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Perfectionism: A Motivational Perspective

Joachim Stoeber, Lavinia E. Damian, and Daniel J. Madigan

Overview

The chapter presents a review of the research literature examining perfectionism from a motivational perspective. Taking the two-factor theory of perfectionism—differentiating the two higher-order dimensions of perfectionistic strivings and perfectionistic concerns—as a basis, we present analyses of the differential relationships that the two dimensions show with key motivational constructs focusing on achievement motivation and self-determination theory. As regards achievement motivation, we examine the relationships with achievement motives (hope of success and fear of failure) and achievement goals (task and ego goals, 2×2 and 3×2 achievement goals). As regards self-determination theory, we examine the relationships with autonomous and controlled motivation and with the different regulatory styles associated with intrinsic motivation, extrinsic motivation, and amotivation. Based on the findings of our review, we propose that the differential motivational qualities of perfectionistic strivings and perfectionistic concerns are important to understand why perfectionism is a “double-edged sword” that may energize or paralyze people, motivating some perfectionists to engage and others to disengage. We conclude that perfectionism research may profit from seeing perfectionism from a motivational perspective, perhaps even regard perfectionism as a motive disposition (need for perfection) whereby perfectionistic strivings represent the approach-oriented and autonomous aspects, and perfectionistic concerns the avoidance-oriented and controlled aspects.

Introduction

Perfectionism comes in different forms each having different aspects and is therefore best conceptualized as a multidimensional construct (Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991). Moreover, research on multidimensional perfectionism has shown that the different forms and aspects of perfectionism—when examined together using factor analyses—form two higher-order dimensions (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993; see also Bieling, Israeli, & Antony, 2004). The two dimensions have been given different names, but are nowadays mostly referred to as personal standards perfectionism and evaluative concerns

perfectionism (Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000) or—as we prefer to call them—perfectionistic strivings and perfectionistic concerns (Stoeber & Otto, 2006).

The differentiation of perfectionistic strivings and perfectionistic concerns is central to the understanding of multidimensional perfectionism. The reason is that only perfectionistic concerns are consistently associated with characteristics, processes, and outcomes indicative of psychological maladjustment (e.g., neuroticism, avoidant coping, negative affect). In contrast, perfectionistic strivings are often associated with characteristics, processes, and outcomes indicative of psychological adjustment (e.g., conscientiousness, problem-focused coping, positive affect). In this chapter, we want to show that the dual nature of perfectionism—illustrated by strivings and concerns often showing differential (and sometimes opposing) relationships with psychological adjustment and maladjustment—is also reflected in the two dimensions' relationships with motivational qualities.

Different studies use different measures of multidimensional perfectionism each having different subscales, which can be confusing for readers who are not experts in perfectionism research. Consequently, we followed previous reviews (e.g., Gotwals, Stoeber, Dunn, & Stoll, 2012; Jowett, Mallinson, & Hill, 2016) and did not detail what specific subscales the reviewed studies employed. Instead, we regarded specific subscales as indicators (“proxies”) of perfectionistic strivings and perfectionistic concerns (see Chapter 0, Table 1, for details) so we could focus on the differential relationships that perfectionistic strivings and perfectionistic concerns showed with motivational constructs, starting with achievement motivation.

Achievement Motivation

Achievement Motives

Motives are a key variable in the study of motivation. Research on motives differentiates three basic motives or needs—the achievement motive (need for achievement), the affiliation motive (need for affiliation), and the power motive (need for power)—of which the achievement motive has been the most researched in the past 50 years (McClelland, Atkinson, Clark, & Lowell, 1953) and is the most relevant for perfectionism. Achievement motives can be described as stable individual differences in learned, affectively charged anticipatory responses to achievement situations that energize and direct people's behaviors (McClelland, 1985). Regarding achievement motives, research traditionally differentiates two basic motives: hope of success (motivating people to achieve success) and fear of failure (motivating people to avoid failure) (Atkinson, 1957; DeCharms & Davé, 1965).

Reviewing the literature, we found nine studies investigating the relationships of perfectionism and fear of failure that reported bivariate correlations (Conroy, Kaye, & Fifer, 2007; Frost & Henderson, 1991; Gucciardi, Mahoney, Jalleh, Donovan, & Parkes, 2012; A. P. Hill, Hall, & Appleton, 2010; Kaye, Conroy, & Fifer, 2008; Quested, Cumming, & Duda, 2014; Sagar & Stoeber, 2009; Stoeber & Becker, 2008; Stoeber & Rambow, 2007), but only three that also included hope of success (Frost & Henderson, 1991; Stoeber & Becker, 2008; Stoeber & Rambow, 2007). Regarding the bivariate correlations, the findings show a clear differential pattern for hope of success, but not for fear of failure. As regards hope of success, all three studies found perfectionistic strivings to show positive correlations. In comparison, only one study found perfectionistic concerns to show a positive correlation with hope of success (Frost & Henderson, 1991) whereas the other two found nonsignificant correlations. For fear of failure, five studies found perfectionistic strivings to show positive correlations (Conroy et al., 2007; Frost & Henderson, 1991; Gucciardi et al., 2012; Kaye et al., 2008; Sagar & Stoeber, 2009) and four found nonsignificant correlations (A. P. Hill et al., 2010; Quested et al., 2014; Stoeber & Becker, 2008; Stoeber & Rambow, 2007).¹ By comparison, all studies found perfectionistic concerns to show positive correlations with fear of failure except for one that found a nonsignificant correlation (Stoeber & Becker, 2008).

Whereas the inspection of bivariate correlations and counting and comparing numbers of significant versus nonsignificant correlations is an appropriate method for getting a first impression of the differential relationships of perfectionistic strivings and perfectionistic concerns, the method has two serious limitations. First, it does not take into account any differences in the size of the correlations and thus ignores the strengths of the relationships. Second, and perhaps more importantly, it does not take the overlap between perfectionistic strivings and perfectionistic concerns into account which can be considerable (see Stoeber & Gaudreau, 2017; Stoeber & Otto, 2006). Consequently, one should also consider differences in the size of the correlations and look for statistical analyses that control the overlap between the two dimensions (such as partial correlations, multiple regression analyses, and structural equation

¹A. P. Hill et al. (2010) examined self-oriented perfectionism as an indicator of perfectionistic strivings differentiating perfectionistic striving and importance of being perfect, so our analysis focused on perfectionistic striving (see Chapter 0, Table 1, Note c).

modeling) and examine the *unique* relationships that perfectionistic strivings and perfectionistic concerns show with key motivational constructs.

Consequently, we reinspected the nine studies and found that, when both perfectionism dimensions showed positive correlations with fear of failure, perfectionistic concerns usually showed larger correlations than perfectionistic strivings, suggesting that the former have stronger and more consistent links with fear of failure than the latter. Further, in the studies that statistically controlled the two dimensions' overlap (Sagar & Stoeber, 2009; Stoeber & Becker, 2008; Stoeber & Rambow, 2007), perfectionistic strivings ceased to show any positive relationships with fear of failure. On the contrary, in two of the three studies perfectionistic strivings now showed negative relationships with fear of failure (Sagar & Stoeber, 2009; Stoeber & Becker, 2008).

The different patterns of bivariate versus unique relationships suggests that the overlap with perfectionistic concerns may be responsible for perfectionistic strivings' positive relationships with fear of failure, and may even suppress possible negative relationships with fear of failure (cf. Stoeber & Gaudreau, 2017). By contrast, nothing changed in the pattern of relationships that perfectionistic concerns showed when the overlap with perfectionistic strivings was controlled. Perfectionistic concerns continued to show positive relationships with fear of failure and all its dimensions. Further, perfectionistic concerns continued to show nonsignificant relationships with hope of success whereas perfectionistic strivings continued to show positive relationships.

Achievement Goal Orientations

Whereas the traditional approach in research on achievement motivation focuses on motives and investigates differences in how strongly individuals are motivated and energized, the contemporary approach focuses on goal orientations and investigates differences in why individuals are motivated to achieve (Elliot, 1997). Over the years, research on achievement goal orientations has progressed from a two-component model to a tripartite model, a 2×2 model, and—as the latest development—a 3×2 model. Our understanding of how perfectionistic strivings and perfectionistic concerns are related to achievement goal orientations (for brevity reasons consecutively referred to as “achievement goals”) has progressed accordingly, so our review will follow the progression of achievement goal theory.

The two-component model. As regards the two-component model of achievement goals, the vast majority of studies examining multidimensional perfectionism followed Duda and Nicholls' (1992) model which differentiates two goals: task goals and ego goals. The two goals

have different foci and different functionalities. When pursuing task goals, people are focused on meeting the demands of the task, exerting effort, and developing their competence. Hence task goals are considered to represent adaptive achievement motivations. By contrast, when pursuing ego goals, people are focused on demonstrating superior competence with respect to others or normative standards, which may result in greater apprehension about one's ability, but can also lead to higher performance. Hence, we consider ego goals as mixed adaptive–maladaptive achievement motivations, but agree that they are maladaptive in combination with low levels of task goals (see Duda, 2005, for a review).

