

EFFECTS OF PERFECTIONISM IN ELITE SPORT

1 Running Head: EFFECTS OF PERFECTIONISM IN ELITE SPORT

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10 The Effects of Perfectionism in Elite Sport: Experiences of Unhealthy Perfectionists

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Abstract

This study examined the perfectionism experiences of 10 elite perfectionist athletes (5 male and 5 female). Following completion of the Sport Multidimensional Perfectionism Scale-2 (Gotwals & Dunn, 2009), a purposeful sample of unhealthy perfectionists were interviewed in relation to the study aims. Several themes emerged from the data that related to: effects of perfectionism and its antecedents on sporting experiences, specificity and level of perfectionism, and the coping skills and techniques used to counter the potentially detrimental effects of perfectionism. The findings highlighted the multi-dimensional nature of perfectionism and the need for future research to further explore the efficacy of techniques athletes use to promote healthy and reduce unhealthy facets of perfectionism.

Keywords: perfectionism, unhealthy perfectionists, organization, control

35 **The Effects of Perfectionism in Elite Sport: Experiences of Unhealthy Perfectionists**

36 Perfectionism is an important individual difference variable that has been shown to
37 predict a variety of negative psychological disorders including depression (Blatt, 1995),
38 obsessive-compulsive disorder (Davey, 2008), and anorexia nervosa (Bastiani, Rao, Weltzin,
39 & Kaye, 1995). In extreme cases it has even been linked to suicide (Blatt). However, despite
40 this, certain facets of perfectionism have also been associated with positive attributes such as
41 heightened self-confidence (Stoeber, Otto, Pescheck, Becker, & Stoll, 2007), task goal
42 orientations (Dunn, Dunn, & Syrotuik, 2002; Stoeber, Stoll, Pescheck, & Otto, 2008), high
43 personal standards (Anshel, Kim, & Henry, 2009), enhanced task performance (Stoll, Lau, &
44 Stoeber, 2007) and success (Gould, Dieffenbach, & Moffett, 2002). Conceptually, a number
45 of developments have helped clarify our understanding of the aforementioned findings. For
46 example, more recent multi-dimensional conceptualizations of perfectionism (Flett,
47 Sawatzky, & Hewitt, 2005) have replaced the uni-dimensional view of the construct which
48 was more commonly associated with the negative connotations outlined above (e.g.,
49 psychological distress and negative evaluations; Burns, 1980).

50 The most influential multi-dimensional models of perfectionism were proposed by
51 Frost, Marten, Laharat, and Rosenblate (1990) and Hewitt and Flett (1991). Although both
52 conceptualized perfectionism as being multi-dimensional, the models differed in the number
53 of dimensions that comprised it. However, subsequent examination of the models suggested a
54 relationship between the underlying dimensions, giving rise to two distinct perfectionism
55 factors (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993). One factor, termed 'positive
56 achievement striving', was linked to positive facets of perfectionism including personal
57 standards and preparation. The second factor, termed 'maladaptive evaluation concern'
58 reflected the negative effects of perfectionism and comprised the dimensions of concern over
59 mistakes, doubts about actions, socially prescribed perfectionism, parental expectations, and

60 parental criticism. Recent conceptualizations have suggested a preference for the factors to be
61 termed ‘perfectionistic concerns’ (PC) and ‘perfectionistic striving’ (PS; e.g., Gaudreau &
62 Antl, 2008; Stoeber & Becker, 2008; Stoeber & Otto, 2006). Research in sport that has
63 examined PC and PS has generally associated PC with the maladaptive facets of
64 perfectionism; factors such as concerns over mistakes, perceived parental pressure, and
65 perceived coach pressure (e.g., Gucciardi, Mahoney, Jalleh, Donovan, & Parkes, 2012;
66 Stoeber & Otto). Conversely, PS has been suggested to comprise the adaptive facets of
67 perfectionism, namely high personal standards and organization.

68 When examining PS and PC in sport, researchers have taken two different
69 approaches; namely, a dimensional or group-based approach. The dimensional approach
70 adopts a position whereby facets of perfectionism are combined to form two independent
71 dimensions of perfectionism (i.e., PS and PC). The group-based approach aligns with the
72 dimensions of PS and PC but proposes individuals display differing levels of facets relating
73 to PS and PC, leading to them being classified as either a healthy or unhealthy perfectionist.
74 Because it enables both PS and PC facets to be distinguished and made explicit, recent
75 perfectionism research has viewed the group-based approach more favorably than the
76 dimensional one. It also avoids some of the potential issues of using an approach where
77 negative facets of PC can conceal the positive associations of PS (Stoeber & Otto, 2006).

78 Group-based perfectionism research was originally proposed by Hamachek (1978)
79 who described two different types of perfectionist orientations; healthy and unhealthy.
80 Healthy perfectionism reflected an individual’s tendency to possess PS facets combined with
81 low levels of PC facets (Stoeber & Otto, 2006). In contrast, unhealthy perfectionism reflected
82 an individual’s tendency to possess both PS and PC facets (Stoeber & Otto). Group-based
83 perfectionism research led to the creation of Stoeber and Otto’s tripartite model of
84 perfectionism. This model proposed two groups of perfectionists (healthy and unhealthy)

85 with non-perfectionists forming a third group. Recent research has continued to use the
86 group-based approach (e.g., Gucciardi et al., 2012; Sapieja, Dunn, & Holt, 2011; Stoeber &
87 Otto) with additional group-based models also being proposed (e.g., 2 x 2 model of
88 perfectionism; Gaudrea & Thompson, 2010).

89 When adopting a group-based approach to research, healthy perfectionists have been
90 found to have higher levels of mastery approach goals, and lower levels of performance
91 avoidance and mastery avoidance goals compared to their unhealthy counterparts (Gucciardi
92 et al., 2012). Healthy perfectionism has been associated with task goal orientations in
93 Canadian Football players (Dunn et al., 2002), and heightened self-confidence in high school
94 athletes (Stoeber et al., 2007). Unhealthy perfectionists have been found to have a desire to
95 avoid incompetence relative to external and internal standards, as well as the attainment of
96 externally derived standards of competence (Gucciardi et al.), reduced self-confidence
97 (Stoeber et al.), and unhealthy achievement goal orientations (Dunn et al.).

