



Military sports recovery athletes' perspectives on role of the coach in athletes' well-being: The importance of supporting basic psychological needs.

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1 **Military sports recovery athletes' perspectives on role of the coach in athletes'**
2 **well-being: The importance of supporting basic psychological needs.**

3 Research has demonstrated significant post combat issues experienced by military
4 personnel who have suffered from physical and mental trauma, such as loss of self-identity
5 (Koren et al., 2005; Melcer et al., 2010; Sutton et al., 2021), employment struggles (Zogas,
6 2017), anger management (MacManus et al., 2012), substance and alcohol abuse (Harmless,
7 1990; Sutton et al., 2021) and difficulties in maintaining relationships (Kintzle et al., 2018;
8 Sutton et al., 2021). There is also evidence of mental health challenges such as post-traumatic
9 stress disorder (PTSD) (Enos 2015; Kintzle et al., 2018; Koren et al., 2005; Schnurr et al.,
10 2000) and other negative psychological responses (Eversen et al., 2009; Walker, 2010). As a
11 result of significant physical or mental trauma, injured military veterans may face additional
12 challenges, such as adapting to new physical constraints (Messinger, 2010), which are likely
13 to affect perceptions of independence and ability (i.e., autonomy and competence) (Enos,
14 2015; Peacock et al., 2019; Sutton et al., 2021). Whilst dealing with new physical
15 impairments, the injury may have also resulted in medical discharge from the military and
16 simultaneous loss of their friends, home and career, which are likely to affect perceptions of
17 connections with important others (i.e., relatedness) (Kintzle et al., 2018; Peacock et al.,
18 2019; Sutton et al., 2021). Researchers have also demonstrated the impact of service-related
19 injury on military personnel's psychological well-being (Kashdan et al., 2006; Lundberg et
20 al., 2011).

21 One approach that seeks to combat the challenges faced by injured military personnel
22 are military sport recovery programmes. These programmes aim to provide wounded, injured
23 and sick (WIS) military veterans with an opportunity to use sports to support their pathway
24 to rehabilitation from mental and physical trauma (Caddick & Smith 2019; Shirazipour et al.,
25 2018; Enos, 2015; Messenger, 2010; Roberts et al., 2019; Sutton et al., 2021; Spornier et al.,

26 2009). In the United Kingdom, these programmes are embedded within large organisations
27 such as Help for Heroes, Battleback and Invictus as well as many other smaller charities.
28 Opportunities are provided from recreational to performance levels of sport, with some
29 athletes competing in the highest echelons of international competition such as the
30 Paralympic Games. One of the smaller charities which operates in this domain is the Armed
31 Forces Para-Snowsport Team (AFPST), a sports recovery charity which uses competitive
32 winter sport to assist in the freedom, recovery and transformation of military personnel who
33 become wounded, injured or sick during military service. The AFPST was founded in
34 response to interest in winter sports from veterans wounded in Iraq and Afghanistan during
35 the conflicts which began in the early 2000s and provides opportunities through a
36 performance pathway from foundation to elite level. It is led by a board of directors,
37 management team and coaches who have qualified through the British Association of
38 Snowsport Instructor (BASI) pathway, all of whom are volunteers. To date, the AFPST has
39 approximately 80 active winter sport athletes who participate in the UK and overseas
40 opportunities organised by its staff.

41 Research in 'mainstream sport', has demonstrated relationships between the coaching
42 environment and athletes' motivation and psychological well-being (Adie et al., 2008;
43 Gagne' et al., 2003; Mack et al., 2011; Reinboth & Duda, 2004, 2006). In particular,
44 coaching behaviours (Bloom et al., 1999; Potrac et al., 2002), the coach-athlete relationship
45 (Mageau & Vallerand, 2003; Olympiou et al., 2008), and the motivational climate (Allen &
46 Hodge, 2006; Hodge et al., 2014) have been shown to influence athletes' psychological
47 needs, motivation and well-being. To date, however, little is known about the psychosocial
48 environment of competitive military sport recovery programmes, their impact on athletes,
49 and, more specifically, the role of the coach in shaping this environment. Without a

50 supportive sporting environment in which athletes can thrive, the effect of a military sports
51 recovery programme may be limited.

52 A useful lens through which to examine the role of the coach in this context is the
53 well documented sub-theory of Self-Determination Theory (SDT) (Deci & Ryan, 1985; Ryan
54 & Deci, 2000); Basic Psychological Needs Theory (BPNT) (Ryan & Frederick, 1997; Ryan
55 & Deci, 2000). This proposes that self-determined motivation *and* psychological well-being
56 are optimised through the satisfaction of three basic psychological needs: autonomy (i.e., the
57 sense of volition to make one's own choices and decisions); competence (i.e., to feel that one
58 is effective in their actions) and relatedness (i.e., the feeling of connection or belonging to
59 something deemed worthwhile). Research in sport has generally demonstrated support for the
60 propositions of BPNT (Gagné et al., 2003; Reinboth & Duda 2004; Adie et al., 2008; Mack et
61 al., 2011) and in the military context, research has demonstrated the positive psychological
62 effects of multi-activity sports courses, where delivery and outcomes were grounded in SDT
63 (Peacock et al., 2019; Sutton et al., 2021).

