

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

An interdisciplinary approach to the management of vocal cord dysfunction in an elite female swimmer: A case study

ACCEPTED FOR PUBLICATION

17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35

Abstract

Acute pulmonary disorders are commonplace within the athletic population, with exercise induced bronchoconstriction, and vocal cord dysfunction (VCD) common diagnoses. VCD is a condition that causes the vocal folds to close during inhalation, causing obstruction at the larynx and thereby a severely impaired sporting performance. VCD can be brought on by laryngeal irritants, emotional and psychological stress and asthma. The present case study details the interdisciplinary approach to the treatment of an elite female swimmer with VCD with an intervention programme that lasted nine weeks, instigated by a local general practitioner who chose to engage a sport psychology practitioner due to the sport-specific nature of the psychological stress she experienced. The steps involved in the design of the sport psychology interventions are outlined and the relationship of those interventions to the work of the other specialists is discussed. The nine-week intervention programme was aimed at reducing the swimmer's levels of precompetitive state anxiety and perfectionist tendencies; using a combination of goal-setting, imagery, and cognitive restructuring. During the course of nine weeks, the athlete's levels of competitive state anxiety and perfectionist tendencies reduced over time along with the frequency of VCD occurrence.

Key words: *elite sport, swimming, vocal cord dysfunction, competitive anxiety, perfectionism, adolescent*

36 **Context**

37 This case study presents a reflective account of sport psychology support provided as
38 a component of an interdisciplinary approach to the treatment of vocal cord dysfunction in an
39 elite swimmer. As a British Psychological Society (BPS) chartered psychologist and a British
40 Association of Sport and Exercise Sciences (BASES) accredited sport and exercise scientist
41 part of my role involves providing sport psychology support to individual athletes. For the
42 majority of my clients, the support I provide is aimed at performance enhancement. A small
43 number of clients seek assistance with performance restoration as a result of performance
44 dysfunction driven by subclinical developmental, interpersonal intrapersonal or transitional
45 issues (e.g., Gardner & Moore, 2005). Performance restoration has been described aptly by
46 Portenga, Aoyagi, Balague, Cohen and Harmison as the process of “...helping a performer
47 remove barriers to allow them to return to performing at an already established level” (p.13;
48 2011). The case at the centre of this article describes the lifecycle of a bespoke intervention
49 that formed part of an interdisciplinary approach to supporting an elite swimmer with the
50 management of a performance-limiting condition called vocal cord dysfunction (VCD) for
51 the purposes of performance restoration. At the time of the intervention I had experience of
52 providing sport psychology support to individual elite swimmers for nine years.

53 **Practice Philosophy**

54 The philosophy that drives my practice, is deliberately fluid and evolves carefully to
55 ensure that it is adaptive to the needs of my clients. In the case outlined below, my practice
56 philosophy was based on a cognitive-behavioural approach. I purposefully adopted the
57 cognitive-behavioural approach as my client was presenting with medical diagnosis of VCD,
58 the driver of which was suspected to be precompetitive state anxiety. In instances such as
59 this, there was a definitive problem to solve, and an intervention strategy to design, which

60 suits a practitioner-led cognitive-behavioural approach (see Keegan, 2016). Practitioner-led
61 approaches are characterised by objective measurement rather than subjective judgement, and
62 involves the practitioner designing an empirically-focused intervention with goals for each of
63 the sessions (Keegan, 2016). In addition, the cognitive and behavioural foci work on the
64 assumption that practitioners can help clients change their beliefs in order to bring about a
65 change in their behaviour (Dozois & Beck, 2011). In this case, my choice of practice
66 philosophy was driven by the needs of the client. As I was working within an
67 interdisciplinary team, it was also important to consider how my approach to the case would
68 interact with the philosophical approaches of my fellow team members. Within the
69 interdisciplinary team I was working alongside a general practitioner, a speech and language
70 therapist and a respiratory consultant. Reflecting on the likely differences between us in
71 professional training and practice reminded me that those with a medical education were
72 primarily driven by the biology of the condition being treated. As a sport psychology
73 practitioner however, my approach was less reductionist and more humanistic, with a focus
74 on all aspects of the individual rather than just the biological variables. In my experience,
75 different approaches in practice philosophy can lead to poor communication and
76 misunderstanding when working within a team setting. Rather than attempt to change my
77 own practice philosophy, I explored my understanding of other professionals' perspectives
78 through discussion, and assigned equal value to them in the context of the case (e.g., Drinka
79 & Clark, 2000).

80 **The Case**

81 **Overview**

83 The athlete at the centre of this case study was a 15-year-old female elite swimmer,
84 competing nationally for Great Britain. The athlete had reported problems with her breathing

85 *during* competitive events where she raced in 400 metre freestyle events. The athlete referred
86 to these episodes as "panic attacks". She reported that the "attacks" came on suddenly during
87 the course of her races, and often affected her performance so badly that she was physically
88 unable to complete them (and was forced to retire from the competition early). The athlete's
89 family took her to her local general practitioner who diagnosed exercise induced asthma and
90 prescribed a salbutamol inhaler for use when experiencing the reported 'attacks'. Over time,
91 the family reported that the instances of these 'attacks' increased, and that the salbutamol
92 inhaler was having no effect. After eight weeks of using the salbutamol inhaler to no avail,
93 the family sought the advice of a medical advisor representing British Swimming, the
94 National Governing Body, who recommended that the athlete be tested for VCD.
95 Subsequently, the athlete was referred to a specialist respiratory clinic where she was
96 diagnosed with VCD and passed back to the local general practitioner for the co-ordination of
97 treatment locally.

98 **Reasons for Seeking Support**

99 I was approached by the athlete's general practitioner who set about putting together
100 an interdisciplinary team to treat the athlete. The team working with the athlete included a
101 respiratory consultant, a speech and language therapist and me performing the sport
102 psychology practitioner role. During our first telephone call, the general practitioner took
103 time to explain the athlete's symptoms and VCD diagnosis to me. She discussed how she
104 believed that the psychological and emotional stress suffered by the athlete was as a result of
105 her "nervousness before competition". She went on to describe the other specialists working
106 within the team and their role in treating the athlete, and how she believed sport psychology
107 interventions may help complement the treatment. During the initial conversation, I admitted
108 that I had no awareness of the condition of VCD, or indeed no experience of working as part

109 of a team involving a speech and language therapist or a respiratory consultant. The general
110 practitioner promised that the rest of the treatment team would support me in the design and
111 delivery of any interventions, and signposted me to various sources of information so that I
112 could read in greater detail about the condition and consequently plan my involvement.