Reviewing the literature, we found eight studies that examined the relationships of perfectionistic strivings and concerns with task and ego goals and reported bivariate correlations (Appleton, Hall, & Hill, 2009; Dunn, Causgrove Dunn, & Syrotuik, 2002; Hall, Kerr, Kozub, & Finnie, 2007; Hall, Kerr, & Matthews, 1998; Lemyre, Hall, & Roberts, 2008; McArdle & Duda, 2004; Nerland & Sæther, 2016; Ommundsen, Roberts, Lemyre, & Miller, 2005). As regards task goals, the majority of studies found perfectionistic strivings to show positive correlations except for two studies that found nonsignificant correlations (Lemyre et al., 2008; Nerland & Sæther, 2016). In comparison, the majority of studies found perfectionistic concerns to show nonsignificant correlations with task goals, except for three studies that found negative correlations (Dunn et al., 2002; Lemyre et al., 2008; Ommundsen et al., 2005). For ego goals, all studies found perfectionistic strivings to show positive correlations. The same applied to perfectionistic concerns, with the exception of one study that found perfectionistic concerns to show a nonsignificant correlation with ego goals (Appleton et al., 2009).

Unfortunately, none of the eight studies used statistical analyses examining the unique relationships of perfectionistic strivings and perfectionistic concerns. However, there are two recent reviews that have done just that. The first review (Gotwals et al., 2012) focused on perfectionistic strivings and therefore only computed partial correlations of perfectionistic strivings controlling the overlap with perfectionistic concerns. The second review (Jowett et al., 2016) also computed partial correlations for perfectionistic concerns controlling the overlap with perfectionistic strivings. As regards task goals, the reviews showed that controlling the overlap did not change the pattern of significant relationships found in the bivariate correlations, except that the positive relationships of perfectionistic strivings tended to become larger when the overlap with perfectionistic concerns was controlled. In contrast, the relationships of perfectionistic concerns tended to become smaller (if positive) or larger (if negative) when the

overlap with perfectionistic strivings was controlled. The opposing pattern of these tendencies suggests the presence of mutual suppression effects whereby perfectionistic concerns suppress adaptive aspects of perfectionistic strivings, and perfectionistic strivings suppress maladaptive aspects of perfectionistic concerns (R. W. Hill, Huelsman, & Araujo, 2010; see Stoeber & Gaudreau, 2017, for a detailed discussion of these effects). For ego goals, the reviews found that, in the majority of studies, perfectionistic strivings showed significant positive relationships even when the overlap with perfectionistic concerns was controlled. This indicates that the links perfectionistic strivings show with ego goals cannot be explained by their overlap with perfectionistic concerns. In contrast, perfectionistic concerns tended to show smaller positive relationships with ego goals when the overlap with perfectionistic strivings was controlled (and some of the relationships even became nonsignificant). This suggests that perfectionistic concerns often show links with ego goals because of their overlap with perfectionistic strivings. Otherwise, the pattern of unique relationships dovetailed with the pattern of bivariate correlations indicating that perfectionistic strivings show more consistent and stronger positive relationships with ego goals than perfectionistic concerns.

The 2 × 2 model. One reason why perfectionistic strivings and concern fail to show a clear-cut differential pattern of relationships with ego goals may be that Duda and Nicholls' (1992) model does not differentiate approach and avoidance orientations. According to the dual process theory of perfectionism (Slade & Owens, 1998), approach versus avoidance is an important distinction for understanding differences between positive and negative aspects of perfectionism because positive aspects (such as those associated with perfectionistic strivings) are suggested to drive approach behaviors whereas negative aspects (such as those associated with perfectionistic concerns) drive avoidance behaviors. Consequently, differentiating approach and avoidance is important not only for understanding different forms of achievement motivation (Elliot, 1997). It is also important for understanding the multidimensional nature of perfectionism and the differential motivational qualities of different perfectionism dimensions.

Whereas the differentiation of approach and avoidance has been applied to ego goals (Skaalvik, 1997), it never really caught on in the two-component model examining task and ego goals. However, the differentiation became central in the closely related model examining mastery and performance goals. People who pursue mastery goals (which are comparable to task goals) tend to see achievement situations as opportunities to improve their ability. They focus on learning new skills or improving old ones, and regard failures and mistakes as providing

important information on how to improve. In comparison, people who pursue performance goals (comparable to ego goals) tend to see achievement situations as opportunities to prove their ability. Their goal is to demonstrate ability relative to others, show others what they have learned, and—if possible—outperform others (Maehr & Meyer, 1997).

The differentiation of approach and avoidance was first applied to performance goals resulting in the tripartite model differentiating performance-approach, performance-avoidance, and mastery goals (Elliot & Harackiewicz, 1996). Later it was also applied to mastery goals resulting in the 2×2 model of achievement goals (Elliot & McGregor, 2001; Pintrich, 2000). The model distinguishes two goal dimensions—definition (performance vs. mastery) and valence (approach vs. avoidance)—and consequently differentiates four goals: performance-approach, mastery-approach, performance-avoidance, and mastery-avoidance. Performance-approach goals represent the motivation to demonstrate normative competence (e.g., striving to do better than others) and mastery-approach goals the motivation to achieve absolute or intrapersonal competence (e.g., striving to master a task). In contrast, performance-avoidance goals represent the motivation to avoid demonstrating normative incompetence (e.g., striving to avoid doing worse than others) and mastery-avoidance goals the motivation to avoid absolute or intrapersonal incompetence (e.g., striving to avoid doing worse than one has done previously) (Conroy, Elliot, & Hofer, 2003).

Twenty-two studies have examined multidimensional perfectionism and the goals of the 2×2 model and reported bivariate correlations (Bong, Hwang, Noh, & Kim, 2014; Damian, Stoeber, Negru, & Băban, 2014; Eum & Rice, 2011; Fletcher, Shim, & Wang, 2012; Gucciardi et al., 2012; Kaye et al., 2008; Kim, Chen, MacCann, Karlov, & Kleitman, 2015; Madjar, Voltsis, & Weinstock, 2015; Shih, 2012, 2013; Speirs Neumeister & Finch, 2006; Speirs Neumeister, Fletcher, & Burney, 2015; Stoeber, Stoll, Pescheck, & Otto, 2008, Studies 1-2; Stoeber, Stoll, Salmi, & Tiikkaja, 2009; Stoeber, Uphill, & Hotham, 2009, Studies 1-2; Van Yperen, 2006; Vansteenkiste et al., 2010; Verner-Filion & Gaudreau, 2010; Wang, Fu, & Rice, 2012; Zarghami, Ghamary, Shabani, & Varzaneh, 2010).² All studies found perfectionistic strivings to show

²Note that a number of studies did not examine all four goals (e.g., the studies following the tripartite model); some studies included multiple indicators of perfectionistic strivings and perfectionistic concerns; and with Van Yperen's (2006) study, our analysis focused on

positive correlations with performance-approach goals. Furthermore, all studies found perfectionistic concerns to show positive correlations, with one exception: In Zarghmi et al.'s (2010) study, one indicator of perfectionistic concerns showed a nonsignificant correlation. For performance-avoidance goals, most studies found perfectionistic strivings to show positive correlations, but five found nonsignificant correlations (Kaye et al., 2008; Kim et al., 2015; Stoeber et al., 2008, Studies 1-2; Stoeber, Uphill, & Hotham, 2009). The same applied to perfectionistic concerns, except that for perfectionistic concerns only two studies found nonsignificant correlations (Stoeber et al., 2008, Study 2; Zarghmi et al., 2010). As regards mastery-approach goals, the pattern was different. Whereas all studies found perfectionistic strivings to show positive correlations (with the one exception of Vansteenkiste et al., 2010), less than half of the studies found perfectionistic concerns to show positive correlations with mastery-approach goals, and more than half found nonsignificant correlations. In comparison, mastery-avoidance goals showed a similar pattern as performance-avoidance goals. Most studies found perfectionistic strivings to show positive correlations with mastery-avoidance goals except for five studies that found nonsignificant correlations (Eum & Rice, 2011; Kaye et al., 2008; Kim et al., 2015; Stoeber et al., 2008, Study 2; Zarghmi et al., 2010). In contrast, all studies found perfectionistic concerns to show positive correlations with mastery-avoidance goals, except for two that found nonsignificant correlations (Kim et al., 2015; Speirs Neumeister et al., 2015).