98 Previous multi-dimensional research involving PC and the facets that comprise it has
99 shown that high levels of PC are associated with athletes reinforcing failures and
100 demonstrating perceptions of low competence (Stoeber & Becker, 2008). Similarly, PC has
101 been suggested to lead to negative self-evaluations, the under-rating of performance (Stoeber
102 & Becker), and a perception of anything short of perfect as being a failure (Anshel &
103 Mansouri, 2005). Athletes high in PC have been suggested to have a tendency to internalize
104 failures and externalize success, resulting in a diminished enjoyment of sport (Anshel &
105 Mansouri). Furthermore, PC has been associated with attempting to maintain a public image
106 that is bereft of flaws or weaknesses and reacting negatively to imperfections (Blatt, 1995).
107 PC has also been linked to avoidance goal orientations (Stoeber et al., 2008) and fear of
108 failure syndrome (Sagar & Stoeber, 2009; Stoeber & Becker). These characteristics can lead
109 to excessively high levels of competitive trait and state anxiety, which can harm performance

110 (Flett, Hewitt, Endler, & Tassone, 1994; Frost & Henderson, 1991; Stoeber et al., 2007). PC
111 has also been associated with a higher risk of exercise dependence (Hall, Hill, Appleton, &
112 Kozub, 2009), burnout (Appleton, Hall, & Hill, 2009), competitive trait anger (Vallance,
113 Dunn, & Dunn, 2006), fear of embarrassment and shame (Sagar & Stoeber), reduced self-
114 esteem (Gotwals, Dunn, & Wayment, 2009), and depression (Rice & Mirzadeh, 2000).
115 Externally, athletes high in PC have been found to feel pressurized by concerns about their
116 parents' and coaches' standards and evaluation, and criticism of their performance (Anshel &
117 Eom, 2002; Dunn et al., 2002). Indeed, PC has been correlated with a variety of maladaptive
118 characteristics, all of which have been suggested to have a negative effect upon sporting
119 performance.

120 In contrast, PS has been associated with a commitment to exceptionally high
121 standards and facets that are typically deemed to be adaptive (Gucciardi et al., 2012).
122 Individuals high in PS have been found to use maximal effort in the pursuit of their high
123 standards (Blatt, 1995) and often view their performance environments as relatively
124 supportive and non-threatening from a social evaluation perspective (Dunn et al., 2002).
125 When experiencing failures athletes high in PS view them as outcomes that facilitate future
126 performance improvements, rather than a representation of low ability (Anshel, 2003). PS has
127 also been related to a variety of positive outcomes in the absence of PC. For example, in the
128 learning, acquisition and improvement of skills and performance, Stoll et al. (2007) found
129 that striving for perfection during training predicted performance increments over repeated
130 trials as well as higher task performance. Other researchers have also reported a positive
131 relationship between PS and self-serving attributions (Koivula, Hassmén, & Fallby, 2002),
132 enhanced approach goal orientations, hope of success and approach motivation (Stoeber et
133 al., 2008), and perceived ability to achieve within an academic setting (Bieling, Israeli,
134 Smith, & Antony, 2003). Negative correlations have been found between PS and both fear of

135 failure, and self-deprecating attributions (Stoeber & Becker, 2008). In a performance context,
136 PS has been linked to positive attributes that enhance or associate with elite training and
137 sporting performance (Gould, et al., 2002; Stoll et al.). Although some of these characteristics
138 have been associated with other psychological constructs (e.g., task goal orientation) it is the
139 PS facets of perfectionism that relate to having high personal standards or striving for
140 excellence which reflects their distinctiveness. It appears therefore that athletes with higher
141 levels of PS may be less susceptible to certain negative correlates associated with PC and
142 have a greater opportunity for enhanced performance, than those with lower levels of PS.

143 Collectively, research that has explored perfectionism within a sporting context
144 provides support for both its beneficial and detrimental effects. However, a reliance on
145 quantitative research designs has resulted in a limited insight into athletes' perceptions of the
146 effects of perfectionism within sport. Indeed, the importance of such insights, alongside the
147 need to move beyond models of perfectionism developed outside of the sport context has
148 been the stimuli for a number of recent qualitative studies on perfectionism (e.g., Gotwals &
149 Spencer-Cavaliere, 2014; Hill, Witcher, Gotwals, & Leyland, 2015). Building on research
150 from other domains, such as education (e.g., Speirs Neumeister, Williams, & Cross, 2007),
151 Hill et al. explored the opinions and perceptions of self-identified high-level perfectionist
152 performers in sport, dance, and music. Participants' characterised being a perfectionist as a
153 source of inner drive, providing greater capacity for accomplishment but also, albeit to
154 varying degrees, contributing to an increased sense of strain in their lives. Although the
155 content of current models and measures largely captured the perfectionist features
156 participants identified, Hill et al. suggested greater focus on obsessiveness, dissatisfaction,
157 and the intra- versus inter-personal dimensions of perfectionism would further enhance our
158 understanding of the lives of perfectionists in these domains. Hill et al.'s findings more
159 closely resembled the accounts of academically gifted self-oriented perfectionists reported by

160 Speirs Neumeister et al. than those of the perfectionist athletes in Gotwals and Spencer-
161 Cavaliere's study. In the former study, participants described the same commitment to high
162 standards, an all-or-none thinking and disdain for settling for anything short of perfection
163 (Speirs Neumeister et al.). In the latter study, the healthy and unhealthy intercollegiate
164 perfectionist athletes reported a variety of characteristics (e.g., a sense of confidence but
165 rigid, all-or-nothing thinking and difficulty dealing with mistakes), reflecting similarities and
166 idiosyncrasies. Notably, all of the studies reinforced the merits of qualitative research in
167 providing a more holistic and in-depth insight into perfectionism across different domains
168 and called for further qualitative research to build on the existing findings. The present study
169 responds to these calls by qualitatively exploring elite perfectionist athletes' experiences of
170 perfectionism in sport and its effects on their sporting experience.

