

Northumbria Research Link

Citation: Sakalidis, Kandianos Emmanouil, Fadeeva, Anastasiia, Hettinga, Florentina and Ling, Fiona (2023) The role of the social environment in inclusive sports participation— Identifying similarities and challenges in athletes with and without Intellectual Disabilities through coaches’ eyes: A qualitative inquiry. PLoS ONE, 18 (1). e0280379. ISSN 1932-6203

Published by: Public Library of Science

URL: <https://doi.org/10.1371/journal.pone.0280379>
<<https://doi.org/10.1371/journal.pone.0280379>>

This version was downloaded from Northumbria Research Link:
<https://nrl.northumbria.ac.uk/id/eprint/51025/>

Northumbria University has developed Northumbria Research Link (NRL) to enable users to access the University’s research output. Copyright © and moral rights for items on NRL are retained by the individual author(s) and/or other copyright owners. Single copies of full items can be reproduced, displayed or performed, and given to third parties in any format or medium for personal research or study, educational, or not-for-profit purposes without prior permission or charge, provided the authors, title and full bibliographic details are given, as well as a hyperlink and/or URL to the original metadata page. The content must not be changed in any way. Full items must not be sold commercially in any format or medium without formal permission of the copyright holder. The full policy is available online: <http://nrl.northumbria.ac.uk/policies.html>

This document may differ from the final, published version of the research and has been made available online in accordance with publisher policies. To read and/or cite from the published version of the research, please visit the publisher’s website (a subscription may be required.)

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

The role of the social environment in inclusive sports participation - identifying similarities and challenges in athletes with and without Intellectual Disabilities through coaches' eyes: A qualitative inquiry

Kandianos Emmanouil Sakalidis ¹, Anastasia Fadeeva ², Florentina Johanna Hettinga ¹, and Fiona Ling ¹

¹ Department of Sport Exercise and Rehabilitation, Faculty of Health and Life Sciences, Northumbria University, Newcastle upon Tyne, United Kingdom

² Violence and Society Centre, University of London, United Kingdom

*Corresponding author
E-mail: florentina.hettinga@northumbria.ac.uk

All authors contributed equally to this work.

48 participation barriers and facilitators could provide direction to stakeholders for developing
49 inclusive sports pathways to people with ID.

50 Keywords: Social interaction, cognition, mainstreaming, coaches, motivation, social factors.

51 **Introduction**

52 In recent years, there is growing emphasis on the integration of non-disability and disability
53 sports organisations, known as mainstreaming, due to the continued global call for equal
54 opportunities in sports [1]. To champion the mainstreaming movement, it is crucial to
55 promote inclusivity within the sports environment. Inclusive practices refer to the provision
56 of enhanced opportunities to people with disabilities to participate in the exercise and sport
57 activity of their choice [2]. A better understanding of the needs, motivation, and social
58 environment of athletes, including the active involvement of coaches and parents, are pivotal
59 in driving inclusivity in sports settings [3,4]. While there is considerable understanding of the
60 role of social agents for athletes without disabilities [5], such is relatively understudied in
61 athletes with Intellectual Disabilities (ID) [6]. The lack of appreciation of the similarities and
62 differences in athletes with and without ID, and their interactions with their social
63 environment, may have hindered progress of inclusivity within the sport settings, as well as
64 sport engagement for individuals with ID [7].

65 People with ID are dealing with limitations in intellectual capacities ($IQ \leq 70$) and
66 adaptive skills (conceptual, practical, social skills). These limitations can negatively influence
67 sports-related skills like decision-making, self-regulation (e.g., goal setting, self-reactions)
68 and learning by experience, resulting in deteriorated sport performance and development
69 [8,9]. For instance, people with ID demonstrate reduced technical proficiency [9] and
70 inadequate pacing behaviour in competitive races [10]. People with ID also have difficulties
71 in understanding and executing the instructions of coaches [10]. Additionally, they may

72 misinterpret the behaviour of other people, and/or inadequately convey messages across,
73 which can hinder social interaction [11]. Consequently, people with ID might respond
74 differently to environmental cues [12,13] impacting on their interaction with their coaches,
75 teammates (e.g., during training sessions) and/or their opponents. In head-to-head
76 competitions for instance, the ability to appropriately respond to the actions of their
77 opponents, a relevant skill for optimal performance [14], is underdeveloped in athletes with
78 ID [10]. Apart from their challenging behaviours, people with ID are also dealing with
79 anxiety, decreased confidence, and social phobia, all of which can influence sports
80 motivation [15,16]. Because of these cognitive deficits and psychological barriers, people
81 with ID may become dependent on the support of others in their daily lives (e.g., coaches,
82 parents, carers) [17]. For example, as people with ID are less proficient in self-regulation, the
83 social environment can step in and help them set goals, give feedback, and alter their
84 affective reactions [5,10]. Thus, the social environment is critical in influencing sports
85 motivation and promoting and/or restricting sports participation of this population [18,19].

86 For this reason, we are interested in understanding the motivation and the social
87 environment for athletes with ID, and compare it with athletes without ID, in order to
88 understand the challenges in adopting inclusive practices in the mainstreaming initiatives.
89 Although there is a growing interest in the intricate role of the social agents in the inclusive
90 sport environment [4,20], research is still scarce. In this study, we focus on the lived
91 experiences of coaches because coaches play a key role in enhancing athletes' sport-related
92 skills (e.g., self-regulation), creating an exercise motivational climate and promoting the
93 sports engagement of the athletes [21,22]. We will consider how the athletes' and coaches'
94 sports-related motivations shape their relationships and guide the sport behaviour of the
95 athletes' [23], a gap in literature, especially in the ID population, that warrants investigation.
96 Hence, a comparison in motivations between coaches, and the motivations of their athletes

97 (with and without ID), as well as the behaviour of coaches will provide insights into the
98 needs and challenges of creating a sustainable inclusive sport environment [1].

99 In view of the above, the aims of this study are to i) investigate athletes' motivations for
100 sports participation (as perceived by coaches), ID) explore coaches' coaching motivations,
101 ID) gain a better understanding of the coaching practices and iv) explore the role of the social
102 environment in athletes' sports participation and development based on coaches' reports.
103 Perspectives of coaches from ID and non-ID athletes will be compared.

