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## Perfectionism in Sport

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## Introduction

Great Britain's Tom Daley won the gold medal in the men's 10 metre platform dive at the 2017 World Aquatics Championships in Budapest. In winning the medal, Daley was awarded 12 perfect scores across six dives. Chen Aisen, the double gold winner at the 2016 Summer Olympics, was awarded three perfect scores of his own and won the silver medal. In this case, three instances of perfection simply weren't enough to win the competition. It is scenarios like this that underscore why the study of perfectionism is so important in sport. In most other areas of life, perfection is ambiguous, elusive, and irrational. In sport, though, perfection can be more tangible, objective and, for athletes at the very highest levels, attainable. These factors may explain why so many athletes identify themselves as perfectionists and why some researchers and practitioners have come to view perfectionism as a hallmark characteristic of elite performers (e.g., Gould, Dieffenbach, & Moffett, 2002).

It is important to bear in mind, however, that from a personality perspective perfectionism is more than the standards people have for themselves. Rather, perfectionism is an engrained way of thinking, feeling and behaving that, paradoxically, can quite easily undermine athlete motivation, performance and wellbeing (Flett & Hewitt, 2014). As it is common to find perfectionistic people in sport, and because perfectionism is so easily misunderstood, we consider perfectionism to be a valuable addition to an Encyclopaedia of Sport Psychology. We have structured our entry around four topics. The topics covered are (1) the multidimensional structure of perfectionism, (2) its transcontextual nature, (3) whether "healthy" perfectionists exist and (4) what the likely consequences of perfectionism are in sport. These are key topics in this area of research and will provide a valuable reference for students, researchers and practitioners interested in perfectionism in sport.

### Perfectionism is Multidimensional

1           Perhaps the biggest advancement in perfectionism research in the last forty years has  
2 been the re-conceptualisation of perfectionism as multidimensional. Prior to this  
3 development, perfectionism was conceptualised as unidimensional (i.e., a total perfectionism  
4 score) and considered largely in terms of self-related irrational beliefs (e.g., “I should be  
5 perfect all of the time”). Multidimensional models (e.g., Hewitt & Flett, 1991) brought to the  
6 fore a wide array of dimensions indicative of perfectionism and shifted emphasis to studying  
7 the different dimensions. Some of the dimensions include, for example, an emphasis on  
8 interpersonal aspects of perfectionism such as beliefs about how others should behave (e.g.,  
9 “Other people should perform perfectly”) and beliefs about what other people think (e.g.,  
10 “Other people expect me to be perfect”). The result of the development of a multidimensional  
11 conceptualisation of perfectionism has been a fuller account of its various manifestations and  
12 its consequences, as well as the ability to intervene in a more effective manner.

13           There are now at least six multidimensional models of perfectionism. With so many  
14 different models (and accompanying measures) of perfectionism, research can be difficult to  
15 navigate. However, in actuality, these models show considerable overlap. Notably, all models  
16 include dimensions that capture high, exceptionally high, or excessively high personal  
17 standards. Thereafter, models differ in the dimensions they include. However, typically, the  
18 additional dimensions pertain to less desirable aspects of perfectionism. These dimensions  
19 capture the thoughts and feelings that accompany achievement-oriented behaviour such as an  
20 intense aversion to mistakes, chronic doubts about performance, and negative reactions to  
21 imperfection. These dimensions are key to differentiating perfectionism from other  
22 achievement-related traits (Frost et al., 1990). They are also important for understanding how  
23 the consequences of perfectionism differ between people.

24           Additional support for the notion that perfectionism should be studied as  
25 multidimensional has been provided by the higher-order model of perfectionism. Adopting a

1 broad definition of perfectionism (“high standards of performance *which are accompanied by*  
2 *tendencies for overly critical evaluations of one's own behaviour*” Frost et al., 1990, p. 450,  
3 italics in original), the higher-order model distinguishes between two factors: perfectionistic  
4 strivings (PS) and perfectionistic concerns (PC). PS are “aspects of perfectionism associated  
5 with self-oriented striving for perfection and the setting of very high personal performance  
6 standards” (Gotwals, Stoeber, Dunn, & Stoll, 2012, p. 264) whereas PC are “aspects  
7 associated with concerns over making mistakes, fear of negative social evaluation, feelings of  
8 discrepancy between one’s expectations and performance, and negative reactions to  
9 imperfection” (Gotwals et al., 2012, p. 264). This model is not a theory of perfectionism.  
10 However, it is a useful heuristic based on factor analytical studies of different measures of  
11 perfectionism (e.g., Bieling, Israeli, & Antony, 2004) and the notion of functional  
12 homogeneity whereby the constitutes of the two higher-order factors tend to be have similar  
13 effects (Gaudreau & Verner-Filion, 2012). Therefore, regardless of the specific model of  
14 perfectionism adopted, evidence supports a multidimensional conceptualisation of  
15 perfectionism with at least two distinct dimensions (PS and PC).