171 **Method**

172 **Participant Selection**

173 Purposeful sampling was employed to select elite perfectionist athletes for in-depth
174 semi-structured interviews. The sampling process began with a participant pool of 67 elite
175 level athletes from the United Kingdom who completed the Sport Multidimensional
176 Perfectionism Scale-2 (Sport-MPS-2; Gotwals & Dunn, 2009) to evaluate their multi-
177 dimensional levels of perfectionist tendencies. For the purpose of the study, elite level was
178 defined as current or recent participation in international competition.

179 Following completion of the Sport-MPS-2 a three-step procedure was employed to
180 derive a purposeful sample of participants reflective of a multidimensional conceptualization
181 of perfectionism. First, participants' subscale scores were computed for the Sport-MPS-2.
182 Second, in line with Stoeber and Otto's (2006) tripartite model of perfectionism participants
183 who did not score highly on personal standards were classified as non-perfectionists. A
184 personal standards score was deemed high if it was equal to or above Sapieja et al.'s (2011)

185 unhealthy personal standards mean score (3.96). This step reduced the sample from 67 to 30
186 athletes. Third, participants were removed if the majority of their subscale scores did not
187 resemble the pattern of a healthy or unhealthy perfectionist proposed by Stoeber and Otto.
188 Specifically, Stoeber and Otto's tripartite model proposed that an individual is viewed as a
189 healthy perfectionist if they score high on PS facets (i.e., personal standards and organization)
190 and low on PC facets (i.e., concern over mistakes, perceived parental pressures, perceived
191 coach pressure, and doubts about actions). An individual is viewed as an unhealthy
192 perfectionist if they score highly on both PS and PC facets. To guide this, scores were
193 compared to those of Sapieja et al.'s investigation into perfectionism in soccer (see Table 1).
194 Sapieja et al.'s scores were used to guide this stage as they used the Sport-MPS-2 and
195 provided specific grouping scores for healthy, unhealthy, and non-perfectionists. This process
196 resulted in a final sample of 12 individuals; however, two were unavailable for follow up
197 interviews resulting in a final sample of 10 athletes, all of whom were classified as unhealthy
198 perfectionists. Potential participants were advised of the purpose of the study and provided
199 written informed consent in accordance with the University's ethical committee
200 requirements.

201 **Participants**

202 From the original participant pool of 67 athletes, the purposeful sample of 10
203 perfectionist elite athletes participated in semi-structured interviews; based on the selection
204 process outlined in the participant selection criteria section (see Table 1) all participants were
205 classified as unhealthy perfectionists. Participants comprised five females and five males with
206 ages ranging from 18 to 21 ($M = 19$ yrs, $SD = 1.2$). Participants competed in track and field
207 athletics ($n = 2$), canoe slalom ($n = 1$), sailing ($n = 1$), dressage ($n = 1$), rugby league ($n = 1$),
208 rugby union ($n = 2$), flat water kayaking ($n = 1$), and taekwondo ($n = 1$).

209 **Measure**

210 **Sport Multidimensional Perfectionism Scale 2 (Sport-MPS-2; Gotwals & Dunn,**
211 **2009).** Consistent with previous research and the domain (sport) specific sensitivity of
212 perfectionism, the Sport-MPS-2 was used to assess participants' perfectionist tendencies
213 (Gotwals & Dunn). The Sport-MPS-2 comprises six dimensions (personal standards, concern
214 over mistakes, perceived parental pressure, perceived coach pressure, doubts about actions,
215 and organization) of perfectionism and contains 42 items that are responded to on a 5-point
216 Likert scale (1 = strongly disagree; 5 = strongly agree). Cronbach alpha's of greater than .74
217 have previously been reported for all dimensions of the Sport-MPS-2 (Gotwals & Dunn).
218 Cronbach alpha's for the full sample ($N = 67$) in the current study were as follows: overall
219 .91; personal standards .80; concern over mistakes .91; perceived parental pressure .96;
220 perceived coach pressure .75; doubts about actions .83; and organization .91.

221 **Semi-structured Interviews**

222 Semi-structured interviews were used to examine participants' experiences of
223 perfectionism in sport. Semi-structured interviews elicit rich, in-depth information about
224 perceptions of a given phenomenon (Gratton & Jones, 2004; Lincoln & Guba, 1985).
225 Interviews were conducted using an interview guide that was based on an extensive review of
226 the relevant research and methodological literature, and developed specifically for the
227 purpose of the study (e.g., Gotwals & Dunn, 2009; Stoeber & Otto, 2006). Elaboration and
228 clarification probes (e.g., can you give me any specific example; can you expand upon that?)
229 were used to enhance the depth and meaningfulness of the information elicited (Gratton &
230 Jones).

231 The interview guide contained three sections. The first examined the participants'
232 perceptions of perfectionism, the second explored the effects of perfectionism on
233 participants' performance in sport, and the third how the participants coped with perfectionist
234 tendencies. Questions within the guide included: Could you share with me how you view

235 perfectionism – what do you think it is? What aspects of perfectionism would you say you
236 possess? When perfectionism has those negative effects how have you combated it to reduce
237 them? How do you facilitate those positive perfectionist tendencies?

238 **Procedure**

239 Interviews were conducted at a time and location of the participants' choice to
240 facilitate open and in-depth responses (Gratton & Jones, 2004). All interviews were
241 conducted in a quiet, private room on a university campus and lasted between 40 and 60
242 minutes ($M = 50$). Interviews were recorded in their entirety, transcribed verbatim and
243 subsequently sent to participants for member checking (Lincoln & Guba, 1985). Three pilot
244 interviews were conducted to assess the effectiveness of the interview guide to address the
245 purpose of the study and refine the researcher's interview technique (Lincoln & Guba). As a
246 result of the pilot interviews a number of changes were made to the wording and sequencing
247 of questions, for example following the athletes' personal view of perfectionism a definition
248 of perfectionism was included.

249 **Data Analysis**

250 Data were content analyzed using within and cross case analysis (Miles, Huberman, &
251 Saldaña, 2013). Within case analysis allowed in-depth exploration of single case
252 phenomenon, whilst cross case analysis enabled generalizations, deepened understanding,
253 and enhanced interpretability of participants' experiences (Miles et al.). The analysis
254 involved a number of analytical stages. First, individual transcripts were read and re-read to
255 gain content familiarity. Second, meaning units were identified through quotations; these
256 meaning units formed the basis of themes. Third, the within case themes were subjected to
257 cross case analysis. Next, two experienced sport psychology researchers conducted
258 confirmation checks. This led to the relabeling and removal of certain sub-themes (e.g.,
259 *perceived parental pressure, perceived coach pressure, and teammate and competitor*

260 *pressure* were combined to form *external pressure*). Finally, an overall summary table was
261 created to represent the data (Table 2).

