Est. 1841 | YORK ST JOHN UNIVERSITY

Hill, Andrew P. and Madigan, Daniel J. (2017) A short review of perfectionism in sport, dance and exercise: Out with the old, in with the 2 × 2. Current Opinion in Psychology.

Downloaded from: https://ray.yorksj.ac.uk/id/eprint/2180/

The version presented here may differ from the published version or version of record. If you intend to cite from the work you are advised to consult the publisher's version: http://www.sciencedirect.com/science/article/pii/S2352250X17300301

Research at York St John (RaY) is an institutional repository. It supports the principles of open access by making the research outputs of the University available in digital form. Copyright of the items stored in RaY reside with the authors and/or other copyright owners. Users may access full text items free of charge, and may download a copy for private study or non-commercial research. For further reuse terms, see licence terms governing individual outputs. Institutional Repositories Policy Statement

RaY

Research at the University of York St John

For more information please contact RaY at ray@yorksj.ac.uk

Hill, A. P. & Madigan, D. J. (in press). A short review of perfectionism in sport, dance and exercise: Out with the old, in with the 2 × 2. Current Opinion in Psychology. Accepted 17-04-2017.

A short review of perfectionism in sport, dance and exercise:

Out with the old, in with the 2 × 2

— 2,753 words (not including abstract, references, and figures) —

Abstract

The purpose of the current paper is to review research examining multidimensional perfectionism in sport, dance, and exercise. We start by providing a conceptual overview of perfectionism. We then describe three main approaches to examining perfectionism. These approaches are an independent effects approach, the tripartite model, and the 2 × 2 model of perfectionism. Alongside the description of each approach, research findings are summarized. We close the paper by explaining how the development of the 2 × 2 model has likely rendered the tripartite model obsolete.

Keywords: perfectionistic strivings; perfectionistic concerns; tripartite model; 2 × 2 model of perfectionism

Introduction

Perfectionism is perhaps the most studied personality trait in sport, dance, and exercise. This may be because whereas perfectionism can pervade all domains of life, it appears to be an especially common characteristic among those performing in these domains. Thanks to the efforts of a relatively small number of research groups and researchers, we have learnt a considerable amount about the likely consequences of perfectionism in sport, dance, and exercise. In the current paper, we summarize this work. We have organized the paper by first providing a conceptual overview of perfectionism and then presenting research using each of the three main approaches adopted by researchers: the independent effects approach, tripartite model, and the 2 × 2 model of perfectionism. As the latter two approaches are incompatible with each other, we also offer our opinion on which of these two models offers the best opportunity to advance our understanding of perfectionism in sport, dance, and exercise.

Multidimensional Perfectionism

Perfectionism is broadly defined as a combination of excessively high personal standards and overly critical self-evaluations [1]. A number of different models have been used in sport, dance, and exercise to examine perfectionism. Reflecting the historical roots of perfectionism, the approaches in these domains originate from other areas of psychology. The work of Frost et al. [1], Hewitt and Flett [2], and Stoeber, Otto, Pescheck, Becker, and Stoll [3] has been especially influential. It is their models that have been adopted and/or adapted most frequently when researchers have sought to study perfectionism in sport, dance, and exercise. Frost et al.'s model [1] assesses perfectionism across a range of dimensions: personal standards, concern over mistakes, doubts about action, organization, parental expectations and parental criticism. By contrast, Hewitt and Flett's [2] model assesses self-oriented (imposing the need for perfection on the self), other-oriented (imposing the need for perfection on others) and socially prescribed (the

belief that others are imposing the need for perfection) dimensions of perfectionism. Finally, Stoeber et al.'s [3] model assesses striving for perfection and negative reactions to imperfection.

While the use of different models may seem counterproductive, it is through the application of these different models that researchers have come to appreciate and understand the different ways in which perfectionism may manifest in sport, dance, and exercise, as well as its possible consequences. In addition, factor-analytical studies suggest that regardless of the particular model and instrument used, they each capture at least one of two higher-order dimensions of perfectionism (e.g., [4,5,6]). Perfectionistic strivings (PS) are "aspects of perfectionism associated with self-oriented striving for perfection and the setting of very high personal performance standards" ([7], pp. 264). By contrast, perfectionistic concerns (PC) are "aspects associated with concerns over making mistakes, fear of negative social evaluation, feelings of discrepancy between one's expectations and performance, and negative reactions to imperfection" ([7], pp. 264). These higher-order dimensions can be used to understand all research in sport, dance, and exercise as part of a single, unified model.

