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Radcliffe, JN, Comfort, P and Fawcett, T

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# The Perceived Psychological Responsibilities of a Strength and Conditioning Coach

Radcliffe, Jon N., Comfort, P and Fawcett, Tom

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**ABSTRACT**

1  
2 Research is limited in exploring the specific psychology oriented responsibilities of the  
3 strength and conditioning professional. The present research explored the psychological  
4 responsibilities adopted by accredited strength and conditioning coaches. Participants  
5 comprised 10 participants working within the UK, 3 within the USA and 5 within Australia  
6 offering a cross section of experience from raging sport disciplines and educational  
7 backgrounds. Participants were interviewed either in person or via Skype. Thematic  
8 clustering was employed utilizing interpretative phonological analysis to identify common  
9 themes. Over half (61%) of the respondents reported that their position as a strength and  
10 conditioning coach required additional psychology orientated responsibilities. These  
11 comprised a counselling role in the absence of psychologist the use of ‘softer skills’ in a  
12 mentoring role of the athlete during a challenging situation. The coach could play an  
13 influential role in shaping the mentality of the team. The coach identifies how the role results  
14 in working to relay information for the athlete to other support staff and similarly from the  
15 support staff through the athlete. The coach identifies how the role results in working to relay  
16 information for the athlete to other support staff and similarly from the support staff to the  
17 athlete. In addition to identifying the resonant psychological orientated responsibilities  
18 discussion is made with specific focus on the ethical boundary to which strength and  
19 conditioning coaches must reside regarding the competencies to provide psychological  
20 support.

**KEY WORDS**

21  
22  
23 CPD; Counselling; Mentoring; Ethics; Professional practice; Performance enhancement.

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## INTRODUCTION

The role of the strength and conditioning practitioner is an increasingly complex one. The role comprises various responsibilities ranging from, technical instruction, adopting suitable advanced training methods, through to logistics and organization (29-31). A tremendous body of work exists examining the optimization of training practices regarding the promotion of physiological adaptation to enhance performance however there is a stark contrast between investigations concerning physiological and technical subject areas and the specific role of the strength and conditioning coach.

Previously, quantitative research has proved useful in identifying the frequency in to which practitioners are utilizing particular psychological strategies with strategies such as goal setting being used considerably more than more complex cognitive interventions such as mental imagery (38). However, whilst encouraging with regard to the implementation of such interventions, the quantitative nature did not afford the expansion to examine reasons accounting for such a discrepancy aside from professional experience. More recently Radcliffe et al. (39) employed a qualitative approach to identify the specific psychological interventions used within strength and conditioning practice by strength and conditioning specialists. This work is effective in identifying the specific interventions and techniques employed, specifically focusing on psycho-physiological regulatory techniques and strategies to enhance confidence and mirrored the recommendations made by Mellalieu and Shearer (33). However, aside from identifying the use of specific psychological interventions such research does little to explore the complexities associated with the psychological responsibilities of the strength and conditioning specialist. Such an exploration is pertinent when considering the evolving role requirements and complexities associated with working as a strength and conditioning coach (40).

50

51 Contemporary work has explored the responsibilities of the practicing strength and  
52 conditioning specialist in observing the development of role responsibilities as practitioners'  
53 progress through their careers (46) whereby various roles and responsibilities are adopted  
54 such as managing stakeholder expectation and being receptive to athletes sharing sensitive  
55 information (46). The perceived evolving role further signaling the complexities of the  
56 discipline relating to interpersonal skills. Furthermore, it is suggested that as a helping  
57 profession strength and conditioning practitioners should use more "softer-skills"  
58 appreciating the requirement for interpersonal skills in fostering an effective client-  
59 practitioner relationship (46). Such softer-skills have previously been defined as gaining trust,  
60 and ensuring athlete buy-in justifying approaches to practice (46).

61

62 Given the evolving role of the strength and conditioning specialist it is reassuring that the  
63 academic community has sought to define the role of the strength and conditioning specialist.  
64 However, exploratory studies have typically focused upon the daily role responsibilities and  
65 working environments whilst the specific psychological responsibilities are often regarded as  
66 miscellaneous within the strength and conditioning specialist repertoire, if reported at all (10,  
67 13-15, 30, 40). As a result, notwithstanding the need for the aforementioned "softer skills"  
68 (46), little is known regarding the specific psychology-related responsibilities of the strength  
69 and conditioning specialist. Additional uncertainty exists regarding the precise psychological  
70 responsibilities of the strength and conditioning professional as only the criteria for the  
71 Certified Strength and Conditioning Specialist exam states the requirement of "*psychological*  
72 *skills to enhance training and/or performance of the athlete*" (34) whilst other pathways to  
73 recognized certification fail to clarify of the role of psychology within applied strength and

74 conditioning work. Consequently a role analysis focusing on the coaches' perception of  
75 psychological responsibilities is warranted.

