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Positive Conceptions of Perfectionism: Approaches, Evidence, Challenges

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Abstract

Almost 30 years ago, Hamachek (1978) suggested that two forms of perfectionism be distinguished, a positive form labeled „normal perfectionism” and a negative form labeled „neurotic perfectionism.” Focusing on the positive, we present an overview of the different empirical conceptions of the two forms of perfectionism and present a common framework for the two basic approaches: the dimensional approach differentiating two dimensions of perfectionism (perfectionistic strivings and perfectionistic concerns) and the group-based approach differentiating two groups of perfectionists (healthy perfectionists and unhealthy perfectionists). Moreover, we review the evidence demonstrating that (a) perfectionistic strivings are associated with positive characteristics and (b) healthy perfectionists show higher levels of positive characteristics compared to unhealthy perfectionists and nonperfectionists. While questions on core facets, positive effects, and developmental antecedents of positive forms of perfectionism remain, our findings suggest that self-oriented perfectionistic strivings are positive, if perfectionists are not overly concerned about mistakes and negative evaluations by others.

Keywords: Perfectionism, Personality Traits, Affect, Well-Being, Achievement

Author Note

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Introduction

Perfectionism is commonly conceived of as a personality style characterized by striving for flawlessness and setting of excessively high standards for performance accompanied by tendencies for overly critical evaluations of one's behavior (Flett & Hewitt, 2002a; Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991). While Hamachek (1978) suggested that two forms of perfectionism be differentiated—a positive form labeled „normal perfectionism“ in which individuals enjoy pursuing their perfectionistic strivings and a negative form labeled „neurotic perfectionism“ in which individuals suffer from their perfectionistic strivings—perfectionism research was long dominated by one-dimensional conceptions of perfectionism and by views that perfectionism was a negative characteristic closely associated with psychopathology. Today, almost 30 years after Hamachek published his seminal article, a large body of evidence has accumulated confirming that two basic forms of perfectionism can be distinguished. Even though these two forms have been given different labels—namely positive strivings and maladaptive evaluation concerns (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993), active and passive perfectionism (Adkins & Parker, 1996), positive and negative perfectionism (Terry-Short, Owens, Slade, & Dewey, 1995), adaptive and maladaptive perfectionism (Rice, Ashby, & Slaney, 1998), functional and dysfunctional perfectionism (Rhéaume, Freeston, et al., 2000), healthy and unhealthy perfectionism (Stumpf & Parker, 2000), personal standards and evaluative concerns perfectionism (Blankstein & Dunkley, 2002), and conscientious and self-evaluative perfectionism (Hill et al., 2004)—there is considerable agreement that perfectionism does not have to be negative, but can also be positive.

Still, many researchers hold strong doubts that perfectionism can be positive, healthy, or functional, not to mention adaptive (e.g., Flett & Hewitt, 2002a, 2005; Greenspon, 2000; see also Benson, 2003). Moreover, the research literature relating to this question is complex and may appear confusing. There are three main reasons for this. First, besides using different labels, researchers have used different facets and different combinations of facets to arrive at their specific conceptualizations of the two forms of perfectionism. Second, researchers have followed two basically different approaches: either a dimensional approach or a group-based approach. In the dimensional approach, the facets of perfectionism are combined to form two independent dimensions of perfectionism—let us call them *perfectionistic strivings* and *perfectionistic concerns*—the former hypothesized to be associated with positive characteristics and the latter with negative. In the group-based approach, the facets of perfectionism are combined to form two groups of perfectionists—let us call them *healthy perfectionists* and *unhealthy perfectionists*—the former hypothesized to be associated with positive characteristics and the latter with negative. Third, not all studies have found perfectionistic strivings and healthy perfectionists to be associated only with positive characteristic. While many studies found perfectionistic strivings to be associated with higher levels of positive characteristics and healthy perfectionists to show higher levels of positive characteristics compared to unhealthy perfectionists and nonperfectionists, others did not: Some studies found perfectionistic strivings and healthy perfectionists to be associated with both positive and negative characteristics, and a few studies with only negative characteristics.

