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Factors perceived to affect the wellbeing and mental health of coaches and practitioners
working within elite sport

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Abstract

30 To date, limited research attention has been directed towards examining the wellbeing and
31 mental health of the support team who work with elite athletes in the performance setting.
32 Hence, using a pragmatic approach, this study explored the factors perceived to impact the
33 wellbeing and mental health of coaches and sports science practitioners within a national
34 sporting organization. Individual interviews and focus group discussions were completed with
35 a sample of 11 participants, which included three male coaches, seven sport science
36 practitioners (6 female and 1 male), and the male performance director. Data were analyzed
37 using thematic analysis (Braun et al., 2016) and the factors perceived to influence participants'
38 wellbeing and mental health were identified. Specifically, excessive workload, post-
39 competitive loss, and a feeling of isolation were identified as the main risk factors, which held
40 the potential to lower the coaches' and practitioners' wellbeing and diminish their mental
41 health. While an effective organizational culture, transformational leadership, and access to
42 quality social support were perceived as the key protective factors that could maintain or
43 enhance their wellbeing and mental health. The findings of the study provide individual and
44 organizational-level recommendations, which, using a social ecological framework, can be
45 implemented to support the wellbeing and mental health of coaches and practitioners within
46 the sport performance environment.

47

48 *Keywords:* High-performance sport, Mental health, Social ecological framework,

49 Wellbeing.

50

51 **Factors perceived to affect the wellbeing and mental health of coaches and practitioners**
52 **working within elite sport**

53 Wellbeing is a subjective, dynamic, and complex construct (Lundqvist, 2011) that has been
54 conceptualized via two perspectives: namely, eudaimonic and hedonic. The eudaimonic
55 approach portrays wellbeing as optimal *psychological* and *social* functioning, which comprises
56 personal growth, purpose, self-acceptance, mastery, and social acceptance/belonging (Keyes,
57 1998; Ryff, 1989). Whereas the hedonic perspective depicts wellbeing as *emotional*
58 functioning, consisting of life satisfaction, positive affect, and the relative absence of negative
59 affect (Diener, 1984). Although both perspectives of wellbeing are distinct, there is
60 considerable overlap (Keyes et al., 2002; Keyes & Lopez, 2005), meaning that an individual's
61 level of wellbeing is likely to be determined by psychological, social, and emotional
62 components. As a result, it is prudent to take both perspectives into account when examining
63 wellbeing (Lundqvist, 2011). Such conceptual complexity of wellbeing has led to the
64 development of numerous definitions, though based on their theoretical and critical review of
65 the literature, Dodge et al. (2012) proposed that wellbeing should be defined as, "the balance
66 point between an individual's resource pool and the challenges faced" (p.230).

67 In terms of mental health, Keyes et al. (2002) describes it as a syndrome of positive
68 symptoms and functioning, operationalized by measures of subjective well-being. Indeed, the
69 World Health Organisation (WHO) define mental health as "a state of wellbeing in which the
70 individual realizes his or her own abilities, can cope with the normal stress of life, can work
71 productively and fruitfully, and is able to make a contribution to his or her community (2005,
72 p. 2). Therefore, mental health is not merely the absence of mental ill-health (identified through
73 standardized diagnostic criteria; American Psychiatry Association, 2013), but is a state of
74 flourishing in which the individual experiences life satisfaction, positive emotions,
75 meaning/purpose in life and rewarding interpersonal relationships (see Iasiello et al., 2020).
76 Hence, mental health can be considered a state of psychological, social and emotional well-

77 being (Keyes & Lopez, 2005; Keyes et al., 2002), and individuals are less likely to develop
78 mental ill-health if they are experiencing higher levels of wellbeing (Keyes et al., 2010).

79 The epidemiological evidence indicates that the prevalence of mental health, low
80 wellbeing, and mental ill-health among elite athletes is similar to that of the general population
81 (e.g., Gouttebauge et al., 2019). Though a number of factors unique to the elite sporting
82 environment can increase athletes' vulnerability to poor mental health outcomes. That is, when
83 athletes are subjected to an overload of training and competitive demands (Hughes & Leavey,
84 2012), sporting failure (Hammond et al., 2013), injury (Gulliver et al., 2015), and retirement
85 (Gouttebauge et al., 2015), they can become increasingly susceptible to lowered wellbeing and
86 mental ill-health. However, athletes are not the only individuals to be affected by the demands
87 of the performance sport setting.

88 It has been established that elite coaches are exposed to an extensive number of
89 organizational and performance stressors, which if not managed effectively can lower their
90 wellbeing and mental health (Norris et al., 2017). In particular, it has been found that a high
91 frequency of organizational stressors (Wagstaff et al., 2018), job insecurity (Bentzen et al.,
92 2020), excessive workload (Carson et al., 2019), and having their basic psychological needs
93 thwarted within the working environment (Carson et al., 2019; Norris et al., 2017), can affect
94 the wellbeing and mental health of coaches detrimentally. In addition, if a coach lacks
95 psychological resilience (Wagstaff et al., 2018) and fails to engage with problem-focused
96 coping strategies (Bentzen et al., 2017), they may become particularly vulnerable to poor
97 mental health outcomes. Within their large-scale study of high-performance coaches, Bentzen
98 et al. (2016) identified that almost a quarter were high in exhaustion, with elite female coaches
99 seemingly particularly susceptible to lowered wellbeing and mental ill-health (see Carson et
100 al., 2018). Critically, Gorczynski et al. (in press) recently found that some coaches have low
101 levels mental health literacy (MHL), which can also contribute to poor mental health.