In a recent edited book, we and a number of colleagues provided a comprehensive review of research examining perfectionism in sport, dance, and exercise [8]. Three chapters, in particular, reviewed studies that examined dimensions of perfectionism separately (an independent effects approach [9]) and studies that examined combinations of dimensions of perfectionism (tripartite model and 2 × 2 model of perfectionism [10,11]). We use these chapters as a starting point from which to provide a summary of research adopting these three approaches. We encourage interested readers to consult these excellent chapters for further details.

Approach One: An Independent Effects Approach

One approach to examining perfectionism in sport, dance and exercise is to adopt an independent effects approach. This entails examining the correlates and consequences of the two

higher-order dimensions of perfectionism separately. As most studies report bivariate correlations, this approach is the most common in research. This approach can also include examining the correlates and consequences of the two dimensions of perfectionism after controlling for their relationship. Such an approach is useful as PS and PC tend to be positively correlated and often display opposing relationships with criterion variables. When adopting this approach, four dimensions of perfectionism can be examined: PS, PC, residual PS, and residual PC. The latter two dimensions are interpreted as the influence of one dimension (PC) on a criterion variable (e.g., anxiety) when the other dimension of perfectionism (PS) is zero (or another fixed value). In other words, interpreting residual PS and residual PC helps answer questions such as, if two athletes report the same level of PS, what is the influence of PC on anxiety?[1]

Two recent reviews have provided a full account of the findings of research in sport, dance, and exercise that has adopted an independent effects approach [9,12]. These reviews analyzed 81 studies with 58 in sport, 10 in dance, and 13 in exercise. The findings of these reviews indicated that PS and PC show different and sometimes opposite patterns of relationships with various correlates and consequences. Specifically, PC showed more consistent positive relationships with maladaptive correlates and consequences (e.g., anxiety, burnout, amotivation [13,14,3]), whereas PS was more ambivalent in that it showed positive relationships with adaptive correlates and consequences (e.g., performance, engagement, autonomous motivation [15,16,17]) as well as maladaptive correlates and consequences (e.g., avoidance goals, anger, exercise dependence

[1]Note that the use of this approach has sparked debate among researchers regarding what conclusions can and cannot be drawn regarding perfectionism when using it (see [13,56,57]). However, the description provided here is common ground for all parties involved.

[18,19,20]). Residual PS was, however, clearly adaptive in that it displayed consistent positive relationships with adaptive correlates and consequences. Residual PC displayed little difference to PC. Effect sizes ranged in magnitude but were typically medium-sized (r = .30 [21]).

Approach Two: The Tripartite Model of Perfectionism

A further approach to examining perfectionism is to focus on combinations of PS and PC. The most established approach to do so is the tripartite model. The tripartite model entails examination of three types of perfectionist: healthy perfectionists (high PS/low PC), unhealthy perfectionists (high PS/high PC), and non-perfectionists (low PS with low PC or high PC). This model is typically tested by adopting a person-centered approach whereby statistical analyses are used to identify qualitatively different groups based on scores of perfectionism and then these groups are compared in terms of levels of other criterion variables (e.g., burnout)[2]. Support for the model is inferred when three groups of perfectionists are established and these groups differ on criterion variables in an expected manner, particularly healthy and unhealthy perfectionists. The tripartite model has a long history that can be traced to Hamachek [22] who advocated a distinction between "normal" and "neurotic" perfectionists. Parker [23] was the first to test the tripartite model, followed shortly after by Rice, Ashby, and colleagues [24,25,26]. It is Rice, Ashby and colleagues who are typically most thought of as affiliated with the model as they have

[2]There are studies that could be considered to test the tripartite model using variable-centred approaches (e.g., canonical correlation analysis), including nine studies in addition to those reviewed here (see [11]). However, we have opted to exclude these studies here because, while valuable, we do not consider them strict tests of the typology-based tripartite model. Moreover, none of these studies has ever found a canonical correlation involving non-perfectionism, only healthy and unhealthy perfectionism (essentially, a dichotomous model).

provided an impressive body of research, including large studies aimed at establishing classification of individuals in the model [27,28]. In sport, dance, and exercise, Dunn was among the first to consider the tripartite and, along with Gotwals, has provided the majority of research testing it in these domains (see [11]).