## 16 **Perfectionism is Transcontextual**

17 A further important issue is whether perfectionism is a trait or disposition. The  
18 confusion is understandable. Both terms are used interchangeably (and sometimes in  
19 combination) in sport and personality research. Drawing on the work of McAdams and Pals  
20 (2006), here we consider traits to be “broad dimensions of individual differences between  
21 people, accounting for inter-individual consistency and continuity in behaviour, thought, and  
22 feelings across situations and over time” (p.207). By contrast, we take a disposition to be a  
23 adaptation to one’s character that is bound or “contextualized in time, place, and/or social  
24 role” (p.208). Examples of character adaptations include personal motives, goals, plans,  
25 values, and virtues. As such, a disposition is something that is less consistent than a trait and

1 shows lower stability over time and across situations and contexts. With regards to  
2 perfectionism, there are currently two opposing positions on this issue. On one hand,  
3 researchers have argued that perfectionism is best considered a trait (or is at least “trait-like”;  
4 e.g., Hill, 2016). On the other hand, other researchers have argued that perfectionism is best  
5 considered a disposition and domain-specific (e.g., Stoeber, 2018). We revisit these two  
6 positions below.

7 Hill (2016) offered three main arguments to support the notion that perfectionism is  
8 best considered a trait or trait-like. First, research examining domain-specific perfectionism  
9 has found the tendency to exhibit perfectionism in one domain is highly correlated with a  
10 tendency to exhibit perfectionism in other domains (e.g., Dunn Craft, Dunn, & Gotwals,  
11 2011). Second, related to the first point, most people who report being “perfectionistic”  
12 identify multiple domains in which they are perfectionistic, rather than only one (see Stoeber  
13 & Stoeber, 2009). Third, and finally, in twin studies examining perfectionism, a substantial  
14 proportion of variability in perfectionism can be attributed to common genetic factors (up to  
15 42%; e.g., Iranzo-Tatay et al., 2015). The amount of variance for some dimensions of  
16 perfectionism is similar to other personality characteristics normally considered traits (e.g.,  
17 Big Five; Bouchard & McGue, 2003).

18 Stoeber (2018), by contrast, has argued that perfectionism is best considered a  
19 disposition, not a trait. He also offers three main arguments for why this is the case. First,  
20 evidence of heritability aside, theoretical models of the development of perfectionism suggest  
21 that perfectionism is most likely something learned from early experiences, particularly in  
22 response to parental behaviours (see Flett, Hewitt, Oliver, & MacDonald, 2002). Second,  
23 individuals who report that they are perfectionistic in all domains are rare. Most people have  
24 a very limited number of domains in their lives in which they are perfectionistic. Finally,  
25 longitudinal studies often show changes in perfectionism over relatively short periods which

1 reflect more immediate changes in experiences and expectations. Stoeber argues that changes  
2 of this kind would be unlikely to occur if perfectionism was a trait.

3 This debate has yet to be resolved. In revisiting it here, we note a recent study by  
4 Franche and Gaudreau (2016) may help move it forward somewhat. Franche and Gaudreau  
5 advocated that perfectionism be best studied as a multilevel characteristic that varies between  
6 individuals and within individuals, and illustrated how the cross-domain manifestation of  
7 perfectionism can be taken into account when studying its effects. The approach is based on  
8 the work of Fleeson (2001; Fleeson & Nofhle, 2008) who argued that both typical behaviour  
9 *and* variability in that behaviour can reflect stable individual-differences and meaningful  
10 aspects of personality. In other words, “consistent-inconsistency” can denote personality in  
11 the same way that consistency does. In this regard, we consider the presence of perfectionism  
12 in some domains (domains that carry especial personal meaning or value), and its predictable  
13 absence in others (domains with no personal meaning or value), to be itself part of an overall  
14 pattern of expression that signals perfectionism is unlikely to be a contextually bound  
15 disposition. Rather, perfectionism has a structure that stretches beyond contexts; it is a  
16 transcontextual trait (McCrae & Costa, 1984).

### 17 **Perfectionists that are “Healthy” Do Not Exist**

18 Our third topic pertains to an ongoing controversy regarding the existence of so-called  
19 “healthy” perfectionists (also referred to as “adaptive” or “functional” perfectionists). Some  
20 sport psychologists believe perfectionism may be desirable for athletes when exhibited as a  
21 healthy type (e.g., Sarkar & Fletcher, 2014). However, we maintain that reasoned  
22 examination of perfectionism highlights that the notion of “healthy” perfectionists is a  
23 misnomer and that there is little empirical basis for the existence for such a type of  
24 perfectionist. The case against the use of the term “healthy perfectionist” is compelling and  
25 centres on three issues: (1) Whether types of perfectionists exist, (2) whether it is advisable to

1 label a trait in a manner that presumes its effects, and (3) whether dimensions of  
2 perfectionism are being confused with types of perfectionism. These issues are discussed  
3 below.