102 The wellbeing and mental health of coaches is an under researched area (Norris et al.,
103 2017), though even less is known about the level of, and factors affecting, the wellbeing and
104 mental health of sport science practitioners working within elite sport. It has been identified
105 that physiotherapists working within the high-performance setting must cope effectively with
106 a high workload, power-relationships, and the moral/ethical conflict they often experience
107 within their role (Kerai et al., 2019). Similarly, sport psychologists appear to encounter multiple
108 stressors that include factors intrinsic to sport psychology, interpersonal demands,
109 organizational roles, career/development issues, and organizational climate of the profession
110 (Cropley et al., 2016). Although not examined directly, it could be inferred from such studies,
111 that the stressors hold the potential to lower the wellbeing and mental health of the practitioners
112 (see Fletcher & Arnold, 2017). Certainly, in a more recent study of “the team behind the team,”
113 Arnold et al. (2019) identified that sport science practitioners experience a number of stressors,
114 categorized as: relationships and interpersonal issues; physical and resource issues; contractual
115 and performance development issues; and organizational structure and logistical issues. All of
116 which were perceived to lower the wellbeing of practitioners, if appraised negatively.

117 As such, it has been established that the support team within high-performance sport
118 experience a broad range of organizational and competitive stressors that could have a
119 detrimental effect. However, there remains a need to examine explicitly, the specific stressors
120 and factors within this environment that are responsible for lowering the wellbeing and mental
121 health of coaches, and (in particular) the sport science practitioners. Critically, to extend the
122 current literature, which has focused predominantly on identifying factors that influence
123 wellbeing and mental health negatively, there is also a need to ascertain factors which can
124 *protect or enhance* the wellbeing and mental health of practitioners within performance sport.
125 Together, this information can then be utilized to inform effective interventions which enable
126 the athletes’ support team to not only minimize negative influences on their wellbeing, but
127 actively elicit high levels of wellbeing and engender mental health. Accordingly, the aim of the

128 current study was to examine the factors perceived to negatively and positively impact the
129 wellbeing and mental health of coaches and sport science practitioners working within an elite
130 sport environment.

131 **Method**

132 **Research Philosophy**

133 The study was underpinned by a pragmatic philosophy (see Rorty, 1990, 1991), in which
134 attempts were made to provide practical solutions to contemporary problems. Pragmatism
135 denies a single reality, and instead advocates that knowledge is dependent on the context, its
136 usefulness, and level of agreement among the community (Rorty, 1990). Thus, as noted by
137 Giacobbi et al. (2005), pragmatism provides an expedient paradigm for applied sport
138 psychology research, as it enables the co-construction of a 'practical level of truth' for the
139 benefit of others. In terms of the current study, a pragmatic approach enabled a contextual
140 exploration of factors perceived to impact the wellbeing and mental health of practitioners
141 working within performance sport, for the purpose of providing meaningful applied
142 recommendations which can support those individuals.

143 **Participants**

144 Eleven members of a support team (6 female and 5 male) who worked within a sporting
145 National Governing Body (NGB) volunteered to take part in the study. This NGB was one of
146 several, positioned within an overarching umbrella National sports organization¹. Participants
147 included three coaches (all male), a strength and conditioning coach (male), sport psychologist
148 (female), performance analyst (female), nutritionist (female), physiotherapist (female),
149 performance lifestyle advisor (female), performance liaison advisor (female), and the
150 performance director (male). They worked full-time within performance sport, providing
151 support for the male and female athletes who competed regularly at national or international
152 events. In accordance with the talent classification system devised by Swann et al. (2015), they

¹ To maintain confidentiality, details regarding the specific sport / NGB and national organization are restricted.

153 supported a group of athletes who were: i) *semi-elite* (i.e., within a talent-development
154 program, and competing at a level just below the top standard); ii) *competitive* (i.e., competing
155 at the highest level, but as yet, had not experienced success at that level); and/or iii) *successful-*
156 *elite* (i.e., competing at the highest level, and had experienced some success at that standard).
157 It should be noted that while the coaches, performance director, and performance analyst
158 worked solely within (and were employed by) the NGB in question, the remaining sport science
159 practitioners were employed by the umbrella national sporting organization and were assigned
160 to work with this NGB (as well as others).

161 **Procedure**

162 Once ethical approval for the study had been obtained, the performance director of the
163 NGB was contacted, and the aim of the study was explained. Thereafter, access to all coaches
164 and sport science practitioners who worked within that NGB was sought and an information
165 sheet detailing the study was disseminated. Subsequently, any member of the support team who
166 wished to ask any questions and/or be involved with the study was encouraged to contact the
167 research team directly. Of note, most practitioners from the NGB chose to take part in the study
168 (i.e., two practitioners did not take part).

169 **Data Collection**

170 Data were collected via individual interviews and focus group discussions. First,
171 individual interviews were conducted with three sport science practitioners (the strength and
172 conditioning coach, sport psychologist, and performance lifestyle advisor) and the performance
173 director. Semi-structured interviews were utilized to encourage individualized and detailed
174 discussions (see Smith & Sparkes, 2016) regarding the participants' own wellbeing and mental
175 health. Informed by the literature, and in particular the work of Dodge et al. (2012), the
176 interview explored broadly: i) the demands that participants encountered within
177 elite/performance sport; ii) the resources utilized (i.e., support accessed and coping responses)

178 to manage those demands effectively, and; iii) the perceived impact (positive and negative) of
179 those demand and resources on their wellbeing and mental health.