As with the previous motivational constructs, the differential pattern of relationships that perfectionistic strivings and concerns showed with the 2×2 achievement goals became much clearer when the overlap between the two perfectionism dimensions was controlled and unique relationships were examined. Of the twenty-two studies reviewed above, nine examined unique relationships (Bong et al., 2014; Damian et al., 2014; Speirs Neumeister et al., 2015; Stoeber et al., 2008, Studies 1-2; Stoeber, Stoll, et al., 2009; Vansteenkiste et al., 2010; Verner-Filion & Gaudreau, 2010; Zarghmi et al., 2010). As regards performance-approach goals, both perfectionistic strivings and perfectionistic concerns showed positive relationships across the studies, with two exceptions: Stoeber et al. (2008, Study 1) found a nonsignificant relationship for perfectionistic strivings, and Zarghmi et al. (2010) found a nonsignificant relationship for perfectionistic concerns. Still, overall the pattern of relationships suggests that *both* perfectionism

dimensions have links with performance-approach goals. For perfectionistic strivings and performance-avoidance goals, six studies found nonsignificant relationships, three found positive relationships (Damian et al., 2014; Speirs Neumeister et al., 2015; Verner-Filion & Gaudreau, 2010), and one found a negative relationship (Stoeber et al., 2008, Study 1). In contrast, perfectionistic concerns showed positive relationships with performance-avoidance goals across all studies, except for two that found nonsignificant relationships (Speirs Neumeister et al., 2015; Stoeber et al., 2008, Study 1). This pattern suggests that perfectionistic concerns are consistently linked with performance-avoidance goals, but not perfectionistic strivings. In contrast, all studies found perfectionistic strivings to show positive relationships with mastery-approach goals, and perfectionistic concerns to show nonsignificant relationships. The pattern was reversed for mastery-avoidance goals. All studies found perfectionistic strivings to show nonsignificant relationships whereas perfectionistic concerns showed positive relationships, except for two studies that found positive relationships for perfectionistic strivings and a nonsignificant relationship for perfectionistic concerns (Damian et al., 2014; Speirs Neumeister et al., 2015). Overall, however, the pattern of relationships suggests that perfectionistic strivings are linked with mastery-approach goals whereas perfectionistic concerns are linked with mastery-avoidance goals.

The 3 × 2 model. The 2 × 2 model has been criticized because mastery goals fail to differentiate whether an individual's goals focus on the task (improving task performance) or on the self (improving one's personal performance). To address this criticism, Elliot, Murayama, and Pekrun (2011) introduced the 3 × 2 model of achievement goals differentiating approach and avoidance for task, self, and other goals. In this model, other-approach and other-avoidance goals correspond to performance-approach and performance-avoidance goals of the 2 × 2 model. Task-approach, self-approach, task-avoidance, and self-avoidance goals go beyond the 2 × 2 model allowing an assessment of whether mastery-approach and mastery-avoidance goals are task-focused or self-focused.

So far, only two studies have investigated how perfectionistic strivings and concerns relate to the goals of the 3 × 2 model. The first study (Stoeber, Haskew, & Scott, 2015) presented undergraduates with a text to study for a mock exam to take within the next few days, and then asked students for their goals regarding this exam. As expected, perfectionistic strivings showed positive correlations with all approach goals (task-, self-, and other-approach) whereas perfectionistic concerns did not show any significant correlations with the approach goals.

Unexpectedly, perfectionistic strivings also showed positive correlations with all avoidance goals (task-, self-, and other-avoidance), and perfectionistic concerns showed a positive correlation with other-approach goals. Unfortunately, the study did not control for the overlap between perfectionistic strivings and concerns, so we do not know how much the overlap was responsible for the unexpected pattern of correlations. But there is another study on perfectionism and the 3×2 achievement goals in sport controlling for the overlap (Madigan, Stoeber, & Passfield, 2017), and this study found a pattern of relationships more in line with expectations. Perfectionistic strivings showed unique positive relationships with all approach goals (task-, self-, and other-approach) and unique negative relationships with task- and self-avoidance goals. In contrast, perfectionistic concerns showed positive relationships with all avoidance goals (task-, self-, and other-avoidance) and negative relationships with task- and self-approach goals, confirming the findings with the 2×2 model that perfectionistic strivings are mainly approach-oriented whereas perfectionistic concerns are mainly avoidance-oriented.

Summary

Our review of the studies examining multidimensional perfectionism and achievement motivation shows that perfectionistic strivings and perfectionistic concerns—the two higher-order dimensions of multidimensional perfectionism—have distinct motivational qualities. This is in particular the case when the overlap of the two dimensions is controlled statistically and unique relationships are examined (cf. Stoeber & Gaudreau, 2017). In line with Slade and Owens' (1998) dual-process model of perfectionism, perfectionistic strivings are mainly approach-oriented showing unique positive relationships with hope of success (when regarding achievement motives) and mastery-approach and performance-approach goals (when regarding achievement goals). In contrast, perfectionistic concerns are mainly avoidance-oriented showing unique positive relationships with fear of failure (regarding achievement motives) and mastery-avoidance and performance-avoidance goals (regarding achievement goals).

There are, however, two motivational qualities in which the two perfectionism dimensions show similar profiles. The first is performance-approach goals, because perfectionistic concerns—even though mainly avoidance-oriented—also show unique positive relationships with performance-approach goals, which cannot be explained by the dual-process model of perfectionism. The relationships, however, can be explained by the hierarchical model of achievement motivation (Elliot, 1997). According to this model, performance-approach goals are motivated by both hope of success and fear of failure, which would explain why both

perfectionistic strivings (associated with hope of success) and perfectionistic concerns (associated with fear of failure) show positive relationships with performance-approach goals. Further, performance-approach goals may have two orientations: a normative orientation (outperforming others, comparing one's performance to others' performance) and a competence-demonstration orientation (demonstrating competence, trying to show others that one is better than others). Only the former is achievement motivated whereas the latter is mainly self-presentational (Senko, Hulleman, & Harackiewicz, 2011), and this may explain why both perfectionism dimensions link with performance-approach goals. Perfectionistic strivings may link with performance-approach goals because they have achievement-motivated aspects, whereas perfectionistic concerns may link with these goals because they have self-presentational aspects. Support for this possible explanation comes from research on perfectionism and social goals that found perfectionistic concerns to show positive correlations with demonstration-approach goals, but not perfectionistic strivings (Shim & Fletcher, 2012; Stoeber, 2014a).

The second motivational quality is ego goals. Whereas only perfectionistic strivings show unique positive relationships with task goals, both perfectionistic strivings and perfectionistic concerns show unique positive relationships with ego goals (even though the relationships of perfectionistic strivings are stronger and more consistent). The possible explanation for this overlap may be that theory and research on ego goals do not differentiate approach and avoidance. Therefore, ego goals (which are comparable to performance goals) may not only contain qualities of performance-approach goals, but also qualities of performance-avoidance goals. This mixture of qualities may explain why both perfectionism dimensions show positive relationships with ego goals, and underscores the importance of differentiating approach and avoidance orientations in achievement motivation.

Furthermore, the differentiation of approach and avoidance is important to understand why perfectionistic strivings can be adaptive. Even though we agree with Gaudreau and colleagues (see Chapter 2) that achievement goals are inherently complex processes, the degree of self-determination in achievement goals should be taken into account (e.g., Vansteenkiste et al., 2010). Also, the adaptiveness of performance-approach and mastery-approach goals may be situation-dependent (e.g., performance-approach goals should be more adaptive in exams/competitions, mastery-approach goals in learning/training). In addition, there is substantial evidence that, all things being equal, performance- and mastery-approach goals are adaptive and performance- and mastery-avoidance goals maladaptive (e.g., Moller & Elliot, 2006). Moreover,

performance-approach goals can explain why athletes high in perfectionistic strivings outperform athletes low in perfectionistic strivings in competitions (Stoeber, Uphill, & Hotham, 2009). Similarly, task-approach goals can explain why students high in perfectionistic strivings outperform students low in perfectionistic strivings in exams (Stoeber et al., 2015). But what about perfectionistic strivings' positive relationships with ego goals, which are regarded as mixed adaptive–maladaptive? Here it is important to note that perfectionistic strivings show positive relationships not only with ego goals, but also with task goals. Whereas the pursuit of ego goals can be maladaptive, it has been suggested that task goals are usually adaptive and may buffer or neutralize the maladaptive effects of ego goals (Duda, 2005). Consequently, even when we do not differentiate approach and avoidance, perfectionistic strivings (showing positive relationships with ego goals and task goals) are associated with a more adaptive pattern of achievement goals than perfectionistic concerns (showing positive relationships with ego goals, but not with task goals).

