

Exploring British adolescent rugby league players' experiences of professional academies and dropout.

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2 dropout

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Abstract

The purposes of this study were threefold: to explore former rugby league players' experiences of professional academy environments, to understand their reasons for dropping out of the sport, and to explore their recommendations for optimising future talent development environments. Semi-structured interviews were conducted with nine ex-professional academy rugby league players up to one year after dropping out of playing rugby. A combination of inductive and deductive thematic analysis was employed to analyse the data. The thematic analysis revealed three general dimensions: talent development pathways, reasons for dropout, and recommendations. The findings suggest that players' talent development experiences, and the reasons for dropout could be explained by a complex interaction of micro (e.g., negative academy experiences), meso (e.g., education), exo (e.g., player pathway structures), and macro systems (e.g., transitions to other clubs). It is concluded from these findings that talent development pathways which lack a long-term focus, and emphasise early success are likely to result in increased risk of burnout, demotivation, and subsequent dropout. From an applied perspective, talent development pathways must consider the many personal and environmental factors which interact to determine an individual's talent development trajectory. Furthermore, by recognising the multiple factors that may influence development, the effectiveness of development pathways may be enhanced by neither excluding 'potential' through inappropriate early identification, nor ignoring crucial talent development variables that contribute toward the fulfilment of potential.

Keywords: bioecological; dropout; expertise, talent development; youth sport

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52 dropout

53 Over many decades sport expertise research has aimed to answer questions about how
54 excellence is achieved, by focusing on how successful athletes reached the top and what
55 attributes they acquired along the way (Baker & Young, 2014). Although research has been
56 dedicated to understand expertise acquisition, research into *why* high-performing adolescent
57 athletes do not achieve elite status by transitioning into full-time professional contracts and
58 subsequently dropping out of playing sport is relatively sparse (see Brown & Potrac, 2009;
59 Fraser-Thomas, Côté, & Deakin, 2008a; Quested et al., 2013). This is an important issue to
60 understand since in the UK alone, rugby league currently has one of the highest rates for
61 dropout (Sport England, 2012). Alfermann and Stambulova (2007) propose that dropping out
62 from sport is the premature termination of a sports career prior to the individual reaching
63 their peak performance. Talented adolescents who have demonstrated traits of elite
64 performance in the teenage years, who stop playing their sport having not fulfilled their
65 potential, are often exposed to immediate psychological, motivational, health and well-being
66 issues associated with sport failure (Brown & Potrac, 2009; Crane & Temple, 2015).

67 Exploring the talent development pathways which many of these athletes partake in
68 during their progression to achieve peak performance could reveal the reasons behind their
69 dropout and provide potential strategies to avoid such dropout. One contextual example of
70 this in rugby league could be basing selection and training environments on the early physical
71 maturation of players, which may exclude equally skilled late developers from the same
72 developmental opportunities (Cupples, O' Connor, & Copley, 2018; Till, Copley, O' Hara,
73 Cooke, & Chapman, 2014). A holistic approach has subsequently been conceded as a critical
74 element in successful talent development programmes (e.g., Henriksen, Stambulova, &
75 Roessler, 2010; Martindale, Collins, & Daubney, 2005). In a review by Martindale and

76 colleagues (Martindale et al., 2005), they presented four critical themes relating to effective
77 talent development environments. First, programmes are required to have long-term aims and
78 methods, second, wide ranging coherent support and messages, third, emphasis on
79 appropriate development rather than early selection, and fourth individualised and ongoing
80 development (Martindale et al., 2005). Development environments which are lacking these
81 features have been shown to increase the risk for burnout, de-motivation and dropout
82 (Durand-Bush & Salmela, 2002; Fraser-Thomas, Cote, & Deakin, 2008b; Isoard-Gauthier,
83 Guillet-Descas, & Lemyre, 2012; Rumbold, Fletcher, & Daniels, 2018). For example, recent
84 research in rugby union academies has identified a range of pressures that academy players
85 can encounter (e.g., conflicting coaching styles, lack of individualised development sessions,
86 a negative motivational climate) whilst operating in such talent development environments
87 (Rumbold et al., 2018). In addition, these pressures have been shown to link to a series of
88 predominantly negative emotional, intrapersonal and performance development outcomes.

89 To achieve a holistic talent development approach, it has been suggested that a sound
90 theoretical framework is important in foreseeing and designing the most appropriate ways to
91 develop future athletes. Many talent development models have specified clear stages (e.g.,
92 Bloom, 1985) which individuals progress through (for a review, see Coutinho, Mesquita, &
93 Fonseca, 2016). However, talent development is idiosyncratic, non-linear and dynamic
94 (Coutinho et al., 2016). Hence, models which examine discriminative and specific stages of
95 development should be taken with caution, as it has been argued that there is no specific
96 precipitating event that may lead to a person's withdrawal from sport. Rather, an ecological
97 theory, such as Bronfenbrenner's bioecological framework (e.g., Bronfenbrenner & Morris,
98 2006), could be used as a starting point to organise the study of multi-level dynamics of the
99 different sub-systems involved in the acquisition of talent development.

100 Bronfenbrenner's bioecological model provides an evolving theoretical framework for

101 understanding how the environment may shape human development throughout the lifespan
102 (see Bronfenbrenner, 2005). Bronfenbrenner (1995) suggests that complex interactions
103 emerge between a person and their environment. These interactions occur through a series of
104 dynamic interrelating nested systems which result in distinct developmental outcomes
105 (Krebs, 2009). The bioecological model is predicated on the interaction of four key elements:
106 Process–Person–Context–Time (PPCT) which constrain human development (for a review,
107 see Bronfenbrenner & Morris, 2006). Bronfenbrenner (2005) indicated the central component
108 of the model as *proximal processes*. These processes refer to systematic interactions between
109 the individual and immediate environment and are activities that the individual regularly
110 participates in, such as attending practice. Araujo et al.'s (2010) study exemplifies how being
111 informed by the PPCT model may benefit researchers to further explore the development of
112 athletes, identifying factors that influence development, such as: training quality and an
113 unstructured practice environment (micro systems), family support (meso systems), location
114 of birth (exo systems), and poverty (macro systems) .