262 **Trustworthiness.** A number of strategies were employed to enhance the
263 trustworthiness of the data. An audit trail was produced to enable external scrutiny of the data
264 collection procedures and establish authenticity (Miles et al., 2013). Pilot interviews
265 safeguarded the effectiveness of the interview guide and interview technique (Lincoln &
266 Guba, 1985). Member checking was employed to confirm the accuracy and completeness of
267 the information derived from the interviews (Miles et al.). Peer debriefing with an
268 experienced independent researcher during study design, data collection, analysis and report
269 writing provided an opportunity to test and refine working hypotheses, clear the mind of
270 feelings and emotions that cloud good judgment, and protected against researcher bias
271 (Lincoln & Guba).

272 **Results and Discussion**

273 The data coalesced into three themes reflecting unhealthy perfectionism: effects of
274 perfectionism and its antecedents on sporting experience, specificity and level of
275 perfectionism, and coping skills and techniques used to counter the potentially detrimental
276 effects of perfectionism. The following narrative explores these themes.

277 **Effects of perfectionism and its antecedents on sporting experience**

278 Consistent with the facets of perfectionism and what is conceived as PS and PC,
279 participants' perceived perfectionism affected them in both an adaptive and maladaptive
280 manner. The following section considers the antecedents and consequences of perfectionism
281 in relation to elite athletes' sporting experiences and where appropriate highlights differences
282 between participants. A results table summarizes the findings (Table 2).

283 **Perfectionist Striving.** Participants identified a number of characteristics associated
284 with PS, with all participants highlighting the adaptive attributes of *personal standards* and
285 *organization*.

286 **Personal standards.** Consistent with previous research that views high personal
287 standards as a core facet of perfectionism (Stoeber & Becker, 2008), all participants
288 highlighted benefits of high personal standards. High personal standards were suggested to
289 motivate all participants to try to attain perfection in their performances; for example, “I think
290 it [perfectionism] makes you better because you want to keep going and try and perfect
291 everything”. Another participant suggested, “I set myself high goals in training so that it
292 translates into performances...By having pre-set standards you have got something to adhere
293 to but if you haven’t got anything in advance then you haven’t got anything to achieve”. The
294 adaptive consequences of high personal standards, which were experienced by all
295 participants, highlight the beneficial effect of perfectionism in sport. However, personal
296 standards also had potentially debilitating effects. Consistent with previous research, (e.g.,
297 Hill, et al., 2015; Stoeber & Becker) high personal standards were linked to athletes being
298 overly critical and never satisfied with performance. This finding aligns with Hill and
299 colleagues’ theme of ‘Drive’, which represents an individual’s unwavering commitment to,
300 and focus upon, constantly improving their performance/work.

301 **Organization.** Organization was highlighted by all participants and included effective
302 preparation of performances and routines for different aspects of sport. All participants
303 suggested that as a consequence of organization performance was enhanced. For example
304 “Without perfectionism I wouldn't have planned as well and that would have led to not being
305 as successful”. When discussing perfectionism within competition, one participant reinforced
306 the importance of performance preparation, which they attributed to perfectionism:

307 When I am trying to be at the highest level in competition I would always try to have
308 an exact routine for my setup so I would know I'd be trying to create a perfect
309 situation. Prior to a performance I have my eating plan and the warm up plan and
310 everything like that and I tried to stick to it, sort of a regimented survey so you don't
311 slip out of your view of what perfectionism is.

312 Participants also indicated performance preparation provided reassurance and enhanced
313 confidence. For example, one participant suggested,

314 The positive aspect is, for me, I feel prepared, I know that when I go in that arena, I
315 know that I have done everything that I could possibly do beforehand for it to be
316 perfect. For me it's almost like a security blanket.

317 Another commented, "[Perfectionism] gives me confidence knowing there are certain things
318 I've done right". The current findings align with Gotwals and Dunn's (2009) research that
319 identified organization as an athlete's tendencies to establish and implement plans or routines
320 that dictated their behavior prior to and during competition. The beneficial effects of
321 organization and routines on performance suggested in our study are consistent with the
322 enhanced focus that resulted from the healthy perfectionists use of organized routines in
323 Gotwals and Spencer-Cavaliere's (2014) work. Collectively, these findings suggest that both
324 healthy and unhealthy perfectionists may benefit from organization and routines, a finding
325 that is consistent with previous quantitative research that showed both healthy and unhealthy
326 perfectionists score highly on this facet (Stoeber & Otto, 2006).

327 **Perfectionist Concerns.** Characteristics associated with PC clearly emerged from the
328 group of unhealthy perfectionists sampled within the study. These characteristics were
329 consistent with the maladaptive aspects of perfectionism with participants suggesting a
330 potential negative impact on their sporting experiences.

331 ***Self-critical tendencies.*** The data suggested self-critical tendencies were perceived to
332 have maladaptive influences upon the participants' sporting experiences. Potential
333 maladaptive effects were identified by all of the participants as a consequence of self-critical
334 tendencies, tendencies were also influenced by other sport performers. The majority of
335 unhealthy perfectionists perceived that a focus upon high personal standards helped foster
336 characteristics of being overly self-critical. One participant explained, "I have a tendency to
337 look at the negatives before the positives" and "afterwards I always think it didn't quite go
338 right in my race even if it was a good one". Another suggested, "I will actually say
339 sometimes 'That judge hasn't been harsh enough' ...And 'I don't understand why they have
340 given me that mark'". The present findings highlighted the potentially debilitating effects of
341 perfectionism and provided support for research that has indicated that being highly self-
342 critical is a core facet of PC (Anshel & Mansouri, 2005; Sagar & Stoeber, 2009; Stoeber &
343 Becker, 2008).