180 Thereafter, two focus groups were completed. The first contained four sport science
181 practitioners (i.e., the physiotherapist, nutritionist, performance liaison advisor, and
182 performance analyst), and the second involved the three coaches. This method of data
183 collection was adopted at the request of the participants, as they preferred to complete a group
184 discussion. Hence, the focus groups were utilized to exchange views, and consider more
185 generally: i) the demands placed on coaches and practitioners working within the high-
186 performance setting, and the perceived impact (positive and negative) on their wellbeing and
187 mental health; and ii) the resources available to those coaches and practitioners, which could
188 be used to support their wellbeing and mental health. There was no expectation for the focus
189 group participants to discuss sensitive information in this setting, though some (especially
190 within the sport science practitioner focus group) willingly, and without prompting, disclosed
191 personal details regarding their wellbeing and mental health. The focus group questions were
192 also informed in part by the findings of the interviews, to ensure the methods were iterative.

193 Once all data had been analyzed, two additional brief individual interviews were
194 completed with the sport psychologist and performance analyst to provide further contextual
195 detail (see Ensuring Quality of Data section). Data were recorded digitally and transcribed
196 *verbatim*, with the main interviews lasting on average 73 minutes ($SD = 12.56$), and the focus
197 groups taking 91 minutes (practitioners) and 71 minutes (coaches) respectively.

198 It is important to note that before data collection began, the constructs of wellbeing and
199 mental health were described to the participants in layman's terms. Utilizing the work of Keyes
200 and colleagues (Keyes et al., 2002, Keyes & Lopez 2005), it was noted that mental health
201 constitutes high levels of wellbeing, and consists of positive emotions, a sense of life
202 satisfaction, meaning/purpose in life, and rewarding interpersonal relationships. Whereas, it
203 was explained that the opposite experience (i.e., negative emotions, low life satisfaction, and a

204 lack of meaning/purpose and interpersonal relationships) is characterized as low wellbeing,
205 though is distinguished from mental ill-health (as identified through diagnostic criteria; APA,
206 2013). Finally, it was highlighted that while the causes of mental ill-health are complex and
207 multifaceted, sustained levels of low wellbeing can be a contributing factor. This protocol was
208 adopted to encourage participants to distinguish as accurately as possible, their experiences of
209 low and/or high wellbeing and mental health.

210 **Data Analysis**

211 Data were analyzed by the second author, via the flexible version of thematic analysis (see
212 Braun et al., 2016), which offers a robust process for identifying and interpreting patterns
213 within the data. As thematic analysis can be used to analyze data relating to participants'
214 experiences, behaviors, and perspectives (Braun & Clarke, 2013), it was well-suited for the
215 current study. The chosen approach to data-coding and theme development was completed
216 through six phases, and was both inductive (data driven) and deductive (actively searching for
217 factors perceived to affect wellbeing and mental health).

218 Initially, familiarization involved reading and re-reading the transcripts, while making
219 notes on any data of interest. Thereafter, coding was completed, which involved identifying
220 data that related to the research aims (i.e., factors perceived by the participants to affect their,
221 and their colleagues' wellbeing and mental health) and assigning labels which described their
222 content. Following this, themes were developed by clustering similar codes together, and
223 providing a descriptive summary of each that resulted in an overview of broad patterns within
224 the data. Based on participant data, those broad patterns were placed under the *in-vivo* terms of
225 risk factors (i.e., perceived to lower wellbeing and/or mental health) or protective factors (i.e.,
226 perceived to maintain or enhance wellbeing and/or mental health). During the revision phase,
227 the codes and themes were re-visited to ensure they represented the data and addressed the
228 research question. Through further analysis, the themes were organized in a hierarchical
229 manner (i.e., themes and sub-themes), and a more detailed descriptive account of each theme

230 and sub-theme was produced, and then named (i.e., risk factors: excessive workload, post-
231 competition loss, and a feeling of isolation; and protective factors: an effective organizational
232 culture, transformational leadership, and access to quality social support). Finally, the explicit
233 meaning of the theme and subthemes were considered, before the narrative was refined to offer
234 a detailed account of the factors perceived to affect the wellbeing and mental health of the
235 coaches and practitioners.

236 **Ensuring Quality of Data**

237 The trustworthiness of data was addressed through the consideration of criteria relevant
238 for this study (Levitt et al., 2016). Thus, to ensure credibility, participants completed lengthy
239 interviews or focus group discussions, that explored in detail the factors perceived to impact
240 the wellbeing and mental health of the support team within the performance sport setting. In
241 addition, through self-reflection and critical discussions among the research team, key analytic
242 decisions were challenged and reviewed during the research process, to achieve confirmability
243 (Sparkes & Smith, 2014). Moreover, aligning with the requirements of a pragmatist
244 methodology, the ‘usefulness’ of the study’s findings were also discussed with relevant
245 stakeholders (Rorty, 1990). This occurred with three individuals who were not involved in the
246 study, though had leadership roles within the umbrella national sporting organization and held
247 a strategic oversight of the NGB. In a similar manner to member reflections (Smith, &
248 McGannon, 2017), this process was used to consider whether there was a need to collect
249 additional data to inform meaningful practical solutions, that could be utilized to protect or
250 enhance further the wellbeing and mental health of the coaches and practitioners. It was deemed
251 necessary to complete an additional two interviews (with the sport psychologist and
252 performance analyst) to contextualize a small number of identified themes (see Data
253 Collection). Finally, the findings of the study were presented in a manner which encouraged
254 naturalistic or representational generalizability through the provision of an authentic narrative

255 that enables the reader to identify similarities and differences to which they are familiar (Smith,
256 2018).

257 **Results**

258 The participants perceived a number of factors could affect the wellbeing and mental
259 health of coaches and sport science practitioners working within their high-performance
260 environment. *Excessive workload, post-competition loss, and a feeling of isolation* were
261 identified as the main risk factors that could lower their wellbeing and mental health. While an
262 *effective organizational culture, transformational leadership, and access to quality social*
263 *support* were identified as key protective factors that could maintain or enhance their wellbeing
264 and mental health.