64 Engagement in sport can provide military veterans with an opportunity to satisfy
65 psychological needs in an environment with similar social and environmental characteristics
66 as they have experienced during their time in the service, such as the requirement for
67 teamwork, courage and physical endurance. But without a supportive environment in which
68 to thrive, the effect of a sports recovery initiative may not succeed in its ultimate intentions.
69 Researchers have previously indicated the importance of instructor knowledge when
70 supporting WIS veterans, but also an approach which includes compassion and focus on
71 building social connections and promoting autonomy (Shirazipour et al., 2018, Shirazipour &
72 Latimer-Cheung, 2020). It is hoped that developing a deeper understanding of how coaches
73 shape the environment that supports or thwarts veterans in their recovery journey during
74 engagement in competitive sport will be useful for those tasked with coaching athletes

75 through competitive programmes as well as provide insight for other stakeholders working
76 with injured military personnel.

77 In summary, military personnel can experience significant post-combat challenges
78 and issues that negatively affect their psychological functioning. This is often exacerbated
79 when accompanied by life changing injury. Military sport recovery programmes have
80 emerged as one means to support injured military personnel in their rehabilitation and
81 recovery journeys. Whilst research suggests that sport has many psychological and social
82 benefits for athletes with disabilities more generally (Anderson, 2003; McCann, 1996), little
83 is known about the experiences of injured military personnel engaged in competitive sport
84 recovery programmes. Therefore, the purpose of this study was to investigate the experiences
85 of athletes in a competitive military sports recovery programme with a specific focus on the
86 extent to which coaches supported or frustrated athletes' basic psychological needs. It is
87 hoped that practical implications will help to inform coaching practice to support optimal
88 recovery and an environment which promotes well-being.

89 **Method**

90 *Methodology*

91 To inform coaching practice, in this case in parasnowsport, the study adopted a
92 pragmatic approach that emphasizes creating actionable knowledge (Poucher et al.,
93 2020). The psychological environment fostered by coaches is integral to, but part of,
94 the coaching process. As noted by Cruikshank & Collins (2017), pragmatism is an
95 effective lens for considering specific aspects of the coaching process rather than
96 the entirety. Consequently, a relativist ontology was adopted, acknowledging that
97 reality is interpreted through diverse perspectives and experiences. This was paired
98 with the understanding that knowledge emerges through enquiry as researchers and
99 participants interact and share experiences (Poucher et al., 2020).

100 ***Participants***

101 For ease of writing, participants will be referred to as athletes for the remaining
102 sections of this research as the Charity ethos of competitive winter sports considers them as
103 such. Eight para-athletes (3 female, 5 male) were interviewed in this study. The participants
104 were recruited from the AFPST and compete in alpine skiing, snowboarding, and cross
105 country skiing. The participants were at varying stages along the AFPST performance
106 pathway, all were competing at Europa Cup level and 6 were Paralympians. All of the
107 athletes had been involved with the charity for more than 2 years (M=4), and their inclusion
108 represented single and double limb amputations and spinal injury. Some of the athletes also
109 had a history of PTSD and other mental health disorders. No visually impaired athletes were
110 included in this study due to the extra dimensions involved in supporting autonomy for these
111 athletes, such as the requirement for an on and off-snow guide. All athletes had experienced
112 coaching in more than one sport or programme throughout their recovery process, and their
113 answers describe interactions and experiences across all of these.

114 ***Procedure***

115 Ethical approval was obtained through the university ethics committee before athletes
116 were initially approached to discuss the research. The purpose of the study was explained,
117 including assurance that anonymity would be maintained, and all athletes agreed to
118 participate. Each participant was assigned a unique code (e.g., Athlete 1, Athlete 2 etc.). They
119 were then sent information sheets and asked to sign consent forms before data collection
120 began. Online meetings were conducted due to the geographical dispersion of the athletes
121 across the UK. Each interview lasted between 30-45 minutes and was transcribed verbatim,
122 generating a total of 38453 words. Transcriptions were analysed thematically to develop an
123 understanding of the participant's experiences and address the purpose of the research.

124 ***Data collection***

125 A semi-structured interview guide was designed, based on the research purpose and a
126 review of the literature on SDT, BPNT and well-being. The guide was used as a prompt, to
127 ensure that the major questions were answered, but the interview itself was semi-structured in
128 nature, to allow scope for the interviewer to expand upon areas of personalised interest and
129 encourage open conversation (Patton, 2002). It was important that the interviewer was
130 sensitive to areas that might cause distress for the athlete, such as recall of an event that
131 caused stress or anxiety and the interviewer was careful to allow athletes to talk freely and
132 tell their stories, or alternatively, change a subject if they felt unhappy to talk about it
133 (Sparkes & Partington, 2003).