344 ***Dissatisfaction with goal progress.*** Unhealthy perfectionists also highlighted the
345 potentially detrimental effects that resulted from being dissatisfied with their current
346 performance levels and being unable to disengage from performance or training goals. For
347 example, in a training context one participant stated "if I do the first set of the session badly I
348 feel that is the whole session ruined straight away. I haven't even started the session and it is
349 ruined." The individual went on to state "if things go badly I just say [to myself] 'forget about
350 it, let's try and move on', but no matter how much I try to forget it, it will still keep cropping
351 up". A taekwondo athlete also described how high standards in training hindered goal
352 progress:

353 For example a simple jab like a little lunge, once I was there for ages just practicing
354 then I was like you don't need to be doing this but I stood there doing it, I didn't know
355 the exact way to do it but I stood there wasting time doing it which is quite

356 annoying... [You can spend] too much time on something which doesn't need that
357 amount of time. Like you're not distributing your time wisely between different
358 moves, you're focusing too much on one and neglecting others for that time.

359 The current findings add to recent research that has proposed that perfectionists may
360 become fixated with flaws in performance and need to overcome these and improve,
361 regardless of the consequences (Hill et al., 2015). Outside of the domain of sport, DiBartolo,
362 Frost, Chang, LaSota, & Grills (2004) found high personal standards to be associated with
363 psychopathology when standards were used to define self-worth. This finding has important
364 implications for unhealthy perfectionists whose self-worth is contingent on their personal
365 standards being achieved.

366 Being part of a team was suggested to exacerbate concerns about the need to attain
367 high personal standards. For example:

368 You can focus on what they're [teammate] doing and not what you're doing and then
369 you have a bit of a conundrum. And actually because you're concentrating on
370 someone else's job you're not making the boat go fast. But it's all because you want
371 to make that perfect.

372 Indeed, the findings suggested that unhealthy perfectionists can become distracted by the
373 actions of their teammates, particularly when it affects their ability to achieve their own (or
374 collective) goals and personal standards. In relation to the potential influence of self- and
375 other-oriented perfectionist standards upon performance, Hill, Stoeber, Brown, and Appleton
376 (2014) suggested that the main driving force behind enhanced team performance was the
377 tendency to impose exacting standards and stringent evaluation on others, as opposed to on
378 oneself. The present findings illuminate the potentially debilitating effect of other oriented
379 perfectionism, albeit through what would appear to be a different mechanism. These
380 potentially debilitating effects have however been observed in previous research with other

381 oriented perfectionism leading to other-directed blame, lack of trust, and feelings of hostility
382 towards others (Hewitt & Flett, 1991). Taken together, the findings highlight the need to
383 further explore the effects of other- and team-oriented perfectionism, particularly in sports
384 where performance necessitates high levels of co-dependency (cf. Hill et al.).

385 *Concerns over mistakes.* Concerns over mistakes, characterized by fear of failure and
386 fear of making future mistakes, influenced the thoughts and behaviors of all participants
387 before, during, and after performance. For example, one participant suggested:

388 I get really nervous before games, actually most games I get pretty nervous about
389 even if there is nothing really riding on it. Even if it is just a game of rugby, a club
390 game mid-season nothing really riding on it I will still be nervous about it. I think
391 that's a fear of failure, I think a fear of it going wrong rather than a fear of 'God that's
392 going to hurt'.

393 During a performance and in response to a mistake, one rugby player's sentiments echoed
394 those of many of the participants:

395 My performance will go down and everyone will say 'you were having a good game
396 then you missed that tackle and you completely disappeared, you weren't even on the
397 pitch', I would still be playing but I would just be going through the motions. I would
398 be scared to make another mistake rather than wanting another chance to prove that I
399 am better...I would be like 'oh no I can't get into that situation again I will miss the
400 tackle again'...So I would be overly wary of what I would be doing and my self-
401 confidence would take a knock and my performance level would drop.

402 As a consequence of concerns over mistakes post-performance, one participant noted:

403 In a game I can block out anything bad I do, but after the game it will eat me up inside
404 until I have literally gone through it bit by bit... I think I am probably my own worst
405 enemy when it comes to my performance because I will rip it to pieces... Other

406 people will go ‘but you did this and this which was really good’, and ‘yes you did that
407 which wasn’t so great’. But I would just be like ‘argh!’ I guess it’s because I would
408 expect to be able to do those things, but I wouldn’t expect myself to do those one or
409 two bad things.

410 The suggestion that unhealthy perfectionists are susceptible to being overly critical of
411 mistakes is consistent with previous research. Specifically, the effects of PC include negative
412 self-evaluations (Stoeber & Becker, 2008) and the view that anything short of a perfect
413 performance is a failure (Anshel & Mansouri, 2005; Vallance et al., 2006). Indeed,
414 participants in this study suggested that concerns over mistakes detracted from learning,
415 reduced motivation and confidence, and increased stress and anxiety. Participants described
416 being put off from future learning in training due to the potential effects of mistakes; ‘I’m
417 sometimes a little bit apprehensive to make mistakes in training, which then leads to not
418 learning as much as I could’. These findings are consistent with the association of PC with a
419 fear of failure syndrome (Hamachek, 1978; Sagar & Stoeber, 2009; Stoeber & Becker) and
420 the need to be flawless (Blatt, 1995), as well as research that has reported the detrimental
421 effects of fear of failure on performance (Blatt; Gucciardi et al., 2012; Stoeber & Becker).

422 The ramifications of such concerns extended to their negative affect on the behaviors
423 of the unhealthy perfectionists. Behavioral aggression emerged as a response to a mistake by
424 over half of the participants. For example, one unhealthy perfectionist stated, ‘If I do bad in
425 training all I want to do is go and punch a wall or take that anger out on something to help me
426 relieve a bit of stress really’. Further, a taekwondo participant commented:

427 When I have done a stupid shot and the other person has scored I will get a bit
428 annoyed and my standard will drop and I will start going to fight. Like I will hit him
429 too hard or go for illegal shots and that kind of thing.

430 Previous research has suggested perfectionists are prone to experiencing anger in situations
431 that involve negative evaluation and frustration and that this anger can interfere with task-
432 relevant cognitions required for skilled performance (Vallance et al., 2006). Dunn, Gotwals,
433 Causgrove Dunn, and Syrotuik (2006) suggested a predisposition to experience anger when
434 playing poorly in competition was associated with a maladaptive perfectionist orientation.