265 **Risk Factors of Wellbeing and Mental Health**

266 *Excessive Workload*

267 The workload associated with supporting athletes within this performance sport was
268 acknowledged to be “considerable”. However, across the participants, the high workload was
269 broadly perceived as “expected” and “manageable”, especially when the leadership team was
270 proactively supportive of staff. Therefore, for much of the time, workload was not considered
271 to impact wellbeing and mental health negatively. Nevertheless, certain factors (i.e., resource
272 allocation, acute work demands, being new and inexperienced, constant availability, and major
273 events/Games) were suggested to increase workload excessively, and thereby lower staff
274 wellbeing and mental health.

275 **Resource Allocation.** Those responsible for providing psychological support to athletes
276 felt particularly over-stretched at times, as they perceived more resources (financial and
277 staffing) were directed towards those involved with the physical preparation of the athletes.
278 This disparity appeared to be exacerbated by the organization’s increased focus on athlete
279 wellbeing and mental health, which had expanded the workload for practitioners supporting
280 this work. One of those practitioners explained:

281 We're being asked to deliver more and talk more about mental health. But there's no
282 greater resource put into it...if you look at the resource put into supporting the physical
283 health of athletes compared to the mental health, it's so skewed towards the physical.
284 Such perceived overload of demands was considered to impact the wellbeing of those staff at
285 busy times, "...lesser resources has led to some staff feeling stretched. There's definitely the
286 impact on wellbeing...We're being asked to deliver too much."

287 **Acute Work Demands (Injury and Screening).** When the athletes were injured, the
288 subsequent increase in workload could be difficult to manage. For example, the physiotherapist
289 explained how they had been affected by supporting an athlete with a concussion:

290 I didn't sleep that night. I text him probably four times...Those sorts of times, when I'm
291 supposed to be off [work], I can't be. I can't switch off. So even though it wasn't a stressful
292 time in terms of the [competition] cycle; just one injury changed it all for me.

293 Moreover, the psychological and physical screening process that occurs when the athlete enters
294 the performance pathway, was reported as being: "a really tough time. The workload increases
295 so much...Let's say ten new athletes come onto the programme and you as a practitioner have
296 to screen them all...that creates too much work for you."

297 **New and Inexperienced Staff.** It was noted that at times, new/inexperienced staff were
298 particularly vulnerable to the negative impact of a high workload, as they felt unable to decline
299 work requests and were less able to manage multiple demands. As explained by one of the
300 newly appointed members of staff: "I haven't had a weekend off for months. I'm being asked
301 to attend training camps and competitions every weekend...As I've only just got the job, I
302 don't feel I can turn round and say no I'm not doing that." Moreover, when reflecting on their
303 first few months within the role, another (experienced) practitioner suggested they had felt the
304 need to work harder than colleagues, and that as a result, their wellbeing had been affected:

305 When I got the job, I felt like I had to be at everything, had to be the first one in the office,
306 and the last one to leave...I look back, and wonder what I was doing to myself! I was
307 running myself into the ground. I was lucky to have got out of that.

308 **Constant Availability.** A number of the coaches and support staff suggested there were
309 periods of time when they were constantly contactable by their athletes, and this had become
310 highly damaging for their wellbeing and mental health. As one practitioner explained: “we’ve
311 this culture where athletes message us whenever, and that leads to stress or pressure, or them
312 imposing on your evenings or your home life. You can’t switch off and relax, which is no good
313 for your [mental] health.” However, it was acknowledged that such accessibility was not a
314 requirement of the support staff, or an expectation from the NGB leadership. Rather, the
315 practice had developed among certain support staff, as a result of athlete demand.

316 **Major Events/Games.** Finally, preparation for, and attending key events and major
317 Games were identified as “critical times”, when coaches and practitioners felt particularly
318 overloaded, and often became vulnerable to lowered wellbeing. As summarised by one
319 practitioner:

320 In the lead up to the major Games, that’s when it gets intense, hard for everyone. You’re
321 working hard with the athletes...having to deal with those who are not selected. And then
322 when you get there, you just don’t sleep as you are on alert the whole time...

323 This was reiterated by one of the coaches: “getting the [athletes] ready for the important
324 [competitions], like Commonwealth....You’ve got to get everything right. It’s rough.” Another
325 coach explained that the psychological impact of attending events was intensified by being
326 away from home for an extended period of time, and no longer having the social support of
327 family, “Australia [Commonwealth Games] was a difficult time for me. You don’t have a day
328 off, even when it’s a scheduled day off. It was effectively six weeks away from home. That for
329 me, was difficult...unsustainable.”

330 ***Post-Competition Loss***

331 The period immediately following important events was also noted as being very
332 challenging by several participants and perceived to elicit lowered wellbeing and poor mental
333 health in some cases. This was discussed further within the practitioner focus group:

334 Practitioner 1: Some find it difficult to come back from the Games...They can't switch off
335 because it's been such a high. Like dropping off a cliff.

336 Practitioner 2: It was exactly the same for me. I remember coming back from one [Games],
337 and I was back in work three days later. I was like 'I can't switch off...I was really bad.

338 Alongside the inability to switch off, the loss of purpose and social support appeared to affect
339 wellbeing: "You lose purpose, excitement, and camaraderie. You've been part of this team,
340 and you've all been working hard for the same goal over such a long period...then it's all
341 over...For me, I felt lost. Yeah, I felt very low."

342 *A feeling of Isolation*

343 Finally, new members of staff and those who worked alone, suggested they could feel
344 isolated, which impacted their wellbeing and mental health negatively. This was the result of
345 an inability to discuss professional and personal concerns with their peers on a daily basis, and
346 less opportunity to socialize regularly with colleagues. As one practitioner shared:

347 There are less of us [discipline team] compared to say S and C [strength and conditioning].

348 They interact with different people. Whereas, I haven't got that chance. And few [staff]
349 understand all the different demands that I am under, so I can't share that with anyone.