104 **Materials and Methods**

105 **Participants and Recruitment**

106 After gaining ethical approval by the Institutional Ethics Board, participants were recruited
107 from January until May of 2021 through a combination of criterion-based and maximum
108 variation sampling strategy [24] in order to capture key variations in participants' coaching
109 experience, age, and type of sport. With regards to the inclusion criteria, we recruited coaches
110 of athletes with and without ID who were fluent in English, had at least one year of coaching
111 experience, and their athletes were adults or adolescents (above 12 years old) who met the
112 criteria for diagnosis of ID: limitations in intellectual and adaptive functioning with an $IQ \leq$
113 70, limitations in social, conceptual, and practical skills, and manifested before the age of 18
114 years old [8]. For comparability purpose, all athletes were in the 'participation' or
115 'performance' stage of sport development where focus is on sports skill acquisition, and with
116 some experience in competition at local and/or regional level [25,26]. Participants were
117 recruited through websites, social media, and emails via charities, sports organisations, and
118 sports clubs. A code was given to each participant; therefore, the collected and stored data did
119 not reflect any personal information of the participants. Moreover, researchers did not store
120 email addresses and/or phone numbers which were essential for the interviews. Twenty-six
121 coaches agreed to participate by signing a written consent form (aged 21-79 years, coaching

122 experience between one and 43 years, types of sport include basketball, archery, badminton,
 123 athletics, boccia, cycling, swimming, tennis, weightlifting, rugby, football, gymnastics,
 124 goalball, cricket, netball, and table tennis; see Table 1 for detailed demographics
 125 information). Data collection was completed when the researchers considered no additional
 126 information could be yielded from additional interviews.

127 Table 1. Participants' Demographic Information

Coaching group	<i>N</i>	<i>Male %</i>	<i>Age (< 40yrs %)</i>	<i>Years of coaching experience (<20yrs %)</i>
Athletes with ID	11	72.72	54.54	72.72
Athletes without ID	13	61.53	38.46	61.53
Athletes with and without ID	2	50	50	50

128 *N* = Number of coaches.

129 Procedure

130 All participants were involved in semi-structured interviews conducted by the first author
 131 (KS) via video-calling platforms (Skype or Zoom; *n* = 24) or telephone (*n* = 2). Each
 132 interview lasted about an hour and participants were asked about their coaching motivations
 133 (e.g., “What motivates you to continue coaching your sport?”), their relationship with their
 134 athletes (e.g., “How would you describe your relationship with your athletes?”) and
 135 interpersonal styles (e.g., “How would you characterise yourself as a coach?”). Coaches also
 136 gave opinions about their athletes' motivations (e.g., “Why are your athletes participating in
 137 sports?”) and athletes' social environment in sports (e.g., “How are your athletes behave to
 138 one another during training and competition?”). The interviewer used the interview guide
 139 flexibly, and follow-up questions were used during the process to elicit richer data [24]. All
 140 interviews were recorded and transcribed verbatim with the assistance of an online
 141 transcription software (Otter.ai) for data analysis.

142 Analytic procedure

143 Transcripts were analysed using a reflexive thematic analysis with an inductive orientation,
144 an iterative and progressive method that allows the authors to identify and provide a detailed
145 analysis of patterns across the data set [27,28]. Initially, the first author (KS) immersed in the
146 data, making notes of preliminary patterns, and generating initial ideas. Codes were then
147 generated from the transcripts using the NVivo software and finally, grouped into themes
148 [27,29]. KS then discussed the structure and the content of the themes with the second author
149 (AF), who also coded the transcripts. AF acted as a 'critical friend', questioning KS's
150 assumptions, codes, and themes to promote reflection and ensure further development of
151 meaningful themes [24]. To improve fidelity, KS tried to collect data from coaches with
152 diverse characteristics (in terms of coaching experience, age, and type of sport) and to
153 become familiar with the culture of participants [30,31]. The analysis was underpinned by the
154 constructivist paradigm, individuals construct knowledge through their own experience and
155 interaction with the world [32]. In terms of the coaching experiences and perceptions of
156 participants, we interpret them as the reality of the experiences of coaches while at the same
157 time we take into consideration the cultural, political, and historical context in which they
158 occur [32]. The investigators were aware that their own experiences and perspectives could
159 influence the research process. For instance, the first author (KS) had an 'insider' perspective
160 of the culture of coaches (he was a coach of non-British athletes with and without ID, but
161 prior the interviews, he also tried to become more familiar with the culture of the coaches in
162 the United Kingdom). His priory knowledge helped him ask more insightful and meaningful
163 questions, but he might be overly sympathetic to the coaches' culture [31]. To effectively deal
164 with this issue, KS used open-ended questions and nonleading language during the interviews
165 [30]. During the data analysis, the discussions with the second (AF) and the last author (FL)
166 who had 'outsider' perspectives (less familiar with the culture of coaches) ensured that the
167 results were interpreted based on the perspective of participants [31]. Moreover, KS recorded

168 reflective notes (memoing) to manage his own perspective and ensure fidelity [30]. With the
169 above practices, the investigators attempted to articulate their positionality and avoid
170 systematic and conscious bias, so that the results and their interpretations reflect the lived
171 experience of the participants as much as possible [31].

172 **Results**

173 **Athletes' sports motivations (as perceived by coaches)**

174 With regards to sports motivations of athletes with and without ID, three themes were
175 identified and categorised into 'Sport-related progression', 'Social Interaction' and 'Positive
176 Emotions'. We identified an additional theme for the sports motivations of athletes without
177 ID ('Health-related reasons').

178 **Sport-related progression**

179 According to coaches, athletes with and without ID participate in sports because they want to
180 'try something different' and because they want to learn new skills: 'They want to learn every
181 intricacy of basketball' (P01, ID coach), 'They want to see how far they can go, how good
182 they can get' (P22, non-ID). They also want to progress in their sport and improve their
183 skills: 'Athletes want to improve, to get better.' (P19, ID coach). This sports performance
184 progression gives them the chance to achieve something meaningful to them: 'They can wear
185 their cricket shirts and have this sense of pride. It is a sense of achievement for them.' (P18,
186 ID coach). The awareness of their progression and their sense of achievement 'give them the
187 confidence' to continue training.