Nine studies have examined the tripartite model using a person-centered approach. Seven of these studies were in sport [29-35], two in dance [36,37] and none in exercise. Three studies provided support for the expected three group structure [29,32,34]. However, the other six were unsupportive in that they identified alternative group structures that included additional groups (four groups; [30,36]) or included groups with different degrees of perfectionism, not different types of perfectionism [31,33,35,37]. In the three studies that provided support for the tripartite model it was found that, in comparison to healthy perfectionists, unhealthy perfectionists reported significantly higher anger and dejection following mistakes, lower self-confidence and optimism following mistakes**,** lower perceived parental authoritativeness (i.e., demanding yet supportive parent behavior), lower task coping strategies (effort and active behaviors), and higher avoidance coping strategies (behavioral disengagement). It is also noteworthy that based on our own estimates when considering effect sizes as opposed to just statistical significance, the differences between healthy perfectionists and unhealthy perfectionists includes a wider range of coping strategies, again in favor of healthy perfectionists (e.g., planning, venting, wishful thinking, Cohen's $d > 0.30$).

Approach Three: The 2 × 2 Model of Perfectionism

The most recent development in this area of research has been the proposal of a 2 × 2 model of perfectionism [38]. The 2 × 2 model includes four "subtypes" of perfectionism derived from combinations of PS and PC: 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). Note that the subtypes are not considered categories or types of people in the same manner as in the tripartite model. Rather, the term is used as shorthand for "within-person combinations" [39]. Based upon the configuration of PS and PC within each subtype, each is hypothesized to be associated with better or worse comparative outcomes. Pure PSP is associated with better, worse, or is no different from non-perfectionism (hypotheses 1a, 1b, and 1c). Pure ECP is associated with worse outcomes than non-perfectionism (hypothesis 2) and mixed perfectionism (hypothesis 3). Finally, pure PSP is associated with better outcomes compared to mixed perfectionism (hypothesis 4). When considered together, the hypotheses provide a cascade of perfectionism from better to worse: pure PSP, mixed perfectionism, and pure ECP.

Nine studies have examined the 2 × 2 model in sport, dance, and exercise. Six of these examined the model in athletes and coaches [40-45], three in dance [36,46,47], and none in exercise. These studies have provided 47 tests of each hypothesis and included various adaptive criterion variables (e.g., positive affect, intrinsic motivation, and physical self-worth) and maladaptive criterion variables (e.g., negative affect, fear of failure, and burnout). Using effect sizes to determine support for each hypothesis reveals that H1a was supported 81% of the time and contradicted 19% of the time (H1b). H2 was supported 91% of the time and contradicted 9% of the time. H3 was supported 77% of the time and contradicted 23% of the time. Finally, H4 was supported 91% of the time and contradicted 9% of the time. Effects ranged in size but were typically medium-sized when supportive of hypotheses and small when contradicted.

Summary of Research Findings

Based on the studies reviewed above a number of conclusions can be drawn. Firstly, PC are clearly maladaptive whereas PS are more complex and ambivalent in sport, dance, and exercise. Secondly, it is better for athletes, dancers, and exercisers with the same level of PC to

have higher PS and worse for those with the same level of PS to report higher PC. Thirdly, when examining combinations of perfectionism in more detail, high PS and high PC (unhealthy perfectionists or mixed perfectionism) is typically associated with more maladaptive, and less adaptive, correlates and consequences in comparison to high PS and low PC (healthy perfectionists or Pure PSP). Fourthly, it is also valuable to distinguish between all four within-person combinations of perfectionism. This is because the correlates and consequences of low PS and low PC (non-perfectionists and non-perfectionism) are discernably worse in comparison to high PS and low PC (healthy perfectionists or Pure PSP) and better in comparison to low PS and high PC (non-perfectionists or Pure ECP). Finally, the most problematic subtype of perfectionism across sport and dance (and in all likelihood exercise) is low PS and high PC (Pure ECP) followed by high PS and high PC (unhealthy perfectionists or mixed perfectionism).