134 An informal pilot interview was conducted with an experienced athlete, who had now
135 retired from competition, to test the interview guide and provide valuable feedback following
136 debrief. This resulted in slight alterations to question wording to allow for a greater depth of
137 information to be gathered and the inclusion of an interviewer's definition of well and ill-
138 being, once athlete awareness of the term had been established. The pilot interview was not
139 included in the overall results.

140 The interviews comprised four broad sections: 1) introductory questions about
141 participants' involvement in sport and the AFPST to help participants to feel comfortable with
142 the process; 2) questions about perspectives on their well and ill-being; 3) questions
143 encouraging athletes to reflect on their own positive and negative experiences and the part
144 played by the coach; 4) opportunity to talk about any other experiences that they wanted to
145 share or felt relevant to the interview.

146 ***Data Analysis***

147 The interview transcripts were interpreted using a sensitising approach (Patton, 2002),
148 where thematic analysis was employed by identifying and categorising patterns in the data
149 (Braun & Clarke, 2006; Braun et al., 2017). Familiarisation of the recordings was conducted

150 by first listening, whilst taking initial notes, then transcribing verbatim into text. The text
151 was then read several times, and the process of open coding (Taylor, 2014) began. Excerpts
152 were identified according to their relevance to the research purpose, analysed for both
153 semantic and latent content (Braun et al., 2017) and labelled by assigning a phrase which best
154 described the content, such as ‘coach listens’ or ‘mutual respect’. These formed the initial
155 data units. These units were then examined for recurring or significant themes by connecting
156 them through the process of axial coding (Taylor, 2014). For themes to be developed, the
157 analysis must have revealed a topic of conversation which had recurred in at least two of the
158 transcripts or were considered by the authors to have particular significance (Taylor, 2014).

159 The theoretical framework, SDT, provided sensitising concepts for the analysis
160 (Patton, 2002), specifically in relation to autonomy-supportive and controlling coaching
161 behaviours which were perceived to impact athletes’ psychological well-being. As such, the
162 initial data units were organised into lower-order themes framed by the work of Mageau and
163 Vallerand (2003) (autonomy-supportive behaviours) and Bartholomew et al. (2010)
164 (controlling behaviours). This approach was largely deductive, however, we also stayed
165 ‘open’ to concepts that did not ‘fit’ with the SDT-framed sensitising concepts. Through this
166 process the initial data units were organised into ten lower-order themes and further
167 categorised into four higher-order themes for discussion.

168 ***Research credibility***

169 Features of the research process which contribute to the credibility of the findings
170 include the first author’s prolonged engagement in the context. The first author has served in
171 the military and coached and managed a military sport recovery programme with a
172 performance focus. In addition, the second and third authors have experience as coaches in
173 performance pathways as well as expertise in SDT, all of which was beneficial when it came
174 to constructing meaning behind athletes’ thoughts (Smith & McGannon, 2018). The first

175 author's engagement as a coach in the context meant that she was *involved in the direct*
176 *coaching of 4 of the athletes, was* known to *2 of the* participants and had mutual contacts *with*
177 *the others*. An acknowledgement of the power relations during interview that may exist as a
178 result of this must be highlighted (Potrac et al., 2010) and although presents a potential
179 limitation to the study, also assisted in creating an environment of trust in which the
180 participants felt secure in divulging personal accounts which were relevant (Smith & Sparkes,
181 2016). Furthermore, the semi-structured approach to the interviews encouraged participants
182 to provide rich thick description of their experiences and perceptions (Smith & Sparkes,
183 2016). The analysis was assisted by reading the transcripts several times to deepen
184 understanding (Braun & Clarke, 2006). The process of interpreting and organising the data
185 into the relevant themes was assisted through critical friend discussions between researchers
186 where interpretations were challenged and developed (Smith & McGannon, 2018).

187 **Results**

188 The four higher-order themes developed captured the participants' experiences as
189 athletes in a military sport recovery programme, their perceptions of coaching behaviours and
190 the impact on need satisfaction and well-being. The four themes were: it's a journey of
191 rediscovery in which sport and the coach were instrumental; fostering relatedness formed a
192 foundation for re-imagining themselves and their capabilities; fostering a sense of autonomy
193 and competence was critical to athletes' motivation and well-being; need thwarting coaching
194 behaviours negatively impacted athletes' well-being. The following section describes each
195 high-order theme along with illustrative quotes.

