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**THE PERCEIVED PSYCHOLOGICAL RESPONSIBILITIES OF A
STRENGTH AND CONDITIONING COACH**

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ABSTRACT

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

KEY WORDS

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).

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

82

83 Given the evolving role of the strength and conditioning specialist it is reassuring that the
84 academic community has sought to define the role of the strength and conditioning specialist.
85 However, exploratory studies have typically focused upon the daily role responsibilities and
86 working environments whilst the specific psychological responsibilities are often regarded as
87 miscellaneous within the strength and conditioning specialist repertoire, if reported at all (10,
88 13-15, 30, 40). As a result, notwithstanding the need for the aforementioned "softer skills" (46),
89 little is known regarding the specific psychology-related responsibilities of the strength and
90 conditioning specialist. Additional uncertainty exists regarding the precise psychological
91 responsibilities of the strength and conditioning professional as only the criteria for the
92 Certified Strength and Conditioning Specialist exam states the requirement of "*psychological*
93 *skills to enhance training and/or performance of the athlete*" (34) whilst other pathways to
94 recognized certification fail to clarify of the role of psychology within applied strength and

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

97

98 Academic interest in the perceptions of various disciplines towards psychology has focused on
99 quantitative research methods such as survey design (2-4, 16, 20, 23, 35) with few studies using
100 qualitative methods such as semi-structured interviews (3, 9, 11). The discrepancy in the
101 volume of published work and between qualitative and quantitative research is surprising given
102 that qualitative research explores in-depth and underlying perceptions towards psychology and
103 would serve to provide an explanation of the rationale for including psychological strategies
104 and provide insight into complexities inaccessible via quantitative methods. To date,
105 qualitative research specifically examining psychology use within strength and conditioning
106 has employed predominantly observational methods, specifically focusing on coach behavior
107 (17, 29). Such observational studies provide little insight into the specific psychological
108 interventions, the rationale behind them, and importantly the perceptions of the practitioners
109 themselves. Recent work (39) identified the types of interventions and the main aims of
110 employing such strategies used however failed to highlight the perceptions of the strength and
111 conditioning specialists' regarding their perceived responsibilities relating to the inclusion of
112 psychological strategies within applied practice.

113

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

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

121

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METHOD

123 **Experimental approach to the problem**

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

135

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

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

149

150 **Ethical approval**

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

157

158 **Subjects**

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

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

171

172 **Procedure**

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

179

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

190 Analysis

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

194

195 The lead author transcribed all interviews verbatim. Adhering to IPA guidelines the transcripts
196 were read sufficiently to provide an in-depth familiarization with the data and specific context
197 of the data. Considering specific questions, each transcript was analyzed to highlight specific
198 instances within the participants' accounts. During first stage analysis, Nvivo 9 assistive
199 software (QSR International Pty Ltd., Victoria, Australia) was used to extract pertinent notes
200 from the narratives. Notes were then compiled to form thematic emergences after which the
201 themes were reviewed for confirmation of understanding within the contexts outlined during
202 the narrative. This procedure was repeated for the remaining transcripts with the application of
203 an evolving 'master template' guided through emerging themes used to focus the analysis (3).
204 Commonalities were explored between transcripts which resulted in the development of higher
205 order themes with appropriate supporting quotes identified. In instances where quotes failed to
206 sufficiently evidence themes the theme was removed from analysis (3).

207

208 Validity and Reliability

209 To increase the likelihood of credible finding is triangulation was used. Triangulation concerns
210 the verification of results by the use of different researchers, different methods, or different
211 sources. In endeavouring to provide triangulation of sources, participant groups were recruited
212 from ranging international settings for instance the UK, the USA and Australia. Thus data
213 source triangulation was performed by which information obtained from participants from
214 differing cultural and professional backgrounds evidences the extent to which similar thematic

215 emergences occurred across different backgrounds (46). Audience triangulation was used in
216 which an experienced qualitative investigator reviewed selected quotes to ensure all relevant
217 themes were exposed and to prevent experiment bias (46).

218

219 Member checking involves presenting raw data to the participants to validate the accurate
220 collection of data. Member checking, regarded as the most important method in the
221 demonstration of credible findings (25), can be progressed in elevating levels of detail ranging
222 from confirmation of raw text to presenting the participants with the interpretation of findings.
223 The present study used member checking to validate the raw text and the presentation of
224 particular thematic emergences. Responses confirmed the accuracy of the data collection and
225 was in agreement with the major thematic emergences.