Self-Determination Theory

Self-determination theory (Deci & Ryan, 1985) postulates that an individual's level of self-determined motivation is reflected by the extent to which the individual's behavior is regulated by processes that are congruent with the self. Ryan and Deci (2000) suggest that a continuum of behavioral regulation exists that ranges from non-self-determined to self-determined motivation (see Figure 1). Self-determination theory differentiates three forms of motivation: intrinsic motivation, extrinsic motivation, and amotivation. These forms are associated with different regulatory styles: intrinsic motivation with intrinsic regulation, extrinsic motivation with external, introjected, identified, and integrated regulation, and amotivation with non-regulation (see again Figure 1). Hence, the theory conceptualizes extrinsic motivation as a composite of four regulatory styles differing in self-determination and perceived locus of causality. *External regulation* is the least self-determined regulation, and the perceived locus of causality is external and has no internal aspects. External regulation is characterized by passive compliance and feelings of alienation, and actions are performed only to gain external rewards and avoid external punishments. *Introjected regulation* is more self-determined than external regulation, and the perceived locus is predominantly external (but has some internal aspects). Introjected regulation is characterized by values, standards, and expectations—originating from socialization (parents, teachers, society)—that have been “taken in,” but are not fully accepted as one's own. Here, actions are performed to gain internal rewards (e.g., feelings of pride) and avoid internal

punishments (e.g., feelings of anxiety, guilt, and shame). *Identified regulation* is even more self-determined than introjected regulation, and the perceived locus is predominantly internal (but still has external aspects). Identified regulation is characterized by personal importance and conscious valuing of reasons for doing an activity. Here values, standards, and expectations are perceived as personal. *Integrated regulation* is the most self-determined regulatory style associated with extrinsic motivation, and the perceived locus of causality is internal. Integrated regulation is characterized by congruence and awareness of reasons and by goals being in synthesis with the self. Here personal values, standards, and expectations are fully integrated in the self.

[Insert Figure 1 about here.]

The most self-determined form of regulation, however, is intrinsic regulation which is the regulatory style of *intrinsic motivation* and characterized by personal interest, inherent satisfaction, and enjoyment. As with integrated regulation, the perceived locus of control is internal, but—differently from integrated regulation—actions are not performed for the expected outcomes, but for their inherent enjoyment. Intrinsic motivation is task-focused, not outcome-focused. By contrast, *amotivation* is unfocused and is associated with non-regulation and a perceived locus of control that is impersonal. Amotivation is characterized by feelings of incompetence, not valuing activities, and a perceived lack of control. People who are amotivated either do not act or “just go through the motions” (Ryan & Deci, 2000, p. 72).

Numerous studies have investigated the relationships of multidimensional perfectionism and self-determination differing in the degree to which individual differences in the three motivations and the six regulatory styles of the self-determination continuum were analyzed. Unfortunately, some studies did not differentiate the three forms of motivation but only reported correlations with a global self-determination index combining intrinsic motivation, extrinsic motivation, and amotivation and so were not included in our analyses (e.g., Burnam, Komarraju, Hamel, & Nadler, 2014; Gaudreau, Franche, & Gareau, 2016). Other studies examined extrinsic motivation without differentiating the more self-determined from the less self-determined regulatory styles that comprise extrinsic motivation, and so were also not included (e.g., Chen, Kuo, & Kao, 2016; Mills & Blankstein, 2000). The reason is that differentiating regulatory styles in extrinsic motivation is important for understanding the different motivational qualities of perfectionistic strivings and perfectionistic concerns, as the studies on autonomous versus controlled motivation demonstrate.

Autonomous Versus Controlled Motivation

In research on autonomous versus controlled motivation, autonomous motivation is usually operationalized as the combination of intrinsic motivation and identified regulation (also including integrated regulation, if assessed) whereas controlled motivation is operationalized as the combination of introjected and external regulation (sometimes also including amotivation). Reviewing the literature on perfectionism and motivation, we found eleven studies that examined autonomous and controlled motivation and reported bivariate correlations.³ As regards autonomous motivation, all studies found perfectionistic strivings to show positive correlations (Barcza-Renner, Eklund, Morin, & Habeeb, 2016; Gaudreau & Antl, 2008; Harvey et al., 2015; Jowett, Hill, Hall, & Curran, 2013; Madigan, Stoeber, & Passfield, in press; Miquelon, Vallerand, Grouzet, & Cardinal, 2005, Studies 1-2; Mouratidis & Michou, 2008; Vansteenkiste et al., 2010). In comparison, only two studies found perfectionistic concerns to show positive correlations with autonomous motivation (Madigan et al., in press; Vansteenkiste et al., 2010) whereas six found nonsignificant correlations (Gaudreau & Antl, 2008; Jowett et al., 2013; Madigan et al., in press; Miquelon et al., 2005, Studies 1-2; Mouratidis & Michou, 2008) and one even found a negative correlation (Barcza-Renner et al., 2016). For controlled motivation, all studies found perfectionistic concerns to show positive correlations (Barcza-Renner et al., 2016; Gaudreau & Antl, 2008; Jowett et al., 2013; Madigan et al., in press; Miquelon et al., 2005, Studies 1-2; Mouratidis & Michou, 2008; Stoeber & Eismann, 2007; Vansteenkiste et al., 2010). In comparison, only seven studies found perfectionistic strivings to show positive correlations with controlled motivation (Barcza-Renner et al., 2016; Gaudreau & Antl, 2008; Jowett et al., 2013; Madigan et al., in press; Mouratidis & Michou, 2008; Nguyen & Deci, 2016; Vansteenkiste et al., 2010) and four found nonsignificant correlations (Harvey et al., 2015; Miquelon et al., 2005, Studies 1-2; Stoeber & Eismann, 2007).

Counting significant bivariate correlations, however, gives a distorted picture of how perfectionistic strivings are related to controlled motivation. First, when perfectionistic strivings showed positive correlations with controlled motivation, they were usually smaller than those of perfectionistic concerns. Second, studies that statistically controlled the overlap between

³However, not all studies included all four variables: perfectionistic strivings, perfectionistic concerns, autonomous motivation, and controlled motivation.

perfectionistic strivings and concerns found perfectionistic strivings to show unique positive relationships only with autonomous motivation, but not with controlled motivation (Gaudreau & Antl, 2008; Jowett et al., 2013; Madigan et al., in press; Mouratidis & Michou, 2008; Miquelon et al., 2005, Studies 1-2; Vansteenkiste et al., 2010). Moreover, the same studies found perfectionistic concerns to show unique positive relationships only with controlled motivation, but not with autonomous motivation. Whereas this pattern of relationships suggests that perfectionistic strivings link with autonomous motivation (but not controlled motivation) and perfectionistic concerns link with controlled motivation (but not autonomous motivation), the picture for perfectionistic strivings is more complex as the studies examining individual regulatory styles from the full self-determination continuum show.

The Full Self-Determination Continuum

Various studies have examined multidimensional perfectionism and self-determination differentiating amotivation, external regulation, introjected regulation, identified regulation, integrated regulation, and/or intrinsic motivation.⁴ As regards *amotivation*, five studies found perfectionistic strivings to show negative correlations (Appleton & Hill, 2012; Chang, Lee, Byeon, Seong, & Lee, 2016; Longbottom, Grove, & Dimmock, 2012; Madigan et al., in press; Stoeber, Davis, & Townley, 2013) and five found nonsignificant correlations (Barcza-Renner et al., 2016; A. P. Hill, 2014; Longbottom et al., 2012; Madigan et al., in press, Time 1; McArdle & Duda, 2004). In comparison, eight studies found perfectionistic concerns to show positive correlations with amotivation (Appleton & Hill, 2012; Barcza-Renner et al., 2016; Chang et al., 2016; A. P. Hill, 2014; Longbottom et al., 2012; Madigan et al., in press; McArdle & Duda, 2004; Stoeber et al., 2013) and only one found nonsignificant correlations (Madigan et al., in press). Clearly, amotivation is the domain of perfectionistic concerns, and antithetical to perfectionistic strivings. Moreover, the opposing pattern of relationships is often enhanced when the overlap between perfectionistic strivings and concerns is controlled. Perfectionistic concerns tend to show stronger positive relationships, and perfectionistic strivings stronger negative relationships with amotivation when unique relationships are regarded (e.g., A. P. Hill, 2014).

⁴A number of studies employed multiple measures of perfectionistic strivings and perfectionistic concerns or multiple measures of self-determined motivation that sometimes showed different correlations. Consequently, some studies appear twice when listing the findings.

For *external regulation*,⁵ five studies found perfectionistic strivings to show positive correlations (Appleton & Hill, 2012; Chang et al., 2016; Gucciardi et al., 2012; A. P. Hill, 2014; McArdle & Duda, 2004) and four found nonsignificant correlations (Flett et al., 2016; Longbottom et al., 2012; Stoeber et al., 2013; Stoeber, Feast, & Hayward, 2009). In comparison, nine studies found perfectionistic concerns to show positive correlations with external regulation (Appleton & Hill, 2012; Chang et al., 2016; Flett et al., 2016; Gucciardi et al., 2012; A. P. Hill, 2014; Longbottom et al., 2012; McArdle & Duda, 2004; Stoeber et al., 2013; Stoeber, Feast, & Hayward, 2009) and only one found a nonsignificant correlation (Chang et al., 2016). This pattern suggests that perfectionistic concerns show stronger positive links with external regulation than perfectionistic strivings. Still, the number of studies linking perfectionistic strivings with external regulation is noteworthy.

