

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

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19

20 **Abstract**

21 The purpose of this study was to investigate the experiences of athletes in a competitive
22 military sports recovery program with a specific focus on the extent to which coaches
23 supported, or frustrated, athletes' basic psychological needs. Eight military veteran athletes
24 competing in parasport took part in semistructured interviews. The accounts of their
25 experiences of working with coaches in this context, and their influence on their
26 psychological needs and well-being were thematically analyzed. Results demonstrated that
27 coaches' behaviors which support basic psychological needs can have positive effects on
28 athletes' well-being and support their wider rehabilitation. Furthermore, frustration of these
29 needs through controlling behaviors contributed to psychological ill-being. Findings suggest
30 practical implications to help to inform coaching practice to support optimal recovery and an
31 environment which promotes well-being.

32

33 Keywords: self-determination theory, disability sport, athlete well-being, autonomy-support,
34 veteran rehabilitation, basic psychological needs theory.

35

36 **Title**

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

39

40 Research has demonstrated significant post combat issues experienced by military
41 personnel who have suffered from physical and mental trauma, such as loss of self-identity
42 (Koren et al., 2005; Melcer et al., 2010; Sutton et al., 2021), employment struggles (Zogas,
43 2017), anger management (MacManus et al., 2012), substance and alcohol abuse (Harmless,
44 1990; Sutton et al., 2021) and difficulties in maintaining relationships (Kintzle et al., 2018;
45 Sutton et al., 2021). There is also evidence of mental health challenges such as post-traumatic
46 stress disorder (PTSD) (Enos 2015; Kintzle et al., 2018; Koren et al., 2005; Schnurr et al.,
47 2000) and other negative psychological responses (Eversen et al., 2009; Walker, 2010). As a
48 result of significant physical or mental trauma, injured military veterans may face additional
49 challenges, such as adapting to new physical constraints (Messinger, 2010), which are likely
50 to affect perceptions of independence and ability (i.e., autonomy and competence) (Enos,
51 2015; Peacock et al., 2019; Sutton et al., 2021). Whilst dealing with new physical
52 impairments, the injury may have also resulted in medical discharge from the military and
53 simultaneous loss of their friends, home and career, which are likely to affect perceptions of
54 connections with important others (i.e., relatedness) (Kintzle et al., 2018; Peacock et al.,
55 2019; Sutton et al., 2021). Researchers have also demonstrated the impact of service-related
56 injury on military personnel's psychological well-being (Kashdan et al., 2006; Lundberg et
57 al., 2011).

58 One approach that seeks to combat the challenges faced by injured military personnel
59 are military sport recovery programmes. These programmes aim to provide wounded, injured
60 and sick (WIS) military veterans with an opportunity to use sports to support their pathway

61 to rehabilitation from mental and physical trauma (Caddick & Smith 2019; Shirazipour et al.,
62 2018; Enos, 2015; Messenger, 2010; Roberts et al., 2019; Sutton et al., 2021; Sporer et al.,
63 2009). In the United Kingdom, these programmes are embedded within large organisations
64 such as Help for Heroes, Battleback and Invictus as well as many other smaller charities.
65 Opportunities are provided from recreational to performance levels of sport, with some
66 athletes competing in the highest echelons of international competition such as the
67 Paralympic Games. One of the smaller charities which operates in this domain is the Armed
68 Forces Para-Snowsport Team (AFPST), a sports recovery charity which uses competitive
69 winter sport to assist in the freedom, recovery and transformation of military personnel who
70 become wounded, injured or sick during military service. The AFPST was founded in
71 response to interest in winter sports from veterans wounded in Iraq and Afghanistan during
72 the conflicts which began in the early 2000s and provides opportunities through a
73 performance pathway from foundation to elite level. It is led by a board of directors,
74 management team and coaches who have qualified through the British Association of
75 Snowsport Instructor (BASI) pathway, all of whom are volunteers. To date, the AFPST has
76 approximately 80 active winter sport athletes who participate in the UK and overseas
77 opportunities organised by its staff.

78 Research in ‘mainstream sport’, has demonstrated relationships between the coaching
79 environment and athletes’ motivation and psychological well-being (Adie et al., 2008;
80 Gagne’ et al., 2003; Mack et al., 2011; Reinboth & Duda, 2004, 2006). In particular,
81 coaching behaviours (Bloom et al., 1999; Potrac et al., 2002), the coach-athlete relationship
82 (Mageau & Vallerand, 2003; Olympiou et al., 2008), and the motivational climate (Allen &
83 Hodge, 2006; Hodge et al., 2014) have been shown to influence athletes’ psychological
84 needs, motivation and well-being. To date, however, little is known about the psychosocial
85 environment of competitive military sport recovery programmes, their impact on athletes,

86 and, more specifically, the role of the coach in shaping this environment. Without a
87 supportive sporting environment in which athletes can thrive, the effect of a military sports
88 recovery programme may be limited.