113 The team however, was geographically disparate. The respiratory consultant was
114 based at a specialist clinic 150 miles away from the athlete's home and training centre. The
115 general practitioner suggested that to ensure the condition was treated efficiently, the speech
116 and language therapist and I were recruited, in part, for our proximity to the athlete.

117 **Background Information**

118 The general practitioner described VCD to me as an acute pulmonary disorder, which
119 occurs more frequently in the athletic population (e.g., Hanks, Parsons, Benninger, Kaeding,
120 Best, Phillips, & Mastronarde, 2012). She explained that the two most common diagnoses of
121 breathing complaints within the athletic population are exercise-induced bronchoconstriction
122 and VCD. She talked about the main characteristic of VCD as being recurrent episodes of
123 tightening of the vocal cords causing them not to open properly, causing airflow obstruction
124 at the larynx. The other symptoms she listed included dyspnea (difficulty breathing),
125 tightness at the throat, inspiratory stridor (a high-pitched inspiratory sound), dysphonia
126 (difficulty speaking), respiratory distress and choking (Pope & Koenig, 2005; Wilson &
127 Wilson, 2006). Although the case we were discussing potentially involved VCD being
128 brought about by a combination of emotional and psychological stress (e.g., Powell,
129 Karanfilov, Beechler, Treole, Trudeau & Forrest, 2000) and high intensity exercise (e.g.,
130 Rundell & Spiering, 2003), my own research highlighted that there are other possible
131 precursors. These include, laryngeal irritants such as cleaning chemicals, smoke, tile dust,
132 gaseous fumes (Perkner, Fennelly, Balkissoon, Bartelson, Ruttenger & Wood, 1998), and

133 asthma (Rhodes, 2008). When discussing the athlete's experience of her VCD attacks, I was
134 told that she experienced laryngeal spasm which caused her vocal cords to close, resulting in
135 difficulties in inhaling and exhaling. I learned that the gold standard of treatment for VCD is
136 an interdisciplinary approach (e.g., Christopher & Morris, 2010). To this end, the general
137 practitioner described how she was working with the respiratory consultant to identify the
138 precursors to the onset of VCD, to appoint the relevant specialists to assist the athlete in
139 managing their symptoms (e.g., Campainha, Ribeiro, Guimarães, & Lima, 2012). She
140 explained that some of the common approaches to treatment involve biofeedback, speech
141 therapy, psychological therapy, and botulinum toxin (Anbar & Hehir, 2000; Earles, Kerr, &
142 Kellar, 2003; Wilson & Wilson, 2006), however in this case, speech and language therapy
143 and sport psychology support were jointly selected given the case history of the individual
144 athlete.

145 **Ethics**

146 My first contact with the athlete's mother by telephone allowed me to introduce
147 myself and initiate a brief discussion regarding my likely role as part of the treatment team. I
148 organised the first face-to-face meeting with the athlete and her parents to determine the
149 extent of the problem, and to discuss how I could best provide support in conjunction with
150 the rest of the interdisciplinary team. Discussions at the initial meeting included details of the
151 VCD, its effects on the athlete's swimming performance, and the ultimate aims of the
152 athlete's overall treatment. It became clear that the objective of the treatment was to ensure
153 that the athlete could continue to perform at the highest level, whilst being able to control or
154 even eliminate the symptoms of her VCD. The initial meeting also served as an opportunity
155 to discuss ethical issues such as confidentiality, the limits of my competency (given my
156 inexperience in supporting an athlete suffering with VCD), and a general discussion about the

157 types of interventions that might be used. I informed the athlete of the type of data that might
158 be generated during my support which included information from the intake, any assessments
159 or questionnaires used, and notes taken during our meetings. I described how I keep this
160 information secure and their right to request access to that information at any time. We also
161 discussed the length of my support to the athlete, which was dictated by budgetary
162 constraints, limiting me to nine, sixty to ninety minute sessions with the athlete.

163 I anticipated several ethical challenges with this case including confidentiality and the
164 sharing of information, both within the interdisciplinary team, and with the athlete's parents,
165 and the provision of informed consent, given that the athlete was 15 years old at the time of
166 seeking support. As I was working within an interdisciplinary team, I explained to the athlete
167 and her parents that there was an expectation that I would share information with the rest of
168 the team of practitioners treating her for VCD. All parties agreed to consent to these limits of
169 confidentiality, and had confirmed that they had already had similar discussions with the
170 other members of the treatment team.

171 The issue of informed consent to provide psychological support is somewhat of a grey
172 area with adolescent clients (Jackson, Burns, & Richter, 2014). As a 15-year-old, the athlete
173 was below the age of consent, which meant that technically, her parents were the source of
174 the appropriate legal authority (British Psychological Society, 2008). However, having
175 discussed issues of informed consent with the athlete and her parents, we jointly agreed that
176 she was Gillick competent (cf. Griffith, 2016) and therefore had the functional ability to make
177 an informed decision regarding her treatment. The athlete was therefore the individual who
178 provided informed consent for psychological support. The final ethical challenge to overcome
179 was the logistical arrangements for delivery of support to the athlete. I asked her whether she
180 would prefer to see me with her parents in attendance, on her own, or a combination of both.

181 She said she was happy to attend her appointments alongside her parents, who were
182 supportive of their daughter gaining control over her condition. They were interested in
183 learning about the psychological skills I had mentioned that may be part of the intervention.
184 However, I reminded the athlete that she could change her mind about her parents
185 accompanying her to the sessions at any point in the future, should a situation arise where she
186 wanted to speak to me without them present.

187 **Needs Analysis and Justification**

188 My main role within the interdisciplinary team was to help the athlete achieve her aim
189 of being able to control or eliminate the symptoms of her VCD, by providing psychological
190 skills interventions to manage the precompetitive state anxiety that the general practitioner
191 suspected was the cause of this condition. To achieve this very specific outcome, when I was
192 planning for the initial meeting, I determined that my "go to" tool for intake and needs
193 analysis - the performance profile - was unlikely to meet the objectives of the referral. Not
194 least because performance profiling is often associated with work to *enhance* performance,
195 whereas the client at the centre of this case was concerned with *restoring* her athletic
196 performance. The additional considerations for intake and needs analysis related to the
197 individual's age: at 15 she was an adolescent, and therefore her family were also keen to get
198 involved in the meeting to provide additional information and to ensure that she could fully
199 communicate the challenges associated with her VCD. Given the initial details I had received
200 about the case, I decided to use the sport-clinical intake protocol (Taylor & Schneider, 1992)
201 with both the athlete (one-to-one) and with her parents to elicit the information needed to
202 gather sufficient detail about the needs of this individual case (Gardner & Moore, 2006;
203 Keegan, 2016).