226

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

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RESULTS

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

INSERT FIGURE 1 HERE

261 ***Provide emotional support***

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

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

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

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

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

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

286 It is also evident that in some cases this is a reluctant role whereby the practitioner feels that
 287 they *have to* say something rather than *want to*. It is likely that such confidence in fulfilling the
 288 role is aligned with the experience of the strength and conditioning coach. As has been
 289 previously stated the ability to provide an informal counselling service is governed by the

290 experience of the coach (46). It is possible that the strength and conditioning training
291 environment serves to enable the athlete to disassociate away from stressful situations and
292 consequently the environment itself may be conducive to the strength and conditioning coach
293 being perceived to be able to offer emotional support.

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

300 It is clear that the perceptions of the strength and conditioning coaches are different. It is
301 evident that there is the adopted responsibility of providing emotional support which is often
302 unrelated to strength and conditioning; however there is a lack of evidence to support the notion
303 that practitioners are providing a true counselling service and a misperception of counselling
304 practice is evident.

305

306 Two coaches recall instances in which they have adopted ‘softer skills’ in a mentoring role of
307 the athlete during a challenging situation.

308 *“Got a young footballer, she’s a cracking kid. She’s playing in a team where there*
309 *is a seasoned international; a world class player, so I sat down with her and was*
310 *like where am I going with this, what am I trying to do? She was like I am not going*
311 *to get in the team because this person is ahead of me so I tried to build her ego up*
312 *a bit and make her feel a lot better about herself and get her to think about the*
313 *positives in her performance.”*

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

320 *“I wouldn’t say there is anything ground breaking in that just literally have a*
 321 *conversation in that trying to get their side of the story trying to put over some*
 322 *perspective from what my experience has been.”*

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

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

327 *“And I also give them a task of in training, and bearing in mind your sport specific*
 328 *coach wouldn’t have this conversation with her because your sport specific coach*
 329 *is perhaps happy with the person who is on the team whereas I am just working*
 330 *with this individual so I am saying you need to get next to this person in training*
 331 *and do everything they do but better. And she has responded really well to that.”*

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

337 ***Shape team dynamics***

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

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

347 It is evident that beyond the physiological conditioning of the players the strength and
 348 conditioning coach can create an environment through which team mentality can be shaped.

349 The coach sees the diverse role functions and it is evident that they want to have more

350 responsibility for shaping and influencing team dynamics. A second individual recited an
 351 occasion when they were informed that it is the role of the strength coach to help shape team
 352 mentality.

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

359 It is therefore evident that the strength and conditioning coach is positioned to offer individual
 360 support as well as the opportunity to foster a productive team environment. However, this may
 361 suggest that the strength and conditioning specialist is crossing boundaries and addressing
 362 psychological strategies that are used during the competitive environment in addition to the
 363 strength and conditioning setting, again this indicates a level of role ambiguity in the
 364 psychological practices of the strength and conditioning coach.

365

366 ***Receive and relay information***

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

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

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

379

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

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

387 Similarly, the relay of information from a sport psychologist is a responsibility of a number of
388 the practitioners. It is likely that when delivered by a non-sport psychology-titled professional
389 such as the strength and conditioning practitioner, who has a greater rapport with the athlete,
390 there is an increased receptivity to psychology interventions. This also serves to illustrate the
391 importance of observing the behavior of the athlete to allow the effective conveying of
392 information to allow other athlete support staff to make appropriate recommendations.

393

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

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

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

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

408

409 ***Sport Psychology interventions***

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

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

418 In the absence of a sport psychologist the strength and conditioning coach has the opportunity
419 to employ psychological intervention techniques. It is evident that the strength and conditioning
420 coach is required to provide psychological skills in the absence of the sport psychologist.
421 However it is apparent that this is a role adopted in the absence of the psychologist and,
422 depending on perceived competencies, the coach may demonstrate a reluctance to provide
423 psychological skills training should the psychologist be present.

424

425 In addition to providing the aforementioned emotional support, one strength and conditioning
426 coach related to the requirement of psychological skills to support rounded development of the
427 athlete.