Out with the Old, in with the 2 × 2

There are a number of debates in this area of research. How perfectionism is best conceptualised, what instruments should and should not be used, the appropriateness of the labels given to dimensions of perfectionism, and, ultimately, its likely consequences. These debates are extremely valuable but well-worn. Readers interested in these issues are directed to Flett and Hewitt [48], Hill [49], and Stoeber and Madigan [50] as starting points. Rather than discuss these issues, we close the paper by offering our opinion on a new issue we think will soon come to the fore. Specifically, two contradictory models of perfectionism are currently being used to examine combinations of PS and PC and it is unclear which one offers the best means of studying perfectionism. In reflecting on this issue ourselves, we believe that the development of the 2 × 2 model has signalled the end of the tripartite model as an approach to examining perfectionism in sport, dance, and exercise. In making this prediction, we are mindful of the ire with which our foreboding may be met by some researchers in this area. Not least

because so few studies currently exist examining either of the models in sport, dance, and exercise. However, we have come to this conclusion for a number of reasons. We describe two of the main ones below.

Firstly, research examining the tripartite model has provided, at best, mixed support for the model. As evidenced by the research findings described above, less than half of the studies in sport, dance, and exercise provided support for the existence of three types of perfectionist. In addition, the backdrop for these findings raises concerns regarding the model's assumptions about the structure of perfectionism as a personality trait (its "taxometric" structure). That is, whether different types of perfectionist actually exist or perfectionism exists to some degree in everyone. This issue that has been discussed by others (e.g., [8,11,51]). As described by Gotwals, the assumption that types of perfectionist exist is a central tenet of the tripartite model and one that is seriously challenged by existing research. In addition, the only study to examine the taxometric structure of perfectionism found support for studying degrees of perfectionism rather than types [52]. Therefore, at the moment, there is little evidence that types of perfectionist exist beyond the descriptive structures that we impose on our samples [49].

Secondly, perhaps the most important basis for our conclusion is the empirical support provided for the 2 × 2 model. This includes general research findings that attest to the predictive ability of the four (not three) subtypes in the model but also the support for hypothesis 2 (pure ECP vs non-perfectionism), in particular. The tripartite model does not distinguish between these two types of perfectionism. For this reason, Stoeber [53,54] has suggested the use of this hypothesis to pit the tripartite and 2 × 2 model against each other (or at least to check for a tripartite model within the 2 × 2 model). Based on findings so far, there is clear value in differentiating between the two subtypes of perfectionism not included in the tripartite model. We also believe that hypothesis 3 is similarly important. Specifically, whether mixed

perfectionism is the most problematic subtype of perfectionism (as in the tripartite model) or pure ECP is the most problematic subtype of perfectionism (as in the 2 × 2 model). Again, empirical evidence appears to be stacked against the tripartite model in this regard. Therefore, while the 2 × 2 model is not without weaknesses (see [55]), in our opinion, it will provide a better understanding of the consequences of combinations of PS and PC in sport, dance, and exercise. We hope to see empirical evidence that confirms or refutes our contention in the near future.

Conclusion

Perfectionism appears to warrant its status as one of the most studied personality traits in sport, dance, and exercise with research revealing that it is associated with a wide range of correlates and consequences in these domains. The precise correlates and consequences of perfectionism differ depending on the dimension examined, PS or PC, whether the relationship between PS and PC is taken into account, and on what particular combinations of PS and PC are examined. When examining combinations of PS and PC in sport, dance, and exercise, we advocate the use of the 2 × 2 model.