204 **Client Meetings**

205 I chose to use the sport-clinical intake protocol (Taylor & Schneider, 1992) with the
206 athlete in a one-to-one, face-to-face meeting to gather information about her functioning (or
207 non-functioning) that may have been relevant to the planning, implementing, or evaluating of
208 treatment (e.g., Hughes & Baker, 1990). As the interviewer, I asked questions tailored to the
209 client to ascertain useful background information, but also to 'break the ice' (cf. Taylor &
210 Schneider, 1992). Following the protocol, I asked several semi-structured questions relating
211 to the individual's activities and interests, school and homework, friendships and peer
212 relations, home situation and family, relations, self-awareness and feelings, adolescent issues,
213 alcohol and drugs, dating and romances. I then asked behaviour-specific questions in an order
214 aimed at gathering data on the client's view of her VCD and how it affected her athletic
215 performance. During our discussions, the athlete revealed that she was struggling with
216 precompetitive state anxiety to such a degree that she reported often thinking of ways to
217 avoid competing. Furthermore, she suggested that her attacks of VCD left her embarrassed,
218 scared and with a distinct "feeling of failure". It was also evident from our discussions that
219 the athlete had a propensity to exhibit maladaptive perfectionist tendencies via comments
220 such as "If I don't win [my race], I will lose my place on the talent programme", "My parents
221 and coach expect me to win..." and "I think I'm a failure if I don't beat [name of swimmer] in
222 my race". Although there is no single definition of perfectionism, it is generally understood to
223 be a "multidimensional dispositional achievement orientation" which often involves the
224 flawless attainment of high performance standards (Gilman & Ashby, 2006; Sapieja, Dunn,
225 & Holt, 2011, p.21). Specifically, the athlete appeared to have high levels of self-orientated
226 perfectionism, where she was demanding absolute perfection from her own performance in
227 combination with socially-orientated perfectionism where she perceived her parents and her
228 coach expected flawless performances from her (e.g., Flett & Hewitt, 2005). Towards the

229 end of the initial session, the athlete confirmed that she would be happy to involve her
230 parents in the following aspect of the meeting, on the basis that their input would be valuable
231 and may bring a distinct perspective to her case.

232 Regardless of the careful selection and justification of this method of assessment,
233 there is no 'gold standard' for conducting needs analyses with adolescents in this context.
234 Other assessment methods were used that complemented the sport-clinical intake protocol
235 (Taylor & Schneider, 1992). These included talking to the client's parents who were an
236 integral part of the needs analysis process, and the use of self-report measures (see below).
237 However, other means of gathering information was not undertaken due to time constraints
238 this included direct observation (prior to the intervention) and talking to the athlete's coach.

239 **Parental Meeting**

240 My meeting also involved a session with the athlete and her parents where I asked the
241 parents about their perspective on their daughter's social functioning, school functioning,
242 medical and developmental history, family relations and home situation and her strengths and
243 interests. Additionally, I asked them to comment on their view of their daughter's VCD, when
244 it manifests and how it is dealt with. The parents mirrored their daughter's description of her
245 background, attacks of VCD, tendency for perfectionism and how that may be making her
246 precompetitive state anxiety worse. They reiterated her frustration at the difficulty in
247 obtaining an accurate diagnosis.

248 **Summary of Initial Meetings**

249 In summary, the sport-clinical intake protocol (Taylor & Schneider, 1992) with both
250 the athlete and her parents provided consistent information and indicated that the athlete may
251 be showing perfectionist tendencies, and that her pre-competitive state anxiety levels were
252 high enough to lead her to consider not attending important swimming galas on occasions. To

253 investigate the findings from the sport-clinical intake further, I set about obtaining objective
254 data on levels of perfectionism and precompetitive state anxiety. At the end of the first
255 meeting, I asked the athlete to complete two questionnaires to assess baseline (pre-
256 intervention) levels of perfectionism and precompetitive state anxiety. I handed her the Child
257 and Adolescent Perfectionism Scale (CAPS; Flett, Hewitt, Boucher, Davidson, & Munro,
258 1997) and the Competitive State Anxiety Inventory 2C (CSAI-2C; Stadulis, MacCraken,
259 Eidson, & Severance, 2009) with the instruction to complete the CSAI-2C 10 minutes before
260 her next competitive race (e.g., Polman, Rowcliffe, Borkoles, & Levy, 2007), and the CAPS
261 at any convenient time. The collection of this data was facilitated by her parents and returned
262 to me via email in advance of the second session.

263 My intention behind the use of these measures was to be able to obtain a baseline
264 score and a post-intervention score in order to detect any change in these constructs that may
265 have been playing an important role in the onset of VCD 'attacks'. These specific measures
266 were chosen as they had both been validated for use in the adolescent population. The 22-
267 item CAPS measures self-oriented and socially prescribed perfectionism in youths and has
268 been used extensively in this population (e.g., Essau, Leung, Conradt, Cheng, & Wong, 2008;
269 Nock & Prinstein, 2005; Stornelli, Flett, & Hewitt, 2009). The self-oriented perfectionism
270 subscale contains 12 items (e.g., “When I do something, it has to be perfect” “I get upset if
271 there is even one mistake in my performance”) and the socially prescribed perfectionism
272 subscale contains 10 items (e.g., “My family expects me to be perfect”). Responses are
273 measured on a 5-point Likert scale ranging from 1 (false—not at all true of me) to 5 (very
274 true of me). A selected number of items were re-worded to make them relevant to the
275 sporting environment (e.g., “My teachers expect my work to be perfect” became “My coach
276 expects my performance to be perfect”). The CSAI-2C is a multidimensional measure of

277 cognitive and somatic state anxiety and self-confidence in sport performance settings.
278 Participants rate each of the 15 items (e.g., “my body feels tense”; “I’m concerned that I’ll
279 swim poorly today”; “I’m confident that I’ll swim well today”) on a 4-point Likert scale
280 ranging from 1 (not at all) to 4 (very much).

281 Finally, it is important to note that whilst perfectionist tendencies and pre-competitive
282 state anxiety can be detrimental to performance in their own right, there are links between the
283 two constructs (Deffenbacher, Zwemer, Whisman, Hill, & Sloan, 1986; Juster, Heimberg,
284 Frost, Holt, Mattia & Faccenda, 1996). Individuals with high levels of perfectionist
285 tendencies are often less satisfied with their performance (Frost & Henderson, 1991),
286 experience higher levels of stress and are more likely to be persistently fear failure (Flett,
287 Hewitt, Blankstein, & Mosher, 1991; Frost, Marten, Lahart, & Rosenblate, 1990). The merits
288 of addressing both issues at the same time were therefore of fundamental importance to the
289 success of the intervention.

