



20           The high-performance environment of top-level sport can be the perfect place for  
21 individuals to thrive and achieve their sporting potential. However, the increased pressure on  
22 performance may have the opposite effect. Athlete burnout has proven difficult to define, but  
23 occurs when the demands placed on an athlete outweigh their perceived resources resulting in  
24 extreme fatigue, a cynical attitude towards their sport, and reduced achievement (Gustafsson  
25 et al., 2018). Burnout has a concerning impact on an athlete's wellbeing and performance with  
26 adverse consequences including illness and loss of motivation (Schaufeli & Buunk, 2003).  
27 Top-level athletes are, by nature, highly motivated individuals who strive to achieve within  
28 their sport. While this often benefits performance, it has been suggested that athletes with  
29 higher levels of motivation are more susceptible to burnout in comparison to those who are less  
30 motivated (Gould et al., 1996). Moreover, it is argued that the number of athletes at risk of  
31 burnout is increasing as a result of elevated training demands, reduced recovery time, and  
32 higher competitive stress (Gustafsson, 2007). This is great cause for concern, particularly as  
33 negative attitudes towards athlete burnout may prevent individuals from seeking support  
34 (Cresswell & Eklund, 2006). Continued effort to improve our understanding of athlete burnout  
35 is extremely important to ensure high-performance athletes' wellbeing, as well as help them to  
36 further their athletic career, especially within areas that have received little attention, such as  
37 women's rugby.

38           The most widely accepted definition of athlete burnout describes it as a  
39 multidimensional syndrome comprised of three key dimensions: a) emotional and physical  
40 exhaustion; b) reduced sense of accomplishment; and c) sport devaluation (Raedeke, 1997). A  
41 reduced sense of accomplishment reflects the tendency to negatively evaluate one's sporting  
42 performance, emotional and physical exhaustion occurs due to the physiological and  
43 psychological pressures of training/competition, and sport devaluation refers to the  
44 development of a pessimistic attitude towards one's involvement in sport. Within a sporting

45 context, research has identified a variety of intrinsic and extrinsic athlete burnout correlates  
46 and consequences, e.g., stress (Raedeke & Smith, 2001), anxiety (Vealey et al., 1998), role  
47 conflict (Kjøormo & Halvari, 2002), perfectionist concerns (Hill et al., 2010), lack of recovery  
48 (Gustafsson et al., 2008), and low-quality coach-athlete relationships (Price & Weiss, 2000).  
49 Despite clear efforts to understand burnout symptoms, the early identification of burnout is  
50 difficult as symptoms often stay unnoticed (Gustafsson et al., 2018; Schaufeli & Enzmann,  
51 1998). Gender differences have been identified in athlete burnout development, for example,  
52 Gustafsson and colleagues (2007) investigated the prevalence of burnout across 980 elite  
53 athletes aged 17-21 years identifying that high levels of burnout were experienced by 1-9% of  
54 female athletes in comparison to 2-6% of males. Differences in how burnout symptoms are  
55 exhibited have also been shown, for example, female coaches, when compared to males,  
56 reported significantly higher levels of exhaustion (Goodger et al., 2007). Variation between  
57 genders may arise from differences in social support networks and coping orientation and  
58 therefore how men and women perceive stress and react to stressors (De Dreu et al., 2004).  
59 Continued investigation into the effects of athlete burnout on different genders is important to  
60 strengthen our understanding of the syndrome, and to improve our ability to protect athletes.

61         One of the most recent theoretical frameworks used to explain burnout and its potential  
62 antecedents is self-determination theory (SDT; Ryan & Deci, 2000). SDT proposes that  
63 individuals possess three basic psychological needs; competence (perceptions of one's  
64 effectiveness in an activity), relatedness (connectedness with others, e.g., teammates), and  
65 autonomy (perceptions of volition and control regarding one's sport). When satisfied, these  
66 needs are fundamental in promoting optimal functioning and wellbeing, but, if frustrated, may  
67 contribute to ill-being (Ryan & Deci, 2000). Gould and Whitley (2009) have shown that  
68 satisfaction of these needs results in enhanced motivation. Within SDT, the self-determination  
69 continuum represents the different motivational states, from intrinsic motivation (behavior

70 driven by internal rewards) being the most self-determined form, to amotivation (absence of  
71 motivation) reflecting the least self-determined motivation (Ryan & Deci, 2000). Extrinsic  
72 motivation (behavior driven by external rewards) lies between amotivation and intrinsic  
73 motivation (Cresswell & Eklund, 2005b). Intrinsic motivation is negatively correlated with  
74 athlete burnout while amotivation is positively associated (Cresswell & Eklund, 2005a).  
75 Empirical research has shown support for the SDT account of burnout; lower levels of athlete  
76 burnout occur when the basic needs are met, moreover, self-determined motivation is  
77 negatively associated with burnout (Cresswell & Eklund, 2005a, 2005b; Gustafsson et al.,  
78 2018).

79 Despite the existence of research investigating the impact of athlete burnout on male  
80 rugby players, little is known about its affects within female players. Studies on male rugby  
81 players have supported the SDT account and explained the nature and effects of athlete burnout  
82 within this demographic (Cresswell & Eklund, 2005a, 2005b; Hodge et al., 2008; Scrase,  
83 2013). Through application of the Athlete Burnout Questionnaire (ABQ) Cresswell and Eklund  
84 (2005a, 2005b) identified that elite and top-amateur male rugby players had similar burnout  
85 scores, but differences did exist. Overall, the professional player sample showed higher reduced  
86 sense of accomplishment, in contrast to higher exhaustion in the top-amateur sample. This was  
87 interpreted as differences between professional and non-professional environments and career  
88 pressures, e.g., the impact of reduced performance on income (Cresswell & Eklund, 2005b).