115 When evaluating the linkage between talent development environments and the
116 possible reasons for dropout in sport, it is worth noting that the literature on adolescent
117 dropout research has focused on individual factors such as personal motivation and coping
118 abilities. However, evidence suggests that broader social forces (e.g., attitudes and beliefs
119 towards developing talent) may also influence dropout (Balish, McLaren, Rainham, &
120 Blanchard, 2014). In this regard, when researching dropout previous research has largely
121 focused on quantitative means of data collection with currently performing competitors,
122 which fails to offer meaningful insight into the complex reasons for attrition amongst elite
123 adolescents (Le Bars, Gernigon, & Ninot, 2009). Given this focus on superficial reasons for
124 dropout, many researchers (e.g., Fraser-Thomas et al., 2008b) have emphasised the
125 importance of conducting qualitative research as a valuable means for in-depth analysis and

126 for interpreting how physical and psychosocial factors interact to influence athlete
127 development (Coutinho et al., 2016). Further, although previous research investigating
128 dropout in sport has considered the varied perspectives of athlete withdrawers versus
129 engagers (Le Bars et al., 2009), coaches (Jones, Mahoney, & Gucciardi, 2014; Pankhurst,
130 Collins, & Macnamara, 2013), parents and National Governing Body staff (Pankhurst et al.,
131 2013), we subscribe to the belief that it is more suitable to represent the viewpoints of those
132 individuals who have proximally lived through the experience of these talent development
133 environments and dropout.

134 One way to start understanding the processes behind dropout is to utilise a
135 framework such as that proposed by Uehara, Button, Falcous, and Davids (2016). These
136 researchers employed an interpretive research design that allowed the exploration of wider
137 interacting environmental constraints that impinge upon the acquisition of expertise. Uehara
138 et al. (2016) outlined how the bioecological model can be used to provide methodological
139 guidance for identifying relevant constraints that affect the development of athletes; offering
140 a holistic, longitudinal and contextual overview of human development. One specific UK
141 context in which we have limited understanding of dropout is that of rugby league academies
142 (Jones et al., 2014). Rugby league academies in the UK operate at under 19s where players
143 are contracted full-time to a professional or semi-professional rugby league club, in addition,
144 a part time under 15s and 16s scholarship programme provides a pathway to the academy. In
145 sports such as rugby league, peak performance emerges during adulthood (Till et al., 2016);
146 hence, career termination during adolescence is regarded as premature and conforms to
147 dropout. Moreover, a large proportion of talented adolescents who reach the top of the sport
148 during the teenage years fail to transition into the higher echelons of the professional game
149 (Rugby Football League, 2016). However, limited research has explored the reasons for
150 dropout in this hard to access population during late adolescence or early adulthood (Baron-

151 Thiene & Alfermann, 2015). Subsequently, this population are a largely underrepresented
152 voice in explaining why dropout in rugby league may occur so frequently. Hence, this study's
153 focus was on dropout in ex-professional academy rugby league players who were previously
154 highly invested in their sport, rather than withdrawal by sport samplers or transfers.
155 Understanding more about ex-players' experiences of academy environments might shed light
156 on the long-term implications of involvement in high-performance sport, whilst providing
157 useful information to guide the designs of athlete development programmes. Therefore, the
158 aim of this research was to explore firstly, experiences of being part of a professional rugby
159 league academy, secondly, the reasons why talented adolescents have dropped out of playing
160 rugby league and thirdly, recommendations for future talent development in rugby league
161 based on players' previous experiences.

162 **Method**

163 **Research Design**

164 In line with research that seeks to represent individuals' values and diverse viewpoints
165 regarding social realities (Lincoln, Lynham & Guba, 2013), a qualitative design was adopted.
166 This design was considered to be most appropriate for serving three main philosophical aims.
167 Firstly, the current authors were interesting in exploring and outlining a social inequity (cf.
168 Mertens, Fraser, & Heimlich, 2008), namely, the disproportionate number of UK professional
169 rugby league players who have prematurely dropped out of the sport (Rugby Football
170 League, 2016). Secondly, through the collection of detailed descriptions, the authors wanted
171 to co-construct a greater sense of social justice by engaging participant voices that have
172 habitually been excluded from talent development and career transition research in sport
173 (Fraser-Thomas et al., 2008b). Thirdly, in embracing action as both a political and ethical
174 research commitment (Heron & Reason, 1997), the authors sought to co-construct a series of
175 recommendations for optimising talent development environments; founded on the belief that

176 people's worldwide views are based on participative realities, and, that individuals'
177 knowledge is cognitively constructed from their experience and interaction with others, and,
178 the environment in which they operate (Lincoln et al., 2013). To achieve this purpose, the
179 study was conducted from a relativist ontological perspective and transformative paradigm
180 (Mertens et al., 2008).