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

101 Engagement in sport can provide military veterans with an opportunity to satisfy
102 psychological needs in an environment with similar social and environmental characteristics
103 as they have experienced during their time in the service, such as the requirement for
104 teamwork, courage and physical endurance. But without a supportive environment in which
105 to thrive, the effect of a sports recovery initiative may not succeed in its ultimate intentions.
106 Researchers have previously indicated the importance of instructor knowledge when
107 supporting WIS veterans, but also an approach which includes compassion and focus on
108 building social connections and promoting autonomy (Shirazipour et al., 2018, Shirazipour &
109 Latimer-Cheung, 2020). It is hoped that developing a deeper understanding of how coaches
110 shape the environment that supports or thwarts veterans in their recovery journey during

111 engagement in competitive sport will be useful for those tasked with coaching athletes
112 through competitive programmes as well as provide insight for other stakeholders working
113 with injured military personnel.

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

126 **Method**

127 *Methodology*

128 To inform coaching practice, in this case in parasnowsport, the study adopted a
129 pragmatic approach that emphasizes creating actionable knowledge (Poucher et al.,
130 2020). The psychological environment fostered by coaches is integral to, but part of,
131 the coaching process. As noted by Cruikshank & Collins (2017), pragmatism is an
132 effective lens for considering specific aspects of the coaching process rather than
133 the entirety. Consequently, a relativist ontology was adopted, acknowledging that
134 reality is interpreted through diverse perspectives and experiences. This was paired
135 with the understanding that knowledge emerges through enquiry as researchers and

136 participants interact and share experiences (Poucher et al., 2020).

137 ***Participants***

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

151 ***Procedure***

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

161 ***Data collection***

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

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

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

183 ***Data Analysis***

184 The interview transcripts were interpreted using a sensitising approach (Patton, 2002),
185 where thematic analysis was employed by identifying and categorising patterns in the data

186 (Braun & Clarke, 2006; Braun et al., 2017). Familiarisation of the recordings was conducted
187 by first listening, whilst taking initial notes, then transcribing verbatim into text. The text
188 was then read several times, and the process of open coding (Taylor, 2014) began. Excerpts
189 were identified according to their relevance to the research purpose, analysed for both
190 semantic and latent content (Braun et al., 2017) and labelled by assigning a phrase which best
191 described the content, such as ‘coach listens’ or ‘mutual respect’. These formed the initial
192 data units. These units were then examined for recurring or significant themes by connecting
193 them through the process of axial coding (Taylor, 2014). For themes to be developed, the
194 analysis must have revealed a topic of conversation which had recurred in at least two of the
195 transcripts or were considered by the authors to have particular significance (Taylor, 2014).

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

205 ***Research credibility***

206 Features of the research process which contribute to the credibility of the findings
207 include the first author’s prolonged engagement in the context. The first author has served in
208 the military and coached and managed a military sport recovery programme with a
209 performance focus. In addition, the second and third authors have experience as coaches in
210 performance pathways as well as expertise in SDT, all of which was beneficial when it came

211 to constructing meaning behind athletes' thoughts (Smith & McGannon, 2018). The first
212 author's engagement as a coach in the context meant that she was involved in the direct
213 coaching of 4 of the athletes, was known to 2 of the participants and had mutual contacts with
214 the others. An acknowledgement of the power relations during interview that may exist as a
215 result of this must be highlighted (Potrac et al., 2010) and although presents a potential
216 limitation to the study, also assisted in creating an environment of trust in which the
217 participants felt secure in divulging personal accounts which were relevant (Smith & Sparkes,
218 2016). Furthermore, the semi-structured approach to the interviews encouraged participants
219 to provide rich thick description of their experiences and perceptions (Smith & Sparkes,
220 2016). The analysis was assisted by reading the transcripts several times to deepen
221 understanding (Braun & Clarke, 2006). The process of interpreting and organising the data
222 into the relevant themes was assisted through critical friend discussions between researchers
223 where interpretations were challenged and developed (Smith & McGannon, 2018).