188 **Social interaction**

189 Participation in sports gives athletes the opportunity to interact and socialise with each other:
190 'Some of them just want to come and have a chat. It's a bit of a social group' (P01, ID coach).
191 For athletes with ID, sports offer an inclusive environment where 'they can feel safe with

192 other people that are like them, where they don't have to feel like they're being judged' (P17,
193 ID and non-ID coach). Many participants mentioned that sports are more than a social event,
194 as they help athletes to make new friends, develop social/sport skills and a sense of
195 belonging:

196 They mostly like coming to see their friends. So, I think playing the sport and gain
197 enough confidence and gain in that friendship network game in order to gain in so
198 many of those and soft skills that they take through sport and interacting with others
199 (P05, ID coach).

200 I think the fact that you come into the gym to see your friends, this is a really big
201 factor. Even if people aren't amazing weightlifters, I think a main factor that keeps
202 bringing them back is because they are training with the group (P12, non-ID coach)

203 **Positive emotions**

204 Athletes participate in sport because they 'love it' and it is an indispensable part of their life:

205 We have a football team. So, they actually take it seriously, like it's their life... they
206 actually want to be there, they choose to be there. And they've trained for it. And their
207 mindset is that they're playing a professional football game (P06, ID coach).

208 Through sports, athletes with ID experience enjoyment: 'The thing that keeps the athlete
209 coming back is that they are having fun' (P1, ID coach), 'If it wasn't fun, they wouldn't come'
210 (P10, non-ID coach). Lastly, it is important for the athletes that they can be independent and
211 express themselves through sports:

212 He said, that's the only time that he hasn't got carers. He can just be himself in his
213 own quietness. If he is annoyed, he can shout. If he is happy, he can be happy. And it
214 is probably the only opportunity he gets in a week, that he can kind of just be himself
215 and be like any other person (P04, ID coach).

216 **Athletes' sports motivations differences: health-related reasons (athletes**
217 **without ID)**

218 According to the reports of the coaches, athletes without ID participate in sports also for
219 health-related reasons. According to PO7 (non-ID coach) they want to 'get fit' and to 'lose
220 some weight'. Sports are a pathway for athletes to regulate their mental health as well. They
221 relieve stress through sports and help them forget their personal problems:

222 Athletes found that doing archery gave them that break from whatever it caused them
223 problems, gave them the chance to not think, because you can't really do archery and
224 think about anything else. (P02, non-ID coach).

225 **Coaches' coaching motivations**

226 Having understood the motivations of the athletes in sport participation, we would like to
227 gain an in-depth view about the coaching motivations of coaches and the extent to which they
228 complement their athletes' motivations. We identified two themes for coaches of athletes
229 with and without ID - 'Help others' and 'Personal and Professional development'. We
230 identified an additional theme for coaches of athletes without ID ('Career aspirations').

231 **Help others**

232 Coaches want to help athletes 'reach their potential' and develop their life skills: 'I'm quite
233 keen to make sure that they are allowed to make decisions' (P18, ID coach), 'I want my
234 athletes to see what is possible through their body and mind, to help them be themselves'
235 (P22, non-ID coach). For coaches, it is important to convince athletes that they can achieve
236 something:

237 I thought the best thing to do with D. is to give him a cricket bat. We got to this point
238 where 'bang', he hit the ball... That was a small win, but in his world, it was a huge
239 win. It was emotionally very powerful. And it's still even to this day, one of the things

240 that continues to motivate me into doing what we're doing, because it makes a
241 difference (P18, ID coach).

242 **Personal and professional development**

243 Coaches reported that they 'love the sport' that they are coaching. They also 'enjoy'
244 interacting with their athletes, as this interaction brings the best out of them personally and
245 professionally:

246 I love it and you get so much out of it. As a coach, it's really rewarding. And you
247 have more fun. I feel like the students bring the best out of me as a coach as well as a
248 person... that makes your job worthwhile. You do not mind putting in the extra work
249 and the extra enthusiasm into your job. (P06, ID coach).

250 Coaches are also intricated by the psychological and the social benefits that sports can
251 offer them and their athletes: 'Sports can improve your mental health your well-being. So
252 that's what I really love about sports coaching' (P19, ID coach), 'I love the aspect that the
253 sport itself is a support network' (P16, non-ID coach).

254 **Coaches' coaching motivations differences: career aspirations (non-ID** 255 **coaches)**

256 Apart from personal and professional development, coaches of athletes without ID are also
257 driven by their career aspirations. 'I want to have respect in my local area (P23, non-ID
258 coach). For example, one female participant wants to become one of the first female coaches
259 in a male-dominant sport:

260 Olympic weightlifting is a very male dominant sport, just in general, not just in the
261 coaching. One of my motivations of becoming a coach was because I didn't know any
262 female coaches when I was learning, I was always taught by males. And I just
263 thought I would love to try and really drive the participation of females in this male
264 dominance sport (P12, non-ID coach).

265 **Coaching practices towards athletes with and without ID**

266 Having a clearer picture of the motivations of athletes in sport participation and coaches'
267 coaching motivations, we would like to the understand how coaches' motivations may
268 influence coaching practices, and in turn, shape coach-athlete relationship. With regards to
269 coaching practices towards athletes with and without ID (second aim), three themes were
270 identified - 'Psychological and life skills development', 'Building Meaningful relationships'
271 and 'Behaviour adaptation'. We identified an additional theme for the coaching practices
272 towards athletes with ID ('Participation-focused') and without ID ('Performance-focused').

273 **Psychological and life skills development**

274 For coaches, sports are an excellent opportunity to help their athletes acquire the necessary
275 soft skills for optimal functioning in daily life: 'I give them a lot of autonomy, I give them a
276 lot of choices' (P15, non-ID coach). Coaches encourage their athletes to be independent,
277 engage them in the learning process and give them responsibilities and options:

278 I'm quite keen to make sure that the students are allowed to make decisions. Because
279 I think that those sorts of things are transferable. I think our responsibility is to get
280 them to understand all the different options that they have... is an individual's
281 decision to choose one of those options (P18, ID coach).