References and Recommended Readings

Papers of particular interest, published within the period of review, have been highlighted as:

- ● of special interest
- ●● of outstanding interest

1. Frost R O, Marten P, Lahart C, Rosenblate, R: **The dimensions of perfectionism.** *Cognitive Therapy and Research* 1990, **14**:449-468.
2. Hewitt P L, Flett G L: **Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology**. *J Pers Soc Psychol* 1991, **60**:456-470.
3. Stoeber J, Otto K, Pescheck E, Becker C, Stoll O: **Perfectionism and competitive anxiety in athletes: Differentiating striving for perfection and negative reactions to imperfection**. *Personality and Individual Differences*, 2007, **42**:959-969.
4. Bieling P J, Israeli A L, Anthony M M: **Is perfectionism good, bad, or both? Examining models of the perfectionism construct**. *Personality and Individual Differences* 2004, **36**:1373-1385.
5. Cox B J, Enns M W, Clara I P: **The multidimensional structure of perfectionism in clinically distressed and college student samples**. *Psychological Assessment* 2002, **14**:365-373.
6. Frost R O, Heimberg R G, Holt C S, Mattia J I, Neubauer A L: **A comparison of two measures of perfectionism**. *Personality and Individual Differences* 1993, **14**:119-126.
7. Gotwals J K, Stoeber J, Dunn J G H, Stoll O: **Are perfectionistic strivings in sport adaptive? A systematic review of confirmatory, contradictory, and mixed evidence.** *Canadian Psychology* 2012, **53**:263-279.
8. Hill A P (Ed.): *The psychology of perfectionism in sport, dance and exercise*. Routledge;

2016.

9. ●● Jowett G E, Mallinson S H, Hill A P: **An independent effects approach to perfectionism in sport, dance, and exercise**. In *The psychology of perfectionism in sport, dance and exercise.* Edited by Hill A P. Routledge; 2016:85-149.

A comprehensive quantitative review of the effects of perfectionistic strivings and perfectionistic concerns in sport, dance, and exercise presenting findings from 70 studies in table format.

10. ●● Gaudreau P: **The 2 × 2 model of perfectionism in sport, dance, and exercise.** In *The psychology of perfectionism in sport, dance and exercise*. Edited by Hill A P. Routledge; 2016:174-200.

Presents an overview of the 2 × 2 model of perfectionism and a comprehensive quantitative review of studies on perfectionism in sport, dance, and exercise that used the 2 × 2 model as conceptual and analytic framework.

11. Gotwals J K: **The tripartite model of perfectionism: Evidence from research in sport and dance. In** *The psychology of perfectionism in sport, dance and exercise*. Edited by Hill A P. Routledge; 2016:150-173.

12. ●● Hill A P, Jowett G E, Mallinson S H: **Perfectionism in sport, dance, and exercise**. In *The psychology of perfectionism: Theory, research, applications*. Edited by Stoeber J. Routledge; in press.

An update on Jowett, Mallinson, and Hill's (2016) comprehensive quantitative review of the effects of perfectionistic strivings and perfectionistic concerns in sport, dance, and exercise presenting findings from an additional 11 studies.

13. Hill A P: **Perfectionistic strivings and the perils of partialling.** *International Journal of Sport and Exercise Psychology*, 2014, **12**:302-315.

14. ●● Madigan D J, Stoeber J, Passfield L: **Perfectionism and burnout in junior athletes:**

A three-month longitudinal study. *Journal of Sport & Exercise Psychology* 2015, **37:**305-315.

This is the first study to show that perfectionism predicts changes in athlete burnout over time. Whereas perfectionistic concerns predicted increases in athlete burnout, perfectionistic strivings predicted decreases.

15. Stoeber J, Uphill M A, Hotham S: **Predicting race performance in triathlon: The role of perfectionism, achievement goals, and personal goal setting.** *Journal of Sport & Exercise Psychology*, 2009, **31**: 211-245.

16. ● Jowett G E, Hill A P, Hall H K, Curran T: **Perfectionism, burnout and engagement in youth sport: The mediating role of basic psychological needs.** *Psychology of Sport and Exercise*, 2016, **24:**18-26.

This study showed that perfectionistic strivings and concerns showed opposite relationships with athlete engagement and burnout. It also showed that need satisfaction and thwarting plays a role in explaining these differential relationships.

17. ● Madigan D J, Stoeber J, Passfield L: **Motivation mediates the perfectionism–burnout relationship: A three-wave longitudinal study with junior athletes**. *Journal of Sport & Exercise Psychology*, 2016, **38**:341-354.