196 ***It's a journey of rediscovery in which sport and the coach were instrumental***

197 Whilst serving in the military, service personnel have often experienced a strong
198 sense of purpose and within their unit, they have been nurtured through each stage of their
199 career, to perform peace and war time roles to a high standard, with a high degree of

200 autonomy. Leaving military service under normal military retirement circumstances is
201 typically eased by a period of transition, a two-year formalised resettlement period. However,
202 often, as was the case with the athletes in this study, injured service people have not planned
203 to leave and have not thought about a life after their military career. As they unexpectedly
204 transitioned from military into civilian life, with the added complexity of acquired physical or
205 psychological trauma to cope with, several of the athletes discussed a loss of self-identity or
206 how the concept they had of themselves was forced to change. Engagement in the sport
207 recovery programme helped them to address this transition in identity. Athlete 4 commented
208 that “I did feel like I’d lost my place in society. I’ve felt like I didn’t have a role. So actually,
209 when I became part of the team, I felt like I could identify as being part of something.”

210 Several athletes explicitly described their unexpected transition into civilian life as a ‘
211 journey’. A journey supported by their involvement in a sport recovery programme and a
212 coach playing a significant part in nurturing their successful evolution as an athlete and
213 person. Athlete 6 commented "my coaches started me on and led me through this athlete
214 pathway. The coaching model they employ, the environment and culture they have created...
215 is really what has fostered a sense of well-being as an athlete.” Athlete 1 also noted: “it [sport
216 programme] was used as a form of... rehabilitation tool to regain physical activity, but also as
217 that mental outlet and focus too, giving an enormous chance to focus on things and skills that
218 I could attain, rather than worrying about the things that I’d lost”.

219 The negative impact of injury and illness as a result of military service and the
220 challenges faced when transitioning into civilian life is well documented (e.g., Melcer et al.,
221 2010; Walker, 2010; Zogas, 2017; Kintzle et al., 2018), however researchers have attempted
222 to demonstrate links between opportunities for sport in this cohort and a subsequent
223 improvement in their overall confidence and wellbeing (Jackson, 2013; Caddick & Smith,
224 2014; Shirazipour et al., 2018). One such study by Shirazipour et al., (2018) et al hypothesise

225 that participation in sport may provide potential avenues for wider rehabilitation goals. Our
226 findings therefore appear to contribute to the growing interest in the transformational power
227 of sport as a vehicle for positive rehabilitation and recovery (e.g., Enos, 2015; Caddick &
228 Smith, 2018; Peacock et al., 2019; Sutton et al., 2021). This was evidenced by the athletes
229 finding a renewed energy and enthusiasm, not just for sport, but in other aspects of their life,
230 fuelled by the sense of pride felt in their sporting achievements. "The sense of achievement I
231 get from skiing helped reignite the drive and motivation to achieve other things. This sense of
232 achievement also carried over into other aspects of my life" (Athlete 5).

233 As part of the programme, some were encouraged to become ambassadors for their
234 sports recovery charity, or mentors to other athletes. These roles played a significant part in
235 rediscovery of their sense of self which also led to feelings of pride and self-worth. Athlete 1
236 commented "it's about performance, about achieving, it's about success, but being a good
237 person is at the heart of it and having a contribution to society at the end of it is very much
238 there and is not an afterthought." This evidence of 'giving back' to the community has been
239 highlighted in other veteran research as a way to promote the benefits of sport, open
240 communication channels and encourage others to become involved (Shirazipour & Latimer-
241 Cheung, 2020).

242 ***Fostering relatedness formed a foundation for reimagining themselves and their***
243 ***capabilities***

244 Whilst relatedness has a more specific definition within SDT (Deci & Ryan, 1985;
245 Ryan & Deci, 2000), it was helpful in the context of this study to approach it by using the
246 concept to frame a wider picture of social connectedness such as inclusiveness, psychological
247 safety and supportive group culture. Athletes made references to coaches' actions that
248 fostered camaraderie, cooperation with each other and shared social support. The coaches and
249 their actions were fundamental to fostering athletes' sense of relatedness and providing them

250 with a firm foundation for their recovery to progress. Athlete 1 commented, “having that real
251 togetherness and inward facing group, we learn from each other and the phrase we use is that
252 the rising swell lifts every boat.” Athlete 5 commented: “The instructors [coaches] knew that
253 this was a key part of [recovery programme] so spending time as a group was encouraged and
254 was given almost as much importance as the actual skiing. The atmosphere and camaraderie
255 there were key reasons I had such a positive experience, so definitely had a huge impact on
256 my well-being and recovery”.