Turning to *introjected regulation*, all studies found perfectionistic strivings to show positive correlations (Appleton & Hill, 2012; Chang et al., 2016; A. P. Hill, 2014; Flett et al., 2016; Longbottom et al., 2012; McArdle & Duda, 2004; Stoeber et al., 2013; Stoeber, Feast, & Hayward, 2009). In comparison, eight studies found perfectionistic concerns to show positive correlations with introjected regulation (Appleton & Hill, 2012; Chang et al., 2016; Flett et al., 2016; A. P. Hill, 2014; Longbottom et al., 2012; McArdle & Duda, 2004; Stoeber et al., 2013; Stoeber, Feast, & Hayward, 2009) and one found a nonsignificant correlation (Chang et al., 2016). However, an inspection of the size of the correlations indicated that—in the majority of studies—perfectionistic concerns tended to show stronger positive relationships with introjected regulation than perfectionistic strivings (see also Jowett et al., 2016), indicating that perfectionistic concerns have stronger links with introjected regulation than perfectionistic strivings.

Regarding *identified regulation*, seven studies found perfectionistic strivings to show positive correlations (Chang et al., 2016; Flett et al., 2016; Longbottom et al., 2012; McArdle & Duda, 2004; Stoeber et al., 2013; Stoeber & Eismann, 2007; Stoeber, Feast, & Hayward, 2009) and three found nonsignificant correlations (Appleton & Hill, 2012; A. P. Hill, 2014; Longbottom et al., 2012). In comparison, only one study found perfectionistic concerns to show a positive correlation with identified regulation (Appleton & Hill, 2012) whereas eight found nonsignificant

⁵Note that some studies examined external regulation, but called it extrinsic regulation.

correlations (Chang et al., 2016; Flett et al., 2016; A. P. Hill, 2014; Longbottom et al., 2012; McArdle & Duda, 2004; Stoeber et al., 2013; Stoeber & Eismann, 2007; Stoeber, Feast, & Hayward, 2009) and one even found a negative correlation (Chang et al., 2016). This indicates that identified regulation is more the domain of perfectionistic strivings than perfectionistic concerns.

Unfortunately, only one study examined multidimensional perfectionism and *integrated regulation* (Stoeber et al., 2013). It found perfectionistic strivings to show a positive correlation whereas perfectionistic concerns showed a nonsignificant correlation.

In contrast, numerous studies examined perfectionism and *intrinsic motivation*, and the pattern of relationships is very clear. Thirteen studies found perfectionistic strivings to show a positive correlation with intrinsic motivation (Appleton & Hill, 2012; Chang, Lee, Byeon, & Lee, 2015; Chang et al., 2016; Flett et al., 2016; Gucciardi et al., 2012; A. P. Hill, 2014; Longbottom et al., 2012; McArdle & Duda, 2004; Mills & Blankstein, 2000; Quested et al., 2014; Stoeber et al., 2013; Stoeber & Eismann, 2007; Stoeber, Feast, & Hayward, 2009) whereas only two found nonsignificant correlations (Longbottom et al., 2012; Mills & Blankstein, 2000). In comparison, no study found perfectionistic concerns to show any positive correlations with intrinsic motivation. Instead, all studies found nonsignificant correlations (Appleton & Hill, 2012; Chang et al., 2015; Chang et al., 2016; Flett et al., 2016; Gucciardi et al., 2012; A. P. Hill, 2014; Longbottom et al., 2012; McArdle & Duda, 2004; Quested et al., 2014; Stoeber et al. 2013; Stoeber & Eismann, 2007; Stoeber, Feast, & Hayward, 2009) except for one that found a negative correlation (Longbottom et al., 2012).

Whereas the positive relationships that perfectionistic strivings showed with intrinsic motivation, integrated regulation, and identified regulation replicate the relationships from the studies examining autonomous motivation (combining intrinsic motivation, integrated regulation, and identified regulation), this is not the case for the positive relationships that perfectionistic strivings showed with introjected and external regulation because the latter remained significant when the overlap with perfectionistic concerns was controlled. Also, when revisiting the two reviews we consulted earlier in this chapter (Gotwals et al., 2012; Jowett et al., 2016), we found that controlling for perfectionistic concerns tended to attenuate the positive correlations between perfectionistic strivings and introjected regulation, but in three of the studies the correlations remained significant. The same pattern was found with external regulation. This suggests that the motivational profile associated with perfectionistic strivings extends beyond internally and

mostly-internally motivated regulations into regulations that are more externally motivated.

Summary

Our review of the studies examining multidimensional perfectionism from the perspective of self-determination theory shows that perfectionistic strivings and perfectionistic concerns have distinct motivational qualities also with regard to self-determined motivation, which are particularly pronounced when the unique relationships of the two perfectionism dimensions are examined (cf. Stoeber & Gaudreau, 2017). Perfectionistic strivings are mainly associated with motivations and regulatory styles characterized by higher degrees of self-determination such as intrinsic motivation, integrated regulation, and identified regulation. In contrast, perfectionistic concerns are mainly associated with motivations and regulatory styles characterized by lower degrees of self-determination such as amotivation, external regulation, and introjected regulation. However, perfectionistic strivings may also show positive relationships with introjected and external regulation even when the overlap with perfectionistic concerns is controlled, suggesting that the motivational qualities of perfectionistic strivings may reach into the domain of less self-determined regulation (see Figure 1).

As to reasons why this is the case, we can only speculate. One possibility is that the pattern of strivings and concerns showing positive relationships with external and introjected regulation can be explained by the fact that both regulations are focused on rewards and punishments: External regulation aims to achieve external rewards and avoid external punishments, and introjected regulation aims to achieve internal rewards and avoid internal punishments. Unfortunately, external and introjected regulation do not differentiate approach (achieve rewards) and avoidance (avoid punishments). Consequently, it could be that perfectionistic strivings (which are mainly approach-oriented) link with external and introjected regulation because they are geared toward achieving external and internal rewards, whereas perfectionistic concerns (which are mainly avoidance-oriented) link with external and introjected regulation because they are geared toward avoiding external and internal punishments. This explanation would also be supported by studies examining perfectionism and reinforcement sensitivity (Stoeber & Corr, 2017; see also Chapter 3) that found perfectionistic strivings to show strong links with all goal- and reward-oriented aspects of the behavioral approach system (BAS) whereas perfectionistic concerns showed strong links with the behavioral inhibition system (BIS) which is aimed at avoiding punishment. The goal- and reward-oriented aspect of the BAS may drive perfectionistic strivings toward external and introjected regulation because of the reward

aspects of these regulatory styles, whereas the BIS may drive perfectionistic concerns towards external and introjected regulation because of the punishment-avoidance aspects of these regulatory styles.

Limitations and Future Research

Whereas this review presents a comprehensive account of research on multidimensional perfectionism and motivation regarding how perfectionistic strivings and concerns relate to achievement motivation and self-determination, it is important to note some limitations. First, approximately half of the studies we reviewed were conducted in the sport domain (see reference list). Whereas we are uncertain if this is a limitation or not—because our impression is that perfectionistic strivings and concerns show by and large the same motivational profiles across domains (e.g., university vs. sport) and samples (e.g., students vs. athletes)—future research may profit from examining if there are systematic differences between different domains and samples (cf. A. P. Hill & Curran, 2016). Second, and more importantly, there are other important dimensions, forms, and aspects of perfectionism that our review did not cover such as other-oriented perfectionism (Hewitt & Flett, 1991), perfectionistic self-presentation (Hewitt et al., 2003), and hybrid forms of perfectionism like narcissistic and self-critical perfectionism (see Chapter 6). Further, the review provides a comprehensive coverage of achievement motives and achievement goals, but there are other motives and goals that may play a role for our understanding of multidimensional perfectionism. For example, research on motives traditionally differentiates three basic motives: achievement, affiliation, and power. Whereas achievement plays an important role for many aspects of perfectionism, affiliation and power may also play important roles particularly if we regard interpersonal aspects of perfectionism (see again Chapter 6 as well as Chapter 14). Furthermore, besides achievement goals, social goals may play a role (Shim & Fletcher, 2012; Stoeber, 2014a). Consequently, future research may profit from going beyond achievement when examining motives and goals, and investigate differences in the motivational qualities of different forms, dimensions, and aspects of multidimensional perfectionism.

Finally, like most studies on perfectionism, nearly all the studies we reviewed were cross-sectional and thus cannot tell us whether perfectionism affects motivation, motivation affects perfectionism, whether there are reciprocal effects, or whether perfectionism and motivation are mere correlates. However, preliminary findings from longitudinal studies we conducted suggest that perfectionism affects motivation (and not vice versa). In one study, for example, we found

that perfectionistic strivings predicted longitudinal increases in school engagement (Damian, Stoeber, Negru-Subtirica, & Băban, 2017). In another study, we found that perfectionistic strivings predicted longitudinal increases in autonomous motivation whereas perfectionistic concerns predicted longitudinal increases in controlled motivation (Madigan et al., in press). Both studies tested for reverse and reciprocal effects, but did not find any such effects. Whereas these findings are encouraging, more—and more systematic—research using longitudinal designs is needed to unravel the temporal and causal relationships between perfectionism and motivation.