This study extends the findings of Madigan, Stoeber, and Passfield (2015) by identifying motivation as a mediator of the longitudinal relationship between perfectionism and athlete burnout.

18. Stoeber J, Stoll O, Salmi O, Tiikkaja J: **Perfectionism and achievement goals in young Finnish ice-hockey players aspiring to make the Under-16 national team**. *Journal of Sports Sciences*, 2009, **27:**85-94.

19. Dunn J G, Gotwals J K, Causgrove Dunn J C, Syrotuik D G: **Examining the**

relationship between perfectionism and trait anger in competitive sport. International *Journal of Sport and Exercise Psychology*, 2006, **4:**7-24.

20. Hall H K, Hill A P, Appleton P R, Kozub S A: **The mediating influence of unconditional self-acceptance and labile self-esteem on the relationship between multidimensional perfectionism and exercise dependence**. *Psychology of Sport and Exercise*, 2009, **10**:35-44.
21. Cohen J: **A power primer**. *Psychological Bulletin*, 1992, **112**:155-159.
22. Hamachek D E: **Psychodynamics of normal and neurotic perfectionism**. *Psychology*, 1978, **15**: 27-33.
23. Parker W D: **An empirical typology of perfectionism in academically talented children**. *American Educational Research Journal*, 1997, **34**:545-562.
24. Locicero K A, Ashby J S: **Multidimensional perfectionism and self-reported self-efficacy in college students**. *Journal of College Student Psychotherapy*, 2000, **15**:47-56.
25. Rice K G, Mirzadeh S A: **Perfectionism, attachment, and adjustment**. *Journal of Counseling Psychology*, 2000, **47:**238.
26. Rice K G, Lapsley D K: **Perfectionism, coping, and emotional adjustment.** *Journal of College Student Development*, 2001, **42**:157.
27. Rice K G, Ashby J S: **An efficient method for classifying perfectionists.** *Journal of Counseling Psychology*, 2007, **54:**72.
28. Rice K G, Ashby J S, Gilman R: **Classifying adolescent perfectionists.** *Psychological Assessment*, 2011, **23:**563.
29. Dunn J G H, Causgrove Dunn J, Gamache V, Holt N L: **A person-oriented examination of perfectionism and slump related coping in female intercollegiate volleyball players**. *International Journal of Sport Psychology*, 2014, **45**:298-324.

30. Gotwals J K: **Perfectionism and burnout within intercollegiate sport: A person-oriented approach.** *The Sport Psychologist*, 2011, **25**:489-510.

31. Gucciardi D F, Mahoney J, Jalleh G, Donovan R J, Parke, J: **Perfectionistic profiles among elite athletes and differences in their motivational orientations**. *Journal of Sport & Exercise Psychology,* 2012, **34**:159-183.

32. Lizmore M R, Dunn J G H, Causgrove Dunn J: **Reactions to mistakes as a function of perfectionism and situation criticality in curling.** *International Journal of Sport Psychology,* 2016, **47:**81-101.

33. Martinent G, Ferrand C: **A cluster analysis of perfectionism among competitive athletes**. *Psychological Reports*, 2006, **99:**723-738.

34. Sapieja K M, Dunn J G, Holt N L: **Perfectionism and perceptions of parenting styles in male youth soccer.** *Journal of Sport & Exercise Psychology,* 2011, **33:** 20-39.

35. Vallance J K, Dunn J G, Dunn J L C: **Perfectionism, anger, and situation criticality in competitive youth ice hockey**. *Journal of Sport and Exercise Psychology,* 2006, **28**:383-406.

36. Cumming J, Duda J L: **Profiles of perfectionism, body-related concerns, and indicators of psychological health in vocational dance students: An investigation of the 2× 2 model of perfectionism**. *Psychology of Sport and Exercise*, 2012, **13:**729-738.

37. Nordin-Bates S M, Cumming J, Aways D, Sharp L: **Imagining yourself dancing to perfection? Correlates of perfectionism among ballet and contemporary dancers**. *Journal of Clinical Sport Psychology,* 2011, **5:** 58-76.

38. Gaudreau P, Thompson A: **Testing a 2 × 2 model of dispositional perfectionism.** *Personality and Individual Differences* 2010, **48**:532-537.