435 ***Doubts about actions.*** Doubts about actions were viewed as a debilitating facet of PC
436 by almost all participants. The unhealthy perfectionists in this study suggested doubts about
437 action resulted in ‘over-thinking’ both prior to and during performance, particularly when
438 attempting to prevent and overcome mistakes. The tendency to have doubts about actions was
439 in-turn thought to have a detrimental effect on performance. For example, one participant
440 commented, “I have been in situations where I have over thought something so much, trying
441 to get it right, that when I have gotten in the arena I have just had a complete mental blank
442 and just literally sat there”. Another explained, “I think how people in my race are going to
443 beat me, if they’re faster or if they’ve done more. If my training hasn’t gone well how their
444 training has gone perfectly, which probably isn’t the case”. These findings reflect research
445 that has suggested doubts about actions result from performers appraising they lack the
446 ability to accomplish achievement related activities (Hall, Kerr, Kozub, & Finnie, 2007).

447 ***External pressure.*** External pressures were experienced by eight of the ten unhealthy
448 perfectionists. These pressures aligned with the previously reported facets of perceived
449 parental pressure and perceived coach pressure. However, participants in this study also
450 identified teammates and other competitors as external sources of pressure.

451 ***Perceived parental and coach pressure.*** The perception of parental and coach
452 pressure was identified as salient by half of the participants. For example, one unhealthy
453 perfectionist suggested:

454 My parents don't come very often to watch me play but if they come and watch me
455 play I want them to see me playing my best. If I'm not playing to what I could be I get
456 negative thoughts like 'that was bad your whole performance was shocking'. One
457 little thing [can go wrong] and I will think that the whole performance was bad.
458 Instead of going 'I didn't make that tackle' I'm quite hard on myself really like 'that
459 was bad I have let them down'.

460 Similarly, participants highlighted a sense of pressure when performing as a result of not
461 wanting to let their coach down; "Because if I don't put the pass in or don't make the tackle, I
462 feel like I let my coaches down as they have put in the time coaching me". The participants
463 perceived pressure due to the desire to not let significant others down (e.g., coaches and
464 parents), rather than the perception that significant others held unrealistic standards of them
465 (e.g., socially prescribed perfectionism; Hewitt & Flett, 1991).

466 For some participants, coaches and/or parents helped to reduce the influences of PC
467 attributes. For example a canoe slalom athlete suggested:

468 I do have a tendency to look at the negatives before the positives and my coach
469 sometimes has to go 'yes, that wasn't quite as good - but look at these things that you
470 did really well and those were quickest or as quick as the winner'.

471 This finding reinforces those of Appleton, Hall and Hill (2011) surrounding the role coaches
472 and parents play in helping create a positive motivational climate for perfectionist athletes.
473 Although there were some nuances in the findings relative to parent-athlete gender, overall
474 Appleton et al.'s study highlighted the need for parents and coaches to mitigate against
475 creating motivational climates that fostered a worry-conducive environment that heightens
476 maladaptive perfectionist cognitions. Our findings, together with those of Appleton et al. add
477 weight to the domain specific research that highlights both the potentially facilitative and

478 debilitating effects of coaches and parents on perfectionist athletes and their athletic
479 performance (e.g., Appleton et al.; Hewitt & Flett, 1991).

480 *Perceived teammate and competitor pressure.* Over half of the participants
481 highlighted the debilitating effect of perceived pressure of teammates or other competitors (n
482 = 6) on their sport experience, with the pressure from teammates being attributed to social
483 comparison and a sense of letting teammates down. In relation to social comparison, one
484 participant recollected:

485 I would always mark myself off against other people so I would be like ‘their pass is
486 better than mine’ or ‘my pass needs to be better than that’. I would look at higher
487 individuals and think ‘I need to be where they are at’.

488 Another talked about social comparisons prior to a race; “...there’s a lot of focus on what
489 other people are doing in their warm up, like ‘are they warming up now?’ and ‘do I follow
490 their routine or do I stick to mine?’”.

491 In a team environment, pressure and concerns about letting teammates down were
492 identified by three participants:

493 You feel like you have let your teammates down like ‘oh no I haven’t done that’.
494 Especially with my position as a fullback, if you miss a tackle it generally leads to a
495 try. [If you miss a tackle and they score then] they are five maybe seven points ahead
496 and then you know that it was your fault for missing that tackle even though
497 sometimes the situation wasn’t like that and people are saying to you ‘don’t worry
498 you will get the next one’. But you ask yourself ‘but what if I don’t?’ Then you feel
499 bad and you feel like a lot of pressure is on you.

500 The same participant went on to suggest that such added pressures affected other areas of
501 their game; “It affects all of your skills because you are concentrating so much on the tackle
502 that your passes and kicks aren’t going to where you want”.

503 Consistent with Gotwals and Spencer-Cavaliere (2014) the findings highlight the
504 significant role teammates can play in an unhealthy perfectionist's sporting experience. To
505 elaborate, Gotwals and Spencer-Cavaliere found that unhealthy perfectionists had the
506 potential to experience concerns about their teammates' thoughts and felt pressured to not let
507 teammates down. Collectively, these findings reinforce the role that 'others' can play in
508 helping unhealthy perfectionists define personal standards of achievement.

509 **Specificity and level of perfectionism**

510 Consistent with Dunn, Gotwals, and Causgrove Dunn's (2005) suggestion that
511 perfectionism should be viewed as a domain-specific construct, some of the unhealthy
512 perfectionists in our study distinguished between sport perfectionism and more global
513 perfectionism (see Table 3). For example, one participant indicated: "In general life, I'm just
514 a bit like 'ah it's alright', but for a competition I want to know everything to the minute".
515 Similarly, another highlighted this distinction when suggesting:

516 It's [perfectionism] completely separate. In my everyday life I would quite happily be
517 'I'm not too great at this' or 'I'm not too great at that' and it doesn't bother me at all. I
518 will be just like 'whatever' but as soon as it comes to rugby I would be like 'no that's
519 not ok'. It's just completely split. In life I wouldn't say I was near being a
520 perfectionist at all but in rugby I would say that I strive to be the best.