89 Building upon this research, Cresswell and Eklund (2006) conducted interviews with  
90 15 professional rugby players and identified player experiences associated with the core  
91 dimensions of burnout. Experiences within each dimension included: “feeling physically sick”,  
92 “on field mistakes”, and “doubts about career” (Cresswell & Eklund, 2006). The authors also  
93 identified factors that players believed to have contributed to their experience of burnout, for  
94 example, competitive transitions, anti-rest culture, and competitive rugby environment. More



119 of burnout on players' performance. Research with such an approach can help deepen our  
120 understanding of the phenomenon, which is hoped to inform other, similar areas that have also  
121 been under-researched (Elbardan & Kholeif, 2017). Therefore, our study is positioned within  
122 the interpretivist paradigm, which researchers investigate participants' 'sense-making' of their  
123 experience of an event (phenomenon). To conduct our interpretive inquiry, a relativist ontology  
124 (i.e., there is no reality independent of perception) and a subjectivist epistemology (i.e.,  
125 knowledge is subjective and socially constructed) were adopted (Potrac et al., 2014; Sparkes,  
126 1992). Such paradigm and philosophical approaches were considered most appropriate in  
127 exploring and understanding how female rugby players made sense of their experiences related  
128 to athlete burnout. Subsequently, semi-structured interviews, one of the meaning-oriented  
129 methodologies, were applied to understand players' subjective experience (e.g., McArdle et al.,  
130 2012).

### 131 **Participants**

132 Convenience sampling (Etikan, 2016) was employed to recruit a total of ten female  
133 rugby players based on their current or past involvement in top-amateur rugby union in the UK.  
134 Eight top-amateur players, aged 19-21 years ( $M = 19.8$ ,  $SD = 0.92$ ), were recruited from three  
135 high-performance programs in the UK; two national programs and one university squad (who  
136 compete at the highest UK university level). Some players were involved in both a national  
137 program and the university squad. A second group of female players ( $n = 2$ , aged 21) that had  
138 recently discontinued their participation in top-amateur rugby, though still participate at a lower  
139 level, were also recruited. To preserve the anonymity of these players details regarding the  
140 squads will not be disclosed as it is known that negative attitudes towards athlete burnout exist  
141 (Cresswell & Eklund, 2006).

142 Participants were classed as top-amateur athletes due to their largely voluntary  
143 involvement in top level competitive rugby. Participants were involved in the highest level of  
144 rugby available to them with regards to age and location. Most participants in this study did  
145 not receive any remuneration for training and playing. A minority did receive some earnings  
146 and paid travel expenses, albeit with irregularity, i.e., depending on competition and not  
147 covering all training commitments, so still relied on other income to cover living costs. As  
148 shown in Table 1, players had a mean of 8.6 ( $SD = 3.8$ ) years in rugby with an average of 10.45  
149 ( $SD = 0.80$ ) months of playing and training per year. Nine players were involved in more than  
150 one squad and all players had at least one other full-time, or multiple part-time non-rugby  
151 commitments.

152 [Table 1 here]

### 153 **Procedure**

154 Following institutional ethical approval participants were contacted via social media  
155 and invited to participate in a video call interview using Microsoft Teams. Before the interview,  
156 participants were provided with introductory information and study details. Participants were  
157 also asked to complete a short online survey (approximately 5 minutes) to obtain informed  
158 consent and gather information regarding their demographics (e.g., age) and background in  
159 rugby (e.g., weekly training hours). Each participant was coded with a unique participant ID  
160 (e.g., Athlete 1) to protect confidentiality.

161 A semi-structured interview approach was adopted for this study. Based on the  
162 literature review of the topic two interview guides were developed, one for current top-amateur  
163 players and another for ex-top-amateur players. The key difference between guides was in  
164 questioning that referred to either current or past squads, depending on the athlete's playing  
165 status. Interview questions were developed with reference to rugby related experiences, the

166 Athlete Burnout Questionnaire (Raedeke & Smith, 2001), previous literature regarding burnout  
167 (e.g., Cresswell & Eklund, 2005a; Gustafsson et al., 2008), and SDT (Ryan & Deci, 2000). If  
168 appropriate, probes and follow-on questions were used to explore the player's answers further.  
169 Interviews were recorded using Microsoft Teams and lasted between 24 and 66 minutes ( $M =$   
170  $36.90$ ,  $SD = 13.27$ ). The lead author used recordings to transcribe interviews verbatim.

## 171 **Data Analysis**

172 Thematic analysis was employed to comprehend the qualitative outcomes. Braun and  
173 Clarke's (2006) six phase model was applied to accurately represent the results. Firstly, the  
174 original transcripts were reviewed and re-read to ensure that the researcher was familiar with  
175 the data – preliminary thoughts and ideas regarding athlete burnout among players were  
176 recorded during this phase. Initial codes were then generated from the raw data, and noticeable  
177 elements, e.g., factors obviously associated to the occurrence of burnout, that could provide a  
178 basis for the development of themes were recorded. Consideration was given to potential rival  
179 explanations of experiences to improve interpretation of the data. Inductive analysis was  
180 employed to identify common themes within the data. To confirm that the raw data were  
181 accurately represented themes were reviewed using deductive analysis of each transcript and  
182 of the overall data. Deductive analysis was also used to examine the core dimensions of athlete  
183 burnout (physical and emotional exhaustion, reduced sense of accomplishment, and sport  
184 devaluation). Subsequently, superordinate themes were defined by linking associated  
185 categories and sub-themes that emerged across the data set (see Table 2 and Table 3). Finally,  
186 findings were presented. The lead author has previous experience within high-performance  
187 rugby environments which could benefit analyses and interpretation of the data. However, as  
188 noted by Cresswell and Eklund (2006), this may have caused an unintentional, unconscious  
189 bias. A research diary was kept by the lead author so that a self-critical and reflexive approach  
190 could be applied to the present study, which helped to identify assumptions and ideas on the