76

77 Academic interest in the perceptions of various disciplines towards psychology has focused  
78 on quantitative research methods such as survey design (2-4, 16, 20, 23, 35) with few studies  
79 using qualitative methods such as semi-structured interviews (3, 9, 11). The discrepancy in  
80 the volume of published work and between qualitative and quantitative research is surprising  
81 given that qualitative research explores in-depth and underlying perceptions towards  
82 psychology and would serve to provide an explanation of the rationale for including  
83 psychological strategies and provide insight into complexities inaccessible via quantitative  
84 methods. To date, qualitative research specifically examining psychology use within strength  
85 and conditioning has employed predominantly observational methods, specifically focusing  
86 on coach behavior (17, 29). Such observational studies provide little insight into the specific  
87 psychological interventions, the rationale behind them, and importantly the perceptions of the  
88 practitioners themselves. Recent work (39) identified the types of interventions and the main  
89 aims of employing such strategies used however failed to highlight the perceptions of the  
90 strength and conditioning specialists' regarding their perceived responsibilities relating to the  
91 inclusion of psychological strategies within applied practice.

92

93 Therefore, in line with the suggestion that the research can serve as a foundation to improve  
94 the profession and more research is required (29), the aim of the present work is to adopt an  
95 interpretive phenomenological approach (43) to explore strength and conditioning  
96 practitioners' personal experiences of using psychology within applied practice to ascertain  
97 the perceived psychology related role requirements of the discipline. It is hypothesized that

98 strength and conditioning specialists would possess a range of client centered and softer skills  
99 which have often been overlooked within the existing research base.

100

101

## METHOD

102

### **Experimental approach to the problem**

103

To explore the practitioners' understanding at a deeper level, a interpretive phenomenological  
104 approach was used to examine the roles which may be implicit within the narratives and  
105 omitted using different methodological approaches such as content analysis. Thus the use of  
106 Interpretive Phenomenological Analysis (IPA) permits the exploration of the subjects  
107 worldview (36) thus perceptions will be captured from the data despite not being explicitly  
108 stated (36) and would be a suitable approach to gain insight from the perspective of  
109 individual practitioners. Such an approach has previously been successfully used to examine  
110 the perceptions of physiotherapists towards psychology exploring real life experiences of  
111 applying psychological interventions (3). Furthermore the use of interpretive  
112 phenomenological analysis is well suited to the current research questions owing to the  
113 notion that many responsibilities acquired via the lived experience of the practitioner.

114

115

In order to answer the aims of the current research question an approach was adopted where  
116 by each individual case is examined in detail prior to the amalgamation of key concepts  
117 resonant across the sample. The approach utilizes semi-structured interviews, transcribed  
118 verbatim, which were analyzed for key resonant themes using IPA (41). Semi-structured  
119 interviews aim to explore a series of topics whilst not constrained to the order in which questions  
120 are asked. This approach lacks the comparability and consistency of the structured interview  
121 method however this approach allows for the creation of a fluid narrative enabling the disclosure

122 of a variety of topics. Indeed such an approach is considered the exemplary data collection  
123 method aligned with IPA (37). Such a design is applicable when examining topics centered on  
124 lived experiences where standardized research instruments may prevent the collection of  
125 relevant data (46). Furthermore as stated by Tod et al. (46) the use of qualitative methods  
126 employing semi-structured interviews have proven successful in answering psychology  
127 orientated research questions within strength and conditioning.

128

### 129 **Ethical approval**

130 Before commencing the study, the Institutional Review Board provided ethical approval for  
131 the experimental procedures. Prior to participation all subjects received an invitation email  
132 containing including a clear explanation of the potential benefits and risks associated with the  
133 research, how the data will be handled, the dissemination of findings, and voluntary nature of  
134 the study. An email contact was provided for the lead investigator should any potential  
135 applicants request additional information.

136

### 137 **Subjects**

138 Eighteen participants were recruited for interview. The present study employed convenience  
139 sampling drawn from a previously obtained sample pool initially compiled through purposive  
140 sampling (38). Additional snowball sampling was used as it is regarded as an effective  
141 method to enlist potential participants and compatible with the concept of purposive  
142 sampling. Participants comprised 17 males and one female. Of these participants, 10  
143 participants were working within the UK, 3 within the USA and 5 within Australia. Each was  
144 accredited by the National Strength and Conditioning Association, the United Kingdom  
145 Strength and Conditioning Association, the Australian Strength and Conditioning  
146 Association, or held a combination of dual accreditation. The participants provided a cross



147 section of experience working as strength and conditioning practitioners, ranging from two  
148 years to over 20 years within various sport disciplines. All participants had experience  
149 working at a minimum of national level.

150

### 151 **Procedure**

152 Interviews were conducted at a mutually-agreed time and location with specific consideration  
153 of time zone differences and typically lasted between 40-80 minutes. Interviews were  
154 conducted face-to-face either in person or via video calls to prevent the location of the subject  
155 becoming barrier to data collection. Data was recorded using a digital voice recorder  
156 (Olympus, VN-5500PC), and transcribed verbatim. Interviews were conducted over the  
157 period commencing October 2011 to January 2012.