39. Gaudreau P: **The 2× 2 model of perfectionism: Commenting the critical comments**

and suggestions of Stoeber (2012). *Personality and Individual Differences*, 2013, **55:**351-355.

40. Crocker P R, Gaudreau P, Mosewich A D, Kljajic K: **Perfectionism and the stress process in intercollegiate athletes: Examining the 2× 2 model of perfectionism in sport competition.** *International Journal of Sport Psychology,* 2014, **45**:325-348.
41. Gaudreau P, Verner-Filio, J: **Dispositional perfectionism and well-being: A test of the 2 × 2 model of perfectionism in the sport domain.** *Sport, Exercise, and Performance Psychology,* 2012, **1:**29-43.
42. Hill A P: **Perfectionism and burnout in junior soccer players: A test of the 2 × 2 model of dispositional perfectionism**. *Journal of Sport and Exercise Psychology,* 2013, 35:18-29.
43. Hill A P, Davis P A: **Perfectionism and emotion regulation in coaches: A test of the 2× 2 model of dispositional perfectionism**. *Motivation and Emotion,* 2014, 38:715- 726.
44. Madigan D J, Stoeber J, Passfield L: **Perfectionism and changes in athlete burnout over three months: Interactive effects of personal standards and evaluative concerns perfectionism.** *Psychology of Sport and Exercise,* 2016, **26**:32-39.
45. Mallinson S H, Hill A P, Hall H K, Gotwals J K: **The 2 × 2 model of perfectionism and school- and community-based sport participation**. *Psychology in the Schools,* 2014, **51**:972-985.
46. Nordin-Bates S M, Raedeke T D, Madigan D J: **Perfectionism, burnout, and motivation in dance: A replication and test of the 2 × 2 model of perfectionism.** *Journal of Dance Medicine & Science,* in press.
47. Quested E, Cumming J, Duda J L: **Profiles of perfectionism, motivation, and self-evaluations among dancers: An extended analysis of Cumming and Duda**

(2012). *International Journal of Sport Psychology*, 2014, **45:**349-368.

48. Flett G L, Hewitt P L: **Reflections on perfection and the pressure to be perfect in athletes, dancers, and exercisers: A focus on perfectionistic reactivity in key situations and life contexts**. In *The psychology of perfectionism in sport, dance and exercise.* Edited by Hill A P. Routledge; 2016:296–320).
49. Hill A P: **Conceptualizing perfectionism: An overview and unresolved issues**. In *The psychology of perfectionism in sport, dance and exercise.* Edited by Hill A P. Routledge; 2016:3-30.
50. Stoeber J, Madigan D J: **Measuring perfectionism in sport, dance, and exercise: Review, critique, recommendations.** In *The psychology of perfectionism in sport, dance and exercise.* Edited by Hill A P. Routledge; 2016:31–56).
51. Flett G L, Hewitt P L: **Perfectionism and maladjustment: An overview of theoretical, definitional, and treatment issues**. In *Perfectionism: Theory, research, and treatment*. Edited by Hewitt P L, Flett G L. American Psychological Association; 2002:5-31.
52. Broman-Fulks J J, Hill R W, Green B A: **Is perfectionism categorical or dimensional? A taxometric analysis**. *Journal of Personality Assessment*, 2008, **90:**481-490.
53. Stoeber J: **Perfectionism in sport and dance: A double-edged sword**. *International Journal of Sport Psychology* 2014, **45**:385-394.
54. Stoeber J: **The psychology of perfectionism: Critical issues, open questions, and future directions.** In *The psychology of perfectionism: Theory, research, applications*. Edited by Stoeber J. Routledge; in press.
55. Stoeber J: **The 2 x 2 model of perfectionism: A critical comment and some suggestions.** *Personality and Individual Differences,* 2012, **53**:541-545.
56. Hill A P: **Real and imagined perils: A reply to Stoeber and Gaudreau (2017).**

Personality and Individual Difference, in press.

57. Stoeber J, Gaudreau P: **The advantages of partialling perfectionistic strivings and perfectionistic concerns: Critical issues and recommendations**. *Personality and Individual Differences* 2017, **104:**379-386.