191 research topic of athlete burnout, as well as any emotional reactions to the research data that  
192 were experienced during data collection and analysis (Brown et al., 2018). To ensure research  
193 rigor, the lead author documented the analytical procedure to develop an audit train that was  
194 reviewed by the second author, this allowed the research team to enhance transparency and  
195 coherence of the analytic process. In this regard, the lead author conducted the primary analysis  
196 and the second author acted as a critical friend (Marshall & Rossman, 2006). Member checking  
197 was conducted to ensure credibility of data collection (Creswell & Miller, 2000). This included  
198 briefly summing up participants' answers throughout data collection to ensure that the  
199 interviewer maintained an accurate understanding of responses. This also allowed participants  
200 to expand upon their answers and correct the interviewer if an inaccurate interpretation had  
201 been made. To further enhance credibility of data, participants were asked to complete a  
202 transcript review. Participants were given the option to accept, add, or edit their original  
203 interview transcript. Nine participants confirmed the accuracy of their transcripts after some  
204 changes to the original transcripts based on their feedback. For instance, Athlete 3 pointed out  
205 the misinterpretation of why she was dropped from a national program, which was corrected  
206 based on her further explanation; other athletes made corrections and expanded on their  
207 perception of events at that time, which increased accuracy when analyzing the data. One  
208 participant did not provide any comment within the timeframe of the research project.

209

### **Results**

210 Of the ten athletes interviewed, nine self-reported that they had experienced burnout at  
211 some stage within their rugby career. From the qualitative evidence, burnout experiences were  
212 prevalent across the dataset, ranging from low to severe athlete burnout. Two athletes reported  
213 experiencing burnout but only exhibited some transient symptoms. This is likely due to  
214 misconceptions of the syndrome. Most players reported that they had seen teammates  
215 experience burnout, this plausible due to the homogeneity of the sample. No athletes

216 completely withdrew from rugby because of burnout, but some had changed squads, either to  
217 a lower level or into an environment that accommodated effective coping. The female rugby  
218 union players' in-depth accounts illustrated contributing factors to development of athlete  
219 burnout and the effects of athlete burnout on their performance. Three themes were identified  
220 in relation to contributing factors (see Table 2): Intrapersonal Concerns including the sub-  
221 themes of Reduced Intrinsic Motivation, Stress, and Personality; External Concerns including  
222 the sub-themes of Role Conflict, High Physical Demands, Negative Environment, and Squad  
223 Transitions; and Interpersonal Concerns including the sub-themes of Coaching Behaviors and  
224 Attitudes, Negative Social Interactions, and Stigma and Taboo. Two themes were identified  
225 regarding the effects of athlete burnout (see Table 3): Key Burnout Dimensions including the  
226 sub-themes of Emotional and Physical Exhaustion, Reduced Sense of Accomplishment, and  
227 Sport Devaluation; and Additional Effects including the sub-themes of Cognitive-affective  
228 Manifestations, Motivational Changes, and Coping Response.

229 [Table 2 & Table 3 here]

### 230 **Internal Concerns**

231 Reduced Intrinsic Motivation was commonly discussed among the athletes. Several  
232 athletes described that rugby could have a detrimental impact on other aspects of their lives,  
233 e.g., social life or work, causing feelings of resentment towards rugby. These factors resulted  
234 in a small number of players having reduced intrinsic motivations to attend training, which  
235 preceded the development of burnout and further change in motivations: "I was just [training]  
236 because I felt like I had to rather than 'cause I wanted to" (Athlete 10). With regards to Stress,  
237 it was evident that all players who experienced burnout perceived that the demands they faced  
238 were greater than their personal resources. Players did not effectively address the issue, e.g.,  
239 by not seeking support, which allowed stressors to intensify. Players described rugby as their

240 outlet, with one highlighting that rugby was her normal coping mechanism, however it became  
241 a source of stress and reduced her ability to cope. Athlete 5 described that to cope with life  
242 events she “would go and play rugby” but went onto say that she became “a lot more anxious  
243 to attend [training] camps” and experienced panic attacks as a result. In terms of Personality,  
244 some players showed a tendency to be self-critical with a small number exhibiting perfectionist  
245 concerns. When heightened by negative situational factors this contributed to players’  
246 experiences of burnout. Many athletes explained that they would put excessive levels of  
247 pressure on themselves, this could negatively impact them if they did not meet their high  
248 expectations: “I put so much pressure on myself that I didn’t actually enjoy the experience and  
249 thought, ‘I’m getting nowhere’” (Athlete 2). Players also described feeling as if they did not  
250 deserve their achievements, even though they had worked hard for them: “I’ve always felt like  
251 a little fish in a big pond, and not that I massively deserve to be [at training]” (Athlete 9).

## 252 **External Concerns**

253         Role Conflict was identified as an external concern. Every player experienced the  
254 effects of role conflict, with many having felt overloaded with excessive rugby and non-rugby  
255 commitments. Athlete 7 summarized the experiences of several players: “you’re playing for a  
256 lot of different teams, a lot of different set-ups, a lot of different goals and regimes”. Most  
257 players commonly found it difficult to balance other elements of their life, e.g., university  
258 studies, particularly when rugby commitments were factored in. The impact that rugby had on  
259 some players’ ability to earn money was a considerable source of stress. With regards to High  
260 Physical Demands, the physicality of rugby caused all players to recount at least short-term  
261 perceptions of high physical demands. However, involvement in multiple, usually high  
262 performing, squads resulted in most players overtraining, not getting adequate rest, and not  
263 fully recovering between games. As such, these players experienced longer-term issues related  
264 to these demands: “my... body’s not functioning right, you start to... feel heavy” (Athlete 6).