350 This led those practitioners to internalize worries, which in turn, impacted their wellbeing and
351 mental health, "I've had a couple of instances when I haven't been able to speak to somebody
352 about my concerns...It became too much of an internal worry and so it started to affect me and
353 my ability to work." A similar finding was reported by a newer practitioner:

354 When I first moved here, I was away from my friends and family. I was always thinking
355 about it [the job] in the evening, always on my emails. I enjoyed it, but then I would stress

356 a lot, and it had an impact [on wellbeing and mental health]...I worked mainly on my own,
357 so I also didn't have that support during the day.

358 **Protective Factors of Wellbeing and Mental Health**

359 *Effective Organizational Culture*

360 Most participants perceived the organization's culture possessed core values that could
361 collectively protect their wellbeing and facilitate mental health. Such values were associated
362 with an organizational vision, sense of togetherness, and a challenging/supportive
363 environment.

364 **Organizational Vision.** The participants noted there had been a recent shift in their
365 organizational climate, instigated by a new vision ('integration, integrity, and innovation'). The
366 vision was initiated by the umbrella national sporting organisation, though driven and
367 reinforced by the leadership group within the NGB through formal and informal
368 communications with staff (verbal and written). As a result, the underpinning values of the
369 vision were becoming embedded among practitioners and coaches working within the NGB. It
370 was proposed by several participants that working in a manner aligned with the vision were
371 becoming the expected and rewarded behaviors within the organization. As explained by a
372 practitioner:

373 There's a clear philosophy from the top with regards to [the vision]...those are our
374 principles of working. We talk about it all the time, and we try in our team meetings to
375 give examples of when we've seen integrity within our working environment, and what
376 that looked like. So, we're trying to embed...those values.

377 Critically, and as explained by a practitioner, rather than being a "meaningless mission
378 statement", the vision had affected staff behavior, their working experiences, and potentially,
379 their wellbeing and mental health:

380 ...we don't have to throw those words [the vision] out at people, you can see people trying
381 to do those things. It might not be comfortable at times, but it creates an enjoyable and
382 safe working environment. That's good for your welfare...your mental health.

383 **Togetherness.** The participants considered their organizational culture promoted a sense
384 of togetherness and belonging, which was reported by many (but not all) of the support staff
385 interviewed, to be an important factor in the protection of their wellbeing and mental health:
386 "I've got supportive colleagues who will always step up to the mark. Knowing that there's
387 always people around, and it being such a good supportive department helps your [wellbeing
388 and mental health]...because you offload stress." The coaches and practitioners met regularly
389 (formally and informally) to work in an integrated multidisciplinary manner, which further
390 facilitated togetherness across the wider support team: "We've [coaches and practitioners] a
391 meeting every week. We talk about how the athletes are doing...making sure that we're
392 delivering effectively. That coming together is also great for touching base and supporting each
393 other on a more personal level."

394 Of importance, it was perceived that such togetherness had enabled some staff to recognize
395 when colleagues were not themselves and offer support. A coach summarized this point:

396 You become aware when your colleagues are a bit off... You often see someone check in
397 with a colleague and say, 'you're a bit quiet today, is everything alright'? That's
398 reassuring. For me, that's the culture here. People looking after the people.

399 **A challenging/supportive environment.** Several participants suggested the working
400 environment was purposefully challenging (to ensure professional and personal development)
401 though also highly supportive:

402 ...we are stretched, but only enough so that we're pushed, but learning and enjoying it.
403 There's also a safety net, which is important. So, if it goes wrong, it's okay, because...it's
404 not always going to go right, as we have to push ourselves and others to get results.

405 As identified by another practitioner, this challenging but supportive environment was
406 considered to influence wellbeing: “as we all get massive satisfaction and enjoyment from
407 working within this unpredictable, challenging, but massively rewarding environment.”

408 *Transformational Leadership*

409 It was reported that effective leadership had been responsible for instigating and
410 developing the shift in organizational culture. Consequently, the leadership group (i.e.,
411 performance director and those who provided strategic oversight of the NGB) was perceived
412 to have impacted positively the coaches’ and practitioners’ working environment, and
413 consequently their wellbeing and mental health. This had been achieved through their delivery
414 of the aforementioned organizational vision, alongside establishing clear expectations, offering
415 an approachable and flexible style, and valuing staff.

416 **Establishing clear expectations.** The performance director explained that the leadership
417 group provided challenging but clear expectations for the staff: “For me, being a good leader
418 is about having good conversations around setting expectations of their [staff] role. Knowing
419 that you have to perform...are expected to perform. But these conversations help create
420 clarity.” Such clear expectations were proposed to impact wellbeing and mental health through
421 increasing individual’s sense of control. As explained by one of practitioners: “Yeah, that
422 clarity, knowing what’s expected, knowing what I have to achieve, helps me create some order
423 to my life...For me, that’s important for my mental state and wellbeing, especially when its
424 busy.”

425 **Approachable and Flexible Leadership.** Several coaches and practitioners noted their
426 leaders were demanding, though also approachable and flexible. This was particularly
427 important for supporting wellbeing and mental health when critical life events occurred and/or
428 when the workload became too high. For example, one of the coaches explained that their
429 colleague received additional time after a family bereavement: “Even though the organisation

430 has a set amount of leave for a bereavement, there was flexibility, in that they [the leader] went
431 with the person rather than following a policy.” Another practitioner noted:

432 I go to him [leader] just with pinch points...There’s a difference between stress and a bit
433 of pressure. He gets it when the stress has become chronic for me, and I feel very open
434 about going to him and saying look, I can’t cope with this. He gets it, he helps. And that
435 makes such a difference to wellbeing.