282 Coaches are also trying to build values of 'teamwork', encouraging the interaction
283 between their athletes and are trying to improve their social skills: 'Get them feel comfortable
284 talking to people, as some of them are very shy' (P03, ID coach), 'I want them to engage with
285 each other and work together as a team. Otherwise, gymnastics could be a quite lonely sport'
286 (P15, non-ID). Moreover, they are trying to make them aware that in sports, as in life, failure
287 is an option and athletes have to 'learn to win and lose' and that they can be better persons
288 through sports: 'Our coaching philosophy should be around making better people' (P18, ID
289 coach).

290 **Building Meaningful relationships**

291 Coaches are constantly trying to connect with their athletes and build meaningful
292 relationships. 'They respect me because I respect them.' (P15, non-ID coach) and they are
293 trying to find 'what works well for them'. They are also trying to interact and conversate with
294 their athletes as much as possible, offer them a safe training environment and gain their trust:

295 The trust is the most important... one of the things that I've always say to people: 'try
296 yourself to be him, how would you do it yourself?'. They have to trust you. You will
297 never ask them to do something, you wouldn't do yourself, right? (P08, ID coach).

298 A number of coaches highlighted the importance to be a 'role model' of their athletes and
299 act as a family member to them: 'I'm like a father figure to them, care for them, look after
300 them' (P08, ID coach). Coaches are also trying to be 'friendly', 'funny' and 'lovable' to their
301 athletes.

302 However, a meaningful relationship is also based on setting clear boundaries to facilitate
303 optimal functioning of this relationship. Thus, coaches are trying to run the sessions as
304 smoothly as possible, avoid conflicts and promote a safe environment. To achieve that, they
305 require from their athletes to 'follow rules' and 'have good manners'.

306 **Behaviour adaptations**

307 Coaches reported the importance to adapt their sessions: 'I'm quite flexible as to what the
308 training can be, depending on how they feel' (P20, ID coach) and interact with flexibility
309 with the athletes: 'What you have to do is to find out to what they respond to the best' (P08,
310 ID coach). Being aware of athletes' behaviour issues could help guide coaches' behaviour and
311 coaching approach: 'You can trigger someone if you are too instructive and authoritarian'
312 (P01, ID coach). 'I have to be aware of the capacity of people to understand what I'm saying'
313 (P09, non-ID coach). Throughout this process, patience is key:

314 ... although they've done (the drill) several times, they may want to start right from
315 the beginning and right from the basics every time. I think you just have to be patient
316 and, and just be aware of that, because you will have to go through things a million
317 times. And if it doesn't work, then there's no point shouting or being forceful (P05, ID
318 coach).

319 Their adaptations are also based on athletes' personal needs and abilities: 'Everyone is an
320 individual, isn't it? Everyone has different abilities and skills (P05, ID coach), 'At our club
321 we tend to tailor the coaching according to people's ability and the time they can spend on the
322 sport' (P02, non-ID coach).

323 **Coaching practices differences: Participation-focused (ID coaches)**

324 A main goal from ID coaches is to engage more people with ID in sports: 'Some of the guys,
325 if they do 10 minutes without leaving, that's a massive achievement' (P01, ID coach). Thus,
326 they are trying to make their sessions inclusive and offer to people with ID different sports
327 opportunities: 'The opportunity for them to be able to participate in whatever activity it may
328 be, whether it's actually a proper competition, or whether it's just a fun social event' (P17, ID
329 and non-ID coach). For coaches, inclusion to sports have different interpretations:

330 Inclusion can be interpreted and can be seen in different ways. Because if you're
331 working with a group of people where some people have a disability, and some
332 haven't, you may have an inclusive session, but it doesn't necessarily mean that they
333 all mixed together. I suppose to that is the door should be open for everybody. The
334 answer to all of this is really simple. We just need to be kind to each other, just be
335 nice to each other (P18, ID coach).

336 Even if inclusivity is perceived differently by the coaches, they highlighted the importance
337 to focus on sports participation of people with ID and not on their performance: 'This is not a
338 performance environment, it is a participation environment' (P18, ID coach).

339 **Coaching practices differences: Performance-focused (non-ID coaches)**

340 While both coaches of athletes with and without ID focus on the sports progression of their
341 athletes, the latter are more performance-focused. Coaches have ‘high expectations’ from
342 their athletes, encourage them to improve their skills and reach their sport performance
343 potential: ‘You have to reflect on your performance, and work with the coach and create a
344 training plan and next steps to meet your next goal.’ (P12, non-ID coach).

345 Coaches want their athletes to perform well in competitions and win: ‘It’s not just we’re
346 taking part for the fun of it. We go out to win’ (P21, non-ID coach). For this reason, they
347 ‘keep track of their sports performance progression’ and ‘prepare them physically (e.g.,
348 ‘match drills) and ‘mentally (e.g., imagery)’ for competitions.

349 **Social Environment and Sports Participation**

350 Our third aim was to explore the role of the social environment (besides coaches) in sports
351 participation of athletes with and without ID. Coaches perceived different social agents that
352 may influence athletes’ sports participation and performance. We identified two groups of
353 social agents - ‘Teammates and Opponents’ and ‘Family’.

354 **Teammates and opponents**

355 Athletes with and without ID are generally friendly with each other and encourage their
356 teammates to participate (and improve in their chosen sport) in training sessions: ‘They have
357 a laugh and a joke to carry on’ (P20, ID coach), ‘They are committed and dedicated to
358 helping each other’ (P22, non-ID). This positive environment enhances ‘team bonding’ and
359 athletes’ ‘confidence’. Teammates are also trying to ‘support’ and ‘encourage’ each other
360 during competition while at the same time they are respectful towards their opponents:

361 And everyone is a bit more friendly with each other, there's a lot of mutual
362 appreciation. Like if someone scores a basket, there's just a lot of cheers from both
363 sides (P01, ID coach).