158

159 The semi-structured interview schedule was composed and scrutinized by specialists from the  
160 disciplines of psychology and strength and conditioning for content validity. The questions  
161 explored the individuals' narrative of their experience being a strength and conditioning  
162 coach with particular focus on the interactions between practitioner and athlete. Examples of  
163 the questions included were: 'Could you tell me about your experience as a strength and  
164 conditioner?'; 'What would you describe as the main purpose of psychology within Strength  
165 and Conditioning?'; 'Do you include mental strategies in your training?'; 'Do you feel  
166 psychological support is effective to your athletes?'. The questioning was open-ended to  
167 allow elaboration around personal professional development and to promote the narrative of  
168 the subject.

169 **Analysis**

170 The analysis employed IPA following the recommendations of Smith (42) and was conducted  
171 with NVivo 9 assistive software (QSR International Pty Ltd., Victoria, Australia) to identify  
172 common themes.

173

174 The lead author transcribed all interviews verbatim. Adhering to IPA guidelines the  
175 transcripts were read sufficiently to provide an in-depth familiarization with the data and  
176 specific context of the data. Considering specific questions, each transcript was analyzed to  
177 highlight specific instances within the participants' accounts. During first stage analysis,  
178 Nvivo 9 assistive software (QSR International Pty Ltd., Victoria, Australia) was used to  
179 extract pertinent notes from the narratives. Notes were then compiled to form thematic  
180 emergences after which the themes were reviewed for confirmation of understanding within  
181 the contexts outlined during the narrative. This procedure was repeated for the remaining  
182 transcripts with the application of an evolving 'master template' guided through emerging  
183 themes used to focus the analysis (3).

184 Commonalities were explored between transcripts which resulted in the development of  
185 higher order themes with appropriate supporting quotes identified. In instances where quotes  
186 failed to sufficiently evidence themes the theme was removed from analysis (3).

187

188 **Validity and Reliability**

189 To increase the likelihood of credible finding is triangulation was used. Triangulation  
190 concerns the verification of results by the use of different researchers, different methods, or  
191 different sources. In endeavouring to provide triangulation of sources, participant groups  
192 were recruited from ranging international settings for instance the UK, the USA and  
193 Australia. Thus data source triangulation was performed by which information obtained from

194 participants from differing cultural and professional backgrounds evidences the extent to  
195 which similar thematic emergences occurred across different backgrounds (46). Audience  
196 triangulation was used in which an experienced qualitative investigator reviewed selected  
197 quotes to ensure all relevant themes were exposed and to prevent experiment bias (46).

198

199 Member checking involves presenting raw data to the participants to validate the accurate  
200 collection of data. Member checking, regarded as the most important method in the  
201 demonstration of credible findings (25), can be progressed in elevating levels of detail  
202 ranging from confirmation of raw text to presenting the participants with the interpretation of  
203 findings. The present study used member checking to validate the raw text and the  
204 presentation of particular thematic emergences. Responses confirmed the accuracy or the data  
205 collection and was in agreement with the major thematic emergences.

206

207 Dependability is the ability of the findings to be repeated and consistent, confirmability is the  
208 degree to which the research findings are unbiased and attributable to the research  
209 participants. The research audit is regarded as the prime method of demonstrating both  
210 confirmability and dependability (25). The research has adhered to consistent methodological  
211 constraints as agreed to and governed by the Institutional Research Ethics panel, this ensured  
212 that the method can be attributed to the research outcome and thus the procedure can be  
213 repeated.

214

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219

**RESULTS**

220 Notwithstanding the logistical and physical training tasks, the psychological responsibilities  
221 of the strength and conditioning professional demonstrated the ranging and complex nature of  
222 the role. Over half (61%) of the respondents reported that their position as a strength and  
223 conditioning professional required additional psychology-orientated responsibilities. A  
224 variety of roles emerged within the narratives. Such responsibilities were thematically  
225 grouped into four main themes of providing emotional support; providing sport psychology  
226 support; shaping team dynamics; and facilitating communication with athletes and key  
227 support staff (Figure 1). Each of the resonant emergent roles pertinent to the discipline of  
228 psychology will be addressed in turn in the subsequent results section.

229 INSERT FIGURE 1 HERE

230

231 ***Provide emotional support***

232 It was apparent that the strength and conditioning professionals believed that they fulfilled a  
233 counselling role through which they would provide emotional support to the athletes that they  
234 worked with. Three experienced coaches documented the perception that the strength and  
235 conditioning coach can provide emotional support:

236 *“Sometimes they can get so focused on just one thing, their performance, they*  
237 *forget that they are human beings and they have got a whole life and sometimes I*  
238 *just make them realize you know what ok you have messed up there but get the*  
239 *whole picture of what you are doing.”*

240 The practitioner believed that they have a role that extends beyond the physical training of  
241 the athlete and that they can take responsibility of the psychological well-being of the athlete  
242 with regard to other aspects of the athlete’s life. Such a notion aligns with the concept of  
243 developing soft skills (46) and that the strength and conditioning coach perceived their role to  
244 extend to providing emotional support to athletes.