436 **Appreciating/valuing staff.** Finally, it was reported that those in leadership roles, often
437 demonstrated they valued the staff as individuals: “They really do want to develop all of us as
438 practitioners, but the focus is also on the individual person in their development...obviously
439 an important part of wellbeing.” As further explained by a practitioner:

440 I’ve regular ‘check ins’ with [leader]. It’s not just about my workload. It’s about how am
441 I as a person, what’s going on in my life, am I busy, am I feeling okay, am I managing
442 everything? Being valued like this can only be good for it [wellbeing and mental health].

443 *Access to Quality Social Support*

444 Informal and formal support networks were perceived by the staff to be an important factor
445 in the maintenance of their wellbeing and mental health.

446 **Informal social support.** The participants’ family and friends were a vital source of
447 support, as they offered an opportunity to discuss work matters outside of the organization, “I
448 have people to talk to at home...unopinionated, unjudgmental. I just need to voice it and get it
449 off my chest at times. That helps maintain [wellbeing and mental health].” As further explained
450 by one of the practitioners, “my husband has always been involved in sport, so there is support
451 there, which makes it [the job] easier.” An important aspect of this informal support was an
452 understanding of the flexible and irregular hours associated with working in elite sport:

453 I took a call at ten to six on Friday. It’s ‘mummy has to go and answer the phone now’.
454 My husband is understanding and will look after the kids. It would be so much harder if
455 you didn’t have that understanding...that’s massively important for my mental health.

456 **Formal social support.** The coaches and practitioners suggested their wellbeing and
457 mental health was often protected by the formal support system within the organization, that
458 consisted of mentoring, peer-support, and supervision. Several noted they had been assigned a
459 senior member of the team as their mentor. While for others, they had self-appointed a mentor
460 from outside the organization. The mentor was considered to help maintain wellbeing and
461 mental health by offering advice on managing workloads and achieving a work-life balance. A
462 coach explained:

463 I've a mentor who is good. I trust them...have open conversations with them and seek
464 advice. So, everything for me is around stress management. Whether it be job related or
465 work-life balance related...They help with that so much, as they have been through it.

466 In regard to peer support, another coach indicated that, "As an individual, if I was going
467 through something, and felt I needed mental health support...if I wanted to talk to colleagues
468 about it, I could." Likewise, a practitioner reported, "the team here are really good. If there are
469 any issues, we'll talk to each other and offload...It's so supportive, and key to our wellbeing."
470 Finally, some of the practitioners identified that they received formal peer-supervision in their
471 role. Although such supervision was focused on technical discussions, it was also deemed to
472 enhance their wellbeing and mental health. One practitioner explained: "...so if we need to go
473 through an athlete case, we've got that outlet which is fantastic. While its workforce related,
474 those discussions can help wellbeing, as you feel supported in your role."

475 **Discussion**

476 The aim of the study was to examine the specific factors perceived to impact positively
477 and negatively the wellbeing and mental health of coaches and sport science practitioners
478 working within an elite sport. Through analysis of the data, several *risk factors* were perceived
479 to affect detrimentally the wellbeing and mental health of the coaches and practitioners working
480 within the selected performance setting. The key risk factors included excessive workload,
481 post-competition loss, and a feeling of isolation. In addition, organizational culture,

482 transformational leadership, and access to quality social support were perceived as the main
483 *protective factors* which held the potential to maintain or enhance the wellbeing and mental
484 health of the coaches and practitioners.

485 **Risk Factors for Wellbeing and Mental Health**

486 Congruent with previous research (e.g., Bentzen et al., 2016), the current study identified
487 that coaches and practitioners experience a considerable workload when supporting athletes
488 within the performance/elite sport environment. While a high workload is known to lower
489 wellbeing and increase mental health concerns (Carson et al., 2019), this was not always the
490 case for a number of participants within the current study. This appeared to be the result of
491 those coaches and practitioners perceiving their workload was expected, acceptable, and within
492 their capability, which encouraged a degree of perceived control and efficacy. Consequently, it
493 is likely that they appraised their workload as a challenge (rather than threat), which may have
494 mitigated the negative impact on their wellbeing (see Arnold, et al., 2019; Norris et al., 2017).
495 It is also likely that the supportive and flexible leadership style received by many of the coaches
496 and practitioners also contributed to their ability to manage their workload and buffer its effect
497 on wellbeing and mental health (e.g., Skakon et al., 2010).

498 Nevertheless, there were specific periods of the year and competitive cycle when the
499 workload increased beyond routine levels (i.e., athlete injury, screening, and before/during
500 major events), and where certain staff perceived an increasing susceptibility to lowered
501 wellbeing. This is unsurprising as coping effectiveness often decreases when the volume of
502 organizational demands increases beyond a critical point (e.g., Levy et al., 2009). New support
503 staff, those who worked in isolation, and practitioners responsible for providing psychological
504 support to athletes, appeared particularly vulnerable to the negative impact of the high
505 workload. Specifically, new staff were reluctant to refuse additional work requests and were
506 less able to manage the multiple demands of their role. Hence, wellbeing may have been
507 affected by their relative workload being higher than their more experienced counterparts (see

508 Carson et al., 2019). Moreover, the new staff and those working in isolation had less access to
509 social support, which is likely to have affected their ability to cope with their workload
510 demands, and in turn, impact their wellbeing and mental health negatively (see Winnubst &
511 Schabracq, 1996). Finally, practitioners responsible for the psychological preparation of the
512 athletes, perceived their workload demands had increased due to their role in supporting the
513 organization's increased prioritization of athlete wellbeing and mental health. Therefore, the
514 perceived rise in vulnerability to lowered wellbeing during acute periods of the year, is an
515 understandable outcome.