290 **Case Formulation**

291 The case formulation was informed by the comprehensive assessment of the athlete,
292 gathering data direct from her self-report assessments, her sport-clinical intake protocol, the
293 interviewing of her parents and the data provided to me from the other practitioners within
294 the interdisciplinary team. The assessment of this combined data led to an understanding that
295 the athlete’s high levels of perfectionism (dispositional variable) and pre-competitive anxiety
296 (environmental trigger) were causing emotional and psychological stress which in turn was
297 contributing to, or causing VCD attacks. While the other members of the treatment team were
298 tackling the biology of VCD, it was my role to address the psychosocial processes that led to
299 the condition. The objective of the interdisciplinary treatment team was to help the individual
300 restore her performance in 400m freestyle races to her last recorded personal best time in

301 order that she may still be considered for selection for Team GB. The planning of the
302 interventions to bring about performance restoration is detailed in the following paragraphs:

303 **Choosing and Planning the Intervention**

304 The selection and planning of the first intervention for this athlete was undertaken in
305 advance of the second meeting “a priori” (Keegan, 2016, p.155). That is to say I based my
306 decision-making on the information I obtained from the sport-clinical intake, and also from
307 the scored CAPS and CSAI-2C questionnaires returned by the athlete's parents. When
308 selecting and planning the interventions to deliver, I opted for a practitioner-led, prescriptive
309 intervention based on a process of systematic decision-making (cf. Keegan, 2016) that
310 involved the careful analysis of the information obtained during the intake process. I designed
311 the first of the interventions to target the athlete's high levels of perfectionist tendencies.
312 Having researched the evidence associated with supporting adolescent clients to reduce their
313 levels of perfectionism, I drafted a plan for the first intervention. My plan was fourfold: (1)
314 To help the athlete identify that their perfectionist tendencies were problematic to (in this
315 case) their athletic performance (e.g., Stoebera, Otto, Pescheck, & Becker, 2007), (2) To
316 facilitate a shift in measures of self-evaluation, (3) To use cognitive restructuring to deal with
317 cognitive inaccuracies such as excessively high standards and highly critical self-evaluation
318 (Kearns, Forbes, & Gardiner, 2007) and (4) To help the athlete develop goals for change (e.g.
319 Shafran, Cooper, & Fairburn, 2002). I chose to include awareness-raising and goal setting
320 components of this plan to help the adolescent athlete take personal control of her
321 interventions and to increase the likelihood of her acceptance of and engagement in the
322 intervention (e.g., Dixon, Holoshitz, & Nossel, 2016).

323 The second focus of my intervention was aimed at helping the athlete manage her
324 precompetitive state anxiety. Although the breadth of sport psychology interventions for the

325 management of precompetitive state anxiety is well-documented, understanding the personal
326 and sport-specific variables associated with the individual's competitive state anxiety is of
327 fundamental importance to ensure that the interventions proposed are appropriate for the
328 athlete and for the sport (Mellalieu, Neil, Hanton & Fletcher, 2009). I therefore anticipated
329 that more time was needed with the athlete to further understand her personal sources of
330 precompetitive state anxiety to determine which particular intervention(s) was/were most
331 likely to be successful. Due to the limited time in between the first and second meeting, I
332 discussed my planned interventions with the respiratory consultant, speech and language
333 therapist and general practitioner four days before the next appointment in order to ensure
334 that the support I was planning on providing was complementing the approach of the other
335 specialists.

336 The second meeting with the athlete was dedicated to developing a more in-depth
337 understanding of the manifestations of her competitive state anxiety. During this session, the
338 athlete revealed that she experienced high levels of "worry" and somatic anxiety up to a day
339 before a competition which led her to examine ways in which she might avoid competing.
340 She also confirmed that her somatic symptoms were mostly centred on her upper airways
341 where she reported experiencing a dry mouth, coughing, and tightness in drawing breath.
342 Overall, she suggested that these symptoms were mostly present when she was competing
343 nationally, but also when there was a perceived expectation from parents and coaches that she
344 should beat a certain opponent (even at lower level galas). The somatic anxiety symptoms
345 reported were consistent with those of VCD (e.g., Banez & Culbert, 2005), and therefore, I
346 anticipated, would be likely to respond to relaxation interventions such as progressive
347 muscular relaxation and diaphragmatic breathing techniques (Banez & Culbert, 2005).
348 Consideration of appropriate interventions to tackle the "worry" or cognitive component of

349 competitive state anxiety included cognitive restructuring, coping support, goal-setting,
350 imagery, rational-emotive therapy, and self-talk (e.g., McCarthy, Jones, Harwood, &
351 Davenport, 2010; Neil, Mellalieu, & Hanton, 2006; Rumbold, Fletcher & Daniels, 2012). I
352 decided that the goal-setting intervention already proposed to address the perfectionism
353 construct would be extended to attempt to reduce the cognitive component of precompetitive
354 state anxiety, and would be specifically designed to help the athlete *and her parents* shift
355 their focus from the outcome of races (win versus loss) to the process (start, stroke rate, turns,
356 breathing, catch etc). In addition to the goal-setting intervention, I planned to teach the athlete
357 how to use motivational-general affective imagery (e.g., Hall, Mack, & Paivio, 1998) to help
358 manage her emotions and arousal levels that underpinned her precompetitive anxiety (e.g.,
359 Cumming & Williams, 2012). During the intake process, the athlete admitted that her use of
360 psychological skills was poor, and that she would be open to learning how to use appropriate
361 techniques. As the athlete was not an experienced user of imagery, I helped her develop an
362 initial imagery script (session 6) using the PETTLEP model (Holmes & Collins, 2001),
363 employing only sights, feelings and sound modalities to begin with. I followed the
364 recommendations of Orlick (2007) and Williams, Cooley, Newell, Weibull and Cumming
365 (2013) for shorter, higher quality imagery sessions that could gradually be increased in length
366 as the athlete becomes more accustomed to imagery. Following the guidance provided by
367 Williams et al., (2013), the imagery script contained content designed to encourage the
368 facilitative interpretation of precompetitive anxiety. For example: “You have experienced
369 these feelings in the past and have performed well ... therefore you know that you are ready to
370 perform well again today.” The athlete practised using the short imagery script and provided
371 feedback on how it should evolve. The script was refined in session 7 and practiced within
372 and outside of the remaining scheduled sessions.