181 **Participants**

182 Purposive sampling was employed to recruit individuals who had previously
183 competed for one of the UK Super League rugby league academies, and had since dropped
184 out of playing the sport. Following institutional ethics approval, ex-academy rugby league
185 players were contacted, informed of the study purpose and invited to take part. The
186 participant sample which agreed to participate ($N = 9$) consisted of male ex-professional
187 academy rugby league players ($M_{age} = 20.22$, $SD = 1.48$ years). During their teenage
188 development years, all players trained within youth scholarship programmes before being
189 contracted to professional rugby league academy teams on a full-time basis for up to 4 years.
190 When operating within their respective professional academy team, six players were not
191 offered a senior contract, two players turned down the offer of a senior contract, and, one
192 player dropped out of the sport mid-way through their academy contract. The competitive
193 standard and future playing potential of these players was evident in so far that seven of the
194 nine players had competed internationally at youth age-group level. Post academy seven of
195 the players immediately dropped out of playing rugby league and at the time of interview had
196 not played since, one player continued playing for a semi-professional club and at the time of
197 interview had not played for one full season, and one player continued playing at university
198 but had not played the sport for two full seasons at the time of interview.

199 **Data Collection**

200 Individual interviews with each participant were conducted face-to-face by the first

201 author who had experience of qualitative interviewing and of playing and coaching rugby
202 league previously. Prior to beginning each interview, participants were provided with a
203 written information sheet about the aims of the research. This information was verbally
204 discussed at the beginning of each interview, at the same time of assuring participant
205 confidentiality, anonymity, and the freedom to withdraw at any stage. Following this,
206 participants had the opportunity to ask questions about the research before completing an
207 informed consent form.

208 **Interview guide.** A semi-structured interview guide was used to facilitate each
209 session. The content of the interview guide was generated based on the authors' inductive
210 logic of rugby league coaching and professional rugby academy environments. In addition,
211 the development of questions was supplemented from related studies that have been
212 conducted on dropout in sport (Fraser-Thomas et al., 2008a, 2008b; Quested et al., 2013). In
213 this way, five sections of the interview guide were developed to explore the relevant research
214 aims, including: (1) initiation into rugby league (e.g., "Can you tell me a little bit about your
215 early experiences of rugby league?" / "How did you first get introduced to the sport?"), (2)
216 experiences of professional rugby league academies (e.g., "Can you tell me about your first
217 involvement with a scholarship or academy?" / "To what extent was the environment an
218 appropriate climate for you to develop within?"), (3) leadership and support structures whilst
219 operating in professional rugby league academies (e.g., "Can you tell me a little bit about the
220 coaching and leadership styles within the academy at the time?" / "To what extent do you
221 think the academy staff worked well to help you develop as a player?"), (4) experiences of
222 dropout from the sport ("How did you adjust to no longer being a professional player?" /
223 "What were your main reasons for dropping out of the sport?"), and, (5) recommendations for
224 youth rugby league players and professional rugby league structures ("What advice would
225 you give to other players operating in academy set ups?" / "On a national level, is there any

226 advice that you would give in terms of creating optimal development environments for
227 academy rugby league players?"). A final section of the interview guide served as an
228 opportunity for participants to summarise their viewpoints, elaborate on their socially
229 constructed experiences and provide feedback on the interview process.

230 **Data Analysis**

231 The interviews took approximately 24 to 76 minutes ($M = 44.39$, $SD = 17.15$), were
232 digitally recorded and transcribed verbatim. To explore ex-academy rugby league players'
233 experiences of dropout, a thematic analysis was conducted due to its suitability in extracting
234 rich descriptive accounts and for identifying common patterns across participant cases (Braun
235 & Clarke, 2006). In line with Braun and Clarke's (2006) framework for thematic analysis
236 procedures, this involved reading and re-reading the interview transcripts and making a note
237 of initial relevant material. Initial codes representing words or phrases relating to the research
238 question were then inductively identified to represent raw data themes. These raw data codes
239 were then collated into lower-order themes before being categorised into higher-order
240 themes. Higher-order themes were then deductively clustered into general dimensions.
241 Following this, ongoing analysis was conducted by the research team to review and refine the
242 naming of themes through inductive and deductive reasoning until a general consensus was
243 achieved.

244 **Research Quality and Rigor**

245 Research rigor was developed based on a relativist approach that views universal
246 criteria as a socially constructed list of characteristics (Smith & McGannon, 2017, p. 16;
247 Sparkes & Smith, 2009). Accordingly, the following steps were adopted to demonstrate the
248 quality of the methods and emerging data. Firstly, purposive sampling was adopted to ensure
249 that the most appropriate participants were recruited to fully address the research question.
250 Rigor of the methods was facilitated by conducting two pilot interviews with two ex-rugby

251 league academy players to evaluate the flexible format and sequencing of questions of the
252 interview. Subsequently, some questions were removed due to repetition and other questions
253 reworded to enhance their clarity. The authors have attempted to illustrate sincerity by being
254 transparent about their biases and motivations, challenging whether they are well-suited to
255 explore the topic of interest, and, how these factors may have played a role in the methods
256 (Tracy, 2010). For example, it is important to acknowledge that the personal biography of the
257 first author was a motivation for undertaking the current study, since the author had
258 experience of playing and coaching rugby league. Furthermore, the first author previously
259 held a coaching role in a talent development setting within a professional rugby league
260 academy, where he had first-hand experience of the challenges that young players
261 encountered during their time within this environment. These experiences provided an
262 'insider status' and a common ground which was deemed important to co-construct
263 knowledge in relation to the research aim (Baldwin, 2006). From a relativist perspective, the
264 authors accept that subjectivity can influence the interpretation of the data. To encourage
265 reflexivity on the first author's presuppositions and how they may have impacted on the
266 construction of knowledge, the second and third authors acted as "critical friends" (i.e., a
267 process of critical dialogue between people to challenge interpretations made) to provide a
268 sounding board for reflection and exploration of multiple and alternative explanations for the
269 emerging data (Smith & McGannon, 2017).

270

Results and Discussion

271 The thematic analysis revealed 17 lower-order themes, 7 higher-order themes, leading
272 to the development of 3 general dimensions. The dimensions included talent development
273 experiences, reasons for dropout, and recommendations. Within talent development
274 experiences, higher-order themes of coaching behaviour, academy experiences, and player
275 pathway structure emerged. Reasons for dropout were concerned with player values and

276 player pathway constraints. Finally, higher-order themes within recommendations included
277 player specific recommendations and pathway governance.