224 **Results**

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

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

234 Whilst serving in the military, service personnel have often experienced a strong
235 sense of purpose and within their unit, they have been nurtured through each stage of their

236 career, to perform peace and war time roles to a high standard, with a high degree of
237 autonomy. Leaving military service under normal military retirement circumstances is
238 typically eased by a period of transition, a two-year formalised resettlement period. However,
239 often, as was the case with the athletes in this study, injured service people have not planned
240 to leave and have not thought about a life after their military career. As they unexpectedly
241 transitioned from military into civilian life, with the added complexity of acquired physical or
242 psychological trauma to cope with, several of the athletes discussed a loss of self-identity or
243 how the concept they had of themselves was forced to change. Engagement in the sport
244 recovery programme helped them to address this transition in identity. Athlete 4 commented
245 that “I did feel like I’d lost my place in society. I’ve felt like I didn’t have a role. So actually,
246 when I became part of the team, I felt like I could identify as being part of something.”

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

256 The negative impact of injury and illness as a result of military service and the
257 challenges faced when transitioning into civilian life is well documented (e.g., Melcer et al.,
258 2010; Walker, 2010; Zogas, 2017; Kintzle et al., 2018), however researchers have attempted
259 to demonstrate links between opportunities for sport in this cohort and a subsequent
260 improvement in their overall confidence and wellbeing (Jackson, 2013; Caddick & Smith,

261 2014; Shirazipour et al., 2018). One such study by Shirazipour et al., (2018) et al hypothesise
262 that participation in sport may provide potential avenues for wider rehabilitation goals. Our
263 findings therefore appear to contribute to the growing interest in the transformational power
264 of sport as a vehicle for positive rehabilitation and recovery (e.g., Enos, 2015; Caddick &
265 Smith, 2018; Peacock et al., 2019; Sutton et al., 2021). This was evidenced by the athletes
266 finding a renewed energy and enthusiasm, not just for sport, but in other aspects of their life,
267 fuelled by the sense of pride felt in their sporting achievements. "The sense of achievement I
268 get from skiing helped reignite the drive and motivation to achieve other things. This sense of
269 achievement also carried over into other aspects of my life" (Athlete 5).

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

279 ***Fostering relatedness formed a foundation for reimagining themselves and their***
280 ***capabilities***

281 Whilst relatedness has a more specific definition within SDT (Deci & Ryan, 1985;
282 Ryan & Deci, 2000), it was helpful in the context of this study to approach it by using the
283 concept to frame a wider picture of social connectedness such as inclusiveness, psychological
284 safety and supportive group culture. Athletes made references to coaches' actions that
285 fostered camaraderie, cooperation with each other and shared social support. The coaches and

286 their actions were fundamental to fostering athletes' sense of relatedness and providing them
287 with a firm foundation for their recovery to progress. Athlete 1 commented, "having that real
288 togetherness and inward facing group, we learn from each other and the phrase we use is that
289 the rising swell lifts every boat." Athlete 5 commented: "The instructors [coaches] knew that
290 this was a key part of [recovery programme] so spending time as a group was encouraged and
291 was given almost as much importance as the actual skiing. The atmosphere and camaraderie
292 there were key reasons I had such a positive experience, so definitely had a huge impact on
293 my well-being and recovery".

294 Through the inclusive and psychologically safe environment they facilitated, coaches
295 demonstrated their care for the athletes as people and facilitated their motivation and well-
296 being. Athlete 1 commented: "I think, for me, the coaches who get the best out of me are the
297 ones who show the most respect to the athlete. Sometimes it can be perceived that a coach-
298 athlete relationship should be more coach, less athlete... Whereas I think I've had my better
299 coaching experiences where... an athlete feels safe enough to communicate, safe enough to
300 fail, safe enough to ask a stupid question and safe enough to dream". Athlete 6 further
301 highlighted the instrumental nature of the coach in creating this environment: "The team that
302 I'm a part of, [recovery programme] as a whole, does a great job of this, my coach being a key
303 part of that structure. They champion us as athletes and the journey we are on. Within our
304 alpine team, we spend a lot of time away together and we get a lot done effectively, working
305 together and helping each other. That tone, environment and culture is set and developed by
306 our coaches".

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

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

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

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

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

336 The nature of the responses from these athletes with regard to autonomy are
337 consistent with previous research in the study of motivation in sport (Adie et al., 2008; Allen
338 & Hodge, 2006; Mageau & Vallerand, 2003). Furthermore, integrating the athlete into the
339 decision making process could be considered as an example of a person or ‘other’-centred
340 coaching approach, which has formed the basis for modern coaching pedagogy (Chelladurai,
341 2007; Turnidge & Côté, 2017; Garner et al., 2022).