373 Prior to the commencement of the delivery of the planned sessions with the athlete,
 374 the final plan was discussed via conference call with the rest of the interdisciplinary medical
 375 team. It was at this stage that the speech and language therapist confirmed that part of her
 376 remit was to work with the athlete to develop awareness of tension in the respiratory system
 377 in order to adapt breathing behaviours before becoming symptomatic. Progressive muscular
 378 relaxation was an exercise that the speech and language therapist was proposing to use.
 379 Furthermore, the focus on gaining control over breathing was ultimately designed with a
 380 relaxation effect in mind, and hence, I removed this from my planned sessions. During this
 381 conference call, I took the opportunity to further clarify where each team member's
 382 responsibilities existed to reduce the likelihood of a further conflict or duplication of effort.
 383 Table 1 summarises the division of responsibility of each team member treating the athlete at
 384 the centre of this case:

385 Table 1

386 *Division of responsibility of the team treating the client with VCD*

	General Practitioner	Respiratory Consultant	Speech & Language Therapist	Sport Psychology Practitioner
Primary role	First point of contact locally for client.	Leads the examinations for VCD (nasendoscopy, spirometry, x-rays) and reviews medication regime (if appropriate).	Teaches client techniques to relax the upper airway and control the laryngeal area utilising techniques commonly used in voice therapy.	Responsible for identifying emotional and psychological stressors causing VCD.
Additional role	Co-ordinates the care required from Respiratory Consultant, speech and language	Provides VCD diagnosis.	Helps educate the client in identifying and reducing excessive tension associated with respiration.	Designs interventions to help athlete to mitigate and cope with the effect of the identified stressors.

therapist & sport
psychology
practitioner

Additional role	Can prescribe medication (if required).	Overview of client from a respiratory perspective.	Helps client adapt breathing behaviour.	Helps athlete challenge and adapt feelings, thoughts and behaviours.
-----------------	---	--	---	--

387

388 The meetings I had with the athlete lasted between, an hour and an hour and a half,
389 and were scheduled on a weekly basis at various locations according to the needs of the
390 athlete. The sessions were scheduled in this manner to ensure sufficient momentum, with a
391 fortnightly update with the rest of the treatment team. The team updates were conducted
392 using conference calls or emails depending on the availability of the other members. With the
393 athlete's permission, I updated the treatment team on the work we were doing together, and
394 her reported progress. They provided the same.

395 Table 2 summarises the nine-week sport psychology-focused intervention programme
396 designed to complement the interdisciplinary approach to the treatment of the athlete's VCD,
397 along with the frequency of team updates:

398 Table 2

399 *Intervention plan*

400

Sessions	1	2	3	4	5	6	7	8	9
Perfectionist tendencies	Initial meeting & needs analysis	Examples of where perfectionist tendencies were harmful to performance	Examples of where perfectionist tendencies were harmful to performance	Exploring other ways of evaluating the self	Exploring other ways of evaluating the self	Dealing with cognitive inaccuracies	Dealing with cognitive inaccuracies	Goal setting for behaviour change	Goal setting for behaviour change
Competitive state anxiety		Further information gathering	Discussion re experiences of precompetitive anxiety	Shifting evaluation from outcome to process	Shifting evaluation from outcome to process	Developing imagery scripts	Refining imagery scripts	Practicing using imagery	Practicing using imagery

401 *Arrows indicate the timing of team updates

402 At the end of the 9-week programme, the athlete was asked to complete the CSAI-2C (at her
 403 next competition) and the CAPS to determine whether there had been any change in levels of
 404 precompetitive state anxiety or perfectionist tendencies. To ensure consistency, the pre- and
 405 post-intervention questionnaires were completed under similar circumstances to the pre-
 406 intervention questionnaires. For the post-intervention CSAI-2C, she completed this ten
 407 minutes before her first competition after the 9-week intervention period. Her parents
 408 scanned and returned both questionnaires to me via email.

409 **Evaluation of Intervention Efficacy**

410 In evaluating this intervention in the case of the 15-year-old swimmer with VCD,
 411 there were several factors to examine. The first, quantitative outcome measure was the
 412 difference in the CSAI-2 and CAPS scores after nine weeks of intervention (see Table 3 & 4):

413 Table 3

414 *Pre- and post-intervention & normative CAPS scores*

	Pre-intervention	Post-intervention	Difference	Normative data	Difference post - intervention
Self-orientated	50	37	-13	35.57	+1.43
Socially prescribed	35	28	-7	25.07	+2.93

415

416 Table 4

417 *Pre- and post-intervention CSAI-2C scores*

	Pre-intervention	Post-intervention	Difference
Somatic anxiety	18	12	-6
Cognitive anxiety	17	12	-5
Self-confidence	5	10	+5

418

419 The tables above show a reduction across both subscales of the CAPS and reductions
420 across all three subscales of the CSAI-2C, indicating that the individual's levels of
421 perfectionist tendencies and precompetitive anxiety had reduced over nine weeks. In
422 comparing the athlete's CAPS post-intervention scores with normative data for her age group
423 (e.g., Flett et al., 1997; Smith, Smoll, Cumming, & Grossbard, 2006), both her levels of
424 perfectionist tendencies are still slightly higher than the average, although the normative data
425 provided does not reflect an elite athletic population. In summary, the reduction in scores
426 across both questionnaires indicated a significant improvement. The athlete suggested that
427 she was committed to continuing to use psychological skills in her daily training regime to
428 reduce her perfectionist tendencies and precompetitive anxiety levels further. In addition,
429 first-hand observation of the athlete's performances towards the end of the intervention
430 indicated that there was a change in behaviour and body language during competition,
431 compared with the accounts provided by the athlete's parents, pre-intervention. The athlete
432 appeared to be more confident, and to be involved in more preparation in advance of her
433 event(s) than previously described. In addition, the athlete reported consciously revisiting her
434 goals prior to her events, to employing imagery before her race(s) and instigating breathing
435 exercises taught to her by the speech and language therapist. She explained how she felt more
436 prepared, and more in control of her performance. Ultimately, through the interventions, the
437 aim was to ensure that the athlete could continue to compete at the highest level whilst
438 controlling any symptoms of VCD and therefore no outcome goal was set that linked to race
439 times or personal bests. The athlete, her coach and her parents all reported that her
440 performance towards the end of the nine weeks of intervention had returned to her pre-VCD
441 levels.