4         The first issue is whether “perfectionists” actually exist. People are often surprised to  
5 learn that in all likelihood there is no such thing as a perfectionist. We use the term  
6 perfectionist as shorthand when describing people who exhibit dimensions of perfectionism  
7 to some varying, typically high, degree. The evidence to support the existence of different  
8 types of perfectionism (a taxonomy), such as healthy and unhealthy perfectionists, is  
9 questionable (see Hill & Madigan, 2017). Rather, the evidence that does exist supports the  
10 notion that perfectionism has a continuum-based structure (Bromen-Fulks, Hill, & Green,  
11 2008). That is, like most personality traits, all people exhibit perfectionism to some degree.  
12 As such, it would be advisable to use the term “perfectionistic” to signal the trait. This is  
13 something that others have recently advocated when describing other traits (e.g., narcissistic  
14 versus narcissist; Aslinger, Manuck, Pilkonis, Simms, & Wright, 2018). In short, if there are  
15 no perfectionists, there can be no healthy (or even unhealthy) perfectionists.

16         The second issue is whether, if we decide that there is benefit to studying typology  
17 regardless, “healthy” is a suitable moniker. A number of researchers have argued against the  
18 use of the term “healthy” and similar terms on various grounds (e.g., Gaudreau, 2013).  
19 Principally, it is a label that emphasises what the trait is related to, not what it is, thus making  
20 the construct and its effects practically inseparable. This is evident in the tautological  
21 arguments that follow (e.g., healthy perfectionism is characterised by, well, good health). As  
22 a label, it also presupposes the effects of a trait that are likely to be exceedingly complex. Is  
23 healthy perfectionism healthy for everyone, under all circumstances, all of the time? Few  
24 people would argue that this is the case. By adopting such a black-and-white approach we  
25 also divert attention away from the role of personal and situational factors that will be

1 important in determining its effects and the more meaningful question of when and for whom  
2 is perfectionism likely to contribute to good or bad health. There is already preliminary  
3 evidence, for example, that the effects of dimensions of perfectionism in sport may be  
4 moderated by gender, age, sport type, and the instrument used to measure perfectionism (Hill  
5 et al., 2018).

6         The third, and final, issue is whether proponents of healthy perfectionism are  
7 confusing dimensions of perfectionism with types of perfectionism. Typically, it is  
8 perfectionistic strivings that is seized upon when advocating the notion of healthy  
9 perfectionists. Obviously, this is not a type of perfectionism; it is a dimension of  
10 perfectionism. It is also only one part of a two factor higher-order model. The two factors  
11 can, of course, be examined separately, statistically analysed in a manner that allows  
12 examination of their unique effects, and each can be examined in context of high or low  
13 levels of the other. However, PC cannot be ignored when the intention is to understand the  
14 consequences of perfectionism. One cannot separate the “good” from the “bad” without  
15 subsequently examining something that is not actually perfectionism (see also Stoeber, 2011).

### 16 **Research Examining Perfectionism Reveals it to be Complex**

17         The final topic we discuss is the likely consequences of perfectionism for athletes.  
18 Research examining perfectionism in athletes extends across 25 years. This research has not  
19 revealed perfectionism to be either uniformly good or bad. Rather, perfectionism has been  
20 revealed to be complex. We are, however, beginning to gain a better understanding of the  
21 typical effects one can expect when athletes report higher and lower levels of PS and PC. We  
22 briefly summarise the results of the two recent large reviews in sport below to illustrate how  
23 this is the case.

24         The first review is a meta-analysis of research examining perfectionism in sport (Hill,  
25 Mallinson-Howard, & Jowett, 2018). The meta-analysis included 52 studies and 697 effect

1 sizes for 29 criterion variables that spanned motivation, performance, and emotion/wellbeing.  
2 Based on research in the review, there was little evidence of any discernible benefits of PC  
3 for athletes. Rather, motivationally, PC were characterised by a pattern of achievement goals  
4 (e.g., ego orientation, mastery avoidance, and performance avoidance) and motivation  
5 regulation (combination of introjected, external and amotivation) that are unlikely to provide  
6 the basis for long-term participation and expertise development. Rather, PC appeared likely  
7 to place a heavy toll on the wellbeing of athletes in the form of greater anxiety, self-criticism,  
8 and depressive symptoms. In regards to performance, research has yet to find any evidence of  
9 an impact of PC on athletic performance. However, given how PC influence wellbeing, it is  
10 difficult to comprehend how they would not indirectly undermine an athlete's ability to  
11 regularly perform to their potential.