364 However, the relationships between athletes could also be challenging. Coaches reported
365 arguments and conflicts between teammates in training and competition: 'I can remember a
366 small quarrel between two of them, they were arguing over sports equipment' (P26, ID
367 coach), 'I had a situation where one of the girls was being bullied, and she got really upset'
368 (P10, non-ID coach). These behavioural problems are also present when athletes have to
369 compete against opponents: 'As soon as someone starts misbehaving, my athletes really start
370 feeling a little bit anxious and stressed about it. And so that can cause bad behaviours from
371 them as well' (P06, ID coach). P06 (ID coach) highlighted that the athletes are 'lacking of
372 team work experience' and due to their social interaction difficulties, sometime 'they prefer to
373 be on their own' during the training session.

374 **Family**

375 Parents can facilitate the sports participation of athletes with (adults and adolescents) and
376 without ID (only adolescents). They know the personality of athletes and can encourage them
377 to continue participation in sports 'The parents play a big part in athletes' life, they know
378 how to deal with them better than me and they encourage them to participate' (P18, ID
379 coach), 'One of my athletes was really proud of his park run time. And I think that's because a
380 member of his family was also really into park run. So, he had this kind of support' (P07,
381 non-ID coach). They also provide 'positive feedback' and 'reinforcement' to the athletes. For
382 all these reasons, coaches consider their cooperation with the parents crucial:

383 I kind of ask parents, if anybody's available to join. And that's great, because that
384 means that there is some networking going on, there is a need to be some

385 sustainability around it. And the parental involvement is vital for that (P18, ID
386 coach).

387 Nonetheless, specifically for athletes with ID, parents can be barriers for sports
388 participation. Sports engagement of people with ID depends heavily on their parents' support.
389 However, it seems that some parents are not enthusiastic about their children's involvement
390 in sports: 'Yeah, it's very difficult to get parents involved. I think a lot of the time they see it
391 as a respite.' (P05, ID coach). According to coaches, a possible explanation for this behaviour
392 is that the parents do not believe in their children's abilities: 'Parents always say, my
393 daughter can't do this, my daughter can't do that (P03, ID coach) and are overprotective:
394 'They don't want to let go, they don't want anybody else to look after them, because it's their
395 child' (P04, ID coach).

396 **Discussion**

397 This study investigated the sports participation motivations of athletes, the coaching
398 motivations of coaches, and the social environment-athlete relationship and interaction in
399 sports settings. According to the social relational model of disability (SRM), the restrictions
400 of an activity (e.g., sports participation) can be caused by impairment (e.g., cognitive deficits)
401 and psycho-emotional oppressions (e.g., social factors) [33]. Thus, the exploration of
402 individual (motivations) and societal factors (social environment attitudes) of sports
403 participation can inform coaches and stakeholders about potential strategies to create a
404 sustainable inclusive environment for people with ID through the mainstreaming pathway.
405 Within the sport coaching context, the relationship between coaches' perceptions of athletes'
406 motivations and the enacted coaching practices and behaviours is not well-documented. As
407 far as we know this is the first study that makes this connection in the sports environment of
408 people with ID.

409 One of aims of this study was to investigate the sports participation motivations of
410 athletes (as perceived by coaches), an individual factor that can have significant impact on
411 athletes' long-term participation in sports [4]. The results showed that athletes with ID, as
412 well as athletes without ID, participate in sports mainly for intrinsic reasons (Positive
413 emotions', 'Social Interaction' and 'Sport-related Progression' themes), which is likely to
414 lead to long-term engagement in sport due to greater persistence and effort [34-36]. For
415 instance, the affective response of enjoyment that the athletes with and without ID experience
416 (according to their coaches), can positively influence their goals and their adherence in sports
417 [37]. Additionally, this study confirms the need of athletes with and without ID to interact
418 with each other [38]. This attitude can promote an inclusive sport participation as teammates
419 can boost athletes' confidence and sense of belonging. While athletes with ID and without ID
420 were perceived to be motivated by their sport progression, the athletic identity of the former
421 is less clear. Further investigation is needed to better understand the athletic identity of
422 athletes with ID and how they think and act within the sports context.

423 It seems that athletes without ID also participate in sports for physical and mental health
424 reasons, as they want to get fit and relieve stress through sports, but this theme ('Health-
425 related reasons') was not identifiable in athletes with ID. The difference could be partially
426 due to the lack of understanding of their physical and mental conditions [39,40]. Raising
427 awareness of a tailored health management plan that would help people with ID to
428 communicate their health-related issues better, could potentially encourage sustained
429 engagement in an inclusive sport environment [39].

430 Our second aim was to gain a better understanding of the coaching motivations of
431 coaches. This could inform us the extent to which they contribute to the motivations of
432 athletes and the coaching practices of coaches. Our results have demonstrated that there are
433 inherent reasons that aspire coaches of athletes with and without ID to coach their chosen

434 sport ('Personal and Professional Development' and 'Help others' theme). Being driven by
435 internal rewards can lead to greater satisfaction in and commitment to their coaching role
436 [35,41], which we have repeatedly seen from the interviews. These coaching motivations
437 could act as a societal facilitator according to the SRM [33], as they empower the athletes,
438 make them feel more competent, and encourage them to participate in sports and reach their
439 goals [12].

440 This led us to dive more into the coaches' practices (third aim) and to explore their
441 relationships with the motivations of athletes and coaches. Specifically, all of our coaches'
442 intrinsic reasons for coaching a sport ('Personal and Professional Development' and 'Help
443 others' themes) could explain why they emphasize the importance of connecting with their
444 athletes ('Build Meaningful Relationships' theme), adapting their behaviour towards them
445 ('Behaviour adaptations' theme) and developing their life skills ('Psychological and Life
446 skills development' theme) [42,43]. The coaching practices also seem to address the intrinsic
447 motivations of athletes ('Social Interaction' and 'Positive Emotions' themes). This could be
448 crucial, as coaches who meet athletes' needs and motivations, give them options and facilitate
449 their development, can cultivate a fertile ground for their athletes' long-term participation in
450 sports [4]. Importantly, the similarities in motivations of athletes coaches' motivations as well
451 as the motivations and practices of coaches between the two groups (ID and non-ID) could
452 facilitate sports inclusion of people with ID. For instance, athletes' common motivations to
453 progress in their sports, socialise with each other, and experience enjoyment through sports
454 can promote group cohesion, psychological collectivism, and athletes' engagement in sports
455 [44]. The common motivations of coaches (e.g., help athletes reach their potential) and
456 practices (e.g., adapt their practices to athletes' needs and abilities) could mean that they
457 require fewer fundamental adaptations in their attitudes towards different populations, which

458 can facilitate a smoother transition from a segregated to an inclusive sports environment [4].
459 However, some barriers in the practices of coaches were identified.

