowlands. 2009. "Children's Physical Activity and Psychological Health: The Relevance of Intensity." *Acta Paediatrica, International Journal of Paediatrics* 98 (6): 1037–1043. doi:10.1111/j.1651-2227.2009.01255.x.

Reeve, Johnmarshall. 1989. "The Interest-Enjoyment Distinction in Intrinsic Motivation." *Motivation and Emotion* 13 (2): 83–103. doi:10.1007/BF00992956.

Reeve, Johnmarshall. 2009. "Why Teachers Adopt a Controlling Motivating Style Toward Students and How They Can Become More Autonomy Supportive." *Educational Psychologist* 44 (3): 159–175. doi:10.1080/00461520903028990.

Reeve, Johnmarshall, and Sung Hyeon Cheon. 2014. “An Intervention-Based Program of Research on Teachers’ Motivating Styles.” *Advances in Motivation and Achievement* 18: 293–339. doi:10.1108/S0749-742320140000018008.

Reeve, Johnmarshall, and Marc Halusic. 2009. “How K-12 Teachers Can Put Self-Determination Theory Principles into Practice.” *Theory and Research in Education* 7 (2): 145–154. doi:10.1177/1477878509104319.

Ryan, R, and E Deci. 2000. “Self-Determination Theory and the Facilitation of Intrinsic Motivation.” *American Psychologist* 55 (1): 68–78. doi:10.1037/0003-066X.55.1.68.

Ryan, Richard M., Geoffrey C. Williams, Heather Patrick, and Edward L. Deci. 2009. “Self-Determination Theory and Physical Activity: The Dynamics of Motivation in Development and Wellness.” *Hellenic Journal of Psychology* 6: 107–124. doi:10.1080/17509840701827437.

Scrabis-Fletcher, Kristin, and Stephen Silverman. 2017. “Perception of Competence in Middle School Physical Education: Instrument Development and Validation.” *Research Quarterly for Exercise & Sport* 81 (1): 52–61. doi:10.18666/TPE-2017-V74-I1-6557.

Sebire, Simon J, Russell Jago, Kenneth R Fox, Mark J Edwards, Janice L Thompson, JF Sallis, RB Cervero, et al. 2013. “Testing a Self-Determination Theory Model of Children’s Physical Activity Motivation: A Cross-Sectional Study.” *International Journal of Behavioral Nutrition and Physical Activity 2013 10:1* 10 (1). BioMed Central: 297–322. doi:10.1186/1479-5868-10-111.

Sierens, Eline, Maarten Vansteenkiste, Luc Goossens, Bart Soenens, and Filip Dochy. 2009. “The Synergistic Relationship of Perceived Autonomy Support and Structure in the Prediction of Self-Regulated Learning.” *British Journal of Educational Psychology* 79 (1): 57–68. doi:10.1348/000709908X304398.

Skinner, Ellen A., Thomas A. Kindermann, and Carrie J. Furrer. 2009. “A Motivational Perspective on Engagement and Disaffection: Conceptualization and Assessment of Children’s Behavioral and Emotional Participation in Academic Activities in the Classroom.” *Educational and Psychological Measurement* 69 (3). SAGE PublicationsSage CA: Los Angeles, CA: 493–525. doi:10.1177/0013164408323233.

Skinner, Ellen A., James G. Wellborn, and James P. Connell. 1990. “What It Takes to Do Well in School and Whether I’ve Got It: A Process Model of Perceived Control and Children’s Engagement and Achievement in School.” *Journal of Educational Psychology* 82 (1): 22–32. doi:10.1037//0022-0663.82.1.22.

Skinner, Ellen, and Michael Belmont. 1993. “Motivation in the Classroom: Reciprocal Effects of Teacher Behavior and Student Engagement Across the School Year.” *Journal of Educational Psychology* 85 (4): 571–581.

Sloan, Stephen. 2010. “The Continuing Development of Primary Sector Physical Education: Working Together to Raise Quality of Provision.” *European Physical Education Review* 16 (3): 267–281. doi:10.1177/1356336X10382976.

718 Standage, Martyn, Joan L Duda, and Nikos Ntoumanis. 2005. “A Test of Self-Determination
719 Theory in School Physical Education.” *British Journal of Educational Psychology* 75 (3):
720 411–433. doi:10.1348/000709904X22359.

721 Sun, Haichun, Weidong Li, and Bo Shen. 2017. “Learning in Physical Education: A Self-
722 Determination Theory Perspective.” *Journal of Teaching in Physical Education* 36 (3):
723 277–291. doi:10.1123/jtpe.2017-0067.

724 Taylor, Ian, Nikos Ntoumanis, Martyn Standage, and Christopher Spray. 2010. “Motivational
725 Predictors of Physical Education Students’ Effort, Exercise Intentions, and Leisure-Time
726 Physical Activity: A Multilevel Linear Growth Analysis.” *Journal of Sport and Exercise*
727 *Psychology* 32 (1): 99–120. doi:10.1123/jsep.32.1.99.

728 Tong, Allison, Peter Sainsbury, and Jonathan Craig. 2007. “Consolidated Criterio for Reporting
729 Qualitative Research (COREQ): A 32- Item Checklist for Interviews and Focus Group.”
730 *International Journal of Qualitative in Health Care* 19 (6): 349–357.
731 doi:10.1093/intqhc/mzm042.

732 Vidourek, Rebecca A, Keith A King, Amy L Bernard, Judy Murnan, and Laura Nabors. 2011.
733 “Teachers’ Strategies to Positively Connect Students to School.” *American Journal of*
734 *Health Education* 42 (2): 116–126. doi:10.1080/19325037.2011.10599179.

735 Xiang, Ping, Zan Gao, and Ron E Mcbride. 2011. “Student Teachers’ Use of Instructional
736 Choice in Physical Education.” *Research Quarterly for Exercise and Sport Deci & Ryan*
737 *Flowerday & Schraw* 823. Ryan & Deci Pajares: 482–490.
738 doi:10.1080/02701367.2011.10599781.

739