516 Of interest, despite the acute workload being removed post-Games, the wellbeing and
517 mental health of certain support staff appeared to remain vulnerable at this point due to the loss
518 of purpose and work-related support networks. A small body of literature has examined why
519 athletes may experience low wellbeing post-Games (e.g., Howells, & Lucassen, 2018), though
520 to our knowledge, the impact of this period on the support staff has not been examined
521 empirically. As such, this study has identified the need for additional research in this area.

522 Accordingly, an understanding of the risk factors identified and explored within the current
523 study (i.e., excessive workload, post-competition loss, and a feeling of isolation) can be utilized
524 to support the wellbeing and in turn, the mental health of coaches and practitioners working
525 within the elite/performance environment. Firstly, it is important for an NGB's leadership
526 group to explore opportunities to reduce or redistribute the workload during critical periods for
527 staff, particularly those who are new or less experienced. Then, with a current emphasis on
528 sporting organizations prioritizing athlete wellbeing and mental health, it is essential that
529 adequate resources are directed towards practitioners who offer the relevant expertise to
530 implement this work. Otherwise, and as indicated within the current study, the paradoxical
531 effect is that the wellbeing of those practitioners can be harmed. Finally, it would also be of
532 value for NGB's to ensure that social support networks can be accessed by staff who work in
533 isolation (e.g., Searle, & Tuckey, 2017). This could include facilitated peer-mentoring (internal

534 and external to the organization) that provides emotional support, and encourages
535 conversations regarding efficient working practices (Jones, Harris et al., 2009).

536 Moreover, at the individual level, it may be advantageous for coaches and practitioners to
537 explore strategies which facilitate a sense of control over their workload during the critical
538 periods of the competitive cycle. By doing so, they are more likely to appraise the work-related
539 demand as a challenge (Folkman & Lazarus, 1984), which can alleviate its negative impact on
540 wellbeing (Jones & Fletcher, 2003). As an example, support staff could be encouraged to
541 develop proactive coping strategies (e.g., preparation and planning; Levy et al., 2009), utilize
542 Rational Emotive Behavioral Therapy (REBT; Bernard, 2019), or employ mindfulness
543 exercises (see Henriksen et al., 2020), which have been shown to encourage perceived control
544 and challenge appraisals of acute stressors. Furthermore, support staff may wish to consider
545 job crafting, which, informed by the Job Demands-Resources (JD-R) model (Bakker &
546 Demerouti, 2007), involves the modification of their role to meet their psychological needs
547 (Berg et al., 2013). This entails reframing work tasks in a manner that matches employee's own
548 skills and preferences, requires the development of new skills, encourages interpersonal
549 relationships, and makes those tasks more meaningful (Tims et al., 2013). Job crafting has also
550 been shown to increase individual's' perceived resources to maintain wellbeing and mental
551 health when exposed to a high workload (see Tims et al., 2013). Finally, support staff should
552 consider accessing psychological support post-Games, to ensure a healthy transition into their
553 normal working routine.

554 **Protective Factors of Wellbeing and Mental Health**

555 All participants within the current study identified that effective organizational culture,
556 transformational leadership, and access to quality social support networks were the key factors
557 that protected or enhanced their wellbeing and mental health when completing their role.
558 Consequently, and in agreement with Arnold et al. (2019), it is evident that many support staff
559 within this particular highly demanding performance environment, perceived they experienced

560 high levels of wellbeing and mental health, when their organizational climate engendered
561 necessary supportive properties. In this case, such supportive properties included an
562 organizational culture that encompassed a collective vision, a sense of togetherness, and the
563 provision of a challenge/supportive environment.

564 An organizational vision can lead to positive outcomes for the organization and its staff, if
565 it becomes more than a slogan through employees accepting it is relevant and meaningful
566 (Griffin et al., 2010; Kirkpatrick, 2016). It is evident that most participants in the current study
567 had ‘bought into’ the vision and were being influenced positively by it. This internalization
568 process occurred through extensive communication of the values underpinning the vision
569 across the organization, and the reinforcement of behaviors that reflected those values (i.e.,
570 integration, integrity and innovation). Congruent with the results of this study, there is evidence
571 elsewhere in the literature to suggest that if a vision is aspirational, aligns with the values of
572 the workforce, and is collectively accepted, it can have a distal influence on wellbeing through
573 increasing perceived resources (Albrecht, 2010). Indeed, it is important to note that at the core
574 of any effective and sustainable high-performance environment, is a vision that is articulated
575 by leaders and sought by staff (Jones, Gittins et al., 2009).

576 A sense of togetherness was perceived by the coaches and practitioners as an important
577 aspect of the organizational culture, which protected their wellbeing and mental health. By
578 satisfying the psychological need for belonging, and facilitating social support across the
579 group, their wellbeing and mental health was maintained (Ryan, 2009). As such, to enhance
580 the wellbeing and mental health of support staff within high-performance sport, it is essential
581 for togetherness to be cultivated through strategies such as team building, team goals, and team
582 norms (Cotterill, 2012), with particular attention paid to how this can be facilitated for new
583 staff and those who work alone. Such togetherness also appeared to increase levels of
584 awareness regarding others’ wellbeing and mental health, and a willingness to offer emotional
585 support. Thus, being a cohesive group seemed to have engendered MHL which can also impact

586 staff wellbeing and mental health positively (Jorm et al., 2006). Indeed, to support the
587 collective wellbeing and mental health of the workforce, coaches and practitioners within elite
588 sport may benefit from completing MHL training (Gorczyński et al., in press).