460 A potential barrier to mainstreaming is the lack of emphasis on inclusivity from coaches
461 of non-ID athletes while coaches of athletes with ID are trying to be supportive, develop
462 athletes with ID life skills and engage them as much as they can in sports (the ‘Performance-
463 focused vs ‘Participation-focused’ theme). The difference could stem from the fact that
464 coaches of athletes without ID might be more motivated by ‘Career aspirations’ which might
465 have led to a performance-focused approach, compared to the participation-focused approach
466 that encourages inclusivity, adopted by the coaches of athletes with ID. This difference in
467 coaching motivation and coaching behaviour might suggest that coaches of athletes with and
468 without ID perceived themselves (or their coaching identity) differently, with coaches of
469 athletes with ID to adopt mainly a mentor rather than a sport-coaching role [45]. While
470 coaches of athletes without ID may overlook the importance of inclusivity in a
471 mainstreaming environment, coaches of athletes with ID may underestimate the athletic
472 identity that people with ID may wish to develop [46]. We can only speculate that a reason
473 for the difference in the coaching approach is the ableist mentality that leads the coaches to
474 adopt different sporting standards of success for athletes with and without ID [47]. To
475 achieve a balance between performance-focused and participation-focused approaches, be it
476 for athletes with or without ID, it is crucial for coaches to listen to their athletes’ sporting
477 aspirations and respond to them accordingly. This could help coaches and athletes to set more
478 appropriate and desirable goals and plan realistically how to achieve them [5]. With
479 flexibility in coaching focus in place, mainstreaming initiatives are likely to be achievable
480 and sustainable [1].

481 Another potential societal barrier for introducing mainstreaming in sport could come
482 from overprotective parents. Their overprotectiveness may arise from the prejudice that they

483 experience from other parents, as they are considered responsible for the disability of their
484 child [48,49]. All these factors confirm the social oppression that arises from the negative
485 interactions between people with and without ID [33]. Lack of understanding the needs of
486 athletes and unhelpful societal attitudes towards athletes with disabilities are quite common in
487 sports, and act as barriers for the long-term participation of athletes with ID in an inclusive
488 environment [19]. While the coaches in our interviews had recognized the importance of
489 adapting their sessions and their attitudes in order to avoid conflicts with their athletes (e.g.,
490 the behavioural problems of the athletes with ID during competition that this study found,
491 probably due to increased stress and anxiety of the competitive environment [15], education
492 to parents and coaches of people without ID is also vital. By raising understanding of the
493 needs and challenges faced by parents of people with ID, stigma against parents of people
494 with ID can be prevented, and coaches can acquire knowledge in their approach towards
495 athletes with ID in inclusive practices. For mainstreaming to be substantiated in sports and
496 fair inclusive participation of people with ID in it, it is critical to address these issues through
497 multisectoral campaigns that will promote disability sports participation awareness and offer
498 inclusive coaching training opportunities [50]. Within and beyond research, co-producing
499 initiatives to promote disability sports and inclusivity, with athletes with and without
500 disability, as well as with their social agents, could generate rich and novel knowledge,
501 deliver meaningful strategies that can positively influence the lives of people with and
502 without, ID and further support public health campaigns [51].

503 **Limitations and future studies**

504 The study presents some limitations that need to be mentioned. First, this study was based
505 only on coaches' experiences of athletes' motivations and did not include athletes' own
506 perceptions. We chose to focus only on coaches due to the critical role of coaches in the
507 sports engagement of athletes [21] and the challenges in interviewing people with ID [52].

508 However, the cognitive limitations of athletes with ID could lead their coaches to misinterpret
509 their motivations and behaviours [11]. To gain a better understanding of the sport of athletes
510 with ID, future work should directly explore the sports experiences of this population. Future
511 research should also consider the combination of interviewing and observational methods
512 [53]. This approach could elicit more diverse views and opinions related to sports for people
513 with ID and the role of the social environment. Moreover, this study did not take into
514 consideration the varying cognitive ability and age (adolescents and adults) of athletes with
515 and without ID. Due to the potential behavioural and need differences that may exist within
516 the population [54], future studies should investigate the motivational and coaching practices
517 differences between athletes with mild and severe ID.

518 **Conclusions**

519 In summary, this paper has highlighted the challenges in promoting inclusivity in the sports
520 environment through understanding the motivations of athletes and coaches from the
521 perspectives of coaches of athletes with and without ID. The intricate relationship between
522 coaches' motivations and their coaching practice, as well as the role of other social agents of
523 the athletes were also explored. Based on the many similarities in the practices of coaches
524 and the motivations of coaches and athletes with and without ID, we are cautiously optimistic
525 that the numerous individual and societal facilitators can promote long-term sports
526 participation of athletes with ID through enhanced awareness of inclusivity. However, more
527 work is needed to overcome potential existing sports participation barriers, for example,
528 ableism, addressing athletes' sports-related needs and motivations, and educating athletes
529 without ID and their social agents challenges faced by athletes with ID. The findings can
530 inform stakeholders about the necessity of a multidisciplinary collaboration (e.g., governing
531 and community bodies, coaches, families, researchers) that will further support athletes with
532 ID and will offer them enhanced opportunities to participate (and maintain) in sports.