521 With regard to the levels of perfectionism displayed in different contexts, three
522 participants suggested their perfectionist tendencies were stronger during competition than
523 training. For example: "I think I'm more of a perfectionist during competition". Two
524 participants stated that the level of perfectionism was affected by the importance placed upon
525 the competition. For example, when competing in a lower level competition one participant
526 stated:

527 It doesn't matter if it's perfect, doesn't matter if I take a couple of attempts as long as

528 I win I think it doesn't matter. So my performance is generally quite poor in a league
529 competition. But I think because it's a league competition and it's just for the points
530 it doesn't matter.

531 Taken together the findings suggested that events viewed as less important may be associated
532 with a decrease in PS attributes such as high personal standards. These findings have
533 potentially important implications for the conceptualization of perfectionism; specifically,
534 that perfectionism may be best viewed as context-specific due to the variability in
535 perfectionism within and across individuals and contexts. The findings in our study provide
536 explicit evidence to previous suggestions that perfectionism should be conceptualized as
537 being context specific (e.g., Dunn et al., 2005; Stoeber & Madigan, in press).

538 **Coping skills and techniques used to counter the potentially detrimental effects of**
539 **perfectionism**

540 The final theme related to the skills and techniques unhealthy perfectionists used to
541 counter the detrimental effects of perfectionism (see Table 4). The most frequently cited was
542 the use of a pre-performance routine. These routines, which helped participants' cope with
543 heightened pre-performance anxiety, included attending to physical, technical, and
544 psychological aspects of performance preparation:

545 Before a regatta I have to check all my kit, I have to clean my boat, if I don't do that
546 then there will a bit of dirt on it or something which is going to slow me down and it's
547 going to make me not get selected or not win a medal or something.

548 Participants also cited isolation as enabling them to use distraction techniques. For
549 example one participant stated:

550 I used to always have to be on my own during training time. I used to take myself to
551 the other side of the river so I could do my own thing and not be interfered with. So if
552 it went wrong it was all my fault.

553 Similarly, one participant suggested that prior to competition “I try to shut myself off, I chuck
554 the music on to get away from everybody, I like to keep myself to myself.”

555 Distraction techniques were also used in situations when athletes could not isolate
556 themselves. These techniques included talking to others (e.g., “general chatting, you’re just
557 relaxed if you think about something completely different then the time goes a lot quicker”),
558 listening to music (e.g., “I feel that music can keep me at a controlled level”), and not acting
559 too seriously (e.g., “not being all serious takes my mind off things up until a minute before
560 the race which is when I need to focus”). Participants suggested that these techniques reduced
561 the possibility of over-thinking and becoming anxious prior to and during performance.

562 Three participants, who had previously received psychological support, cited the use
563 of imagery as a coping skill to help reduce perfectionism induced anxiety. An individual who
564 competed in dressage used a ‘circle of excellence’ technique: “A circle of excellence is what
565 I have used with imagery to get to somewhere that I feel relaxed...When I am riding it is
566 somewhere I feel relaxed and I'm not stressed”. The coping skills and techniques identified
567 by the unhealthy perfectionists in this study are not exclusive to perfectionists; they can be,
568 and have been documented as being employed by any athlete (e.g., Nicholls, Polman, &
569 Levy, 2010). As such, it could be suggested that the participants in this study did not have
570 any specific strategies that assisted them to cope with the potential debilitating facets of PC.
571 Rather, it appears that unhealthy perfectionist athletes might benefit from education and
572 training in specific skills or techniques that could be used to promote PS and reduce PC facets
573 of perfectionism. Hall, Hill, and Appleton (2012) proposed basic cognitive restructuring
574 should focus on teaching perfectionist athletes about the difference between perfectionism
575 and more adaptive achievement striving to promote psychological performance. Further, goal
576 setting training, if focused upon goal flexibility and evaluation has the potential to decrease
577 maladaptive characteristics of perfectionism (e.g., concerns over mistakes; Hall et al.).

578 **Summary and Conclusion**

579 This study examined elite, unhealthy perfectionist athletes' experiences of
580 perfectionism in sport. Participants highlighted the effects of perfectionism and its
581 antecedents on sporting experiences, the specificity and level of perfectionism, and the
582 coping skills and techniques used to counter the potentially detrimental effects of
583 perfectionism. The findings supported research that has encouraged a multi-dimensional
584 conceptualization of perfectionism emphasizing PS and PC facets (Gaudreau & Antl, 2008;
585 Stoeber & Becker, 2008). PS was expressed through personal standards and organization
586 whereas PC related to self-critical tendencies, dissatisfaction with goal progress, concerns
587 over mistakes, doubts about actions, and external pressure. Our findings provided some
588 support for Stoeber and Otto's (2006) tripartite model of perfectionism with the majority of
589 participants reflecting the pattern of PS and PC facets outlined within that model. However,
590 our findings also provided some support for aspects of the 2 x 2 tripartite model of
591 perfectionism (Gaudreau & Thompson, 2010). Specifically, the participants in this study were
592 reflective of mixed perfectionists who have a combination of high PS and high PC. In relation
593 to the conceptualization of perfectionism, some athletes in our study suggested perfectionism
594 was context-specific; a finding that supports the view that perfectionism is domain specific
595 (e.g., Dunn et al., 2005; Gotwals & Spencer Cavaliere, 2014).