245           *“Some of them come and they start crying because they have got no one else to*  
 246           *talk to. You need to be able to relate and understand [and] be compassionate to*  
 247           *that person to make them understand that it is not all about that. Be almost a*  
 248           *counsellor, that’s really important.”*

249    There is indication that a counsellor is a specific role, however the strength and conditioning  
 250    coach believed their behaviors could be viewed as counselling. This again mirrors the work  
 251    of Tod et al. (46) which suggests that with experience the strength and conditioning coach  
 252    adopts a supporting role with athletes seeking an individual with whom to share sensitive  
 253    information.

254           *“Probably I am here. Because you always get the athletes that don’t make the*  
 255           *England squad and they ring you up and you **have to** say something so yeah*  
 256           *they’ll come to you with it.”*

257    It is also evident that in some cases this is a reluctant role whereby the practitioner feels that  
 258    they *have to* say something rather than *want to*. It is likely that such confidence in fulfilling  
 259    the role is aligned with the experience of the strength and conditioning coach. As has been  
 260    previously stated the ability to provide an informal counselling service is governed by the  
 261    experience of the coach (46). It is possible that the strength and conditioning training  
 262    environment serves to enable the athlete to disassociate away from stressful situations and  
 263    consequently the environment itself may be conducive to the strength and conditioning coach  
 264    being perceived to be able to offer emotional support.

265           *“I am fed up I just split up with my boyfriend” and in situations like that*  
 266           *normally what I say is that any outside stressor like that, athletics is a really*  
 267           *interesting side issue for stress, because the minute you step the over the door to*  
 268           *the weight room, set your foot inside of the circle that is your time. That is*  
 269           *something you can do for you. Nobody else can influence that, just you, so spend*  
 270           *that hour bettering you, forget it, and leave it out the door.”*

271    It is clear that the perceptions of the strength and conditioning coaches are different. It is  
 272    evident that there is the adopted responsibility of providing emotional support which is often  
 273    unrelated to strength and conditioning; however there is a lack of evidence to support the

274 notion that practitioners are providing a true counselling service and a misperception of  
275 counselling practice is evident.

276

277 Two coaches recall instances in which they have adopted 'softer skills' in a mentoring role of  
278 the athlete during a challenging situation.

279 *"Got a young footballer, she's a cracking kid. She's playing in a team where*  
280 *there is a seasoned international; a world class player, so I sat down with her*  
281 *and was like where am I going with this, what am I trying to do? She was like I*  
282 *am not going to get in the team because this person is ahead of me so I tried to*  
283 *build her ego up a bit and make her feel a lot better about herself and get her to*  
284 *think about the positives in her performance."*

285 It is clear that the strength and conditioning practitioner is occasionally afforded the  
286 opportunity to work with players away from the team environment. There is the notion that  
287 by working in an environment removed from the team setting the practitioner is able to  
288 address athletes on an individual basis. Through such integrations the strength and  
289 conditioning specialist offers a supportive role in addition to the physical preparation of the  
290 athlete in which the support is often grounded on the coaches own previous experiences.

291 *"I wouldn't say there is anything ground breaking in that just literally have a*  
292 *conversation in that trying to get their side of the story trying to put over some*  
293 *perspective from what my experience has been."*

294 The practitioner adopts a mentoring approach; in relating their experiences to those of the  
295 athlete it is emphasizing the importance of two-way communication.

296 There is also indication of the value that practitioners can offer with the availability of the  
297 one-to-one training environment detached from the goals of the team coach.

298 *"And I also give them a task of in training, and bearing in mind your sport*  
299 *specific coach wouldn't have this conversation with her because your sport*  
300 *specific coach is perhaps happy with the person who is on the team whereas I am*  
301 *just working with this individual so I am saying you need to get next to this*  
302 *person in training and do everything they do but better. And she has responded*  
303 *really well to that."*

304 Again, in this instance the perspective of the strength and conditioning coach is centered on  
 305 individual development. This suggests the instrumental role possessed by the strength and  
 306 conditioning coach in facilitating the progress of players who are perceived to be neglected  
 307 within the team setting. This implies the important motivational role of the strength and  
 308 conditioner adopting a mentoring position.

309 *Shape team dynamics*

310 One individual recited an occasion demonstrating that the strength and conditioning coach  
 311 could play an influential role in shaping the mentality of the team.