533 **References**

- 534 1. Kitchin PJ, Peile C, Lowther J. Mobilizing capacity to achieve the mainstreaming of
535 disability sport. *Managing Sport and Leisure*. 2019; 24(6):424–44.
- 536 2. Misener L, Darcy S. Managing disability sport: From athletes with disabilities to
537 inclusive organisational perspectives. *Sport Management Review*. 2014; 17(1):1
- 538 3. Svanelöv E, Wallén EF, Enarsson P, Stier J. “Everybody with Disability Should be
539 Included”: A Qualitative Interview Study of Athletes’ Experiences of Disability
540 Sports Participation Analysed with Ideas of Able-Mindedness. *Scandinavian Journal*
541 *of Disability Research*. 2020; 22(1):296–306.
- 542 4. Campbell N, Stonebridge J. Coaching athletes with intellectual disabilities. Same
543 thing but different? In Wallis J, Lambert J, editors. *Sport Coaching with Diverse*
544 *Populations: Theory and Practice* (1st ed.). Routledge; 2020.
- 545 5. Sakalidis KE, Menting SG, Elferink-Gemser MT, Hettinga, FJ. The Role of the Social
546 Environment in Pacing and Sports Performance: A Narrative Review from a Self-
547 Regulatory Perspective. *International Journal of Environmental Research and Public*
548 *Health*, 2022; 19(23):16131. <https://doi.org/10.3390/ijerph192316131>
- 549 6. Teodorescu S, Bota A. Teaching and coaching young people with intellectual
550 disabilities: a challenge for mainstream specialists. In Hassan D, Dowling S,
551 McConkey R, editors. *Sport, Coaching and Intellectual Disability*. Routledge; 2014.
552 pp. 103-119.
- 553 7. Robinson D, Goodey C. Agency in the darkness: “fear of the unknown”, learning
554 disability and teacher education for inclusion. *International Journal of Inclusive*
555 *Education*. 2017; 22(4):426–40.
- 556 8. British Psychological Society. Professional Affairs Board. *Learning Disability:*
557 *Definitions and Contexts*. Leicester; 2000.

- 558 9. Van Biesen D, Mactavish J, Pattyn N, Vanlandewijck Y. Technical proficiency
559 among table tennis players with and without intellectual disabilities. *Human*
560 *Movement Science*. 2012; 31(6):1517–28.
- 561 10. Van Biesen D, Hettinga FJ, McCulloch K, Vanlandewijck Y. Pacing Profiles in
562 Competitive Track Races: Regulation of Exercise Intensity Is Related to Cognitive
563 Ability. *Frontiers in Physiology*. 2016; 7:624.
- 564 11. Marrus N, Hall L. Intellectual Disability and Language Disorder. *Child and*
565 *adolescent psychiatric clinics of North America*. 2017; 26(3):539-54.
- 566 12. Edwards AM, Dutton-Challis L, Cottrell D, Guy JH, Hettinga FJ. Impact of active and
567 passive social facilitation on self-paced endurance and sprint exercise: encouragement
568 augments performance and motivation to exercise. *BMJ Open Sport & Exercise*
569 *Medicine*. 2018; 4(1):e000368.
- 570 13. Davis AJ, MacCarron P, Cohen E. Social reward and support effects on exercise
571 experiences and performance: Evidence from parkrun. Buzzachera CF, editor. *PLOS*
572 *One*. 2021; 16(9):e0256546.
- 573 14. Hettinga FJ, Konings MJ, Pepping G-J. The Science of Racing against Opponents:
574 Affordance Competition and the Regulation of Exercise Intensity in Head-to-Head
575 Competition. *Frontiers in Physiology*. 2017; 8:118.
- 576 15. Kevan F. Challenging behaviour and communication difficulties. *British Journal of*
577 *Learning Disabilities*. 2003; 31(2):75–80.
- 578 16. Ruiz MC, Appleton PR, Duda JL, Bortoli L, Robazza C. Social Environmental
579 Antecedents of Athletes' Emotions. *International Journal of Environmental Research*
580 *and Public Health*. 2021; 18(9):4997.
- 581 17. Van Asselt-Goverts AE, Embregts PJCM, Hendriks AHC. Structural and functional
582 characteristics of the social networks of people with mild intellectual disabilities.

- 583 Research in Developmental Disabilities. 2013 Apr;34(4):1280–8.
- 584 18. Sakalidis KE, Burns J, Van Biesen D, Dreegia W, Hettinga FJ. The impact of
585 cognitive functions and intellectual impairment on pacing and performance in sports.
586 Psychology of Sport and Exercise. 2021; 52:101840.
587 <https://doi.org/10.1016/j.psychsport.2020.101840>
- 588 19. Smith B, Sparkes A. Disability, sport and physical activity. In Watson N, Vehmas S,
589 editors. Routledge Handbook of Disability Studies (2nd Edition). London: Routledge;
590 2019. pp. 391-403.
- 591 20. Hansen E, Nordén H, Ohlsson ML. Adolescents with intellectual disability (ID) and
592 their perceptions of, and motivation for, physical activity and organised sports. Sport,
593 Education and Society. 2021; 1–14.
- 594 21. Mansfield L, Kay T, Anokye N, Fox-Rushby J. A qualitative investigation of the role
595 of sport coaches in designing and delivering a complex community sport intervention
596 for increasing physical activity and improving health. BMC Public Health. 2018;
597 18(1).
- 598 22. Camiré M, Forneris T, Trudel P, Bernard D. Strategies for Helping Coaches Facilitate
599 Positive Youth Development Through Sport. Journal of Sport Psychology in Action.
600 2011; 2(2):92–9.
- 601 23. Holt A-D, Smedegaard S, Pawlowski CS, Skovgaard T, Christiansen LB. Pupils’
602 experiences of autonomy, competence and relatedness in “Move for Well-being in
603 Schools”: A physical activity intervention. European Physical Education Review.
604 2018; 25(3):640–58.
- 605 24. Sparkes AC, Smith B. Qualitative Research Methods in Sport, Exercise and Health:
606 From Process to Product. London: Routledge; 2013.
- 607 25. Eady J. Practical Sports Development. London: Pitman; 1995