265 Two players described competing for multiple seasons with no break: “I’d literally not had a  
266 break... I was just dead, I couldn’t do anything” (Athlete 10); “I had played a full 2 ½ years  
267 without a break... that’s part of the reason why I was like, ‘fuck this, I’m done’” (Athlete 5).  
268 In reference to Negative Environment, many players identified environmental factors that  
269 significantly contributed to burnout. Players established that a lack of team stability caused  
270 increased stress. Athlete 1 described that her squad would constantly change, which created  
271 widespread fear of being dropped and prevented players from bonding. Moreover, many  
272 players recalled feelings of being undervalued. Some of these players felt depersonalized  
273 altogether; “it was all clinical... I didn’t feel like a person – I felt like a cog in a machine”  
274 (Athlete 3). A negative atmosphere during training had an adverse effect on players and overall  
275 sporting performance. Athlete 1 described that it was common for squad members to “be in  
276 tears ‘cause they just couldn’t deal with [the environment]”. Notably, most players perceived  
277 little to no support for burnout, or mental health in general. One athlete highlighted that there  
278 was no support from someone she could relate to, e.g., regarding age and gender. Athlete 2  
279 described it had seemed normal to struggle, believing burnout to be a communal experience.  
280 Moreover, a small number of players believed burnout to be part of the progression through  
281 high-performance rugby, “this is what’s necessary, this is what everyone feels” (Athlete 1).  
282 More positive player experiences were closely related to perceptions of supportive and  
283 respectful environments. Athlete 5 explained that it is obvious if someone exhibits burnout  
284 symptoms if there is “a very good environment and you know that people want to be there  
285 because they want to do well”.

286 With regards to Squad Transitions, three players experienced rapid progression across  
287 age categories which accentuated the pressure they felt. Athlete 9, who competed above her  
288 age category, described that “everything changed from rugby for enjoyment, to a lot of nerves”.  
289 This player explained that she felt out of place and was experiencing increasing demands.

290 Additionally, one player perceived negative outcomes in others who had moved from a lower  
291 level into high-performance rugby and were unable to sustain the increased effort. Finally,  
292 Athlete 3 felt out of control when she was gradually phased out then let go from her squad, “I  
293 had a block up, my self-worth was diminished”.

#### 294 **Interpersonal Concerns**

295 Coaching Behaviors and Attitudes was identified as a key interpersonal concern. Most  
296 players described autocratic coaches had negatively impacted their performance and longer-  
297 term enjoyment of rugby, often due to reduced feelings of control or self-determined  
298 investment in training: “everyone’s just doing it, so they don’t upset the coaches” (Athlete 1).  
299 Several players also described adverse reactions from coaches about mistakes in training were  
300 a source of worry or stress. One player highlighted that autocratic coaching could be beneficial  
301 if rooted in respect for players and combined with a more democratic style. Another player did  
302 not show a preference for coaching style but described that having a low-quality relationship  
303 with her coach directly affected her performance. Low-quality coach-player relationships  
304 negatively impacted other players as they often perceived that their views and efforts were  
305 undervalued. One athlete had extremely deleterious interactions with a coach stating,  
306 “coaching... made me just want to quit... every single weekend I drove home crying ‘cause I  
307 just wanted to quit so bad” (Athlete 2).

308 Attitudes held by coaches, particularly those in primary positions, directly contributed  
309 to a sense of apathy towards burnout. Players who perceived a coach’s attitude toward burnout  
310 as negative were unlikely to approach their coach with burnout related issues, which reinforced  
311 the taboo nature of the subject. A few players explained that some coaches would try to  
312 understand but were dismissive of burnout as it is not immediately apparent like a physical  
313 injury; “you can still run so just get on with it” (Athlete 10). Athletes also felt coaches might

314 misinterpret conversations about burnout by construing reports of burnout experiences as a lack  
315 of player commitment or effort. Some players alluded to the fact that coaches, or programs,  
316 which had a narrow view of athletes, e.g., limited understanding of players' commitments  
317 outside the squad, were less likely to be empathetic regarding the impact of external issues, this  
318 could deter players from seeking support when struggling. Players were more likely to  
319 communicate with coaches if they perceived conversations regarding burnout would be met  
320 with active support. These players also reported more positive experiences within the  
321 associated squad. Athlete 2 described that, in her current team, coaches respected players who  
322 expressed burnout concerns as they could actively work with athletes to address the problem.  
323 All the players highlighted the importance of quality coach-player relationships.

324         With respect to Negative Social Interactions, most players did not show reduced  
325 relatedness with peers, however, some players highlighted negative experiences that  
326 contributed to the development of burnout. Within rugby, players described difficulties in  
327 playing with an unmotivated team, feeling out of place on a new team, and being aware that  
328 teammates could replace them. One athlete highlighted some teammates received financial  
329 benefits from rugby which caused reduced relatedness with those who did not. Many players  
330 referenced restrictions that rugby had on social life, reducing their connectedness with peers  
331 outside of the high-performance setting: "I barely attended any social events... there was a fear  
332 of... being pictured if you drank and then that becoming negative. So, it was just easier not to  
333 be part of it" (Athlete 3). Stigma and Taboo was discussed as an interpersonal concern. The  
334 dominant view held amongst players was that burnout was associated with high levels of stigma  
335 and relating experiences would reflect negatively upon athletes. Athlete 7 perceived that  
336 communicating feelings of burnout would "be a black mark against" those athletes. Others  
337 highlighted players risked being let go if they alluded to burnout experiences, consequently  
338 some attempted to conceal any negative feelings. Several described the taboo nature of burnout.

339 One explained that it was not spoken about often, contributing to the level of perceived stigma.  
340 Players had a significant lack of knowledge about burnout until after they, or teammates, had  
341 experienced it. This limited awareness impacted individuals' ability to cope and seek help.