312 *“The beginning of the off season, an example was when I first got out to where I*  
 313 *am at in January with volleyball it was my first interaction with the team was*  
 314 *with weightlifting and what I actually decided to do was do circuit training for*  
 315 *about two weeks. The circuit training was time-based and it was just one thing,*  
 316 *onto the next, onto the next, and the big thing I stressed to the girls when I was*  
 317 *there was that I am using this to see who is the leader, who is going rise up, and*  
 318 *see who can push through hard times and stuff like that.”*

319 It is evident that beyond the physiological conditioning of the players the strength and  
 320 conditioning coach can create an environment through which team mentality can be shaped.  
 321 The coach sees the diverse role functions and it is evident that they want to have more  
 322 responsibility for shaping and influencing team dynamics. A second individual recited an  
 323 occasion when they were informed that it is the role of the strength coach to help shape team  
 324 mentality.

325 *“I know that it is important and now that I think about it I do remember talking to*  
 326 *one of the head football strength coaches that I worked with and he mentioned to*  
 327 *me that the role of the strength coach is also that mentality of the team how*  
 328 *aggressive they are in the weight room and how that applies on the football field*  
 329 *so I mean that might be something I want to keep in the back of my mind. I’ve*  
 330 *always kept that in the back of my mind too.”*

331 It is therefore evident that the strength and conditioning coach is positioned to offer  
 332 individual support as well as the opportunity to foster a productive team environment.  
 333 However, this may suggest that the strength and conditioning specialist is crossing

334 boundaries and addressing psychological strategies that are used during the competitive  
335 environment in addition to the strength and conditioning setting, again this indicates a level  
336 of role ambiguity in the psychological practices of the strength and conditioning coach.

337

338 ***Receive and relay information***

339 Two practitioners stated that they fulfil the needs of both the athlete and other coaches to  
340 receive and forward information. The strength and conditioning practitioner identifies how  
341 the role results in working to relay information for the athlete to other support staff and  
342 similarly from the support staff through the athlete.

343 *“I think I mean a percentage of the S and C coaches I know are glad to use it and*  
344 *maybe along the lines of instead of having another person in there maybe*  
345 *allowing let’s say the sport psych to come in and watch a couple of sessions*  
346 *whereas the S and C coach can deliver the athlete because has got a higher*  
347 *rapport with that athlete. Yeah so it’s like a message system you could say”*

348 *“We don’t have a full time psychologist with the team so again a lot of the bits*  
349 *and pieces we’re kind of doing ourselves and we communicate regularly on*  
350 *things we use in training.”*

351

352 The coach perceives that they are able to develop a strong rapport with the athlete which  
353 positions them well to receive and relay information from the coach to the athletes and *vice*  
354 *versa*. Again the ability to develop athlete trust is viewed a crucial skill developed through  
355 the career of the strength and conditioning coach (46).

356 *“We sort of communicate back and forth on ways we’re going to talk to him and*  
357 *deal with him, he’s still a very young lad, he’s only 14 so getting across to him*  
358 *that his development is long term.”*

359 Similarly, the relay of information from a sport psychologist is a responsibility of a number  
360 of the practitioners. It is likely that when delivered by a non-sport psychology-titled  
361 professional such as the strength and conditioning practitioner, who has a greater rapport with  
362 the athlete, there is an increased receptivity to psychology interventions. This also serves to



363 illustrate the importance of observing the behavior of the athlete to allow the effective  
364 conveying of information to allow other athlete support staff to make appropriate  
365 recommendations.

366

367 The importance to conveying information is evident however, an additional communicative  
368 responsibility has been alluded to.

369 *“I think from a conditioning perspective from my role because I am not*  
370 *necessarily involve with selection”*

371 *“I am kind of a sounding board for guys; I am a little bit neutral in that respect*  
372 *so they will often engage with me. It’s more being a sounding board because they*  
373 *know there will be no repercussions from kind of a neutral person they are*  
374 *talking to almost just talk to them from a common sense perspective potentially*  
375 *play devil’s advocate if needed lot of that is just to rationalize what their thoughts*  
376 *are to try you know get them to understand.”*

377 The practitioner is removed from the team selection process and as a result, athletes will feel  
378 more comfortable sounding thoughts to the strength and conditioning coach. Thus appearing  
379 impartial is clearly important in gaining the respect of the athlete and places the practitioner  
380 in a valuable position to offer psychological support should the requisite competencies exist.

381

### 382 ***Sport Psychology interventions***

383 One individual explicitly stated the role the strength and conditioning coach adopts in the  
384 absence of a psychologist.

385 *“It’s very important, depending on if they have got a sport psychologist that*  
386 *could get into that then use techniques to get them back on the pitch. Then maybe*  
387 *not as much, but a lot of athletes don’t tend to have that kind of support, so as an*  
388 *S and C coach it kind of lands on you to be able to provide that psychological*  
389 *information and techniques to get them back onto the pitch. So in that instance I*  
390 *suppose it would be really important.”*

391 In the absence of a sport psychologist the strength and conditioning coach has the opportunity  
392 to employ psychological intervention techniques. It is evident that the strength and

393 conditioning coach is required to provide psychological skills in the absence of the sport  
394 psychologist. However it is apparent that this is a role adopted in the absence of the  
395 psychologist and, depending on perceived competencies, the coach may demonstrate a  
396 reluctance to provide psychological skills training should the psychologist be present.