257 Through the inclusive and psychologically safe environment they facilitated, coaches
258 demonstrated their care for the athletes as people and facilitated their motivation and well-
259 being. Athlete 1 commented: “I think, for me, the coaches who get the best out of me are the
260 ones who show the most respect to the athlete. Sometimes it can be perceived that a coach-
261 athlete relationship should be more coach, less athlete... Whereas I think I’ve had my better
262 coaching experiences where... an athlete feels safe enough to communicate, safe enough to
263 fail, safe enough to ask a stupid question and safe enough to dream”. Athlete 6 further
264 highlighted the instrumental nature of the coach in creating this environment: “The team that
265 I’m a part of, [recovery programme] as a whole, does a great job of this, my coach being a key
266 part of that structure. They champion us as athletes and the journey we are on. Within our
267 alpine team, we spend a lot of time away together and we get a lot done effectively, working
268 together and helping each other. That tone, environment and culture is set and developed by
269 our coaches”.

270 Through conversation, the athletes were able to demonstrate occasions where the
271 actions of coaches in a military competitive sport recovery programme created an
272 environment that fostered relatedness and their feelings of connectedness. This contributed to
273 a psychologically safe environment within which athletes could train and compete in sport,

274 challenge themselves to achieve and explore ‘new’ abilities and identity which enhanced their
275 well-being.

276 ***Fostering a sense of autonomy and competence was critical to athletes’ motivation and***
277 ***well-being***

278 The athletes identified their post-injury involvement in sport as a starting point for
279 their discovery of new skills. They emphasised how their coach was able to structure training
280 to convince them of their potential for accomplishment and shift their focus away from things
281 they were no longer able to achieve. For example athlete 5 described how she was
282 encouraged to find adapted solutions to challenging situations and the ensuing feelings of
283 achievement and confidence demonstrated the deliberate influence of the coach: “The focus
284 throughout was very much on the positive things I could do and attain, rather than things I
285 couldn’t and if there was something I was unable to do, specifically because of my injury,
286 rather than simply being told it was just something I couldn’t do, we would figure out an
287 adapted solution”.

288 The athletes identified that the behaviours of several of the coaches supported their
289 sense of autonomy and motivation. For example, when athletes were part of the decision-
290 making process this, in turn, fostered their motivation. Athlete 5 commented “but ultimately,
291 if the athlete is not involved in some way and has some control and say over their own
292 journey, I think it would be very easy to become disengaged and demotivated.” Furthermore,
293 Athlete 4 noted “I get to feel the sense of achievement because I chose to challenge myself, I
294 chose to take that risk... so to be involved in that decision making in a bigger, more
295 challenging environment is really helpful.” Athletes also appreciated feeling that their coach
296 was listening to them, valuing their experience, feelings and perspectives. Athlete 1
297 commented: “I think it’s a great environment, to feel safe to be curious and when my passion
298 for the sport or my ideas are considered at some point on the journey”.

299 The nature of the responses from these athletes with regard to autonomy are
300 consistent with previous research in the study of motivation in sport (Adie et al., 2008; Allen
301 & Hodge, 2006; Mageau & Vallerand, 2003). Furthermore, integrating the athlete into the
302 decision making process could be considered as an example of a person or ‘other’-centred
303 coaching approach, which has formed the basis for modern coaching pedagogy (Chelladurai,
304 2007; Turnidge & Côté, 2017; Garner et al., 2022).

305 Fostering athletes’ feelings of competence was even more significant because of their
306 loss of independence as a result of their illness or injury. Where coaches were able to design
307 learning experiences which challenged the athletes at an appropriate level, the resultant
308 feelings of competence improved athletes’ confidence and self-belief. Athlete 8 commented:
309 “He [the coach] understood that we all had different disabilities, different injuries and he’d
310 tailor the session and incorporate all into it. If that meant someone going off for a half hour
311 break, that’s what happened. We would do different drills throughout the session, depending
312 on what he thought would best for us as individuals”.

313 Athlete 5’s experience was perhaps even more life transforming. She described how,
314 as a result of working with the coach in the sport programme, she was able to ‘come to terms’
315 with the ‘new’ version of herself. She was able to accept her limitations and yet knew she
316 could overcome challenges. This gave her a sense of achievement which fostered her
317 motivation and sense of well-being. She commented: “The sense of achievement I get from
318 skiing helped re-ignite the drive and motivation to achieve other things. This sense of
319 achievement also transferred into other areas of my life and helped me to realise that I could
320 still do things, even if I needed to do them in a slightly different way”. Thus, positive effects
321 on well-being were evidenced by the athletes finding a renewed energy and enthusiasm, not
322 just for sport, but in other aspects of their life and the sense of pride felt by their sporting
323 achievements.

324 Not only did the athletes report coaches supporting their sense of competence but
325 importantly this was also a task-involved sense of competence focused on working
326 collaboratively. For example, Athlete 1 talked about how the athletes in the programme were
327 encouraged to help each other to get better: "...instead of me learning a lesson and then
328 watching my teammates stumble and figure it out for weeks, while I'm off doing something
329 else, I want to share every single discovery I have and make my teammates better, cause the
330 better they get today, the better I need to be tomorrow".