### 342 **Core Dimensions of Athlete Burnout**

343 In terms of Emotional and Physical Exhaustion, a few players described periods of  
344 exhaustion that can be attributed to the general physical nature of rugby, however, those who  
345 experienced burnout described enduring physical and emotional effects. One player  
346 encapsulated her experience by stating she “was physically exhausted, mentally exhausted, just  
347 genuinely struggling to get by day-to-day” (Athlete 9). Lack of rest coupled with high training  
348 and playing loads was a common theme throughout, causing feelings of constant soreness and  
349 fatigue. As a result, several athletes described that their on-field performance was detrimentally  
350 impacted. Physical exhaustion had more serious effects on some players. Most players  
351 recounted experiences of injury or illness, some of these instances are attributable to the  
352 physicality of rugby, however, other cases were directly linked to the constant physical strain  
353 that several players were under; “I hadn’t been off... my body was dying... I was more prone  
354 to injury that season than any other season” (Athlete 10). Another athlete recounted a  
355 significant injury they attributed to overtraining. A small number of players experienced  
356 increased levels of illness; one athlete kept pushing herself to train, not allowing her body to  
357 recuperate. Emotional exhaustion was prevalent amongst players. A minority of players  
358 showed low levels, if any, of prolonged emotional exhaustion, however, the majority exhibited  
359 longer lasting effects. Athlete 2 explained: “my emotions were just so heightened... If the  
360 coach had taken me aside and said something, I’d have burst into tears”. Players also described  
361 being unable to wind down. Athlete 10 explained that she was not able to fully rest because  
362 “all the things [she] did wrong would just replay in [her] head”.

363           Regarding Reduced Sense of Accomplishment, all players who experienced some level  
364 of burnout showed signs of a reduced sense of accomplishment, both in personal sporting  
365 performance and wider rugby achievements. One player described she “always thought [she]  
366 played rubbish” (Athlete 10), another completed extra training as she felt like her ability was  
367 below expectations, resulting in further exhaustion. A significant impact on most players’  
368 wider sense of accomplishment was also evident. A couple of players highlighted the high  
369 levels of work they felt they, and others, were putting in while gaining little. This is closely  
370 linked with several other players feeling as though they had little to aim for. Athlete 9  
371 showcased the discrepancy between her wider, objective achievements and personal sense of  
372 accomplishment, “on paper everything that I was achieving was crazy... but... it was  
373 underwhelming”, this was attributed to the state of her physical and mental health at the time.  
374 As women’s rugby is a developing sport there can be great variance in playing level between  
375 squads, the impact of this was noted by a few players with one explaining that club rugby did  
376 not give her any sense of achievement after training at a high level in the national set-up.  
377 Interestingly, during their period of burnout one player had a high sense of achievement on a  
378 wider level due to her involvement in a national program, however, on a personal level she  
379 exhibited a distinct reduced sense of accomplishment regarding their ability.

380           Referencing Sport Devaluation, every player described at least some transient  
381 experiences of sport devaluation, however, because of burnout, those who had experienced the  
382 syndrome displayed more persistent cynicism towards rugby. Most commonly, devaluation  
383 manifested in one of two ways, complete devaluation of rugby, or devaluation of certain, yet  
384 meaningful, aspects of involvement. Most players, often due to a combination of factors (e.g.,  
385 poor environment and lack of rest), devalued the high-performance aspect of rugby they had  
386 been part of and had greater desire to be involved in more social rugby. Other players conveyed  
387 greater feelings of devaluation; “my love for rugby was just down the drain and I just hated it”

388 (Athlete 10). Expressions of doubt regarding high-level rugby were common, often stemming  
389 from players having fewer positive and more stressful experiences within rugby. Consequently,  
390 other aspects of players' lives took precedence over high-performance rugby; for Athlete 9,  
391 "rugby [was her] entire life, but now... it's not that much of a priority" in comparison to other  
392 commitments. A common feature of players' devaluation, with close ties to reduced sense of  
393 accomplishment, was disillusionment with women's rugby. Athlete 2 conveyed this was a  
394 notable element of her burnout experience, "I've really, really struggled to keep going, purely  
395 because with the way women's [rugby is] set-up, there's no incentive". Another athlete  
396 described female rugby players, often those aiming for the top, "make a lot of sacrifices for not  
397 necessarily as much gain as other sports because it's not as recognized" (Athlete 7). Players  
398 who did not experience burnout were also aware of negative characteristics of the women's  
399 rugby set-up, this contributed to temporary personal doubts about continuing at the top level.

#### 400 **Additional Effects**

401 Cognitive-affective Manifestations was discussed as one of the additional effects. Most  
402 players experienced increased negative feelings, often associated with training and related  
403 environments, such as, anxiousness before attendance. An athlete described newly  
404 experiencing panic attacks due to pressures of fitness testing. Many athletes described having  
405 depressed moods, with one experiencing depression. A few players described being worried  
406 their emotional state did not line up with the perceived emotional expectations of a top-level  
407 squad; "I feel it was expected of us not to feel that way because we were in such a good position  
408 – you were to be grateful" (Athlete 3). This could lead to feelings of guilt, frustration, and  
409 resentment. As for Motivational Changes, prior to negative experiences, all players were highly  
410 and intrinsically motivated to compete at the top level, however experiencing burnout caused  
411 either a large shift or loss in motivation. Each player described that rugby had become  
412 significantly less enjoyable for them, one player commenting, "we're not doing it for money

413 or... for any other reason than to enjoy it. So, when you're not, you automatically question  
414 why you're doing it" (Athlete 9). Most players displayed a loss of motivation by describing  
415 they had wanted to quit rugby or needed a break due to the negative experience they were  
416 having. Many gave a sense of the obligation they felt, with players continuing to attend training  
417 while demotivated; "I was just existing. I wasn't going into each session with a goal" (Athlete  
418 2). Burnout had a great impact on several players' desire for high-performance rugby, one  
419 athlete described their "outlook on the sport had gone from being like 'I wanna be best', to 'I  
420 just want to go and drink at a sevens tournament'" (Athlete 5).

