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

2

3 **Abstract**

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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

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

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

71

72 **Keywords**

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

74

75 **Introduction**

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

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

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

96 One theoretical approach that has increased in popularity in primary school PE literature
97 is Self-Determination Theory (SDT; Ryan and Deci 2000). SDT proposes a continuum through
98 which motivation varies in quality from 'controlled' to 'autonomous' forms (Deci and Ryan
99 2008). Controlled motivation is characterised by either an external pressure (e.g. punishment,
100 reward) or an internal pressure (e.g. guilt, pride) to engage in an activity (Deci and Ryan 2008).
101 Within a PE setting, controlled motivation can lead to negative feelings such as boredom and
102 lack of effort (Karagiannidis et al. 2015; Taylor et al. 2010). Autonomous motivation however is
103 characterised by volitional engagement and a feeling that participation in PE is of the student's
104 own choice and willing. Autonomous motivation is associated with improved psychological
105 well-being, interest, persistence and long-term behavioural engagement (Ryan and Deci 2000)
106 and has been associated with increased enjoyment of PE and increased PA outside of school
107 (Jaakkola et al. 2017; Karagiannidis et al. 2015).

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

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

123 suggests three basic psychological needs are important for the development/maintenance of
124 intrinsic motivation, namely *competence* (perceived ability to carry out a task effectively),
125 *autonomy* (perception that behaviour is self-determined) and *relatedness* (perceived social
126 connections with peers and teacher) (Cox, Duncheon, and McDavid 2009; Ryan and Deci 2000).
127 These psychological conditions are influenced by an individual's social environment, including a
128 child's teacher and peers, with student-teacher interactions shown to support and undermine
129 student motivation (Cox, Duncheon, and McDavid 2009). Several teaching strategies are
130 available to support autonomy (e.g. offering meaningful choice, nurturing self-interest and
131 exploration, minimising controlling language [Reeve 2009]) competence (e.g. offering structure,
132 tailored support and feedback, communicating clear guidelines and expectations [Sierens et al.
133 2009]) and relatedness (e.g. energetic and eager delivery, listening to children, coming from the
134 child's perspective [Haerens et al. 2013]). Teaching styles reminiscent of a disengaged,
135 controlling and chaotic environment however are believed to typically thwart a student's basic
136 needs, which can lead to an undermining of motivation and learning (Ryan and Deci 2000).

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

154

155 **Methods**

156

157 *Study design*

158 *Participants and setting*

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

176

177 *Focus groups*

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

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

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

211

212 *Data analysis and representation*

213

214 Focus group data was transcribed verbatim and each transcript read several times by the
215 first author. Staying close to the data was an important way of ensuring that data interpretation,
216 where possible, was undertaken through the eyes of the child, rather than researcher (Janesick
217 1994). Transcripts were imported into NVivo10 qualitative analysis software and analysed by the
218 first author using the principles of thematic analysis (Braun and Clarke 2006). Thematic analysis
219 was chosen as the preferred analytical technique as the analysis process allows the researcher to
220 identify, analyse and report patterns (themes) within a particular data set (Braun and Clarke
221 2006). Whilst we were interested in exploring the extent to which children's perceptions mapped
222 onto SDT constructs, the primary objective was to extract the factors that children themselves
223 perceived to be important in influencing enjoyment. As such, an inductive approach to analysis
224 was taken to ensure perceptions of factors that influence PE enjoyment, that did not readily fit
225 the SDT framework were not missed. This began by segmenting the data and coding it to allow
226 specific codes and categories to emerge. The assigning of specific quotes, conversations and
227 paragraphs were then further analysed to allow broader themes to emerge from the data to best
228 encapsulate participants' meanings. This process, known as open coding, is considered to
229 enhance credibility when analysing semi-structured data collection techniques (Morse 2015).
230 Regular meetings between all authors took place to discuss emerging codes and refine codes as
231 appropriate until consensus was reached. The emergent themes were then reviewed for their
232 relevance to SDT and interpreted in relation to existing academic literature.

233

234 **Results**

235

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

242

243 *Individual preferences*

244

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

249
250 The majority of children were interested in a variety of sports/activities, but perceived PE to
251 provide few of these. Consequently, children wanted more choice in PE activities, and to do
252 more of the PE activities they enjoyed.

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

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

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

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

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

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

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

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

271 (School 4, Year 5/6)

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

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

278

279 **Peer behaviour**

280
281 Arguments between peers, perceived unfair teams and pupil disengagement often reduced
282 children's PE enjoyment through perceptions of an undesirable learning environment. This was
283 especially prevalent when instructors had to stop lessons to re-explain rules or re-engage pupils.

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

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

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

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

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

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

306 ***Instructor behaviour***

307

308 **Teacher presence**

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

311 *Billy* *'Because everyone then learns things, and like everyone can show people how to*
312 *do things, and like if you get stuck, the teachers can help you, and like pair up*
313 *with you and do something.'*

314 *Researcher* *'Yes, that's a great point.'*

315 *Gem* *'It shows us that they actually care about our PE.'*

316 *Researcher* *'Your learning and your PE. Great.'*

317 *Ethan* *'And it also shows that they do want us to stay healthy and fit.'*

318 (School 3, Year 5/6)

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

321 *Fin* *'Like our teacher doesn't play, and he has a whistle and stands to the side.'*

322 *Lucy* *'And they just go off. The teachers just go off, and they won't watch you.'*

323 *Billy* *'Sometimes teachers just like stay at the side, tell you what to do.'*

324 (School 3, Year 5/6)