Conclusion

Perfectionism is a multidimensional personality disposition that comes in different forms and has different aspects, and whereas many aspects of perfectionism are maladaptive, some aspects of perfectionism can be adaptive (Enns & Cox, 2002). To understand this dual nature of perfectionism regarding adaptive and maladaptive aspects and why perfectionism can be a “double-edged sword” (Stoeber, 2014b), the two-factor theory of perfectionism—differentiating the two higher-order dimensions of perfectionistic strivings and perfectionistic concerns—has been extremely useful (Stoeber & Otto, 2006; see also Gotwals et al., 2012; Jowett et al., 2016; and Chapter 2).

As the present chapter demonstrates, this is also the case when perfectionism is examined from a motivational perspective and the relationships of perfectionistic strivings and concerns with achievement motivation and self-determination are regarded. The reason is that perfectionistic strivings and concerns have different motivational qualities. Whereas there are some overlapping qualities, the two dimensions clearly have distinctive “motivational footprints.” The motivations associated with perfectionistic concerns are mainly avoidance-oriented and lack self-determination—and often motivation is lacking altogether (amotivation). In contrast, the motivations associated with perfectionistic strivings are mainly approach-oriented and largely self-determined and involve both ego goals and task goals. And in individualistic, highly demanding and competitive achievement-oriented societies, such motivations should be adaptive.

These differences in motivational qualities are not only important to understand the dual nature of perfectionism. They are also important to explain the different, sometimes opposing, relationships that the two perfectionism dimensions show with achievement-related processes and outcomes and with indicators of psychological adjustment and maladjustment. For example, differences in achievement motives and achievement goals can explain why people high in perfectionistic strivings show higher performance, but not people high in perfectionistic concerns

(Stoeber, 2012). Differences in hope of success can explain why only people high in perfectionistic strivings raise their aspiration levels after success (Stoeber, Hutchfield, & Wood, 2008) in line with Atkinson's (1957) classic model of motivation and task choice. Furthermore, differences in approach motivation and self-determined motivation can explain why people high in perfectionistic strivings make progress in important goals they set themselves, whereas people high in perfectionistic concerns do not (Powers, Koester, & Topciu, 2005). Finally, differences in self-determined motivation can explain why perfectionistic concerns are associated with high levels of burnout whereas perfectionistic strivings are associated with low levels (A. P. Hill & Curran, 2016; Madigan et al., in press). The latter findings suggest that differences in motivational qualities may also explain why perfectionistic strivings are often associated with psychological adjustment whereas perfectionistic concerns are associated with psychological maladjustment.

Based on the findings of our review, we assert that research would profit from taking a motivational perspective on multidimensional perfectionism. In particular, research may want to pay closer attention to the motivational qualities associated with perfectionism and the differential motivational profiles of perfectionistic strivings and perfectionistic concerns. Perhaps perfectionism should even be regarded as a motive disposition (need for perfection) whereby perfectionistic strivings represent the approach-oriented aspects (hope of perfection, perfection-approach goals) that feel self-determined and autonomous whereas perfectionistic concerns represent the avoidance-oriented aspects (fear of imperfection, imperfection-avoidance goals) that do not feel self-determined, but controlled and may leave some perfectionists disengaged and amotivated.

References

- Appleton, P. R., Hall, H. K., & Hill, A. P. (2009). Relations between multidimensional perfectionism and burnout in junior-elite male athletes. *Psychology of Sport and Exercise, 10*, 457-465.
- Appleton, P. R., & Hill, A. P. (2012). Perfectionism and athlete burnout in junior elite athletes: The mediating role of motivation regulations. *Journal of Clinical Sport Psychology, 6*, 129-145.
- Atkinson, J. W. (1957). Motivational determinants of risk-taking behavior. *Psychological Review, 64*, 359-372.
- Barcza-Renner, K., Eklund, R. C., Morin, A. J. S., & Habeeb, C. M. (2016). Controlling coaching

behaviors and athlete burnout: Investigating the mediation role of perfectionism and motivation. *Journal of Sport & Exercise Psychology*, 38, 30-44.

- Bieling, P. J., Israeli, A. L., & Antony, M. M. (2004). Is perfectionism good, bad, or both? Examining models of the perfectionism construct. *Personality and Individual Differences*, 36, 1373-1385.
- Bong, M., Hwang, A., Noh, A., & Kim, S. (2014). Perfectionism and motivation of adolescents in academic contexts. *Journal of Educational Psychology*, 106, 711-729.
- Burnam, A., Komarraju, M., Hamel, R., & Nadler, D. R. (2014). Do adaptive perfectionism and self-determined motivation reduce academic procrastination? *Learning and Individual Differences*, 36, 165-172.
- Chang, E., Lee, A., Byeon, E., & Lee, S. M. (2015). Role of motivation in the relation between perfectionism and academic burnout in Korean students. *Personality and Individual Differences*, 82, 221-226.
- Chang, E., Lee, A., Byeon, E., Seong, H., & Lee, S. M. (2016). The mediating effect of motivational types in the relationship between perfectionism and academic burnout. *Personality and Individual Differences*, 89, 202-210.
- Chen, K. T.-C., Kuo, J. Y.-C., & Kao, P.-C. (2016). Learning motivation and perfectionism in English language learning: An analysis of Taiwanese university students. *International Journal of Research Studies in Psychology*, 5, 13-23.
- Conroy, D. E., Elliot, A. J., & Hofer, S. M. (2003). A 2 × 2 Achievement Goals Questionnaire for Sport: Evidence for factorial invariance, temporal stability, and external validity. *Journal of Sport & Exercise Psychology*, 25, 456-476.
- Conroy, D. E., Kaye, M. P., & Fifer, A. M. (2007). Cognitive links between fear of failure and perfectionism. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 25, 237-253.
- Damian, L. E., Stoeber, J., Negru, O., & Băban, A. (2014). Perfectionism and achievement goal orientations in adolescent school students. *Psychology in the Schools*, 51, 960-971.
- Damian, L. E., Stoeber, J., Negru-Subtirica, O., & Băban, A. (2017). Perfectionism and school engagement: A three-wave longitudinal study. *Personality and Individual Differences*, 105, 179-184.
- DeCharms, R., & Davé, P. N. (1965). Hope of success, fear of failure, subjective probability, and risk-taking behavior. *Journal of Personality and Social Psychology*, 1, 558-568.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human*

behavior. New York: Plenum.

- Duda, J. L. (2005). Motivation in sport: The relevance of competence and achievement goals. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 318-335). New York: Guilford.
- Duda, J. L., & Nicholls, J. G. (1992). Dimensions of achievement motivation in schoolwork and sport. *Journal of Educational Psychology, 84*, 290-299.
- Dunkley, D. M., Blankstein, K. R., Halsall, J., Williams, M., & Winkworth, G. (2000). The relation between perfectionism and distress: Hassles, coping, and perceived social support as mediators and moderators. *Journal of Counseling Psychology, 47*, 437-453.
- Dunn, J. G. H., Causgrove Dunn, J., & Syrotuik, D. G. (2002). Relationship between multidimensional perfectionism and goal orientations in sport. *Journal of Sport & Exercise Psychology, 24*, 376-395.
- Elliot, A. J. (1997). Integrating the “classic” and “contemporary” approaches to achievement motivation: A hierarchical model of approach and avoidance achievement motivation. In P. Pintrich & M. Maehr (Eds.), *Advances in motivation and achievement* (Vol. 10, pp. 143-179). Greenwich, CT: JAI Press
- Elliot, A. J., & Harackiewicz, J. M. (1996). Approach and avoidance achievement goals and intrinsic motivation: A mediational analysis. *Journal of Personality and Social Psychology, 70*, 461-475.
- Elliot, A. J., & McGregor, H. A. (2001). A 2×2 achievement goal framework. *Journal of Personality and Social Psychology, 80*, 501-519.
- Elliot, A. J., Murayama, K., & Pekrun, R. (2011). A 3×2 achievement goal model. *Journal of Educational Psychology, 103*, 632-648.
- Enns, M. W., & Cox, B. J. (2002). The nature and assessment of perfectionism: A critical analysis. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 33-62). Washington, DC: American Psychological Association.
- Eum, K., & Rice, K. G. (2011). Test anxiety, perfectionism, goal orientation, and academic performance. *Anxiety, Stress, & Coping, 24*, 167-178.
- Fletcher, K. L., Shim, S. S., & Wang, C. (2012). Perfectionistic concerns mediate the relationship between psychologically controlling parenting and achievement goal orientations. *Personality and Individual Differences, 52*, 876-881.
- Flett, G. L., Hewitt, P. L., Besser, A., Su, C., Vaillancourt, T., Boucher, D., . . . Gale, O. (2016).

The Child–Adolescent Perfectionism Scale: Development, psychometric properties, and associations with stress, distress, and psychiatric symptoms. *Journal of Psychoeducational Assessment, 34*, 634-652.

Frost, R. O., Heimberg, R. G., Holt, C. S., Mattia, J. I., & Neubauer, A. L. (1993). A comparison of two measures of perfectionism. *Personality and Individual Differences, 14*, 119-126.