- 608 26. Fisher R, Borms J. *The Search for Sporting Excellence*. Schorndorf: Hofmann; 1990.
- 609 27. Braun V, Clarke V. Using Thematic Analysis in Psychology. *Qualitative Research in*
610 *Psychology*. 2006; 3(2):77–101.
- 611 28. Braun V, Clarke V. Reflecting on reflexive thematic analysis. *Qualitative Research in*
612 *Sport, Exercise and Health*. 2019 Jun 13;11(4):589–97.
- 613 29. Braun V, Clarke V, Weate P. Using thematic analysis in sport and exercise research.
614 In Brett S, Sparkes A, editors. *International handbook of qualitative research in sport*
615 *and Exercise*. London, UK: Routledge; 2015.
- 616 30. Levitt HM, Motulsky SL, Wertz FJ, Morrow SL, Ponterotto JG. Recommendations
617 for designing and reviewing qualitative research in psychology: Promoting
618 methodological integrity. *Qualitative Psychology*. 2017; 4(1):2–22.
- 619 31. Holmes D. Researcher Positionality - A Consideration of its influence and place in
620 qualitative research - A new researcher guide. *Shanlax int. j. educ*. 2020; 8(4):1-10.
621 <https://doi.org/10.34293/education.v8i4.3232>
- 622 32. Levers M-JD. Philosophical Paradigms, Grounded Theory, and Perspectives on
623 Emergence. *SAGE Open*. 2013; 3(4):1–6.
- 624 33. Thomas C. *Sociologies of Disability and Illness: Contested Ideas in Disability Studies*
625 *and Medical Sociology*. New York: Palgrave Macmillan; 2007.
- 626 34. Mageau GA, Vallerand RJ. The coach–athlete relationship: a motivational model.
627 *Journal of Sports Sciences*. 2003; 21(11):883–904.
- 628 35. Deci E, Ryan R. *Intrinsic Motivation and Self-Determination in Human Behavior*.
629 New York: Springer Science & Business Media; 1985.
- 630 36. Deci E, Ryan R, Guay F. Self-determination theory and actualization of human
631 potential. In McInerney DM, Herbert Marsh H, Craven R, Guay F, editors. *Theory*
632 *driving research: New wave perspectives on self-processes and human development*.

- 633 Charlotte, NC: Information Age Press; 2013. 1 pp. 109-133.
- 634 37. Tavares VD de O, Schuch FB, Tempest G, Parfitt G, Oliveira Neto L, Galvão-Coelho
635 NL, et al. Exercisers' Affective and Enjoyment Responses: A Meta-Analytic and
636 Meta-Regression Review. *Perceptual and Motor Skills*. 2021; 128(5):2211–36.
- 637 38. Washif JA, Sandbakk Ø, Seiler S, Haugen T, Farooq A, Quarrie K, Van Rensburg DJ,
638 Krug I. COVID-19 Lockdown: A Global Study Investigating the Effect of Athletes'
639 Sport Classification and Sex on Training Practices. *International Journal of Sports
640 Physiology and Performance*. 2022; 17(8):1242-56.
- 641 39. Van Schrojenstein Lantman-de Valk HMJ, Walsh PN. Managing health problems in
642 people with intellectual disabilities. *British medical journal*. 2008; 337:2507–7.
- 643 40. Scott HM, Haverkamp SM. Mental Health for People With Intellectual Disability:
644 The Impact of Stress and Social Support. *American Journal on Intellectual and
645 Developmental Disabilities*. 2014; 119(6):552–64.
- 646 41. McLean KN, Mallett CJ. What motivates the motivators? An examination of sports
647 coaches. *Physical Education & Sport Pedagogy*. 2012; 17(1):21–35.
- 648 42. Lafrenière M-AK, Jowett S, Vallerand RJ, Carbonneau N. Passion for coaching and
649 the quality of the coach–athlete relationship: The mediating role of coaching
650 behaviors. *Psychology of Sport and Exercise*. 2011; 12(2):144–52.
- 651 43. Jowett S, Lafrenière M-AK, Vallerand RJ. Passion for activities and relationship
652 quality. *Journal of Social and Personal Relationships*. 2012; 30(6):734–49.
- 653 44. Gu S, Xue L. Relationships among Sports Group Cohesion, Psychological
654 Collectivism, Mental Toughness and Athlete Engagement in Chinese Team Sports
655 Athletes. *International Journal of Environmental Research and Public Health*. 2022;
656 19(9):4987.
- 657 45. Rocchi M, Couture AL. Recreational and developmental youth coach learning.

- 658 Physical Education and Sport Pedagogy. 2017; 23(3):267–79.
- 659 46. Edison BR, Christino MA, Rizzone KH. Athletic Identity in Youth Athletes: A
660 Systematic Review of the Literature. International Journal of Environmental Research
661 and Public Health. 2021; 18(14):7331.
- 662 47. Silva CF, Howe PD. The (In)validity of Supercrip Representation of Paralympian
663 Athletes. Journal of Sport and Social Issues. 2012; 36(2):174–94.
- 664 48. Birenbaum A. Courtesy stigma revisited. Mental retardation. 1992; 30:265-268.
- 665 49. McGarty AM, Westrop SC, Melville CA. Exploring parents’ experiences of
666 promoting physical activity for their child with intellectual disabilities. Journal of
667 Applied Research in Intellectual Disabilities. 2020; 34(1):140–8.
- 668 50. Atherton H, Crickmore DJ. Learning disabilities: Towards inclusion. Edinburgh:
669 Elsevier Churchill Lvgst; 2012.
- 670 51. Smith B, Williams O, Bone L, Collective the MSWC. Co-production: A resource to
671 guide co-producing research in the sport, exercise, and health sciences. Qualitative
672 Research in Sport, Exercise and Health. 2022; 1–29.
- 673 52. Hollomotz A. Successful interviews with people with intellectual disability.
674 Qualitative Research. 2017; 18(2):153–70.
- 675 53. Jamshed S. Qualitative Research method-interviewing and Observation. Journal of
676 Basic and Clinical Pharmacy. 2014; 5(4):87–8.
- 677 54. Sturman DA, Mandell DR, Moghaddam B. Adolescents exhibit behavioral differences
678 from adults during instrumental learning and extinction. Behavioral Neuroscience.
679 2010; 124(1):16–25.