325 **Tailoring to children's abilities**

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

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

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

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

339 *Specialist coaches, they're teaching us things that we don't know, but then they teach us*
340 *to show us. But then after the [specialist] coaches have gone...the teachers are teaching*
341 *us the things that the specialist coaches have already taught us. (Tom, School 4, Year*
342 *3/4)*

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

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

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

351

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

355 **Relationships with specialist coaches**

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

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

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

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

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

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

374

375 **Discussion**

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

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

386 The children in this study expressed a desire for a greater choice of activities within PE,
387 as not all children enjoy the same things. It has been shown elsewhere that meaningful choice is
388 an important tenant in the development of pupils' autonomous motivation for PE (Xiang, Gao,
389 and McBride 2011; Ntoumanis and Standage 2009). Our qualitative data provides an insight into
390 the mechanisms through which this increase in autonomous motivation may occur. For choice
391 to be meaningful, choices should align with and reflect pupils goals, interests and values (Assor,
392 Kaplan, and Roth 2002). While there are different ways instructors can offer meaningful choice
393 (Xiang, Gao, and McBride 2011), children in our study suggested procedural choice (e.g. asking
394 pupils which activities they would like to engage in) was important for increasing PE enjoyment.
395 Such procedural choice was linked to an increased sense of autonomy, through giving children a
396 feeling that "everyone's opinion counts" and that they were being listened to. There were also
397 examples however where lack of choice (i.e. being "made" to do activities that were too
398 difficult) diminished children's sense of competence, which in turn reduced their enjoyment and
399 engagement with PE. Perceived competence is thought to be closely related to the enjoyment
400 element of intrinsic motivation (Reeve 1989) and our data supports this notion. Children noted
401 that teachers in particular (compared with specialist coaches) struggled to tailor activities
402 appropriately to children's ability, which led to boredom (if too easy) or disengagement (if too
403 difficult). The ability to get to know children's abilities, listen to their needs, and tailor activities
404 accordingly is also important in enhancing children's sense of relatedness (Reeve and Halusic
405 2009) and thus an inability to align sessions with children's needs may have a poor effect on
406 their relatedness. Whilst choice is often associated with the basic psychological need of
407 autonomy (Ryan and Deci 2000) our qualitative data suggests choice may also be important for
408 improving children's sense of competence and relatedness in PE.

409

410 Within the UK, elementary school teachers are required to achieve standardised learning
411 objectives as part of the national PE curriculum. It is important to note that giving children
412 choice in the activities they do need not compromise these learning objectives. Indeed, children
413 in our study appeared cognisant of the requirements on teachers to deliver certain activities, in
414 suggesting a process of “guided choice”, such that teachers allow children to “vote” for options
415 from a pre-defined programme, thus voicing opinions and providing input into PE lessons, key
416 components of autonomy support (Assor, Kaplan, and Roth 2002). Children seemed however to
417 lack confidence in their teachers’ competence to effectively deliver PE, which in turn impacted
418 negatively on the children’s sense of competence and enjoyment (through lack of tailored
419 progression and feedback, thus children did not feel optimally challenged). It is possible also
420 that children sensed the teachers’ own lack of perceived competence and knowledge (Sloan
421 2010; Domville et al. 2018) which in turn led them to de-value the teachers’ attempts to deliver a
422 structured learning environment. A well structured environment is believed to be fundamental in
423 the development of children’s perceived competence (Ryan and Deci 2000), and involves clearly
424 framing learning activities, integrating activities that are of optimal challenge and providing clear
425 guidance and feedback (Skinner, Kindermann, and Furrer 2009; Skinner and Belmont 1993).
426 There was little evidence in our findings to suggest generalist teachers were achieving this aim,
427 which ultimately impacted (negatively) on children’s enjoyment of PE. Such findings are
428 worrying given many generalist teachers are responsible for delivering PE-specific skills in
429 primary schools and developing child competencies that prepare children for, and promote, life-
430 long engagement in health-enhancing PA (Ntoumanis and Standage 2009). Accordingly,
431 improving teacher competence and motivation for PE delivery could not only support children’s
432 short-term learning but could improve children’s perceived competence and autonomous
433 motivation for PA in the longer term.

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

441 environment relating to the provision of autonomy support as gaining an interest in children is
442 also a component of autonomy support. While relatedness is thought to have a more distal role in
443 the development of autonomous motivation than autonomy and competence (Ryan and Deci
444 2000), individuals are more likely to internalise values and skills in a well-supported relatedness
445 context (Ryan et al. 2009) and positive pupil-instructor connections are deemed essential for
446 child enjoyment and engagement in PE (Haerens et al. 2013). Use of controlling language by
447 social agents (i.e., parents, teachers and coaches) has been shown to undermine motivation and is
448 associated with need frustration, leading to negative cognitive, affective and behavioural
449 outcomes (Ntoumanis et al. 2017). Researchers have suggested training teachers and/or coaches
450 to communicate with students in more need-supportive style and found some positive results
451 related to greater student satisfaction and enjoyment of lessons, as well as increased teacher
452 motivation for PE delivery (Cheon, Reeve, and Moon 2012; Reeve and Cheon 2014). While
453 various communication techniques have been suggested to help increase need supportive
454 communication, a relatively simple communication technique such as using children's first
455 names (which was highlighted as important by the children in our study) has been shown to
456 increase autonomous motivation and children's perceived connection with instructors (Vidourek
457 et al. 2011). Evidence from this study highlights how students notice the use of controlling
458 language and respond negatively toward it, thereby supporting suggestions that controlling
459 language should be minimised in the PE setting to increase lesson enjoyment.

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

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

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

485

486 *Strengths and limitations*

487

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

501

502 **Conclusion and recommendations**

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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.

528

529 **Summary for practitioners**

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

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

544

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