Frost, R. O., & Henderson, K. J. (1991). Perfectionism and reactions to athletic competition. *Journal of Sport & Exercise Psychology, 13*, 323-335.

Frost, R. O., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research, 14*, 449-468.

Gaudreau, P., & Antl, S. (2008). Athletes broad dimensions of dispositional perfectionism: Examining changes in life satisfaction and the mediating role of sport-related motivation and coping. *Journal of Sport & Exercise Psychology, 30*, 356-382.

Gaudreau, P., Franche, V., & Gareau, A. (2016). A latent mediated moderation of perfectionism, motivation, and academic satisfaction: Advancing the 2 × 2 model of perfectionism through substantive-methodological synergy. *Journal of Psychoeducational Assessment, 34*, 688-701.

Gotwals, J. K., Stoeber, J., Dunn, J. G. H., & Stoll, O. (2012). Are perfectionistic strivings in sport adaptive? A systematic review of confirmatory, contradictory, and mixed evidence. *Canadian Psychology, 53*, 263-279.

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

Hall, H. K., Kerr, A. W., Kozub, S. A., & Finnie, S. B. (2007). Motivational antecedents of obligatory exercise: The influence of achievement goals and multidimensional perfectionism. *Psychology of Sport and Exercise, 8*, 297-316.

Hall, H. K., Kerr, A. W., & Matthews, J. (1998). Precompetitive anxiety in sport: The contribution of achievement goals and perfectionism. *Journal of Sport & Exercise Psychology, 20*, 194-217.

Harvey, B., Milyavskaya, M., Hope, N., Powers, T. A., Saffran, M., & Koestner, R. (2015). Affect variation across days of the week: Influences of perfectionism and academic motivation. *Motivation and Emotion, 39*, 521-530.

Hewitt, P. L., & Flett, G. L. (1991). Perfectionism in the self and social contexts:

Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology*, *60*, 456-470.

Hewitt, P. L., Flett, G. L., Sherry, S. B., Habke, M., Parkin, M., Lam, R. W., . . . Stein, M. B. (2003). The interpersonal expression of perfection: Perfectionistic self-presentation and psychological distress. *Journal of Personality and Social Psychology*, *84*, 1303-1325.

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

Hill, A. P., & Curran, T. (2016). Multidimensional perfectionism and burnout: A meta-analysis. *Personality and Social Psychology Review*, *20*, 269-288.

Hill, A. P., Hall, H. K., & Appleton, P. R. (2010). A comparative examination of the correlates of self-oriented perfectionism and conscientious achievement striving in male cricket academy players. *Psychology of Sport and Exercise*, *11*, 162-168.

Hill, R. W., Huelsman, T. J., & Araujo, G. (2010). Perfectionistic concerns suppress associations between perfectionistic strivings and positive life outcomes. *Personality and Individual Differences*, *48*, 584-589.

Jowett, G. E., Hill, A. P., Hall, H. K., & Curran, T. (2013). Perfectionism and junior athlete burnout: The mediating role of autonomous and controlled motivation. *Sport, Exercise, and Performance Psychology*, *2*, 48-61.

Jowett, G. E., Mallinson, S. H., & Hill, A. P. (2016). An independent effects approach to perfectionism in sport, dance, and exercise. In A. P. Hill (Ed.), *The psychology of perfectionism in sport, dance and exercise* (pp. 85-149). London: Routledge.

Kaye, M. P., Conroy, D. E., & Fifer, A. M. (2008). Individual differences in incompetence avoidance. *Journal of Sport & Exercise Psychology*, *30*, 110-132.

Kim, L. E., Chen, L., MacCann, C., Karlov, L., & Kleitman, S. (2015). Evidence for three factors of perfectionism: Perfectionistic strivings, order, and perfectionistic concerns. *Personality and Individual Differences*, *84*, 16-22.

Lemyre, P.-N., Hall, H. K., & Roberts, G. C. (2008). A social cognitive approach to burnout in athletes. *Scandinavian Journal of Medicine & Science in Sports*, *18*, 221-234.

Longbottom, J.-L., Grove, J. R., & Dimmock, J. A. (2012). Trait perfectionism, self-determination, and self-presentation processes in relation to exercise behavior. *Psychology of Sport and Exercise*, *13*, 224-235.

Madigan, D. J., Stoeber, J., & Passfield, L. (2017). Perfectionism and achievement goals

- revisited: The 3 × 2 achievement goal framework. *Psychology of Sport and Exercise*, 28, 120-124.
- Madigan, D. J., Stoeber, J., & Passfield, L. (in press). Motivation mediates the perfectionism–burnout relationship: A three-wave longitudinal study with junior athletes. *Journal of Sport & Exercise Psychology*.
- Madjar, N., Voltsis, M., & Weinstock, M. P. (2015). The roles of perceived parental expectation and criticism in adolescents' multidimensional perfectionism and achievement goals. *Educational Psychology*, 35, 765-778
- Maehr, M. L., & Meyer, H. A. (1997). Understanding motivation in schooling: Where we've been, where we are, and where we need to go. *Educational Psychology Review*, 9, 371-409.
- McArdle, S., & Duda, J. L. (2004). Exploring social-contextual correlates of perfectionism in adolescents: A multivariate perspective. *Cognitive Therapy and Research*, 28, 765-788.
- McClelland, D. C. (1985). How motives, skills, and values determine what people do. *American Psychologist*, 40, 812-825.
- McClelland, D. C., Atkinson, J. W., Clark, R. A., & Lowell, E. L. (1953). *The achievement motive*. East Norwalk, CT: Appleton-Century-Crofts.
- Mills, J. S., & Blankstein, K. R. (2000). Perfectionism, intrinsic vs extrinsic motivation, and motivated strategies for learning: A multidimensional analysis of university students. *Personality and Individual Differences*, 29, 1191-1204.
- Miquelon, P., Vallerand, R. J., Grouzet, F. M. E., & Cardinal, G. (2005). Perfectionism, academic motivation, and psychological adjustment: An integrative model. *Personality and Social Psychology Bulletin*, 31, 913-924.
- Moller, A. C., & Elliot, A. J. (2006). The 2 × 2 achievement goal framework: An overview of empirical research. In A. V. Mitel (Ed.), *Focus on educational psychology research* (pp. 307-326). New York: Nova Science.
- Mouratidis, A., & Michou, A. (2011). Perfectionism, self-determined motivation, and coping among adolescent athletes. *Psychology of Sport and Exercise*, 12, 355-367.
- Nerland, E., & Sæther, S. A. (2016). Norwegian football academy players-players self-assessed competence, perfectionism, goal orientations and motivational climate. *Sport Mont*, 14, 7-11.
- Nguyen, T. T., & Deci, E. L. (2016). Can it be good to set the bar high? The role of motivational regulation in moderating the link from high standards to academic well-being. *Learning*

and *Individual Differences*, 45, 245-251.

- Ommundsen, Y., Roberts, G. C., Lemyre, P.-N., & Miller, B. W. (2005). Peer relationships in adolescent competitive soccer: Associations to perceived motivational climate, achievement goals and perfectionism. *Journal of Sports Sciences*, 23, 977-989.
- Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In M. Boekarts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 451-502). San Diego: Academic Press.
- Powers, T. A., Koestner, R., & Topciu, R. A. (2005). Implementation intentions, perfectionism, and goal progress: Perhaps the road to hell is paved with good intentions. *Personality and Social Psychology Bulletin*, 31, 902-912.
- Quested, E., Cumming, J., & Duda, J. L. (2014). Profiles of perfectionism, motivation, and self-evaluations among dancers: An extended analysis of Cumming and Duda (2012). *International Journal of Sport Psychology*, 45, 349-368.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68-78.
- Sagar, S. S., & Stoeber, J. (2009). Perfectionism, fear of failure, and affective responses to success and failure: The central role of fear of experiencing shame and embarrassment. *Journal of Sport & Exercise Psychology*, 31, 602-627.
- Senko, C., Hulleman, C. S., & Harackiewicz, J. M. (2011). Achievement goal theory at the crossroads: Old controversies, current challenges, and new directions. *Educational Psychologist*, 46, 26-47.
- Shih, S. S. (2012). An examination of academic burnout versus work engagement among Taiwanese adolescents. *Journal of Educational Research*, 105, 286-298.
- Shih, S. S. (2013). Autonomy support versus psychological control, perfectionism, and Taiwanese adolescents' achievement goals. *Journal of Educational Research*, 106, 269-279.
- Shim, S. S., & Fletcher, K. L. (2012). Perfectionism and social goals: What do perfectionists want to achieve in social situations? *Personality and Individual Differences*, 52, 919-924.
- Skaalvik, E. M. (1997). Self-enhancing and self-defeating ego orientation: Relations with task and avoidance orientation, achievement, self-perceptions, and anxiety. *Journal of Educational Psychology*, 89, 71-81.
- Slade, P. D., & Owens, R. G. (1998). A dual process model of perfectionism based on

reinforcement theory. *Behavior Modification*, 22, 372-390.