442 Verbal feedback from the general practitioner, speech and language therapist and
443 respiratory consultant on a conference call at the end of the nine-week sport psychology
444 intervention suggested that they were happy with the athlete's progress. The general
445 practitioner explained how she considered the interdisciplinary approach to treating the VCD
446 had been successful. We reflected on a novel approach to the treatment of a challenging case,
447 with the general practitioner and the respiratory consultant suggesting that for similar cases in
448 the future, the sport psychology support would be sought earlier for the client/patient should
449 budgets allow. In addition, both the athlete and her parents were pleased with the progress
450 made in the nine weeks since I had been a part of the treatment team. As my support to the
451 athlete came to an end, she had managed to compete in a 400m freestyle race at a major
452 competition, posting a time close to her personal best. Although she was still experiencing
453 VCD, the 'attacks' were much less frequent, and when they did occur, she reported feeling
454 more able to control them.

455 **Challenges**

456 One of the most significant barriers to further sport psychology assistance beyond the
457 nine weeks of intervention was cost. The respiratory consultant, speech and language
458 therapist and general practitioner were free services at the point of use under the national
459 health service for citizens of the United Kingdom. Sport psychology services are not covered
460 by the national health service, or in the case of this athlete, her national governing body, and
461 were therefore funded by the athlete's parents. Nevertheless, the purpose of the psychology
462 intervention plan was to help the individual athlete recognise, manage and control
463 perfectionist tendencies and precompetitive state anxiety which was believed to be precursors
464 of her VCD attacks during competition. Whilst to a degree, this was accomplished, on

465 reflection further sessions may have helped the athlete develop, practice and adapt these
466 techniques for further benefit.

467 An additional challenge related to the logistics of the fortnightly conference call
468 meetings with geographically disparate treatment team. It was very difficult to schedule
469 conference calls to suit everyone's availability, and as such these meetings were often very
470 brief, or scheduled at unsociable hours. Having said that, our communications were
471 supplemented by email correspondence, especially when I needed further advice or support,
472 or where an update was warranted outside of our scheduled meetings.

473 **Discussion of applied, theoretical and research implications**

474 The aim of this case study was to highlight the role of the sport psychology
475 practitioner, as part of an interdisciplinary team of specialists helping an athlete control or
476 eliminate the symptoms of her VCD as a means of restoring her competitive swimming
477 performances. In support of the BPS' approach to the training of sport psychologists, an
478 exposure to a breadth of roles that can be performed by people practicing the discipline of
479 sport psychology is fundamental for professional development (British Psychological
480 Society, 2011). I recommend gaining experience of delivering sport psychology support as
481 part of an interdisciplinary team of individuals supporting an athlete. Indeed, future research
482 would benefit from investigating how the function of interdisciplinary teams may be
483 enhanced. Themes such as leadership, communication, the maintenance of confidentiality,
484 working within and across professional, ethical, geographical, organisational and cultural
485 boundaries all provide worthwhile avenues of investigation.

486 **Recommendations to practitioners and students**

487 On reflection of my experiences of working as part of an interdisciplinary team to
488 support an athlete with VCD, I make the following recommendations: Firstly, it is important

489 for practitioners to have an awareness of VCD as psychophysiological condition that may be
490 responsible for performance decrements in sport. Being familiar with this condition, may help
491 expedite accurate diagnosis and referrals for athletes with unexplained breathing complaints.
492 Secondly, practitioners may benefit from using the sport-clinical intake protocol (Taylor &
493 Schneider, 1992) as a means of needs analysis when presenting with unconventional cases,
494 especially when working with athletes to aid performance restoration or to tackle
495 performance dysfunction (e.g., Gardner & Moore, 2005). The sport-clinical intake protocol
496 can help obtain adequate information about the athlete to assist in the preparation of an
497 effective intervention plan or programme (e.g., Taylor & Schneider, 1992). Finally, students
498 and practitioners may benefit from understanding that the roles of specialists working within
499 an interdisciplinary team often overlap, and that careful negotiation of roles and
500 responsibilities will ensure that the athlete is fully supported, without a duplication of effort,
501 or indeed conflicting messages. In such situations, communication is key.

502 **Reflections**

503 My reflections on this case will follow the structure recommended by Gibbs (1998),
504 by outlining a description of what happened, my reactions, an evaluation, analysis,
505 conclusion and action plan. This was my first experience of playing a key role in an
506 interdisciplinary team to help support an elite athlete manage a condition such as VCD. At
507 the time, I had little experience of working alongside general practitioners, speech and
508 language therapist and respiratory consultants, and was unaware of what to expect, and how
509 my involvement would effectively compliment the work undertaken by the other specialists.
510 When I first became involved in this case, I lacked a detailed knowledge of VCD and the
511 manner in which it could impact on athletic performance. As such, I spent a long time talking
512 to the general practitioner and the respiratory consultant about their work with individuals

513 suffering from this condition from diagnosis, all the way through to how individuals achieved
514 the successful management of their condition. They recommended several useful articles that
515 I could read to enhance my knowledge of the condition, and sent me copies of presentations
516 prepared and case studies of individuals previously treated. In addition, the general
517 practitioner specifically supported the development of my understanding of the condition, and
518 the likely links with precompetitive anxiety. Although at the time of initiating my
519 involvement in this case, I worked hard to gather information on VCD, I was clear at the
520 initial meeting with the client and her parents that this was my first experience of dealing
521 with such a case. They were happy to proceed with my support on this basis, and were aware
522 of the support available to me from the other practitioners on the interdisciplinary team.

523 One of the major challenges for me as a sport psychology practitioner was to decide
524 how I would approach this case given that I was about to commence work with an athlete
525 who was hoping to merely *restore* their athletic performance. The majority of athletes I work
526 with are looking to enhance their performance, and as such, my “go-to” tool for intake and
527 needs analysis - the performance profile - was unlikely to meet the objectives of the referral.
528 This is where the flexibility of the sport-clinical intake helped. This approach to needs
529 analysis and client intake helped me discover the athlete's perfectionist tendencies, which
530 were in part, driving her precompetitive anxiety, which happened to be a fundamental issue
531 that was contributing to her VCD.