278 With a view to highlighting players' academy experiences and the reasons why they
279 dropped out from playing rugby league, figure 1 was developed to highlight the complex
280 interaction which exists between the interacting micro, meso, exo and macro systems with
281 further analysis provided below of how each component of the system interacted.

282 **Figure 1 here**

283 **Talent Development Experiences**

284 **Positive academy experiences (microsystem).** Participants' experiences of rugby
285 league environments were influenced by the microsystem of the rugby league academy,
286 particularly the proximal processes and interactions with coaching staff. Positive experiences
287 were demonstrated with coaches providing a more autonomy-supportive coaching style,
288 whom were passionate, encouraging, and acted as motivators. Here, players' accounts of a
289 development focus highlighted the importance players placed on individualised coaching,
290 which was exemplified through one-to-one video sessions and coaching that aimed to
291 improve technical or tactical deficiencies. A player provides an example of an individual
292 video session:

293 It were individual team video sessions so pick up on your performance, not the team's
294 performance, it were all about you and if you did well, you know, pick up on it and
295 show why you did it well. Look at your technique, that's good or vice versa or if there
296 were something you were struggling with or something you did poor in a game, 'this
297 is your technique, this is what you need to fix up, you need to work on this'. (P8)

298 Mutual respect and effective interpersonal skills were drivers in influencing players'
299 perceptions of positive coach-athlete relationships, and players suggested that these
300 behaviours helped coaches to build rapport with all players. Ivarsson et al. (2015) suggests

301 high quality environments involve good coach-athlete relationships where athletes feel an
302 optimal arena for communication about things inside and outside of the sport. Here, the
303 analysis revealed that players discussed certain coaches who developed a reputation for being
304 a ‘good guy’, these coaches were held in high regard in the local area and held a cult-like
305 status. Coaches of this nature were described as being approachable, having time for players,
306 being patient during learning and skill tasks, and leading by example, as outlined by the
307 following quote:

308 Could not find a better bloke. He is worth a million pounds ... He knows his stuff and
309 he’s got the time of day for you as well. Always trying to help and he was one of
310 those blokes that wouldn’t ask you to do anything he couldn’t do himself. He would
311 stand there and show you. He wouldn’t just bark [instructions]. (P5)

312 Early positive experiences were categorised by factors that provided a sense of
313 belonging, where ‘trust’ and ‘confidence’ were consistently placed in the players by the
314 academy staff and their peers. The account below exemplifies how a player ‘felt good’ due to
315 the academy staff looking after him and his peers:

316 It was really good. I mean training you’d have at least four or five coaches in there but
317 they know what they’re talking about and on game day there’d be even more and they
318 were all confident with you. They weren’t saying ‘we’ll shove him in and we’ll see’.

319 They were confident with you and [subsequently] there’s more of a family bond. (P2)

320 These findings relate to previous work where positive experiences were demonstrated with
321 coaches providing a more autonomy-supportive coaching style, who had passion,
322 encouragement, and acted as motivators (Fraser-Thomas et al., 2008a; Isoard-Gauthier et al.,
323 2012). Even during stressful situations where academy staff had to make difficult decisions
324 regarding playing opportunities, contract offers, and releasing players from the academy,
325 players still spoke positively about the experience. These difficult situations were made

326 positive due to academy staff adopting a caring attitude towards the player, and openly
327 discussing the reasons for certain decisions directly. A player provides an example of an
328 academy manager providing an exit strategy to another club following his release:

329 I had a meeting and then the week after obviously because I was contracted to them, I
330 got paid out and had a letter through and that was it really, but [coach] was, he was
331 good help to be fair. He helped me get into a different club, different set up. (P5)

332 **Negative academy experiences (microsystem).** Within the microsystem of rugby
333 academies, negative experiences were concerned with the perceived change in motivational
334 climate, the prioritisation of physical development over skill development, and players not
335 fulfilling their potential. Poor coach-athlete relationships were cited frequently by players,
336 recalling that they felt unfairly treated. This resulted in a perceived lack of opportunity to
337 play (i.e. time), lack of enjoyment (i.e. context) and lower perceptions of competence (i.e.,
338 person) all contributing to reasons for withdrawing from the sport. Examples of negative
339 coach behaviour included poor coach-athlete relationships described as autocratic,
340 domineering, and volatile, resulting in reduced autonomy and competence in the players (e.g.,
341 Adie, Duda, & Ntoumanis, 2012). This is exemplified by a participant's comments on his
342 relationship with an academy coach:

343 It was the guy's demeanour; he reminded me of a military teacher ... He was just a
344 prick. He was just really nasty.... no one really liked him he was just a horrible person,
345 you tried to chat to him about anything and he was just so serious about training. (P3)

346 Poor communication has been shown as a determining factor between "high" and
347 "low" quality environments where an inability to communicate with the coach results in a
348 negative impact on players' development (Durand-Bush & Salmela, 2002). Here, poor coach
349 communication was mainly concerned with players not understanding the reasons why they
350 were not being selected to play competitive games. Players felt that "favouritism" was a

351 reason for not being selected because “your face didn’t fit”, therefore they did not get many
352 opportunities to play in competitive games. The issue was intensified when coaches poorly
353 explained why players were not being selected:

354 I’d ask them questions on what I need to improve on and what I need to do and
355 they’d tell me I’m doing well, they’d tell me sometimes I need to do this and that
356 but it was, they wouldn’t give me a valid reason why I wasn’t in the team most
357 weeks and that was, I don’t expect to get in the team every week but you know I
358 should be playing more than what I was. (P5)

359 This microsystem impacted on the “Person” disposition, resulting in lower perceptions
360 of self-confidence, satisfaction and autonomy. Therefore, the importance of democratic
361 coaching styles and mature coach–athlete conversations during adolescence is suggested
362 (Wright and Cote, 2003). Previous work in academy soccer has demonstrated that a lack
363 of opportunity to play, not enjoying training or matches, and peer/teammate difficulties
364 are linked to dropout within the immediate environment (Figueiredo, Gonçalves, Coelho
365 e Silva, & Malina, 2009). A more open and transparent communication is suggested,
366 with coaches making an effort to interact frequently with all of their athletes and to
367 solicit information concerning their athletes’ perceptions, opinions, and attitudes
368 regarding their sport involvement (Adie et al., 2012).