397

398 In addition to providing the aforementioned emotional support, one strength and conditioning  
399 coach related to the requirement of psychological skills to support rounded development of  
400 the athlete.

401 *“I think that’s an important part of the strength and conditioning coaches’ job*  
402 *you know you’re not just there to get them to lift more you’re developing an all-*  
403 *round athlete and that includes psychological training”*

404 It is clear that the role of the strength and conditioning practitioner is important in creating an  
405 athlete that possesses a spectrum of skills in addition to those specific to strength and  
406 conditioning. This indicates that the strength and conditioning coach perceives their role to  
407 extend beyond that of the traditional physical preparation for sport performance and that they  
408 are required to work towards equipping the athletes with psychological skills.

409

410

411

412

## DISCUSSION

413 The present study revealed that strength and conditioning practitioners considered that the  
414 role required psychology orientated responsibilities. Numerous explorations into the  
415 responsibilities and behaviors of the strength and conditioner exist (10, 12-15, 44), however  
416 they offer limited insight into the use of psychology. The current study contributes to the  
417 existing body of knowledge indicating that the coaches’ role is dynamic and evolving in  
418 which a broad range of adopted role responsibilities are exhibited. It is evident that the role of

419 the strength and conditioning practitioner is a complex one with various additional  
420 responsibilities. Indeed Brooks et al. (5) emphasized that a strength and conditioning  
421 practitioner is primarily a coach with responsibilities to provide social, emotional, and  
422 physical development.

423

424 A large proportion of the strength and conditioning coaches made reference made to the  
425 unique position that the strength and conditioning practitioner holds. There was the indication  
426 that the strength and conditioning practitioner often works in an environment which is  
427 removed from the immediate team setting often governed by social dynamics and  
428 performance related incentives which can often result in conflicts within the team (36). There  
429 was the notion that within the team setting, governed by team selection stressors, there is a  
430 paucity of athlete-centered attention yet the removed position of the strength and conditioning  
431 professional presents an environment in which an athlete-centered approach can be  
432 facilitated. With frequent athlete contact, however distinct from other coaching staff, the  
433 strength and conditioning coach may be well placed to serve as a mentor and work with the  
434 client on an individual basis to foster psychological and physical development detached from  
435 the stressors associated with team setting.

436

437 Experienced strength and conditioning practitioners have been observed to be more readily  
438 able to work at an individual level catering for the athlete's physical and psychological  
439 development (46). The ability to develop a positive rapport with the client was a prime  
440 quality acknowledged by experienced practitioners (46). Indeed, it is likely that when  
441 delivered by a non-sport psychology-titled professional, such as the strength and conditioning  
442 practitioner, who has a greater rapport with the athlete, there is an increased receptivity to  
443 psychology interventions and thus increasing the potential opportunity for administering

444 psychological interventions. This is likely owing to the stigma associated with seeing the  
445 support of psychology tilted professionals (26, 27, 47, 48, 52).

446

447 Through the work of Tod et al. (46), it is apparent that as strength practitioners gain  
448 experience, there is also an increased awareness of interpersonal skills in addition to the  
449 established training responsibilities of the practitioner. It is important to note that such  
450 examples were evident when the practitioner had the opportunity to work on an individual  
451 one-to-one basis. Practitioners working within a team setting are responsible for numerous  
452 athletes at a given time may not be afforded such an occasion to adopt a mentoring role. In  
453 addressing the psychological need of the athlete, the strength and conditioning professional is  
454 a valuable asset to the athlete support team. Not least because the need to “manage athletes  
455 psychologically” is a significant stressor experienced by elite coaches (36) and the  
456 contribution from additional sources could lessen the burden through working collaboratively  
457 to address such athlete requirements. The perception existed that the role of other staff was to  
458 be working at solely a team level and neglecting individuals within the team. Existing  
459 research has identified that a distinguishing factor between experienced and lesser  
460 experienced coaches is the ability to build a positive rapport with the client (46). Thus, this  
461 potential misperception may account for the strength and conditioning practitioner adopting a  
462 mentoring role in which they work on an individual basis with athletes. It is possible that the  
463 misperception of the strength and conditioning coach, especially when removed from the  
464 team organization, results in them trying to fulfil roles outside of their primary  
465 responsibilities.