532 The design of the intervention was constrained by the limited amount of time I had to
533 work with the athlete due to funding constraints. The limited time available focused the
534 intervention, and potentially the athlete and her parents' engagement in the sessions. In my
535 opinion, by fully involving the parents in the sessions, they were able to reinforce the advice
536 delivered, and encourage the use of psychological skills on a more regular basis in between

537 sessions (e.g., Roberts, 2015). In hindsight however, more work with the parents of the
538 athlete may have been beneficial since maladaptive perfectionism in children and adolescents
539 is linked to family environments where love and approval is conditional on performance, or
540 where feedback is withheld from the child unless particular standards are met (Sapieja et al.,
541 2011). In conclusion, the 9-week intervention programme which formed part of an
542 interdisciplinary treatment regime for an elite swimmer with VCD was considered effective,
543 and involved the learning of new skills that enhanced my effectiveness as a practitioner.
544 Given the lessons I have learned from this case, I am aiming to extend my practice to
545 incorporate psychological support to athletes at all levels with a VCD diagnosis.

546

547

References

548 Anbar, R. D. & Hehir, D. A. (2000). Hypnosis as a diagnostic modality for vocal cord
549 dysfunction. *Pediatrics*, 107, e21.1 - e21.4.

550 Banez, G. A., & Culbert, T. P. (2005). An integrative approach to vocal cord dysfunction in
551 young athletes. *Biofeedback*, 33, 54-57.

552 British Psychological Society (2008). *Generic professional practice guidelines*. Leicester:
553 BPS.

554 British Psychological Society (2011). *Qualification in sport and exercise psychology* (Stage
555 2). Leicester: BPS.

556 Campaignha, S., Ribeiro, C., Guimarães, M., & Lima, R. (2012). Vocal cord dysfunction: A
557 frequently forgotten entity. *Case Reports in Pulmonology*, 1 - 4. doi:
558 10.1155/2012/52549.

- 559 Christopher, K. L., & Morris, M. J. (2010). Vocal cord dysfunction, paradoxical vocal cord
560 motion or laryngomalacia? Our understanding requires an interdisciplinary approach.
561 *Otolaryngologic Clinics of North America*, *43*, 43-66. doi: 10.1016/j.otc.2009.12.002
- 562 Cumming, J., & Williams, S. E. (2012). The role of imagery in performance. In S. Murphy
563 (Ed.), *Handbook of sport and performance psychology* (pp. 213–232). New York,
564 NY: Oxford University Press.
- 565 Deffenbacher, J. L., Zwemer, W. A., Whisman, M. A., Hill, R. A., & Sloan, R. D. (1986).
566 Irrational beliefs and anxiety. *Cognitive Therapy and Research*, *10*, 281-291.
- 567 Dixon, L. B., Holoshitz, Y., & Nossel, I. (2016). Treatment engagement of individuals
568 experiencing mental illness: review and update. *World Psychiatry*, *15*, 13-20. doi:
569 10.1002/wps.20306.
- 570 Dozois, D. J., & Beck, A. T. (2011). Cognitive therapy. In J.D. Herbert & E. M. Forman
571 (Eds.), *Acceptance and mindfulness in cognitive behavior therapy: Understanding*
572 *and applying the new therapies*. (pp.26-56). Wiley: Chichester.
- 573 Drinka, T. & Clark. P. G. (2000). *Health care team work: Interdisciplinary practice and*
574 *teaching*. Westport, CT US: Auburn House.
- 575 Earles, J., Kerr, B., Kellar, M. (2003). Psychophysiologic treatment of vocal cord
576 dysfunction. *Annals of Allergy, Asthma, and Immunology*, *90*, 669-671.
- 577 Essau, C. A., Leung, P. W. L., Conradt, J., Cheng, H., & Wong, T. (2008). Anxiety
578 symptoms in Chinese and German adolescents: Their relationship with early learning
579 experiences, perfectionism, and learning motivation. *Depression and Anxiety*, *25*,
580 801-810.

- 581 Flett, G. L., Hewitt, P. L. (2005). The perils of perfectionism in sport and exercise. *Current*
582 *Directions in Psychological Science, 14*, 14-18.
- 583 Flett, G. L., Hewitt, P. L., Blankstein, K. R., & Mosher, S. W. (1991). Perfectionism,
584 selfactualization, and personality adjustment. *Journal of Social Behavior &*
585 *Personality, 6*, 147-160.
- 586 Flett, G. L., Hewitt, P. L., Boucher, D., Davidson, L., & Munro, Y. (1997). The Child-
587 Adolescent Perfectionism Scale: Development, validation, and association with
588 adjustment. Unpublished manuscript.
- 589 Frost, R. O., & Henderson, K. J. (1991). Perfectionism and reactions to athletic
590 competition. *Journal of Sport and Exercise Psychology, 13*, 323-335.
- 591 Frost, R. O., Lahart, C. M., & Rosenblate, R. (1991). The development of perfectionism:
592 A study of daughters and their parents. *Cognitive Therapy and Research, 15*, 469-489.
- 593 Gardner, F. L., & Moore, Z. E. (2005). Using a case formulation approach in sport
594 psychology consulting. *The Sport Psychologist, 19*, 430-445.
- 595 Gardner, F. L., & Moore, Z. E. (2006). *Clinical sport psychology*. Champaign, IL: Human
596 Kinetics.
- 597 Gibbs, G. (1988). *Learning by doing: A guide to teaching and learning methods*. Further
598 Education Unit. Oxford: Oxford Polytechnic.
- 599 Gilman, R., & Ashby, J.S. (2006). Perfectionism. In G.G. Bear & K.M. Minke (Eds.),
600 *Children's needs III: Development, prevention, and intervention* (pp. 303-312).
601 Bethesda, MD: National Association of School Psychologists.
- 602 Griffith, R. (2016). What is Gillick competence? *Human Vaccines and Immunotherapeutics,*
603 *12*, 244-247. doi: 10.1080/21645515.2015.1091548.

604

605 Hanks, C. D., Parsons, J., Benninger, C., Kaeding, C., Best, T. M., Phillips, G., &
606 Mastronarde, J. G. (2012). Etiology of dyspnea in elite and recreational athletes. *The*
607 *Physician and Sports Medicine*, 40, 28-33. doi: 10.3810/psm.2012.05.1962.

608 Hall, C., Mack, D. E., & Paivio, A. (1998). Imagery use by athletes: Development of the
609 sport imagery questionnaire. *International Journal of Sport Psychology*, 29, 73–89.

610 Holmes, P. S., & Collins, D. J. (2001). The PETTLEP approach to motor imagery: A
611 functional equivalence model for sport psychologists. *Journal of Applied Sport*
612 *Psychology*, 13, 60–83.

613 Hughes, J. N. & Baker, D. B. 1990: *The clinical child interview*. New York: Guildford Press.

614 Jackson, M. K., Burns, K. K., & Richter, M. S. (2014). Confidentiality and treatment
615 decisions of minor clients: a health professional's dilemma & policy maker's
616 challenge. *SpringerPlus*, 3, 320. doi: 10.1186/2193-1801-3-320.