331 ***Need thwarting coaching behaviours negatively impacted athletes' well-being.***

332 Despite evidence of coaching behaviours that supported need satisfaction and well-
333 being, there was also evidence of coach controlling behaviours which appeared to negatively
334 impact athletes' motivation and well-being. Some athletes reported experiencing controlling
335 coaching behaviours which sought to pressure or intimidate them into thinking, feeling, or
336 behaving in a prescribed way. They also reported behaviours that suggested a lack of interest
337 in their perspectives or care for them as well as behaviours that undermined athletes'
338 confidence in their abilities.

339 Athlete 4 described how, after sensing the coach's frustration at her being unable to
340 'keep up' with the group, she felt anxious and unable to sleep during the training camp. This,
341 in turn, affected involvement in future training camps where that member of staff might be
342 involved: "I was in their care really, at the end of the day, I mean I know I'm a grown adult,
343 but uhm, but I was in their care, and I felt they let me down. But I was frustrated that they
344 seemed to think that I was 'a problem child' and that, I really, I nearly walked away from the
345 team because of that. That became overwhelmingly bad. Actually, it took months and months
346 to rectify, and I just started isolating myself".

347 In another example, Athlete 2 commented: "I asked: 'can we have a conversation
348 please? ...I've got a few things I'd like to have a conversation about' and as soon as I said I

349 don't feel like I'm getting the coaching I deserve', that was it, the chair was thrown back, he
350 stood up, screaming in my face. And that was it, after that, I just kind of gave up".

351 Athletes also reported behaviours from coaches that disregarded athletes' opinions or
352 limited opportunities for input from the athletes which frustrated their need for autonomy.
353 Athlete 5 commented that "the sessions were almost dictatorial, in that there was no
354 discussion or collaboration involved.". This type of controlling approach to coaching has
355 been discussed within literature specific to sport and within leadership studies more generally
356 and has been linked with negative effects in regard to well-being such as reduction in vitality
357 and burnout (Bartholomew et al., 2011; Adie et al., 2012; Arnold et al., 2017; Olafsen et al.,
358 2017).

359 By not involving the athletes or not being open to their perspectives, there was
360 evidence of coaches' behaviours also thwarting athletes' need for relatedness. Behaviours
361 that appeared to deprive, and in some cases frustrate, athletes' sense of relatedness also
362 negatively affected motivation, led to withdrawal, distress and anxiety. One athlete even
363 mentioned she felt like giving up on life completely and described how distressed she became
364 after injury and resultant surgery resulted in immediate disconnection from the team. There
365 was no rehabilitation support or counselling made available despite disclosure of severe
366 deleterious effects on her mental health. This ultimately triggered retirement and transition
367 into another sport: "When you're blocked, you just feel so useless and so worthless and it's a
368 horrible position to be in.... I couldn't do anything and so it was just a complete nightmare,
369 but the next year, I came away from [sport] completely". (Athlete 3).

370 Athlete 5 described how the coach's reaction to her mistakes affected her: "He would
371 often yell at any mistakes – the yelling wasn't necessarily directed at me personally; it was
372 just his way of expressing his frustration that it wasn't perfect, but it just had the effect of
373 making me more nervous and tense and ultimately making more mistakes". These

374 emotionally abusive encounters have been discussed by Stirling (2013), who interprets their
375 origins to be both expressive (coaches' frustration) and instrumental (exertion of control upon
376 athletes) with the potential to cause harm.

377 **Discussion**

378 The purpose of this study was to investigate the experiences of athletes in a
379 competitive military sports recovery programme and the extent to which coaches supported
380 or frustrated their psychological needs in order to inform coaching practice. Using rich
381 information gathered from semi-structured interviews, athletes' perceptions of how
382 memorable coaching interactions had affected their well-being were analysed through the
383 lens of BPNT. The findings contribute to our understanding of the experiences and
384 psychological functioning of injured military personnel; the impact of a military sport
385 recovery programme; and the important role of the coach. As a result, our findings can
386 inform those working with military parasport athletes about coaching practice that can
387 contribute to enhanced recovery and well-being.

388 Drawing on SDT and BPNT (Deci & Ryan, 1985; Ryan & Deci, 2000) was useful to
389 help us to better understand the impact of coaches on the athletes' experiences in a military
390 sport recovery programme. In doing so we were able to explore not only the impact on
391 athletes' well-being but also the mechanisms in action. That is, by considering the extent to
392 which coaches actions supported, deprived or frustrated psychological needs, we are able to
393 gain insight into how engagement in sport leads to positive or negative outcomes for injured
394 military personnel.

395 Much of the research grounded in SDT, at least in sport, has focused on the autonomy
396 supportive behaviours described by Mageau and Vallerand (2003). Whilst the findings in our
397 study suggest the importance of the need for autonomy, for these athletes, at least, feeling
398 connected to and cared for by others (relatedness) and capable of engaging effectively with

399 their environment (competence) to meet positive outcomes was as important, if not more
400 important than autonomy.