12 PS were revealed to be much more ambiguous. In regards to motivation, it included a  
13 mix of achievement goals (task and ego orientation) and almost all motivation regulations  
14 (with the exception of amotivation). PS are therefore likely to be highly energising but are  
15 also likely to give rise to a complex pattern of achievement behaviour that reflects the  
16 presence of both high quality/optimal motivation and low quality/sub-optimal motivation  
17 (Deci & Ryan, 2008). The result of which appear to be evident regarding performance and  
18 emotion/wellbeing. Unlike PC, PS were positively related to athletic performance. However,  
19 their impact on emotion/wellbeing was mixed. On one hand, PS were positively related to  
20 self-esteem, self-confidence, and enjoyment but also, on the other hand, they were positively  
21 related to anxiety, worry, and self-criticism. In regards to unpicking this complexity,  
22 additional analyses revealed that some of the ambiguity of PS is attributable to its relationship  
23 with PC. In other words, given their strong intercorrelation, accompanying levels of PC may  
24 be one major source of problems for athletes with higher in PS.

1           The second review was a reanalysis of research in sport, dance, and exercise with a  
2 focus on outcomes associated with different combinations of dimensions of perfectionism  
3 (Hill, Mallinson-Howard, Madigan, & Jowett, in press). In the review, we adopted the  $2 \times 2$   
4 model proposed by Gaudreau and Thompson (2010) wherein within-person combinations of  
5 perfectionism are examined: non-perfectionism (low PS/ low PC), pure perfectionistic  
6 strivings (pure PS; high PS/ low PC), pure perfectionistic concerns (pure PC; low PS/high  
7 PC), and mixed perfectionism (high PS/ high PC)<sup>1</sup>. The model includes a number of  
8 formalised hypotheses regarding differences between each combination. Hypothesis 1 states  
9 that pure PS will either be associated with better (H1a), poorer (H1b), or no different (H1c)  
10 outcomes compared with non-perfectionism. Hypothesis 2 states that non-perfectionism will  
11 be associated with better outcomes than pure PC (H2). Hypothesis 3 states that mixed  
12 perfectionism will be associated with better outcomes compared to pure PC (H3). Finally,  
13 hypothesis 4 states that pure PS will be associated with better outcomes compared to mixed  
14 perfectionism (H4).

15           With these hypotheses in mind, the reanalysis included 63 studies and 1772 effect sizes.  
16 Hypothesis 1a was supported on 312 of 443 occasions (70% of the time). Hypothesis 2 was  
17 supported on 416 of 443 occasions (94% of the time). Hypothesis 3 was supported on 309 of  
18 443 occasions (70% of the time). Hypothesis 4 was supported on 416 of 443 occasions (94%  
19 of the time). In other words, as expected, typically, pure PS was associated with better

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<sup>1</sup> These dimensions are actually referred to as non-perfectionism (low PS/ low PC), pure personal standards perfectionism (pure PSP; high PS/ low PC), pure evaluative concerns perfectionism (pure ECP; low PS/high PC), and mixed perfectionism (high PS/ high PC). We have retained the language of the higher-order model to avoid confusion and for ease of the reader.

1 outcomes than non-perfectionism and mixed perfectionism, and non-perfectionism and mixed  
2 perfectionism were associated with better outcomes than pure PC. However, based on  
3 instances in which hypotheses were in the opposite direction to expectations (H1b supported  
4 on 131 occasions or 30% of the time and H3 contradicted on 134 occasions or 30% of the  
5 time) it is likely that pure PS and mixed perfectionism carry the potential to be associated  
6 with both better *and* worse outcomes in comparison to non-perfectionism and pure PC. On  
7 this basis, we concluded that it was likely that all combinations of perfectionism carry at least  
8 some potential for motivation, wellbeing, and (therefore) performance difficulties. Whether  
9 these difficulties are realised will likely depend on a range of personal and situational  
10 moderating factors. Identifying these factors is now one of the main focuses of research in  
11 sport.

## 12 **Summary**

13       Perfectionism is common but often misunderstood in sport. In considering key topics in  
14 this area of research we argue perfectionism is a multidimensional trait that manifests in areas  
15 of people's lives that are important. In addition, there is little evidence to support the  
16 existence of types of perfectionists, healthy or otherwise. Instead, perfectionism most likely  
17 exists in everyone to some degree with its consequences dependent on the level of  
18 perfectionism, the particular dimensions exhibited, and other personal and situational  
19 moderating factors. Research to date suggests that the effects of PS are ambiguous; perhaps  
20 beneficial for athletic performance some of the time, but most likely bad for the athlete most  
21 of the time. By contrast, PC are likely to be problematic for most athletes, most of the time.  
22 This pattern of findings is also evident in research when examining combinations of the  
23 different dimensions of perfectionism.

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