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

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

436

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438

439

DISCUSSION

440 The present study revealed that strength and conditioning practitioners considered that the role

441 required psychology orientated responsibilities. Numerous explorations into the

442 responsibilities and behaviors of the strength and conditioner exist (10, 12-15, 44), however

443 they offer limited insight into the use of psychology. The current study contributes to the

444 existing body of knowledge indicating that the coaches' role is dynamic and evolving in which

445 a broad range of adopted role responsibilities are exhibited. It is evident that the role of the

446 strength and conditioning practitioner is a complex one with various additional responsibilities.

447 Indeed Brooks et al. (5) emphasized that a strength and conditioning practitioner is primarily

448 a coach with responsibilities to provide social, emotional, and physical development.

449

450 A large proportion of the strength and conditioning coaches made reference made to the unique

451 position that the strength and conditioning practitioner holds. There was the indication that the

452 strength and conditioning practitioner often works in an environment which is removed from

453 the immediate team setting often governed by social dynamics and performance related

454 incentives which can often result in conflicts within the team (36). There was the notion that

455 within the team setting, governed by team selection stressors, there is a paucity of athlete-

456 centered attention yet the removed position of the strength and conditioning professional

457 presents an environment in which an athlete-centered approach can be facilitated. With

458 frequent athlete contact, however distinct from other coaching staff, the strength and

459 conditioning coach may be well placed to serve as a mentor and work with the client on an

460 individual basis to foster psychological and physical development detached from the stressors

461 associated with team setting.

462

463 Experienced strength and conditioning practitioners have been observed to be more readily
464 able to work at an individual level catering for the athlete's physical and psychological
465 development (46). The ability to develop a positive rapport with the client was a prime quality
466 acknowledged by experienced practitioners (46). Indeed, it is likely that when delivered by a
467 non-sport psychology-titled professional, such as the strength and conditioning practitioner,
468 who has a greater rapport with the athlete, there is an increased receptivity to psychology
469 interventions and thus increasing the potential opportunity for administering psychological
470 interventions. This is likely owing to the stigma associated with seeing the support of
471 psychology tilted professionals (26, 27, 47, 48, 52).

472

473 Through the work of Tod et al. (46), it is apparent that as strength practitioners gain experience,
474 there is also an increased awareness of interpersonal skills in addition to the established training
475 responsibilities of the practitioner. It is important to note that such examples were evident when
476 the practitioner had the opportunity to work on an individual one-to-one basis. Practitioners
477 working within a team setting are responsible for numerous athletes at a given time may not be
478 afforded such an occasion to adopt a mentoring role. In addressing the psychological need of
479 the athlete, the strength and conditioning professional is a valuable asset to the athlete support
480 team. Not least because the need to "manage athletes psychologically" is a significant stressor
481 experienced by elite coaches (36) and the contribution from additional sources could lessen the
482 burden through working collaboratively to address such athlete requirements. The perception
483 existed that the role of other staff was to be working at solely a team level and neglecting
484 individuals within the team. Existing research has identified that a distinguishing factor
485 between experienced and lesser experienced coaches is the ability to build a positive rapport
486 with the client (46). Thus, this potential misperception may account for the strength and

487 conditioning practitioner adopting a mentoring role in which they work on an individual basis
488 with athletes. It is possible that the misperception of the strength and conditioning coach,
489 especially when removed from the team organization, results in them trying to fulfil roles
490 outside of their primary responsibilities.

491

492 A selection of respondents suggested that they adopt a counselling role in which they were
493 required to address problems lying outside the strength and conditioning environment. It should
494 be emphasized that predominantly more experienced strength and conditioning coaches
495 suggested such a role. Tod (46) noted that, with increased experience, the coach occasionally
496 assumes a role in which the athlete shares sensitive information. Evidently, there is evidence
497 of role ambiguity with the use of psychological interventions which are unrelated to the specific
498 strength and conditioning objectives. Notwithstanding the integration of diverse roles which
499 have been shown to be an effective characteristic for coaches to acquire in strength and
500 conditioning (46) and North American collegiate athletics (28) the adoption of such
501 responsibilities poses an ethical question. The sport community has questioned the location of
502 the theoretical ethical boundary (51, 53). This is pertinent as the appropriate level of
503 qualification and training has been previously queried by Athletic Directors (51).