401 Our findings demonstrate incidences where actions of coaches created an environment
402 that fostered athletes' need for relatedness. This appeared to contribute to a psychologically
403 safe environment within which athletes could train and compete in sport to a high level,
404 challenge themselves to achieve and explore 'new' abilities and identity which enhanced their
405 well-being. This finding is consistent with propositions of SDT and BPNT (Deci & Ryan,
406 1985; Ryan & Deci, 2000) and with findings in research in sport more generally (Gagne' et
407 al., 2003; Mageau & Vallerand, 2003; Reinboth & Duda, 2004). Positive effects of a
408 relatedness-supportive environment manifest through a range of outcomes, such as increased
409 morale, higher self-esteem and reduced stress (Mallet, 2005; Williams et al., 2013; Occhino
410 et al., 2014). Athletes in our study identified that coaches actively promoted and facilitated
411 opportunities for athletes to develop camaraderie and help each other and the creation of this
412 type of environment may be akin to the military culture of teamwork and selfless
413 commitment, a social culture which is sought after following transition to civilian life (Zogas,
414 2017; Kintzle et al., 2018). In addition, the opportunity to reconnect with other military
415 personnel who have experienced somewhat similar emotions and challenges can provide a
416 sense of connection and belonging (Ellison et al., 2016; Roberts et al., 2019). As such the
417 participants accounts support research that has suggested that gaining athletes' trust by
418 providing and demonstrating care and a shared vision, is more likely to contribute to positive
419 sport experiences (Mallet, 2005; Allen & Muir, 2020).

420 Our findings support some aspects of the autonomy-supportive coaching behaviours
421 described by Mageau and Vallerand (2003) and these seemed to have strong associations to
422 the psychological needs of autonomy and competence. Most striking in support of autonomy

423 and competence, however, was the tendency of some coaches to ensure their actions had
424 relevance to athletes' life outside of sport, thus assisting in their transformational journey.

425 Bartholomew et al. (2010) contested that previous research lacked distinction between
426 lack of need satisfaction and the active thwarting of needs in relation to the impacts on health
427 and well-being. In our study, athletes provide examples of coaching interactions that
428 appeared to thwart psychological needs and threatened athletes' mental health and well-
429 being, such as threat of deselection, acts of aggression and pressurisation. Our findings
430 strengthen the argument that active thwarting of basic psychological needs as a result of a
431 controlling environment shaped by the coaches' actions is consistent with feelings of ill-being
432 in athletes. Similarities can be drawn from research highlighting the ill-effects of a 'win at all
433 cost' approach (Cumming et al., 2007) and recurrence of this theme across some of the
434 athletes in this study establishes its significance as a perceived threat to recovery. Moreover,
435 athletes described how coaches use of controlling strategies, such as intimidation and power
436 exertion have had negative effects on their motivation and well-being, further strengthening
437 findings from research such as that from Felton and Jowett (2013) and Olafsen et al. (2017).

438 A prominent finding was a recurring mention that these athletes were on a journey of
439 self-discovery. They recognised that the programme they were engaged in had a part to play
440 in their recovery following injury and were aware of its purpose to help facilitate this. Many
441 of the positive accounts were of interactions within these programmes which had led to
442 improved feelings of self-worth, confidence and the social benefits of reconnection with
443 others. Examples of literature which has researched the positive psychological and social
444 benefits of sport are readily available (Malm et al., 2019; Downs & Ashton, 2011; Wankel &
445 Berger, 1990), the findings in this study lend further support to these claims and extend them
446 to military sport recovery programmes.

447 An important finding from our study, however, is that sport and sport recovery
448 programmes by themselves, are neither inherently positive nor negative for injured military
449 personnel. Instead, how sport and the programme is delivered, the psychosocial environment
450 created by the actions of others, particularly coaches, is critical. Where coaches created a
451 need supportive environment, the athletes' experiences were largely positive and led to
452 enhanced sense of identity and well-being. However, where coaches' actions thwarted the
453 satisfaction of needs through need depriving or frustration, the outcomes for athletes were
454 less positive and led to loss of confidence, stress, anxiety, isolation, and ill-being. This
455 potential for sport to have a deleterious effect on injured military participants has not received
456 much attention, though it has been noted in wider sport research (Arnold et al., 2017; Hodge
457 & Lonsdale, 2008; Stenling et al., 2017).