466

467 A selection of respondents suggested that they adopt a counselling role in which they were  
468 required to address problems lying outside the strength and conditioning environment. It

469 should be emphasized that predominantly more experienced strength and conditioning  
470 coaches suggested such a role. Tod (46) noted that, with increased experience, the coach  
471 occasionally assumes a role in which the athlete shares sensitive information. Evidently, there  
472 is evidence of role ambiguity with the use of psychological interventions which are unrelated  
473 to the specific strength and conditioning objectives. Notwithstanding the integration of  
474 diverse roles which have been shown to be an effective characteristic for coaches to acquire  
475 in strength and conditioning (46) and North American collegiate athletics (28) the adoption of  
476 such responsibilities poses an ethical question. The sport community has questioned the  
477 location of the theoretical ethical boundary (51, 53). This is pertinent as the appropriate level  
478 of qualification and training has been previously queried by Athletic Directors (51).

479

480 The role of the strength and conditioning coach is clearly complex in which responsibilities  
481 are being adopted that are removed from the physical preparation of athletes. The counselling  
482 discipline is specialized and separate from that of psychological skills training and indicates  
483 that a selection of practitioners perceive that they are able to use additional so-called soft-  
484 skills (46) whilst there is the misperception that they can offer a service akin to counselling. It  
485 is clear that, in addition to the misunderstanding of counselling being merely emotional  
486 support rather than as a standalone specialist discipline, there is the temptation to cross role  
487 boundaries and practice outside of the competencies of the accredited strength and  
488 conditioning professional. This identifies important areas for professional development in  
489 positioning referral mechanisms and educating in the ethical boundaries within professions.

490

491 Sport psychology is a discipline in its own right with the title of Sport and Exercise  
492 Psychologist receiving protected status within the United Kingdom (22). Receiving  
493 considerable training and assessment to become a certified Sport Psychologist, it is obvious

494 that there are instances requiring the experience and intervention of appropriately licensed  
495 practitioners which go beyond the competencies of the coach (1, 19, 32). In such instances,  
496 the appropriate referral network should be to the psychology-titled professional, as is the case  
497 in physiotherapy (23). Assuming the current growth of strength and conditioning as a  
498 discipline, an understanding of the ethical boundary and limitations of the practitioners'  
499 competency would be an important consideration as would an understanding of appropriate  
500 referral networks. Thus, in line with recommendations within physiotherapy (35), it should be  
501 clear that without appropriate training a coach should not be expected to apply specialized  
502 interventions which would be considered to be responsibility of psychology-titled  
503 professionals.

504

505 There have been steps forward in defining competence and suggesting who is qualified to  
506 educate athletes regarding their psychological skills, however whilst it is the responsibility of  
507 the psychologist to offer counselling and attend to clinical issues (1, 32), the use of  
508 psychological performance enhancement skills offers a blurred boundary with questions as to  
509 who is qualified to administer such skills (53). This is further exacerbated as no guidelines  
510 exist as to the application of mental skills within coaching (53).

511

512 The requirement to use 'psychological skills' to enhance performance is a role responsibility  
513 of strength and conditioning specialists accredited by the NSCA (34) whereas there is little  
514 reference made to the use of psychology by other strength and conditioning associations.  
515 However, such lack of clarity in the role description is problematic. This is echoed in other  
516 disciplines, such as sport coaching, athletic training, and physiotherapy, whereby leading  
517 organizations state that particular skill sets should be learned, however do not require the use  
518 of skills within the published role responsibilities (53). Conversely, other organizations state

519 that only those licensed as psychologists are able to provide psychological support to their  
520 athletes (53). However, this would prohibit the support personnel, for example coaching and  
521 rehabilitation professionals, with the greatest contact with the athlete from implementing  
522 psychological skills (53).

523

524 Whilst clear definitions must distinguish between psychological skills training, general  
525 interpersonal attributes, and clinical skills of counselling, the question is posed as to whether  
526 coaches can use mental skills training if they have had no formal training (53). There is an  
527 indication that without sufficient training detrimental outcomes may arise and result in  
528 negative misconceptions towards psychology. The potential problems associated with  
529 untrained professionals approaching mental skills consist of offering a ‘canned’ approach in  
530 which individual differences are neglected, having insufficient range of skills to provide  
531 suitable interventions, along with the insufficient awareness of the appropriate time to  
532 administer interventions, and lacking the pedagogical knowledge to communicate and  
533 rationalize the use of such skills with athletes (8, 21, 45). Such harmful outcomes would  
534 negatively influence the likelihood of applying psychological strategies. Concerning the  
535 increasing demand for psychological skills training (49) and the unrealistic view that solely  
536 qualified psychology titled professions provide psychological skills (7), with appropriate role  
537 clarification, other support staff could be involved with teaching of psychological skills (53).  
538 This is evident within athletic training (4, 6, 16, 50), physiotherapy (2, 3, 20, 23), and sport  
539 coaching (18). This would be especially important concerning the financial and logistical  
540 barriers to employing a psychologist (24, 37) resulting in athletes being unable to receive the  
541 professional services of a sport psychology consultant.