504

505 The role of the strength and conditioning coach is clearly complex in which responsibilities are
506 being adopted that are removed from the physical preparation of athletes. The counselling
507 discipline is specialized and separate from that of psychological skills training and indicates
508 that a selection of practitioners perceive that they are able to use additional so-called soft-skills
509 (46) whilst there is the misperception that they can offer a service akin to counselling. It is clear
510 that, in addition to the misunderstanding of counselling being merely emotional support rather
511 than as a standalone specialist discipline, there is the temptation to cross role boundaries and

512 practice outside of the competencies of the accredited strength and conditioning professional.

513 This identifies important areas for professional development in positioning referral

514 mechanisms and educating in the ethical boundaries within professions.

515

516 Sport psychology is a discipline in its own right with the title of Sport and Exercise

517 Psychologist receiving protected status within the United Kingdom (22). Receiving

518 considerable training and assessment to become a certified Sport Psychologist, it is obvious

519 that there are instances requiring the experience and intervention of appropriately licensed

520 practitioners which go beyond the competencies of the coach (1, 19, 32). In such instances, the

521 appropriate referral network should be to the psychology-titled professional, as is the case in

522 physiotherapy (23). Assuming the current growth of strength and conditioning as a discipline,

523 an understanding of the ethical boundary and limitations of the practitioners' competency

524 would be an important consideration as would an understanding of appropriate referral

525 networks. Thus, in line with recommendations within physiotherapy (35), it should be clear

526 that without appropriate training a coach should not be expected to apply specialized

527 interventions which would be considered to be responsibility of psychology-titled

528 professionals.

529

530 There have been steps forward in defining competence and suggesting who is qualified to

531 educate athletes regarding their psychological skills, however whilst it is the responsibility of

532 the psychologist to offer counselling and attend to clinical issues (1, 32), the use of

533 psychological performance enhancement skills offers a blurred boundary with questions as to

534 who is qualified to administer such skills (53). This is further exacerbated as no guidelines exist

535 as to the application of mental skills within coaching (53).

536

537 The requirement to use ‘psychological skills’ to enhance performance is a role responsibility
538 of strength and conditioning specialists accredited by the NSCA (34) whereas there is little
539 reference made to the use of psychology by other strength and conditioning associations.
540 However, such lack of clarity in the role description is problematic. This is echoed in other
541 disciplines, such as sport coaching, athletic training, and physiotherapy, whereby leading
542 organizations state that particular skill sets should be learned, however do not require the use
543 of skills within the published role responsibilities (53). Conversely, other organizations state
544 that only those licensed as psychologists are able to provide psychological support to their
545 athletes (53). However, this would prohibit the support personnel, for example coaching and
546 rehabilitation professionals, with the greatest contact with the athlete from implementing
547 psychological skills (53).

548

549 Whilst clear definitions must distinguish between psychological skills training, general
550 interpersonal attributes, and clinical skills of counselling, the question is posed as to whether
551 coaches can use mental skills training if they have had no formal training (53). There is an
552 indication that without sufficient training detrimental outcomes may arise and result in negative
553 misconceptions towards psychology. The potential problems associated with untrained
554 professionals approaching mental skills consist of offering a ‘canned’ approach in which
555 individual differences are neglected, having insufficient range of skills to provide suitable
556 interventions, along with the insufficient awareness of the appropriate time to administer
557 interventions, and lacking the pedagogical knowledge to communicate and rationalize the use
558 of such skills with athletes (8, 21, 45). Such harmful outcomes would negatively influence the
559 likelihood of applying psychological strategies. Concerning the increasing demand for
560 psychological skills training (49) and the unrealistic view that solely qualified psychology titled
561 professions provide psychological skills (7), with appropriate role clarification, other support

562 staff could be involved with teaching of psychological skills (53). This is evident within athletic
563 training (4, 6, 16, 50), physiotherapy (2, 3, 20, 23), and sport coaching (18). This would be
564 especially important concerning the financial and logistical barriers to employing a
565 psychologist (24, 37) resulting in athletes being unable to receive the professional services of
566 a sport psychology consultant.

567

568 The present investigation has identified that the strength and conditioning professional is
569 employing psychologically oriented strategies to facilitate athlete growth within, and outside,
570 the strength and conditioning environment. Aside from the work of Tod (46) noting the need
571 for softer skills, detailed exploration has to date focussed only on the perspective of cognitive
572 behavioural interventions to improve performance (38, 39). The present work demonstrates
573 that there is also attention focused towards the humanistic perspective in developing a rounded
574 individual with less emphasis on acute cognitive interventions for performance gain. This is a
575 noteworthy observation emanating from the present work and provides support for a valuable
576 strand of practitioner development focussing on humanistic centred approaches and indeed the
577 associated clarification of ethical boundaries associated in the provision of sport psychology
578 support. Thus it is clear that there must be increased focus on both the appropriate use of
579 psychological strategies and also the positioning of referral networks and educational programs
580 to facilitate the inclusion of psychological interventions within the strength and conditioning
581 domain.