589 The support staff within the current study considered their working environment to be both
590 challenging and supportive. Therefore, and as found previously (see Sarkar & Fletcher, 2017),
591 such an environment can protect individuals' wellbeing and mental health by fostering
592 psychological resilience. Indeed, this finding reinforces the importance of developing
593 resilience among practitioners (Wagstaff et al., 2018), through an organizational climate that
594 both challenges the staff via high expectations, developmental feedback, accountability, and
595 responsibility, while also providing necessary support through motivational feedback,
596 encouraging sensible risk-taking, using mistakes as a learning opportunity, and offering
597 emotional support (Fletcher & Sarkar, 2016).

598 The actions of the organization's leaders were noted as an important protective factor of
599 the coaches' and practitioners' wellbeing and mental health. Specifically, the leaders provided
600 and reinforced a shared organizational vision that promoted co-operation and innovation;
601 showed individualized support, consideration, and flexibility towards staff; while also
602 demanding clear and challenging expectations of the team. All of which are transformational
603 leadership behaviors and associated with increased occupational self-efficacy, motivation, role
604 clarity, empowerment, psychosocial resources, and employee wellbeing (see Arnold, 2017).
605 Therefore, the challenge for all leaders within the performance sport setting is to demonstrate
606 such transformational behaviors throughout the competitive cycle, and across the staffing base.

607 Finally, access to quality social support was identified as a key determinant of wellbeing
608 and mental health among the coaches and practitioners within this study. That is, access to
609 formal and informal support networks protected the individual from the demands of working
610 within a highly pressurized environment. It has been established that social support can provide
611 both psychological and material resources to individuals, thereby improving their problem-

612 solving behaviors, and increasing self-efficacy, positive emotions, and perceived control.
613 Consequently, the ability to cope with stressors encountered, and maintain/enhance wellbeing
614 and mental health is improved (see Cohen, 2004). Thus, all support staff within
615 elite/performance sport should benefit from having access to informational and emotional
616 social support via different sources, that could include mentoring and supervision. Given the
617 potential detrimental effects of being a new member of staff and working in isolation,
618 maximizing opportunities to develop support networks for those staff, is particularly important
619 (see Jones, Harris et al., 2009).

620 **Summary and Applied Implications**

621 This study extends the literature by exploring the specific factors perceived to affect
622 positively and negatively, the wellbeing and mental health of both coaches and sport science
623 practitioners. The findings point to a number of take-home messages that can be used by NGB's
624 to inform their organizational climate and working practices. First, there is a need for the
625 leadership group to remain mindful of the acute rise in workload for coaches and practitioners
626 during certain periods of the competitive cycle. Hence, to enhance wellbeing and protect
627 mental health at those times, additional resources and support may be required, especially for
628 new staff and those who work in isolation. Second, the wellbeing and mental health of support
629 staff may also be facilitated by the provision of transformational leadership behaviors that
630 engender an aspirational vision, a challenging and supportive environment, and a sense of
631 belonging. Third, due to a need to prioritize and support athlete wellbeing and mental health,
632 it may be of value to reflect on the resources available (e.g., staffing/financial) for those
633 responsible for delivering this work. Fourth, it is likely to be advantageous for practitioners
634 and coaches to learn and employ strategies which increase their perceived control and efficacy
635 over their workload. Fifth, it appears beneficial to encourage all support staff to receive MHL
636 training. Finally, there appears to be a need for the provision of psychological support for
637 coaches and practitioners returning from major events.

638 It is evident therefore, that to support the wellbeing and mental health of coaches and
639 practitioners within the high-performance sport environment, it is necessary to adopt an
640 ecological systems approach (see Purcell et al., 2019). That is, an effective intervention must
641 address the individual-level factors (i.e., develop the coaches' and practitioner's coping skills);
642 the micro-level factors (i.e., a social support network of peers, mentors and family); and the
643 organizational-level factors (i.e., transformational leadership, vision and values) affecting
644 wellbeing and mental health.

645 **Limitations and Future Research**

646 It is important to note that the conclusions reached, and applied implications offered, have
647 emerged from one sporting organization. Moreover, few demographic and cultural differences
648 among the group were evident or raised (religiosity, ethnicity, sexuality etc.). Therefore, it is
649 necessary for future research to examine factors that affect the wellbeing and mental health of
650 a larger number of support staff, across differing sports, and within a culturally heterogenous
651 sample. In addition, the three coaches who took part in the study (i.e., within the focus group),
652 did not complete individual interviews at their request. As it is possible that the group setting
653 prevented the discussion of detailed and sensitive information, there remains a need for future
654 studies to explore further, the personal experiences relating to coach wellbeing and mental
655 health within elite sport.

656 The data collected were also based on the participants' subjective recall, and so a
657 longitudinal, mixed methods research design would be of benefit for future research. This
658 approach could ascertain objective levels of wellbeing and mental health through a competitive
659 cycle, and establish a clearer association between stressors, coping resources, and wellbeing or
660 mental health. Furthermore, although the practitioners within the study worked full-time within
661 elite sport, they also supported athletes outside of the NGB examined within this study.
662 Therefore, while the participants were encouraged to discuss their experiences within the one
663 sport, it is possible that their perception of risk and protective factors were influenced by the

664 organizational climate outside this sport in question. Finally, while most findings related to
665 both coaches and practitioners, a small number were relevant to specific practitioner roles (i.e.,
666 physiotherapist and those who provided psychological support to athletes). It would be
667 advantageous therefore, for researchers to explore in more comparative detail, any nuanced
668 differences in the factors affecting the wellbeing and mental health of practitioners across
669 disciplines/roles.

670 Nevertheless, the findings of the study remain salient, as the perceptions of the
671 information-rich participants have provided a detailed, much-needed, and resonating insight
672 into the factors perceived to affect the wellbeing and mental health of coaches and practitioners
673 working within elite sport. In addition, those insights can be utilized to inform applied
674 recommendation that can support the wellbeing and mental health of those working within the
675 high-performance sport environment.

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