617 Juster, H. R, Heimberg, R. G., Frost, R. O., Holt, C. S., Mattia, J. I. & Faccenda, K. (1996).
618 Social phobia and perfectionism. *Personality and Individual Differences*, 21, 403–
619 410.

620 Keegan, R. J. (2016). *Being a sport psychologist*. Palgrave: London.

621 Kearns, H., Forbes, A., & Gardiner, M. (2007). A cognitive behavioural coaching
622 intervention for the treatment of perfectionism and self-handicapping in a nonclinical
623 population. *Behaviour Change*, 24, 157-172.

- 624 McCarthy, P. J., Jones, M. V., Harwood, C. G., & Davenport, L. (2010). Using goal setting to
625 enhance positive affect among junior multievent athletes. *Journal of Clinical Sport*
626 *Psychology, 4*, 53-68. doi: 10.1123/jcsp.4.1.53.
- 627 Mellalieu, S. D., Neil, R., Hanton, S., Fletcher, D. (2009) Competition stress in sport
628 performers: Stressors experienced in the competition environment. *Journal of Sports*
629 *Sciences, 27*, 729-744. doi: 10.1080/02640410902889834.
- 630 Neil, R., Mellalieu, S., & Hanton, S. (2006). Psychological skills usage and the competitive
631 anxiety response as a function of skill level in rugby union. *Journal of Sports Science*
632 *& Medicine, 5*, 415-23.
- 633 Nock, M. K., & Prinstein, M. J. (2005). Clinical features and behavioral functions of
634 adolescent self-mutilation. *Journal of Abnormal Psychology, 114*, 140-146.
- 635 Orlick, T. (2007). *In pursuit of excellence* (4th ed.). Champaign, IL: Human Kinetics.
- 636 Perkner, J., Fennelly, K., Balkissoon, R., Bartelson, B., Ruttenger, A., & Wood, R., (1998).
637 Irritant-associated vocal cord dysfunction. *Journal of Occupational and*
638 *Environmental Medicine, 40*, 136–143.
- 639 Polman, R., Rowcliffe, N., Borkoles, E., & Levy, A. (2007). Precompetitive state anxiety,
640 objective and subjective performance, and causal attributions in competitive
641 swimmers. *Pediatric Exercise Science, 19*, 39-50.
- 642 Pope, J., & Koenig, S. (2005). Pulmonary disorders in the training room. *Clinics in Sports*
643 *Medicine, 22*, 161-180.
- 644 Portenga, S. T., Aoyagi, M. W., Balague, G., Cohen, A., & Harmison, B. (2011). Defining
645 the practice of sport and performance psychology. Retrieved from American

- 646 Psychological Association Web site: <http://www.apadivisions.org/division->
647 [47/about/resources/defining.pdf](http://www.apadivisions.org/division-47/about/resources/defining.pdf).
- 648 Powell, D., Karanfilov, B., Beechler, K., Treole, K., Trudeau, M., & Forrest, A. (2000).
649 Paradoxical vocal cord dysfunction in juveniles. *Archives of Otolaryngology-Head*
650 *and Neck Surgery*, *126*, 29–34.
- 651 Rhodes, R. K. (2008). Diagnosing vocal cord dysfunction in young athletes. *The Journal of*
652 *the American Academy of Nurse Practitioners*, *20*, 608-613. doi: 10.1111/j.1745-
653 7599.2008.00363.x
- 654
- 655 Roberts, C-M. (2015). Enhancing adolescent sports performance through parental educational
656 interventions. Paper presented at the *14th European Congress of Psychology, Milan,*
657 *Italy*.
- 658 Rumbold, J. L., Fletcher, D., & Daniels, K. (2012). A systematic review of stress
659 management interventions with sport performers. *Sport, Exercise, and Performance*
660 *Psychology*, *1*, 173-193. doi: 10.1037/a0026628.
- 661 Rundell, K., & Spiering, B. (2003). Inspiratory stridor in elite athletes. *Chest*, *123*,
662 468–474.
- 663 Sapieja, K. M., Dunn J, G. H., & Holt, N. L. (2011). Perfectionism and perceptions of
664 parenting styles in male youth soccer. *Journal of Sport & Exercise Psychology*, *33*,
665 20-39.
- 666 Shafran, R., Cooper, Z., & Fairburn, C. G. (2002). Clinical perfectionism: A cognitive-
667 behavioural analysis. *Behaviour Research and Therapy*, *40*, 773–791.

- 668 Smith, R. E., Smoll, F. L., Cumming, S. P. & Grossbard, J. R., (2006). Measurement of
669 multidimensional sport performance trait anxiety in children and adults: The Sport
670 Anxiety Scale-2. *Journal of Sport and Exercise Psychology*, 28, 479-501.
- 671 Stadulis, R. E., MacCracken, M. J., Eidson, T. A., & Severance, C. (2009). A children's form
672 of the competitive state anxiety inventory: The CSAI-2C. *Measurement in Physical
673 Education & Exercise Science*, 6, 147-165. doi:10.1207/S15327841MPEE0603_1.
- 674 Stoebera, J., Otto, K., Pescheck, E., & Becker, C. (2007). Perfectionism and competitive
675 anxiety in athletes: Differentiating striving for perfection and negative reactions to
676 imperfection. *Personality and Individual Differences*, 42, 959-969.
- 677 Stornelli, D., Flett, G., & Hewitt, P. (2009). Perfectionism, achievement, and affect in
678 children: A comparison of students from gifted, arts, and regular programs. *Canadian
679 Journal of School Psychology*, 24, 267-283. doi:10.1177/0829573509342392.
- 680 Taylor, J., & Schneider, B. (1992). The Sport-Clinical Intake Protocol: A Comprehensive
681 Interviewing Instrument for Applied Sport Psychology. *Professional Psychology:
682 Research and Practice*, 23, 318-325.
- 683 Williams, S. E., Cooley, S. J., Newell, E., Weibull, F., & Cumming, J. (2013). Seeing the
684 difference: Developing effective imagery scripts for athletes. *Journal of Sport
685 Psychology in Action*, 4, 109-121. doi: 10.1080/21520704.2013.781560.
- 686 Wilson, J., & Wilson, E. (2006). Practical management: Vocal cord dysfunction in athletes.
687 *Clinics in Sports Medicine*, 16, 357 - 360. doi: 10.1097/00042752-200607000-00014.