369 Players highlighted a culture of overemphasising physical development as opposed to
370 developing game skills, which the players did not consider conducive to their development.
371 The following player outlines the perceived emphasis on fitness from his professional
372 academy experiences:

373 It [training] was more emphasising fitness and what your body fat percentage was
374 saying, which I thought was irrelevant to a certain degree... he [fitness coach] used to
375 absolutely beast us, absolutely cane us, I didn’t really mind it at the time, but I did feel

376 like sometimes he went a bit overboard with it. I think they were more concerned with
377 what your rig [body] was saying than what you could actually do as a player which, I
378 was one thing that I didn't really like about the club. (P6)

379 Players also discussed negative academy experiences in relation to the motivational
380 climate created by key social agents within the academy, such as the academy support staff,
381 coaches, and peers. Accounts were provided about the control that coaches and peers exerted
382 over the squad to play and practice in a certain way. Players considered this coercive
383 approach to limit opportunities to develop game skills and decision-making qualities. A
384 player provides an account in relation to trying skills during game based practice, the skills he
385 was using were not considered congruent with the position he played, where he felt pressure
386 to "train in a certain way":

387 I suppose there is a lot more pressure to train in a certain way when you are with a
388 professional side, obviously, but if you are at an amateur club you can try and do
389 things, you can, I was a prop forward, I could throw a really long pass and no one
390 would bat an eyelid, but if I tried that in training for [academy] I'd be obviously told
391 off [reprimanded] for it or told I shouldn't be doing that. (P9)

392 In line with findings from exploring rugby union academies (Rumbold et al., 2018),
393 this type of motivational climate was common across the players' experiences, where the
394 academy environment presented motivational challenges through the behaviourist type of
395 methods employed. These challenges manifested themselves during practice and competitive
396 games, where a focus was placed on perfection and control, leading to players performing
397 actions in a safe manner that reduced risk and eliminated player autonomy:

398 We did have a lot of skill sessions but I think [coach] was really critical on that. He
399 was always shouting, always screaming his head off, so it was always really hard to
400 relax because everyone was feeling under so much pressure that you feel like 'oh shit,

401 I don't want to try this in the game, I don't want to try this because if it goes wrong
402 I'll just get screamed at'. So you were less willing to try something new and be a bit
403 adventurous. (P3)

404 Here, participants spoke frequently about specialised training, with the focus on
405 "perfect technique" rather than exploring their own skill set to produce actions. This resulted
406 in a range of dispositional characteristics such as, lower self-confidence, a feeling of having
407 no autonomy and decreased motivation. This study highlights the importance of carefully
408 structured programmes that focus on physically and psychosocially developing individuals
409 rather than simply on the "perfect" performing athlete. This finding supports Burgess and
410 Naughton's (2010) suggestion to move away from prescribing precise training hours or
411 regimes which are embedded with deliberate practice models (Ericsson, Krampe, & Tesch-
412 Römer, 1993). Rather, it may be beneficial to adopt a holistic framework of individualised
413 training, with the ability to alter programmes according to the monitoring of feedback from
414 talent development specialists, who in turn, work with coaches, teachers, and parents.

415 **Reasons for Dropout**

416 **Player pathway structure (exosystem).** Players discussed exosystem factors such as
417 coaching frameworks not supporting players' motivations and the challenges associated with
418 identifying talent too early on in adolescence. Players discussed examples of peers who were
419 selected to play for international representative sides early on in adolescence, suggesting that
420 players who experienced early physical maturation had an advantage over other players
421 (Cupples et al., 2018). One player provided his perspective on the issues associated with
422 selecting young players for representative programmes:

423 Some people that got selected at 12 years old were still pushed even though they were
424 18, which if they are good enough fine, that's brilliant, but then you have got really
425 good players that maybe weren't as [physically] developed as they were at 12 years

426 old but can't get in [the system]. That is a massive thing. I don't understand why they
427 had a [Nation] youth [team] that young because it's not an indication of where you
428 are. (P2)

429 This quote highlights one of the constraints of a rigid exosystem factor, such as a relative age
430 effect and physical maturation (Cupples et al., 2018). In this way, the general consensus
431 amongst ex-players was that relative age effect can make it increasingly difficult to enter or
432 exit a microsystem, presenting talent identification challenges to players who matured later
433 on in adolescence. As Simonton (2001) proposed, coaches and governing bodies employing
434 these systems focus on early adolescent performance results, demonstrating a "win-at-all-
435 costs" mentality that may, in fact, impairs future performance. An important component of
436 the Process-Person-Context-Time (PPCT) model is the interaction of the PPC over time
437 (Bronfenbrenner, 2005). Our findings suggest a long term development focus needs to be
438 better embedded, to allow adolescents to fully develop and utilise their potential. The
439 findings suggest that often, player development pathways were too rigid and did not allow the
440 flexibility that is required in changing interactions between various microsystems in the
441 adolescents' development. An important component on reasons for dropout from players'
442 perceptions was a focus on immediate results, rather than long term development being
443 central to the programme aims. Fraser-Thomas et al. (2008a) suggested that sport performers
444 who remain engaged in their sport for prolonged periods advocate a developmental
445 philosophy, with a delayed specialisation and a stronger focus on personal development.
446 Players' accounts suggest that some of the players themselves, and their peers, did not benefit
447 from being selected for representative sides early on in adolescence:

448 I don't think it is a good thing to categorise people at such a young point
449 because I also know a lot of people that were in [National] youth at that
450 age, thought they'd made it at 13 years old and didn't get anywhere near

451 becoming [senior full-time professional], so I don't think it is good for
452 some of the people that are actually in it [the system]. I don't think it is a
453 good thing for the people that aren't in it, either. (P4)

454 Players also discussed struggling to cope with the transition from playing amateur
455 rugby, such as the physical struggles and the change in environment leading to lower levels
456 of enjoyment and motivation, which supports similar challenges encountered in rugby union
457 academies (Rumbold et al., 2018):

458 No middle ground, like no middle ... It's just straight into it and I think that's really
459 hard to [cope with], unless you really want it. Fair play to the ones who coped with it
460 really well. Unless you really want it and that's what you really want to do then that's
461 what you have to do. I think for the rest of them a lot of people don't develop like
462 that. I think a lot of people go the opposite way and act out and just really don't enjoy
463 it anymore, so maybe throw in a bit more time or make it a lot easier to integrate from
464 one to the other. (P3)

465 Players here spoke of a linear, inflexible, and prescriptive player pathway structure
466 reporting that the pathway did not support the non-linearity of players' development. A
467 player presents his experiences of being released before he had matured physically. This
468 challenge was also increased through the removal of an older age category that would have
469 provided the player with further development opportunities. He explained:

470 Then later on when it got to actually 18 and they got rid of the under 21 system, I
471 suppose it sort of became like if you are not good enough for 18 are you actually
472 going to be good enough to play at all? At that time obviously, physically for a prop
473 forward myself there's no way at 18 I'd be physically developed enough to play at
474 Super League level with players who are twice my size. (P3)

475 **Education (mesosystem).** A mesosystem encompasses situations where two or more

476 microsystems come together in some respect, here values of education and rugby clashed
477 influencing players choices to dropout (Keathley, Himelein, & Srigley, 2013). The theme of
478 education was a common area discussed by the players, who felt that their education was
479 more important to them than a career in rugby league. Participants often reported conflicts
480 between rugby, school / education and social / recreational opportunities. As highlighted
481 previously in soccer (Crane & Temple, 2015), rugby players had similar issues with conflicts
482 between sporting commitments, education, and time spent in social settings with friends. For
483 some players, this dilemma presented a situation that meant education came first, at the
484 expense of a career in rugby league. The following player discusses wanting to complete a
485 work apprenticeship, but also wanting to continue their rugby league career:

486 Let them [players] do what they want to do. If they want to go to University, if they
487 want to go on to do an apprenticeship, if they want to carry on at college then support
488 them and give them something, they will enjoy rugby a hell of a lot more once they
489 come out of school ... I think, let them do what they want to do and you'll get a ten
490 times better player. It would have kept me in the game. Let me finish my
491 apprenticeship, work with me and I think I'd have developed into something. (P5)

492 The ability to cope with the demands of excelling in both sport and academia, and
493 with the pressure put on athletes by their coach and parents is an important success factor for
494 adolescents in elite training environments (Isoard-Gauthier et al., 2012). These findings
495 suggest high quality talent development environments require well established relationships
496 between the club, coaches, parents, and school, to support both the participants' sporting and
497 academic aspirations (Ivarsson et al., 2015).

498 **Finance (exosystem).** The lower-order theme of finance was concerned with full-time
499 contract offers post-academy rugby. Players did not consider the contract offers to be of value
500 to them, and turned the offers down:

501 [head coach] tried putting a proposition forward to me with first team. I think it was
502 about £9,000 a year... I could earn more than that going to work and I'd have had
503 better prospects... That job was there until I was 65. I wanted it but for £9,000 a year I
504 wouldn't get out of bed. They like to say that it's a family and it's all about the person
505 and the players and we all work together, but the favourite words are used when it
506 doesn't go their way, "it's a business, it's a business, we've got to make money". (P2)

507 One player also shared his experiences of being offered a first team contract, but the
508 financial instability of the club along with a reduced wage influenced his decision not to take
509 the offer of a first team contract:

510 They wanted to keep me. The intention was to put me into the first team the year after
511 but I was going to be on less money than I would be on now. At this point I was
512 questioning whether I wanted to be a professional rugby player and also I thought
513 even if I stayed [club] are they going to go bust in a year's time so, OK, thanks for the
514 offer, think about it. Talked it over with my dad and decided that it was probably not
515 the best place to be at the moment, which was a shame because I loved it. (P4)

516 **Transition to other clubs (macrosystem).** The lower-order theme of transitions was
517 concerned with players' ability to cope with the transition from amateur to academy rugby
518 league, and the challenges associated with transitioning to amateur rugby league clubs post-
519 academy. Players also had poor experiences of trying to transition to other professional clubs,
520 where club representatives demonstrated unprofessional behaviour towards players, leading
521 to them not taking the opportunity to join another club.

522 None of them really cared ... it wasn't just me, there were a few others that got up to
523 them [club] as well ... went to speak to them. They were late, didn't care. They got
524 names mixed up, you know ... I have driven to [sport organisation venue] for them to
525 not turn up, for them to get my name wrong, and then they'll offer you a place. No

526 thank you. And that left a bad taste in the mouth. (P8)

527 **Recommendations**

528 Within the dimension of recommendations, two higher-order themes of player
529 specific and pathway governance were identified.