596 It is important to acknowledge that there were both strengths and limitations to our
597 research. The strengths of the study included stringent sampling procedures, the elite level of
598 the sample, and the exploratory nature of the study; allowing adaptive and maladaptive
599 considerations of perfectionism to emerge. Arguably, and perhaps inevitably given the
600 stringent sampling procedures employed to create a purposeful sample of elite perfectionist
601 performers, the findings were based upon a relatively small number of participants ($n = 10$).
602 Future research would benefit from larger sample sizes that may allow findings to be

603 generalized to a wider population. Further, inclusion of healthy, alongside unhealthy
604 perfectionists would enable a between group comparison of the effects of perfectionism. In
605 the absence of any established norm values, the sampling criteria were based upon the
606 findings of one paper (e.g., Sapeija et al., 2011). Future perfectionism research using
607 quantitative methods should provide participant subscale scores to provide the basis for
608 multidimensional norms to be established and built upon. Future research could also look to
609 provide a more fine-grained understanding of the findings that have emerged from this study,
610 particularly in relation to identifying the efficacy of strategies that aim to enhance athlete
611 performance via the promotion of PS and the reduction of PC. In addition, future research
612 should seek to further explore whether perfectionism would be best conceptualized as a trait,
613 in a dispositional framework, or as something that is more context (or domain) specific.
614 A number of practical implications emerged from this study. The findings indicated
615 unhealthy perfectionism can have both adaptive and maladaptive consequences for elite
616 athletes. Therefore, when working with unhealthy perfectionist athletes, an environment in
617 which PS is emphasized and PC is reduced needs to be fostered and the use of appropriate
618 coping strategies encouraged. For example, Hill, Hall and Appleton (2010) emphasized that
619 problem-focused coping (as opposed to avoidant coping) had the potential to reduce burnout
620 in certain perfectionist athletes. In addition to the use of coping strategies, coaches in our
621 study were highlighted as having a potentially beneficial influence on the unhealthy
622 perfectionists. As such, a task-involved motivational climate should be promoted by coaches
623 working with unhealthy perfectionists, in an effort to reduce the debilitating influences of PC.
624 Additionally, our study supports Sagar and Stoeber's (2009) suggestion for educational
625 interventions that train coaches to provide less critical evaluations and more supportive
626 athletic environments, where mistakes and failures are accepted in order to reduce athletes'
627 concerns over mistakes. Educational interventions could also be extended to parents and

628 teammates of unhealthy perfectionists. Furthermore, and consistent with previous research,
629 the current findings demonstrated the potentially detrimental effects of other-oriented
630 perfectionism (e.g., Appleton et al., 2009; Hill et al., 2014). Therefore, goal setting
631 interventions which focus upon flexibility and evaluation may have particular merit (cf. Hall
632 et al., 2012). Finally, psychological skills such as relaxation and mental rehearsal may help to
633 moderate the perfectionism-distress relationship (Hill et al). Overall, coaches have a
634 potentially important role in creating an environment which promotes PS reduces PC. To
635 achieve such a supportive environment it is suggested that coaches should emphasize goal
636 flexibility, be accepting of mistakes, provide less critical evaluations, and wherever possible,
637 educate unhealthy perfectionist athletes' significant others.

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786 Table 1:

787 *Sport-MPS-2 subscale mean scores and comparisons with Sapieja et al. (2011)*

Participant Number	Personal Standards	Concerns Over Mistakes	Perceived Parental Pressure	Perceived Coach Pressure	Doubts About Actions	Organization
1	4.71	4	2.11	2.83	2.67	5
2	4.43	4.5	4.22	3.33	4.83	3
3	4.29	2.5	1.44	3.83	1.67	3.83
4	4.14	4.5	4.89	3	4.17	3.83
5	4.43	4.63	3	4.33	3.67	4.5
6	4.43	4.13	3	2.5	1.33	4.5
7	4.29	4.75	2.11	2.17	2.83	5
8	4.86	4	2.22	3	2.83	3.83
9	4.29	4.13	3.56	3.83	4.33	3
10	4.29	4.13	2.78	3.5	2.33	4
Overall mean scores and (SD)	4.42(.22)	4.13(.63)	2.93(1.1)	3.2(.66)	3.07(1.2)	4.05(.71)
Sapieja et al.'s unhealthy perfectionists' scores	3.96(.58)	3.72(.63)	3.08(.66)	3.9(.6)	3.22(.66)	3.46(.78)

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790 Table 2:
791 *Effects of perfectionism on sporting experiences*

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Facets of perfectionism	Effects and antecedents of perfectionism	Overall ($n = 10$)	Participant number - Yes	Participant number - No
Perfectionist striving				
Personal Standards	High personal standards	10	1-10	
	Enhanced motivation	10	1-10	
Organization	Preparation and organization	10	1-10	
	Increased confidence	6	1,2,3,4,5,10	6,7,8,9
Perfectionist concerns				
Self-critical Tendencies	Overly critical and/or a need to attain high standards	8	1,2,3,4,5,7,8,9	6,10
Dissatisfaction With Goal Progress	Dissatisfied with current performance levels	5	1,2,4,5,9	3,6,7,8,10
	Need to attain high standards in a team	2	5,10	1,2,3,4,6,7,8,9
Concerns Over Mistakes	Overly critical following mistakes	8	1,2,4,5,6,7,8,9	3,10
	Negative response to mistakes	10	1-10	
	Aggression following mistakes	7	2,4,5,7,8,9,10	1,3,6
	Fear of failure and future mistakes	4	1,2,4,7	3,5,6,8,9,10
Doubts About Actions	Over-thinking	8	1,2,3,4,5,7,9,10	6, 8
External Pressure	Perceived coach pressure	5	1,2,5,6,9	3,4,7,8,10
	Perceived parent pressure	5	2,4,6,7,9	1,3,5,8,10
	Perceived teammate and competitor pressure	6	1,2,4,6,7,10	3,5,8,9

793 Table 3:

794 *Specificity and level of perfectionism*

Themes	Overall (<i>n</i> = 10)	Participant number – Yes	Participant number - No
Covered all aspects of life	2	2,9	1,3,4,5,6,7,8,10
Perfectionism higher in competition than training	3	3,4,7	1,2,5,6,8,9,10
Perfectionism higher in more important competitions	2	4,7	1,2,3,5,6,8,9,10
Perfectionism grown over time	2	2,3	1,4,5,6,7,8,9,10

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797 Table 4:

798 *Coping skills and techniques used to counter the potentially detrimental effects of*799 *perfectionism*

Coping skills	Overall (<i>n</i> = 10)	Participant number - Yes	Participant number - No
Isolate self	3	1,2,7	3,4,5,6,8,9,10
Talking	2	6,7	1,2,3,4,5,8,9,10
Perspective / Realistic	2	6,8	1,2,3,4,5,7,9,10
Routine	7	1,2,3,4,5,9,10	6,7,8
Music	3	2,3,6	1,4,5,7,8,9,10
Not act too serious	1	2	1,3,4,5,6,7,8,9,10
Imagery	3	4,8,10	1,2,3,5,6,7,9

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