421         Regarding Coping Response, among those that experienced burnout there was an  
422 overwhelming inability to cope with its consequences. Only one player actively addressed  
423 burnout, however, this was after an extended period of experiencing the negative outcomes.  
424 The vast majority did little, possibly due to feeling unable, to actively improve their situation,  
425 as Athlete 2 summarizes, "I just didn't cope with it, I literally just got on with it". A couple of  
426 athletes indicated that they would avoid the issue by attributing negative feelings to something  
427 other than the true problem, e.g., university work. Although injury had a negative impact on  
428 many athletes it gave some players time to rest and realize their poor situation. Being unable  
429 to participate fully, or at all, due to physical injury benefitted three players, as expectations and  
430 performance demands were reduced, "I don't have any responsibility... I don't have to go back  
431 and be amazing because [I'm injured]" (Athlete 1). Six players coped with the effects of  
432 burnout by, either voluntarily or involuntarily, changing situation. One player who did not  
433 address the problem of burnout directly but continued performing at the top level did so by  
434 advancing from one top-level program to another with a healthier environment, this eliminated  
435 the factors that contributed to the development of burnout. Other players avoided the problem  
436 by having the stress of high-performance lessened, either by reducing the number of high-level  
437 squads they were involved in or by ceasing involvement in top-level rugby.

438

### Discussion

439           This study focused on the features of athlete burnout among top-amateur female rugby  
440 union players. In doing so common intrapersonal, external, and interpersonal factors that  
441 contributed to the development of burnout were identified from player experiences. The effects  
442 of athlete burnout relating to the established dimensions of athlete burnout and additional  
443 cognitive-affective manifestations, motivational changes, and coping effects were also  
444 identified. As such, the characteristics of athlete burnout identified directly contribute to the  
445 understanding of the phenomena in female rugby players, within literature and across practical  
446 fields.

447           The findings support the conceptualization of athlete burnout as a multi-dimensional  
448 syndrome. Those who described experiences identifiable as burnout conveyed enduring  
449 emotional and physical exhaustion, a reduced sense of accomplishment, and sport devaluation.  
450 Similar to previous research regarding rugby players (Cresswell & Eklund, 2006), a certain  
451 level of exhaustion was expected due to the physicality of rugby – shown by all players in this  
452 study. These experiences of exhaustion were easily overcome with periods of rest so were not  
453 indicative of burnout. However, exhaustion experiences conceptually aligned with burnout  
454 were prevalent across the current findings. Furthermore, players described more extreme  
455 experiences of emotional and physical exhaustion, injury, or illness. This is consistent with  
456 consequences experienced by male players due to the high-impact nature of rugby (Cresswell  
457 & Eklund, 2006) although direct comparisons should be made with caution due to differences  
458 in level. As is consistent across literature, cognitive and affective manifestations arose as a  
459 consequence of burnout and depletion of emotional resources (Schaufeli & Enzmann, 1998).  
460 Previous literature agrees that exhaustion should be considered the core component of athlete  
461 burnout (Schaufeli & Buunk, 2003), this was evident within this study as the onset of

462 exhaustion, and development into an enduring feature, was a significant element of burnout for  
463 these rugby players.

464         Among the key burnout dimensions, an interesting element of players' sport  
465 devaluation was a cynical attitude toward the women's rugby set-up, specifically the  
466 unsustainability of involvement at the top level. This was partly due to the impact of rugby on  
467 players' income; rugby and money hassles have been positively linked to core burnout  
468 characteristics (Cresswell, 2009). Moreover, devaluation of women's rugby is closely linked  
469 with reduced sense of accomplishment as players perceived discrepancies between high efforts  
470 and low rewards. Consistent with the effort-reward imbalance model, this can lead to increased  
471 risk for burnout (Bakker et al., 2000). Overall, the value women's rugby holds in society  
472 impacted players' devaluation and motivations; extrinsic motivations existed, but players were  
473 mainly motivated for intrinsic reasons (e.g., enjoyment). This may indicate burnout differences  
474 between male and female players. Male top-amateur players have shown high intrinsic and  
475 high extrinsic (e.g., social status) motivations that are attributed to its societal value (Cresswell  
476 & Eklund, 2005a). The effect of differing perceptions of women's rugby should be considered  
477 when coaching and conducting research amongst female rugby players as it may have a direct  
478 impact upon identity and motivations.

479         In agreement with SDT (Ryan & Deci, 2000), reduced intrinsic motivation was evident  
480 in those who had burnt out. This is consistent with research into top-amateur male rugby  
481 players, whereby more self-determined forms of motivation have significant negative  
482 correlation with burnout (Cresswell & Eklund, 2005a). Less self-determined involvement in  
483 training may have resulted in feelings of entrapment, which have previously been correlated  
484 with burnout (Raedeke, 1997). As previously suggested, more highly motivated athletes may  
485 be at greater risk of burnout (Gould et al., 1996). Motivational differences could explain why  
486 some athletes in this sample experienced burnout while others had not.

487           Elevated stress and pressure from multiple avenues, including negative environments  
488 and coaching behaviors, were significant factors of burnout – especially if an individual’s  
489 perceived resources were depleted. Notably, rapid progression across age categories, which  
490 may have occurred due to early success (Gustafsson et al., 2007), created severe increases in  
491 demands. Past research has shown that role conflict and high physical demands are positively  
492 associated with burnout (Kjøormo & Halvari, 2002; Lemyre et al., 2007) – both were the major  
493 contributors to athlete burnout within this study. These factors were exacerbated when wider  
494 commitments of players (e.g., work, and other squads) were not considered. Gustafsson and  
495 colleagues (2008) highlighted that, by encouraging wider identity development in athletes,  
496 burnout might be prevented. The practical implications are clear; it is highly important to  
497 understand the range of unique demands that athletes face and ensure that ample support is  
498 provided to maximize their perceived resources in dealing with such demands, particularly in  
499 developing athletes.

500           Furthermore, negative perceptions of burnout, often reinforced by attitudes held by  
501 coaches, had a detrimental impact on athletes in this study, as is consistent with previous  
502 research (Cresswell & Eklund, 2006; Gould et al., 1996). However, positive experiences were  
503 described and closely linked with positive environments and supportive coach reactions.  
504 Evidently, where a positive culture is fostered the risk of burnout is likely to be reduced.  
505 Coaches and management teams facilitate the culture and environment of high-performance  
506 programs and squads and so dictate how welfare issues, like athlete burnout, are addressed.