530 **Player specific (microsystem).** Player specific recommendations were based on
531 training and learning and expectations. Training and learning recommendations were
532 concerned with not overtraining, actively exploring opportunities to experience physical
533 adversity through playing in older age groups, and playing rugby league with autonomy.
534 Research has demonstrated a mixture of benefits and risks of ‘‘playing up’’ (Wright & Côté,
535 2003). Here, participants felt that playing against older players forced them to develop tactical
536 and technical skills rather than ‘‘not rely on one element (physicality)’’ but to ‘‘try and mix it
537 up a bit’’. A participant discusses playing in a year above for a whole season, and explains
538 how beneficial this was for setting the ‘‘platform’’ to transition into an academy:

539 Under 15s we played a year above. We played in the second division of the [region]
540 league and I think we won it. The age above and that was always tough. Always very
541 physical ... That set the platform for me. (P3)

542 Few talent development models encourage the development of self-regulated learners,
543 despite the support for the benefits of developing self-regulation skills (Adie et al., 2012).
544 Participants discussed the importance of playing rugby league with autonomy, due to the
545 enjoyment and playing benefits associated with a ‘‘free role’’:

546 Sometimes I think people play better if they get a free role. When we were coming
547 through at that sort of age it wasn't 'you pass it to him' or 'you pass it to him' ... Play
548 what you see as opposed to playing a set play ... so just enjoy it. I wouldn't change
549 how you play, play to your structure, but play what's in front of you and enjoy what
550 you are doing, that's probably what I would advise [players] to do. (P9)

551 Participants also provided recommendations on expectations, which included, keeping
552 your options open, being realistic, preparing for failure, and to try to start playing again to
553 prevent permanent dropout. One deselected player provided a very honest account of the
554 rugby league landscape, the chances of progressing at the senior professional level, and
555 keeping future options open:

556 I suppose it depends what position you are in when you leave. I think that it is
557 important for them joining that they actually understand that there is a very, very large
558 possibility that you are not going to do this. You know there are only 17 people that
559 can play for 12 Super League teams, so not everyone is going to do it. Chances are it
560 is going to be very tough. Don't be naive to think that just because you are a good
561 player then you are going to be a good player in two years' time. Still go down the
562 route of getting an education, have other options, whether that's doing any courses,
563 apprenticeships, but make sure that you are ready for when they come and say 'sorry
564 we are not going to be taking you on'. (P4)

565 Participants in hindsight also spoke about the importance of trying to enjoy rugby
566 league again. In particular, although none of the participants had returned to playing rugby
567 league at any competitive level, they encouraged future ex-professional players to try
568 participating at the amateur level to prevent permanent dropout. Participants felt that this was
569 important for health and well-being reasons and reflected that players should not feel
570 embarrassed about dropping down in levels; rather, they should embrace what first attracted
571 them to playing the sport:

572 I'd probably say just try and get back to enjoying it. I felt kind of, I wouldn't say
573 embarrassed but I'd played at such high levels and I am going to be dropping back
574 down to this level. What are people going to say? What are people going to think? I'd
575 say don't think like that. Don't worry about that, just get back [to playing] and enjoy

576 your rugby. You obviously enjoy it; that is why you were playing it originally.
577 [Professional rugby] It is a different game compared to amateur ... it does become a
578 business whether it is right or wrong, just get back into it [rugby] and enjoying it (P8).

579 **Pathway governance (macrosystem).** Pathway governance revealed three lower-
580 order themes of support, coaches, and player pathway structure. These recommendations
581 were concerned with player pathway factors that could be improved to provide a more
582 supportive player environment, and to focus more on providing a player pathway that better
583 supports the non-linearity of talent development. In line with some previous research on
584 career transitions (Baron-Thiene & Alfermann, 2015; Brown & Potrac, 2009), the lower-
585 order theme of support was concerned with offering players more support during their time in
586 the academy and post-academy, following their discontinuation. Participants categorised
587 support as education workshops, tutoring support whilst undertaking formal education
588 programmes, and support with finding paid work to supplement their academy pay. One
589 participant discussed their experiences of struggling to complete the workload associated
590 with undertaking a further education course that was linked to the academy, suggesting that
591 better support would have helped him to cope better:

592 He [head coach] did make it out to be quite a doddle [easy] to all of us, but when you
593 went there it really wasn't and I couldn't keep up with the workload. It was ridiculous,
594 a ridiculous change. (P7)

595 Participants also discussed valuing the extra education sessions that were provided for
596 them by the national sport governing body, although, participants felt that more of these
597 sessions would have been beneficial:

598 I think maybe ... a few more of those days, but hitting on setting different topics and
599 areas. I think they just did, I remember I think it was drugs, coping pressures and
600 social media or something like that. (P6)

601 The lower-order theme of coaches was concerned with participants' recommendations
602 to improve coaching behaviour in order to provide a better experience for players. The main
603 areas that were discussed by the participants were increased coach-player interactions and
604 coaches being honest. Participants discussed some coaches who did not engage in any social
605 interaction with the players, suggesting it was important that coaches were not a “friend”, but
606 interacted more so they could help with “whatever they need”. Participants also discussed the
607 importance of coaches being honest with players, especially in regards to selection and
608 contract matters. A participant discussed the importance of coach honesty when dealing with
609 players' futures:

610 Instead of giving them false hope, yeah it might put them down but they'll get over it,
611 rather than [head coach] saying that they can do it and they get to a stage when they
612 know they can't and they are like 'ah, I have been sold false dreams'. (P1)

613 Under the lower-order theme of player pathway structure, participants recommended
614 that better links between professional and amateur clubs should be forged, and the
615 development pathway should be extended past the current under 19s age group structure.
616 Players proposed that extending the pathway to under 21 would provide more of a physical
617 and psychological challenge to younger developing players:

618 Yeah you have to step up. I think if you play with better [older] players or bigger and
619 faster players or whatever, it brings the best out of you because you have to train that
620 little bit harder, push that bit harder. (P8)

621 **Practical Recommendations and Future Work**

622 Many sport programmes emphasise institutionalisation, elitism, and early specialisation
623 (Coutinho et al., 2016). The findings of this study suggest a developmental approach is
624 required to decrease dropout, but also ensure that elite adolescents have the opportunity to
625 reach their full potential. Our findings echo that of previous work in terms of creating a

626 positive coaching environment that create and maintain a supportive, mastery-orientated
627 environments for both adolescent success and psychosocial well-being (Ommundsen,
628 Roberts, Lemyre, & Miller, 2006). To encourage a positive motivational climate, coaches can
629 provide corrective instruction in a positive way, encouraging players to learn from their
630 mistakes, reinforcing positive behaviours and provide players with more autonomy during
631 practice (Martindale et al., 2005). More resourceful inter-personal relationships, where
632 coaches and club support officers are better skilled at helping youth players navigate the non-
633 linear pathway towards expertise (e.g., when a player is not selected for a team) could help in
634 the reduction of drop-out from the sport. Furthermore, coaches or rugby clubs may wish to
635 monitor intention to dropout during the season when there is still the potential to intervene.
636 For example Quested et al. (2013) used two simple questions to monitor players' intention to
637 drop out, and these questions could be incorporated with an open-ended opportunity (e.g.,
638 Keathley et al., 2013) to identify important reasons for why players intend to dropout. It
639 should be acknowledged that the findings represent participant accounts of their experiences
640 rather than necessarily actual events that occurred in talent development environments which
641 may subsequently be subject to forms of bias (e.g., recall bias). Hence future research should
642 look to extend on these initial findings using other methodologies (e.g., ethnography) to
643 explore the actual events that occur in these environments.

644 **Conclusion**

645 The findings highlight that dropout from rugby league is a complex and
646 multidimensional phenomenon. Here, a bioecological model was used as a framework to
647 guide the discussion between how Process-Person-Context-Time may interact to result in
648 dropout. Our findings build on previous work in arguing that talent development pathways
649 which lack a longer-term focus, a healthy support network and emphasise early success are
650 likely to result in increased risk of burnout, de-motivation, and subsequent dropout. Hence,

651 learning environments such as talent development pathways must consider the many personal
652 and environmental factors which interact to determine an individual's talent development
653 trajectory. By recognising the multiple factors that influence development based on the
654 participants' accounts (e.g., training, learning and governance recommendations), the
655 effectiveness of development pathways will improve by neither excluding 'potential' through
656 inappropriate early identification, nor ignoring crucial talent development variables that
657 contribute toward the fulfilment of potential.

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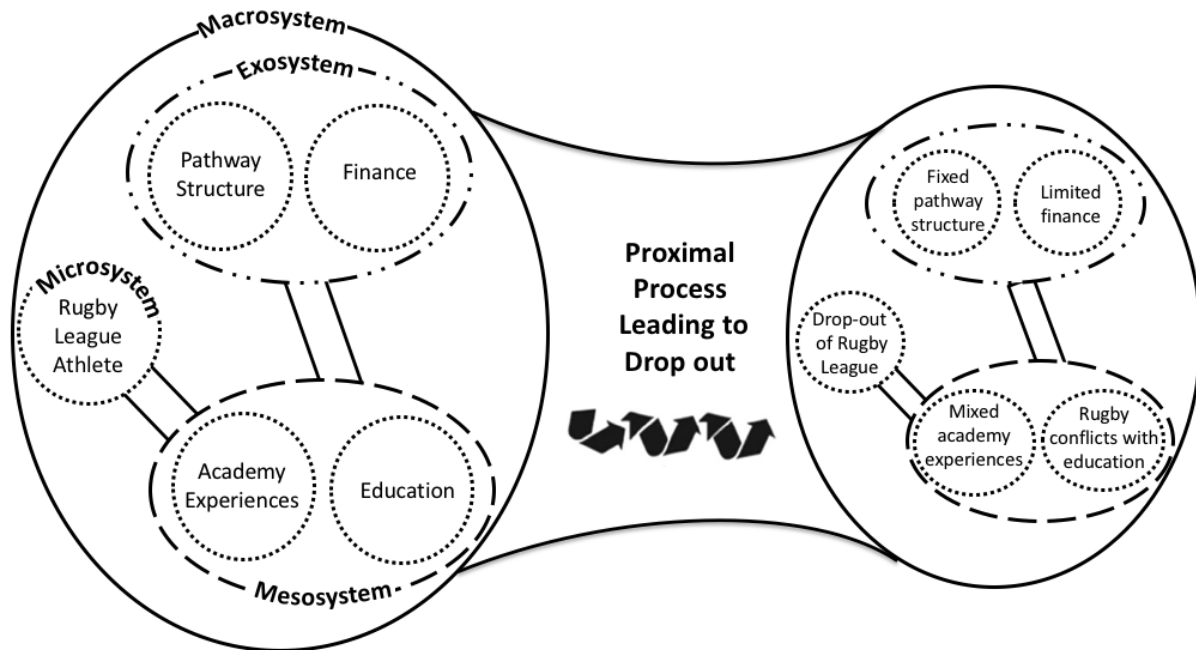
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814

815 **Figure 1.** Illustration using the bioecological model (Bronfenbrenner, 2005) of the complex sub-
 816 systems, micro, meso, exo and macro systems which interacted over time (i.e. proximal process)
 817 leading to dropout in Rugby League. For example, two micro-systems (academy experiences and
 818 education) were in conflict within the mesosystem resulting in a choice between rugby or education.