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

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

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

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

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

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

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

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

388 Athletes also reported behaviours from coaches that disregarded athletes' opinions or
389 limited opportunities for input from the athletes which frustrated their need for autonomy.
390 Athlete 5 commented that "the sessions were almost dictatorial, in that there was no
391 discussion or collaboration involved.". This type of controlling approach to coaching has
392 been discussed within literature specific to sport and within leadership studies more generally
393 and has been linked with negative effects in regard to well-being such as reduction in vitality
394 and burnout (Bartholomew et al., 2011; Adie et al., 2012; Arnold et al., 2017; Olafsen et al.,
395 2017).

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

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

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

414 **Discussion**

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

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

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

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

438 Our findings demonstrate incidences where actions of coaches created an environment
439 that fostered athletes' need for relatedness. This appeared to contribute to a psychologically
440 safe environment within which athletes could train and compete in sport to a high level,
441 challenge themselves to achieve and explore 'new' abilities and identity which enhanced their
442 well-being. This finding is consistent with propositions of SDT and BPNT (Deci & Ryan,
443 1985; Ryan & Deci, 2000) and with findings in research in sport more generally (Gagne' et
444 al., 2003; Mageau & Vallerand, 2003; Reinboth & Duda, 2004). Positive effects of a
445 relatedness-supportive environment manifest through a range of outcomes, such as increased
446 morale, higher self-esteem and reduced stress (Mallet, 2005; Williams et al., 2013; Occhino
447 et al., 2014). Athletes in our study identified that coaches actively promoted and facilitated
448 opportunities for athletes to develop camaraderie and help each other and the creation of this
449 type of environment may be akin to the military culture of teamwork and selfless
450 commitment, a social culture which is sought after following transition to civilian life (Zogas,
451 2017; Kintzle et al., 2018). In addition, the opportunity to reconnect with other military
452 personnel who have experienced somewhat similar emotions and challenges can provide a
453 sense of connection and belonging (Ellison et al., 2016; Roberts et al., 2019). As such the
454 participants accounts support research that has suggested that gaining athletes' trust by
455 providing and demonstrating care and a shared vision, is more likely to contribute to positive
456 sport experiences (Mallet, 2005; Allen & Muir, 2020).

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

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

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

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

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

495 The negative impact of injury and illness as a result of military service and the
496 challenges faced when transitioning into civilian life is well documented (e.g., Melcer et al.,
497 2010; Walker, 2010; Zogas, 2017; Kintzle et al., 2018) and although not the specific focus of
498 this study, our findings add to this body of literature demonstrating the impact of physical and
499 psychological trauma on participants' identity and well-being. Our findings also contribute to
500 the growing interest in the transformational power of sport as a vehicle for positive
501 rehabilitation and recovery (e.g., Enos, 2015; Caddick & Smith, 2018; Peacock et al., 2019;
502 Sutton et al., 2021) and somewhat distinctively, highlight the important role coaches play,
503 with athletes making reference to positive and negative experiences which had been
504 significant to them and had impacted on their recovery process. Consistent with SDT and
505 BPNT (Deci & Ryan, 1985; Ryan & Deci, 2000), we were able to demonstrate that through
506 the psychosocial environment that the coaches facilitated through their interactions, they were
507 able to foster satisfaction of all three basic psychological needs which in turn, appeared to
508 foster adaptive motivation and well-being. However, our findings also indicate that coaches'

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

513 **Conclusion and Practical implications**

514 These findings make a valuable contribution to our understanding of the experiences,
515 both positive and negative, that a sports recovery programme has imparted upon a small
516 cohort of wounded veterans. They provide us with insights into how the social psychological
517 environment created by the coach can directly impact veterans' psychological needs, well-
518 being and recovery process. Therefore, practitioners such as coaches working with WIS
519 veterans would benefit from engaging in CPD to support their understanding and
520 development of motivationally adaptive environments (e.g., Ahlberg et al., 2008; Mallet,
521 2005; Turnidge & Cote, 2017) and this study adds to this important topic. In particular,
522 knowledge of how controlling behaviours have the potential to cause harm will be useful for
523 practitioners in this context, to avoid potentially toxic environments, particularly where the
524 philosophy of such programmes has recovery as its primary purpose.

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

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

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

548 **Limitations and future research**

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

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

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

566 To address these limitations, future research could benefit from incorporating
567 triangulation of perspectives. This means gathering data not only from athletes but
568 also from their coaches. Including coaches perspectives, philosophies, and
569 observations of coaching behaviours could provide a more comprehensive and
570 nuanced picture of coaching practices.

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