542

543 The present investigation has identified that the strength and conditioning professional is  
544 employing psychologically oriented strategies to facilitate athlete growth within, and outside,  
545 the strength and conditioning environment. Aside from the work of Tod (46) noting the need  
546 for softer skills, detailed exploration has to date focussed only on the perspective of cognitive  
547 behavioural interventions to improve performance (38, 39). The present work demonstrates  
548 that there is also attention focused towards the humanistic perspective in developing a  
549 rounded individual with less emphasis on acute cognitive interventions for performance gain.  
550 This is a noteworthy observation emanating from the present work and provides support for a  
551 valuable strand of practitioner development focussing on humanistic centred approaches and  
552 indeed the associated clarification of ethical boundaries associated in the provision of sport  
553 psychology support. Thus it is clear that there must be increased focus on both the  
554 appropriate use of psychological strategies and also the positioning of referral networks and  
555 educational programs to facilitate the inclusion of psychological interventions within the  
556 strength and conditioning domain.

557

558

559

560

### **PRACTICAL APPLICATIONS**

561 The adopted roles of the strength and conditioning coach appear to be shaped by the position  
562 they adopt within the coaching organizational structure. Strength and conditioning coaches  
563 have frequent contact with the athlete often away from the pressures associated with team  
564 selection (36). This results in the facilitation of a positive rapport between athlete and  
565 practitioner. Thus, the strength and conditioning coach is in a valuable position to promote  
566 the use of psychological skills due to the frequency of athlete contact and generation of  
567 rapport. Furthermore the unique positioning dictates that, when working within an



568 organization, clear communication channels are established between the strength and  
 569 conditioning coach, the sport coaches and appropriate specialized disciplines owing to the  
 570 importance in accurately relaying information. Strength and conditioning coaches must  
 571 endeavour to assess role boundaries with their practice and critically examine whether they  
 572 have the requisite qualifications and understanding of the discipline. Coaches would be well  
 573 advised to attend continuing professional development events with a focus on the use of  
 574 psychological intervention from both cognitive behavioural and humanistic standpoints. A  
 575 key recommendation resulting from the present work is the emphasis of communication  
 576 skills. With a range of communication skills, including reflective listening, apparent strength  
 577 and conditioning practitioners would be well advised to upskill in such areas through  
 578 reflecting on athlete interactions and attending available workshops.

579

580

581

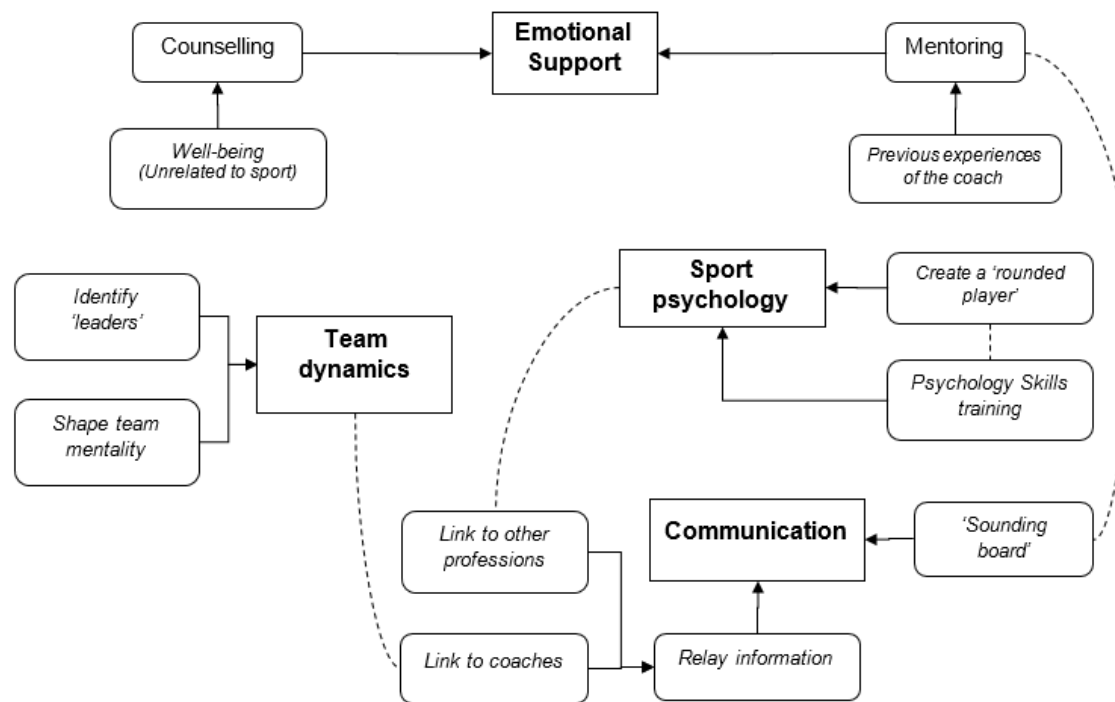
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- 718



**Figure 1.** Schematic representation of the complexities of the perceived psychological responsibilities of the Strength and Conditioning specialist.