507           In line with SDT, unfulfilled basic needs had a detrimental impact on players. Negative  
508 experiences with coaches were identified as being significant in players’ development of  
509 burnout with both autonomy (autocratic coaching) and relatedness (coach conflict) being  
510 thwarted. This is consistent with existing literature; certain coaching behaviors have been  
511 identified as risk factors of burnout (Davis et al., 2019; Vealey et al., 1998), with autonomy-

512 supportive coaching and high-quality coach-player relationships negatively correlated with  
513 athlete burnout (Jowett et al., 2017; Mageau & Vallerand, 2003). This is particularly important  
514 for female players as previous research has found that female athletes, when compared to  
515 males, were more likely to seek social support as a coping strategy in response to performance-  
516 related stress (Crocker & Graham, 1995; Vealey et al., 1998). Connectedness with teammates  
517 was a key element of players' enjoyment in rugby and negative outcomes were evident if it  
518 was reduced. This was shown in female adolescent athletes where burnout was negatively  
519 associated with higher team cohesion (Pacewicz et al., 2020). The perception of burnout  
520 experiences as commonplace and even communal, shown in this data, highlights a particular  
521 area of interest. This notion gives a rudimentary indication of how social-identity based  
522 emotion in sport (Campo et al., 2019) might link to occurrences of athlete burnout. Athletes'  
523 emotional experiences can be influenced by their group membership through collective  
524 emotion or team-referent emotion (Campo et al., 2019). These factors may influence the  
525 development of athlete burnout within multiple ingroup members, particularly those with  
526 strong group identity. It is worth noting, though, that the findings in this study show that some  
527 teammates who received financial benefits from rugby experienced relatedness with those who  
528 did not. Reduced feelings of competency were evident due to lower performance ability when  
529 tired or injured and when self-critical tendencies were exaggerated in negative environments.  
530 The self-critical component of perfectionism can increase burnout risk, with perfectionist  
531 individuals being more vulnerable in stressful situations (Flett & Hewitt, 2002). Moreover,  
532 reduced sense of accomplishment clearly indicates players' need of competency being  
533 chronically unfulfilled.

534           While the main results from the present study are in line with and support the findings  
535 of past research, there are significant results that contribute to the literature within the context  
536 of female rugby. Due to the amateur nature of the women's rugby teams (e.g., national

537 programs and squads), issues were raised relating to a lack of financial support or income  
538 from rugby, which was closely linked with a reduced sense of achievement and motivation.  
539 Reduced sense of accomplishment was salient across findings, even when there was no  
540 objective basis for it. Performance is a core aspect of sport and athletes are evaluated  
541 frequently within games and, regarding this study, in a high-performance setting to maintain  
542 their position in a squad. Thus, many athletes' identities are interlinked with their  
543 performance, which, if perceptions of competency are threatened, can have a negative impact  
544 on motivation, affect, and self-esteem (Brewer et al., 1993).

545         Furthermore, athletes who experienced burnout also faced a lack of psychosocial and  
546 informed support. Due to poor understanding of issues caused by burnout, players did not  
547 receive appropriate support and could be criticized by coaches for lack of commitment. Even  
548 though low commitments could arise from a player's need to generate income, which was  
549 closely linked to a reduced sense of accomplishment and sport devaluation. This emphasizes  
550 the importance of raising awareness of the risks associated with burnout, and demands  
551 coaches better understand the syndrome to prevent its occurrence in their players. The  
552 athletes exhibited clear sport devaluation often due to detrimental experiences they  
553 encountered within rugby and the impact rugby could have on non-rugby life. Specifically,  
554 devaluation of only certain elements of rugby, e.g., high-performance, may be explained by  
555 players' commitment to multiple teams, some players had an overwhelmingly negative  
556 experiences in one squad while having positive rugby experiences elsewhere. This may be  
557 related to a strong athletic identity, which can be a risk factor of burnout (Brewer et al.,  
558 1993), although this strong identity may have prevented athletes from devaluing rugby  
559 completely due to its ties with self-worth. In addition, devaluation has been suggested as a  
560 coping response due to the effect that reduced accomplishment may have on self-esteem  
561 (Gustafsson et al., 2008). In this respect, the findings of the present study also show that



586 have biased results towards certain experiences. Future research should consider larger sample  
587 sizes, players from different competitive levels, and female athletes from different sports. As  
588 previously noted, rugby experiences of the lead author, while beneficial in data collection and  
589 analyses, may have unknowingly caused some bias in results (Cresswell & Eklund, 2006). The  
590 benefits and drawbacks of researcher experience should be considered for future studies.

591         The qualitative data showed strong evidence of burnout experiences, however, no  
592 quantitative measures were employed. Employing a standardized measure would improve the  
593 validity of objective outcomes and enable direct comparison to out-groups. The interview  
594 process relied heavily on players' recall of events, which has inherent limitations. Although,  
595 distinctive emotional events, like burnout experiences, are less likely to be forgotten  
596 (Christianson & Safer, 1996). Additionally, use of the ABQ to inform interview guides,  
597 although improving the focus of questioning, prompts responses related to burnout themes,  
598 which may have limited an opportunity for the participants to discuss broader aspects of  
599 burnout and for the researchers to explore the factors beyond the questions from the ABQ.

600         The findings of this study also present avenues for future research. Further investigation  
601 of specific antecedents and effects of athlete burnout among a wider demographic of female  
602 rugby players would create a fuller understanding of the syndrome in this setting. Using SDT,  
603 the motivational tendencies of top-amateur female rugby players should be investigated in  
604 more depth to understand intra-team burnout and motivational differences between male and  
605 female players. Future research should aim to understand the factors that could prevent burnout  
606 and offset negative cultures, as this would help to safeguard player welfare. Finally, further  
607 research should also consider longitudinal designs to assess players' present experiences, and  
608 for understanding burnout developments over time. Previous research has shown seasonal  
609 variation in the core dimensions of athlete burnout in male rugby players (Cresswell & Eklund,  
610 2005b).