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PRACTICAL APPLICATIONS

The adopted roles of the strength and conditioning coach appear to be shaped by the position they adopt within the coaching organizational structure. Strength and conditioning coaches have frequent contact with the athlete often away from the pressures associated with team selection (36). This results in the facilitation of a positive rapport between athlete and practitioner. Thus, the strength and conditioning coach is in a valuable position to promote the use of psychological skills due to the frequency of athlete contact and generation of rapport. Furthermore the unique positioning dictates that, when working within an organization, clear communication channels are established between the strength and conditioning coach, the sport coaches and appropriate specialized disciplines owing to the importance in accurately relaying information. Strength and conditioning coaches must endeavour to assess role boundaries with their practice and critically examine whether they have the requisite qualifications and understanding of the discipline. Coaches would be well advised to attend continuing professional development events with a focus on the use of psychological intervention from both cognitive behavioural and humanistic standpoints. A key recommendation resulting from the present work is the emphasis of communication skills. With a range of communication skills, including reflective listening, apparent strength and conditioning practitioners would be well advised to upskill in such areas through reflecting on athlete interactions and attending available workshops.

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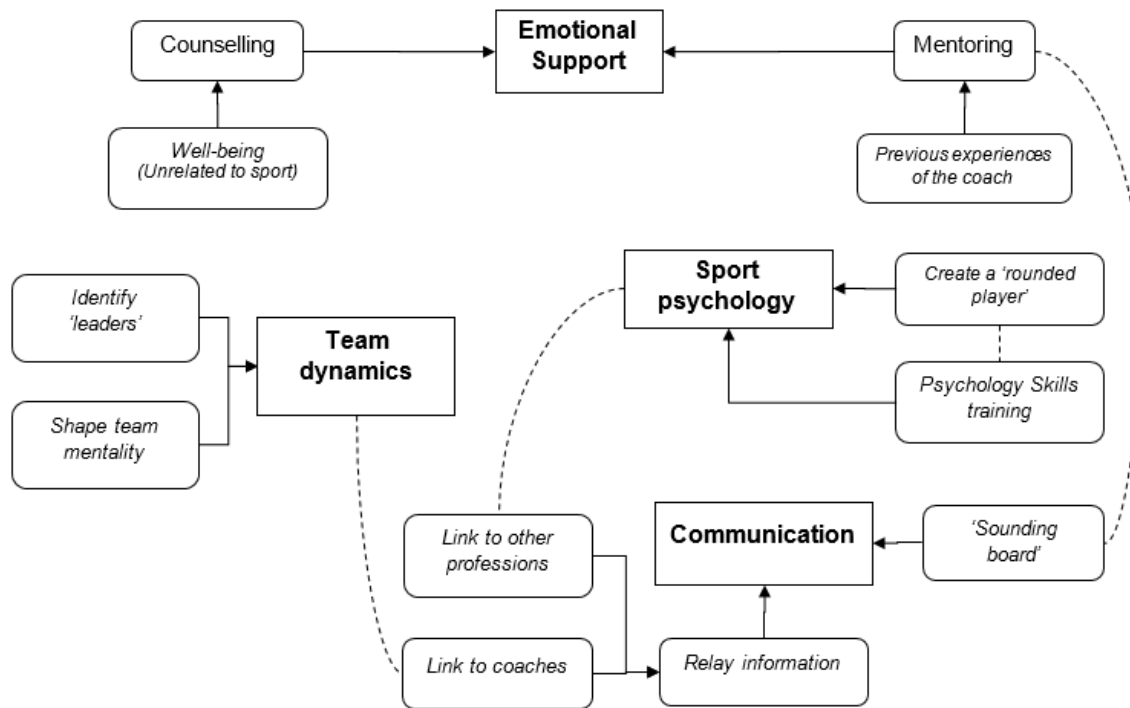


Figure 1. Schematic representation of the complexities of the perceived psychological responsibilities of the Strength and Conditioning specialist.