Speirs Neumeister, K. L., & Finch, H. (2006). Perfectionism in high-ability students: Relational precursors and influences on achievement motivation. *Gifted Child Quarterly*, 50, 238-251.

Speirs Neumeister, K. L., Fletcher, K. L., & Burney, V. H. (2015). Perfectionism and achievement motivation in high-ability students: An examination of the 2 × 2 model of perfectionism. *Journal for the Education of the Gifted*, 38, 215-232.

Stoeber, J. (2012). Perfectionism and performance. In S. M. Murphy (Ed.), *The Oxford handbook of sport and performance psychology* (pp. 294-306). New York: Oxford University Press.

Stoeber, J. (2014a). How other-oriented perfectionism differs from self-oriented and socially prescribed perfectionism. *Journal of Psychopathology and Behavioral Assessment*, 36, 329-338.

Stoeber, J. (2014b). Perfectionism in sport and dance: A double-edged sword. *International Journal of Sport Psychology*, 45, 385-394.

Stoeber, J., & Becker, C. (2008). Perfectionism, achievement motives, and attribution of success and failure in female soccer players. *International Journal of Psychology*, 43, 980-987.

Stoeber, J., & Corr, P. J. (2017). Perfectionism, personality, and future-directed thinking: Further insights from revised Reinforcement Sensitivity Theory. *Personality and Individual Differences*, 105, 78-83.

Stoeber, J., Davis, C. R., & Townley, J. (2013). Perfectionism and workaholism in employees: The role of work motivation. *Personality and Individual Differences*, 55, 733-738.

Stoeber, J., & Eismann, U. (2007). Perfectionism in young musicians: Relations with motivation, effort, achievement, and distress. *Personality and Individual Differences*, 43, 2182-2192.

Stoeber, J., Feast, A. R., & Hayward, J. A. (2009). Self-oriented and socially prescribed perfectionism: Differential relationships with intrinsic and extrinsic motivation and test anxiety. *Personality and Individual Differences*, 47, 423-428.

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

Stoeber, J., Haskew, A. E., & Scott, C. (2015). Perfectionism and exam performance: The mediating effect of task-approach goals. *Personality and Individual Differences*, 74, 171-176.

Stoeber, J., Hutchfield, J., & Wood, K. V. (2008). Perfectionism, self-efficacy, and aspiration

level: Differential effects of perfectionistic striving and self-criticism after success and failure. *Personality and Individual Differences*, 45, 323-327.

- Stoeber, J., & Otto, K. (2006). Positive conceptions of perfectionism: Approaches, evidence, challenges. *Personality and Social Psychology Review*, 10, 295-319.
- Stoeber, J., & Rambow, A. (2007). Perfectionism in adolescent school students: Relations with motivation, achievement, and well-being. *Personality and Individual Differences*, 42, 1379-1389.
- Stoeber, J., Stoll, O., Pescheck, E., & Otto, K. (2008). Perfectionism and achievement goals in athletes: Relations with approach and avoidance orientations in mastery and performance goals. *Psychology of Sport and Exercise*, 9, 102-121.
- Stoeber, J., Stoll, O., Salmi, O., & Tiikkaja, J. (2009). Perfectionism and achievement goals in young Finnish ice-hockey players aspiring to make the Under-16 national team. *Journal of Sports Sciences*, 27, 85-94.
- Stoeber, J., Uphill, M. A., & Hotham, S. (2009). Predicting race performance in triathlon: The role of perfectionism, achievement goals, and personal goal setting. *Journal of Sport & Exercise Psychology*, 31, 211-245.
- Van Yperen, N. W. (2006). A novel approach to assessing achievement goals in the context of the 2 × 2 framework: Identifying distinct profiles of individuals with different dominant achievement goals. *Personality and Social Psychology Bulletin*, 32, 1432-1445.
- Vansteenkiste, M., Smeets, S., Soenens, B., Lens, W., Matos, L., & Deci, E. (2010). Autonomous and controlled regulation of performance-approach goals: Their relations to perfectionism and educational outcomes. *Motivation and Emotion*, 34, 333-353.
- Verner-Filion, J., & Gaudreau, P. (2010). From perfectionism to academic adjustment: The mediating role of achievement goals. *Personality and Individual Differences*, 49, 181-186.
- Wang, K. T., Fu, C.-C., & Rice, K. G. (2012). Perfectionism in gifted students: Moderating effects of goal orientation and contingent self-worth. *School Psychology Quarterly*, 27, 96-108.
- Zarghmi, M., Ghamary, A., Shabani, S. E. H. S., & Varzaneh, A. G. (2010). Perfectionism and achievement goals in adult male elite athletes who compete at the national level and above. *Journal of Human Kinetics*, 26, 147-155.

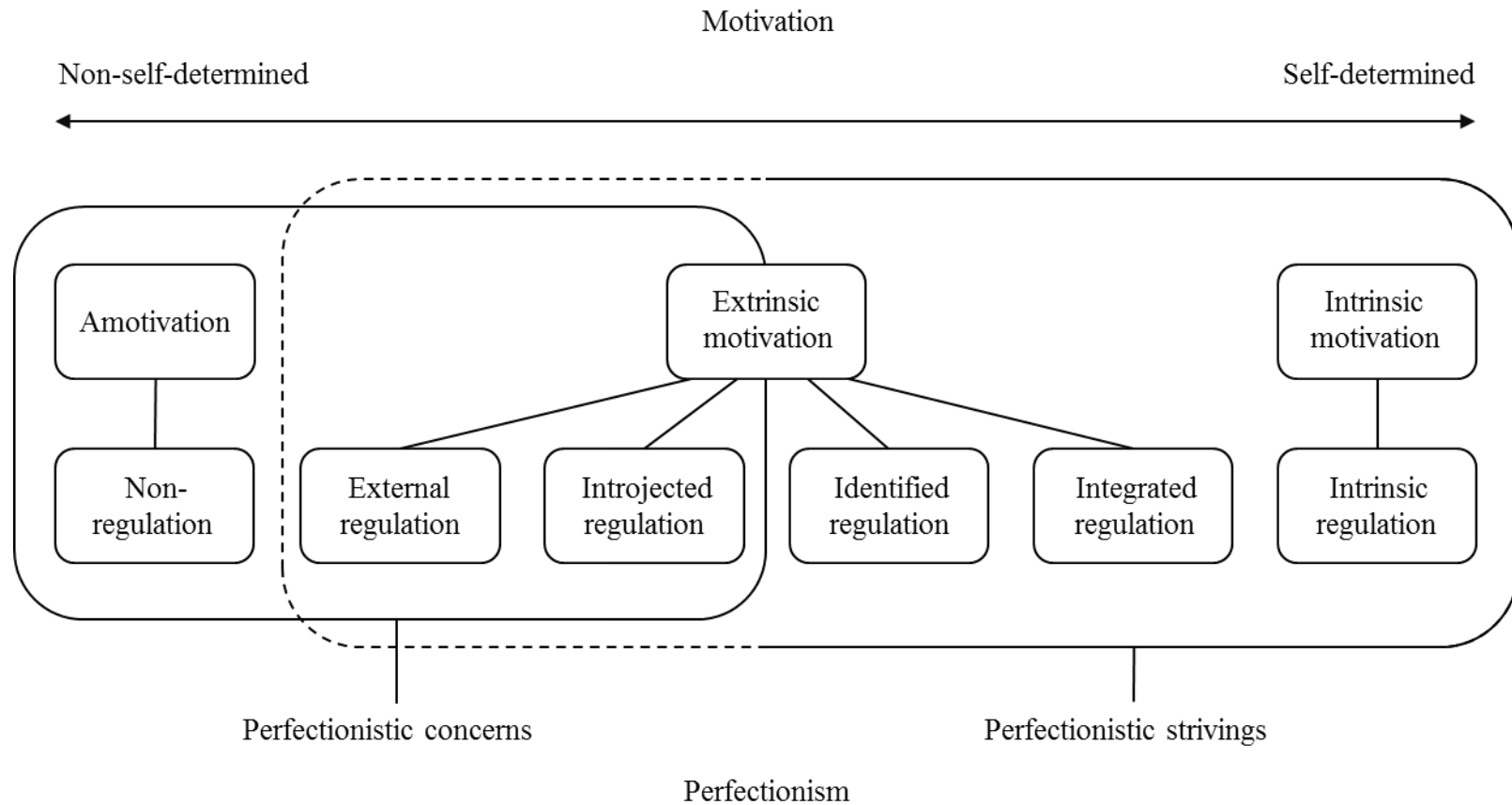


Figure 1. Perfectionism and the self-determination continuum. Perfectionistic concerns are mainly associated with amotivation, external regulation, and introjected regulation. In contrast, perfectionistic strivings are mainly associated with intrinsic motivation, integrated regulation, and identified regulation but may also show associations with introjected and external regulation. (The motivation part of the figure was adapted from Ryan & Deci, 2000, Figure 1.)