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752 **Table 1**753 *Details of participants*

| <b>Athlete</b> | <b>Top-amateur status</b> | <b>Age</b> | <b>Years in rugby</b> | <b>No. of squads</b> | <b>Weekly rugby hrs</b> | <b>Season length (mons)</b> | <b>Notable non-rugby commitments</b>                           |
|----------------|---------------------------|------------|-----------------------|----------------------|-------------------------|-----------------------------|--|
| <b>1</b>       | Ex                        | 21         | 4                     | 2                    | 10                      | 10.5                        | Full-time student  |
| <b>2</b>       | Current                   | 19         | 12                    | 2                    | 14                      | 10                          | Full-time student (inc. placements)                            |
| <b>3</b>       | Ex                        | 21         | 6                     | 2                    | 11                      | 10                          | Full-time student  |
| <b>4</b>       | Current                   | 19         | 13                    | 2                    | 8                       | 9.5                         | Full-time student  |
| <b>5</b>       | Current                   | 21         | 5                     | 1                    | 8                       | 11                          | Part-time student, part-time job, volunteering, apprenticeship |
| <b>6</b>       | Current                   | 19         | 7                     | 2                    | 11                      | 9.5                         | Full-time student, full-time job/apprenticeship                |
| <b>7</b>       | Current                   | 20         | 10                    | 2                    | 9                       | 11                          | Full-time student  |
| <b>8</b>       | Current                   | 19         | 4                     | 2                    | 12                      | 10                          | Full-time student, part-time job                               |
| <b>9</b>       | Current                   | 19         | 12                    | 2                    | 12                      | 12                          | Full-time student, part-time job                               |
| <b>10</b>      | Current                   | 20         | 13                    | 2                    | 11                      | 9.5                         | Full-time student, part-time job                               |

754

755 **Table 2**756 *Themes identified from interviews: Contributing Factors*

| <b>Superordinate Theme</b> | <b>Theme</b>                 | <b>Code</b>  |
|----------------------------|------------------------------|--|
| Intrapersonal Concerns     | Reduced Intrinsic Motivation | Negative Impact on Non-Rugby Commitments<br>Obligation<br>Increased Extrinsic Motivations/Amotivations |
|                            | Stress                       | Perceived Demands vs. Personal Resources   |
|                            | Personality                  | Perfectionist Concerns<br>Self-Critical  |
| External Concerns          | Role Conflict                | Other Squads<br>Non-Rugby Commitments  |
|                            | High Physical Demands        | Lack of Rest<br>Overtraining<br>No Between Season Break<br>Involvement in Multiple Squads              |

|                           |                                     |   |
|---------------------------|-------------------------------------|---|
| Interpersonal<br>Concerns | Negative Environment                | Squad Instability<br>Negative Atmosphere<br>Feeling Undervalued   |
|                           | Squad Transitions                   | Rapid Progression Across Levels<br>Let Go   |
|                           | Coaching Behaviors and<br>Attitudes | Negatively Autocratic<br>Coach Conflict<br>Low-Quality Coach-Player Relationship<br>Negative Reactions<br>Apathy Towards Burnout<br>Narrow View of Athletes |
|                           | Negative Social<br>Interactions     | Reduced Relatedness with Teammates<br>Reduced Relatedness with Peers  |
|                           | Stigma and Taboo                    | Adverse Reactions<br>Not Addressed<br>Limited Awareness   |

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758 **Table 3**759 *Themes identified from interviews: Effects of Athlete Burnout*

| <b>Superordinate<br/>Theme</b> | <b>Subordinate<br/>Theme</b>            | <b>Theme</b>                        | <b>Code</b>  |
|--------------------------------|---|-------------------------------------|--|
| Key Burnout<br>Dimensions      | Emotional and<br>Physical<br>Exhaustion | Emotional                           | Emotionally Drained<br>Heightened Emotions<br>Unable to Wind Down<br>Miserable           |
|                                |   | Physical                            | Always Tired<br>Sore<br>Never Fully Recovered<br>Lethargic<br>Injury/Illness Risk        |
|                                |   | Reduced<br>Performance              | Physically Tired<br>Injury/Illness   |
|                                | Reduced Sense of<br>Accomplishment      | Low<br>Confidence<br>in Ability     | Feel Unable to Continue Performing at<br>Level<br>Trying Harder/Doing Extras             |
|                                |   | Negative<br>Factors<br>Internalized | Coach Criticism<br>Environment/Atmosphere<br>Poor Score Lines<br>Representation in Media |

|                    |                                    |                            |   |
|--------------------|------------------------------------|----------------------------|---|
|                    |                                    | Low Feeling of Achievement | Not Meeting Performance Expectations<br>Effort Not Worth Cost<br>Lack of Goal<br>Rugby Impact on Life Accomplishments   |
|                    |                                    | Aversion to Training       | Poor Environment<br>Source of Stress  |
|                    | Sport Devaluation                  | Doubts About Involvement   | Cost-Reward Imbalance<br>Negative Impact of Rugby on Life<br>Non-Rugby Engagements Become More Important  |
|                    |                                    | Disillusionment            | Women's Rugby Set-Up<br>Perceive Few Benefits from Rugby  |
|                    | Cognitive-Affective Manifestations |                            | Frustration/Irritation<br>Anxiety (Performance, Social)<br>Depression/Depressed Mood<br>Guilt Feelings (High Expectations About Behaviors)<br>Helplessness/Hopelessness<br>Worry/Dread<br>Nervousness |
| Additional Effects | Motivational Changes               | Loss                       | Lack of Motivation<br>Loss of Enjoyment/Enthusiasm<br>Want to Quit/a Break  |
|                    |                                    | Changes                    | Less Focused on Performance<br>Reduced Desire for High-Performance<br>Change in Motivation  |
|                    | Coping Response                    | Behavioral                 | Withdrawal from High-Performance Rugby<br>Reduce Number of High-Performance Squads<br>Move to Healthier High-Performance Environment<br>Forced Break from Rugby, e.g., Injury                         |
|                    |                                    | Emotional                  | No Coping<br>Avoidance of Issue   |