458 The negative impact of injury and illness as a result of military service and the
459 challenges faced when transitioning into civilian life is well documented (e.g., Melcer et al.,
460 2010; Walker, 2010; Zogas, 2017; Kintzle et al., 2018) and although not the specific focus of
461 this study, our findings add to this body of literature demonstrating the impact of physical and
462 psychological trauma on participants' identity and well-being. Our findings also contribute to
463 the growing interest in the transformational power of sport as a vehicle for positive
464 rehabilitation and recovery (e.g., Enos, 2015; Caddick & Smith, 2018; Peacock et al., 2019;
465 Sutton et al., 2021) and somewhat distinctively, highlight the important role coaches play,
466 with athletes making reference to positive and negative experiences which had been
467 significant to them and had impacted on their recovery process. Consistent with SDT and
468 BPNT (Deci & Ryan, 1985; Ryan & Deci, 2000), we were able to demonstrate that through
469 the psychosocial environment that the coaches facilitated through their interactions, they were
470 able to foster satisfaction of all three basic psychological needs which in turn, appeared to
471 foster adaptive motivation and well-being. However, our findings also indicate that coaches'

472 actions can thwart athletes' psychological needs leading to ill-being and there were several
473 examples of controlling interactions which served to create a more toxic and harmful
474 environment. Therefore, the importance of coaches engaging in CPD to support them in
475 avoiding negative environments cannot be over-emphasised.

476 **Conclusion and Practical implications**

477 These findings make a valuable contribution to our understanding of the experiences,
478 both positive and negative, that a sports recovery programme has imparted upon a small
479 cohort of wounded veterans. They provide us with insights into how the social psychological
480 environment created by the coach can directly impact veterans' psychological needs, well-
481 being and recovery process. Therefore, practitioners such as coaches working with WIS
482 veterans would benefit from engaging in CPD to support their understanding and
483 development of motivationally adaptive environments (e.g., Ahlberg et al., 2008; Mallet,
484 2005; Turnidge & Cote, 2017) and this study adds to this important topic. In particular,
485 knowledge of how controlling behaviours have the potential to cause harm will be useful for
486 practitioners in this context, to avoid potentially toxic environments, particularly where the
487 philosophy of such programmes has recovery as its primary purpose.

488 In this study we also sought to examine this context through the lens of BPNT.
489 Overall our findings demonstrate support for the propositions of BPNT (Deci & Ryan, 1985;
490 Ryan & Deci, 2000) in that the athletes recalled coaching behaviours which they said
491 supported their basic psychological needs and fostered feelings of well-being. This in turn
492 supported their wider rehabilitation process. The athletes also identified coaching behaviours
493 which frustrated their psychological needs and contributed to feelings of ill-being. These in
494 turn hinder their recovery. Our findings extend previous research grounded in BPNT by
495 investigating the coach's role in psychological need satisfaction within a military sport
496 recovery programme and with para-athletes competing in high level sport. Furthermore,

497 contrary to research that has emphasised benefits of autonomy supportive coaching
498 behaviours, our findings demonstrate that for these athletes, supporting their needs for
499 relatedness and competence were at least as important, if not more important, than supporting
500 autonomy.

501 It could be argued that this context has perhaps provided an amplified version of
502 psychological outcomes due to its philosophy of recovery through engagement in sport, or
503 that these athletes have learned through the course of their recovery journey that open
504 dialogue about mental health and well-being is essential to progress, but as a result, rich
505 information has been gathered to allow discussion and interpretation. Whilst all coaches are
506 in the privileged position to influence the thoughts and feelings of their athletes, they remain
507 instrumental to supporting and recognising a decline in well-being, as a result of sport-
508 specific or general life factors. Coaches in this context must look to develop strategies to
509 provide them with a safe and supportive social environment, being careful that their
510 interactions engender empowerment rather than control.

511 **Limitations and future research**

512 These findings reflect the experiences of athletes engaged in one military sports
513 recovery programme and their involvement in both national and military sports
514 charity level. It is not our intention to generalise our findings to all parasport athletes
515 and coaches, instead consistent with our relativist perspective the unique, context-
516 specific insights provided by the individual experiences and subjective interpretations
517 of the athletes are valued. However, the findings may resonate with others involved
518 in parasport (e.g., coaches and athletes) and as such provide ‘naturalistic’ tentative
519 generalisations (Stake, 2013). When considering this point, we encourage readers to
520 assess whether our methods generated sufficient richness to enable transferability
521 thereby ensuring that the findings can be meaningfully applied to similar contexts

522 and contribute to the development of new theories or practices.

523 Data were gathered data through a single one-off interview with each athlete. While
524 our intention was to obtain detailed and comprehensive insights, it is important to
525 note that this singular perspective may not fully capture the complexities and
526 multifaceted nature of coaching practices in military sport recovery programs.
527 Athletes' perceptions could be influenced by personal experiences, emotions, or the
528 specific context of their recovery journey.

529 To address these limitations, future research could benefit from incorporating
530 triangulation of perspectives. This means gathering data not only from athletes but
531 also from their coaches. Including coaches perspectives, philosophies, and
532 observations of coaching behaviours could provide a more comprehensive and
533 nuanced picture of coaching practices.

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