Against this background, the main aims of the present article are twofold. First, we will present a comprehensive review of the existing research literature and provide an overview of how, under the dimensional and group-based approach, the facets of perfectionism are combined to differentiate a positive and a negative form of perfectionism. Sec-

ond, we will review and evaluate the empirical evidence in support of the view that some forms of perfectionism are positive. Our review will show that—despite the many different conceptions and the two different basic approaches—there is considerable agreement as to which core facets define the two forms of perfectionism: for the positive perfectionistic strivings dimension, these are high personal standards and self-oriented perfectionism; and for the negative perfectionistic concerns dimension, these are concerns over mistakes, doubts about actions, socially prescribed perfectionism, and perceived discrepancy between actual achievements and high expectations. Moreover, our review will show that (a) healthy perfectionists can be conceived of as individuals with high levels of perfectionistic strivings and low levels of perfectionistic concerns, (b) unhealthy perfectionists as individuals with high levels of perfectionistic strivings and high levels of perfectionistic concerns, and (c) nonperfectionists as individuals with low levels of perfectionistic strivings. Consequently, conceptions following a dimensional approach and conceptions following a group-based approach can be combined, summarized, and compared under one common conceptual framework (see Figure 1). While questions remain regarding additional facets, longitudinal effects, and developmental antecedents, our review will show that the empirical evidence in support of positive perfectionism far outweighs the evidence against it: Perfectionistic strivings are predominantly associated with positive characteristics, particularly when overlap with perfectionistic concerns is controlled for; and healthy perfectionists predominantly show higher levels of positive characteristics when compared to unhealthy perfectionists and nonperfectionists.

Perfectionism: A Brief Historical Overview

Why do many researchers find it difficult to accept that perfectionism can be positive? Traditionally, perfectionism has been associated with psychopathology, with psychodynamic theory stressing that perfectionism was a sign of a neurotic and disordered personality (e.g., Horney, 1951; Missildine, 1963). Even though Hamachek (1978) published his proposal to distinguish two forms of perfectionism—normal perfectionism and neurotic perfectionism—at the end of the 1970's, the dominant view of the 1980's was that perfectionism was always neurotic, dysfunctional, and indicative of psychopathology (e.g., D. D. Burns, 1980; Pacht, 1984). Empirical findings supported this view. Studies with clinical populations found elevated levels of perfectionism in clients diagnosed with depression, obsessive-compulsive disorder, and eating disorders (e.g., Ranieri et al., 1987; Rasmussen & Eisen, 1992; Rosen, Murkofsky, Steckler, & Skolnick, 1989), and studies with nonclinical populations found perfectionism to be related to higher levels of distress and to pathological symptoms associated with depression, anxiety, and disordered eating (e.g., Flett, Hewitt, & Dyck, 1989; Hewitt, Mittelstaedt, & Wollert, 1989; Thompson, Berg, & Shatford, 1987). However, all these studies relied on one-dimensional measures of perfectionism such as the perfectionism subscale of the Eating Disorders Inventory (Garner, Olmstead, & Polivy, 1983) or the perfectionism scale of D. D. Burns (1980) which consisted of items from the Dysfunctional Attitudes Scale (Weissman & Beck, 1978), a scale developed to capture attitudes that are typical of clients diagnosed with depression. Thus, it comes as no surprise that perfectionism was found to be negative, dysfunctional, and even pathological.

This changed at beginning of the 1990's, when two research groups independently demonstrated that perfectionism is multidimensional in nature, and provided perfectionism research with two multidimensional scales to capture the construct in all its facets (Frost et al., 1990; Hewitt & Flett, 1991). Frost and colleagues (1990) proposed that six facets in

the experience of perfectionism be differentiated—personal standards, organization, concern over mistakes, doubts about actions, parental expectations, and parental criticism—indicating that perfectionists have high standards, value order and organization, and try to avoid mistakes and are thus often indecisive about their actions. Moreover, perfectionists attach great importance to past or present evaluations by their parents. Hewitt and Flett (1991), on the other hand, proposed that three facets of perfectionism be differentiated—self-oriented perfectionism, socially prescribed perfectionism, and other-oriented perfectionism—indicating that perfectionists may see their high standards as self-imposed or as imposed by others, and that they may equally have high expectations of others. Moreover, they suggested that self-oriented perfectionism was directed towards avoiding self-criticism whereas socially prescribed perfectionism was directed towards avoiding disapproval by others.

Despite the apparent differences between the two multidimensional measures of perfectionism in terms of nature and number of facets and associated characteristics (see Enns & Cox, 2002), they were shown to have common underlying dimensions (Frost et al., 1993). When all facets were subjected to a single factor analysis, two substantial factors emerged: one factor subsuming personal standards, organization, self-oriented perfectionism, and other-oriented perfectionism; and a second factor subsuming concern over mistakes, doubts about actions, socially prescribed perfectionism, parental expectations, and parental criticism. Moreover, when the subscales subsumed under the two factors were aggregated to form measures of positive strivings and maladaptive evaluation concerns and then correlated with measures of well-being, it emerged that only maladaptive evaluation concerns were related to higher levels of negative affect and depression (and unrelated to positive affect). In contrast, positive strivings were related to higher levels of positive affect (and unrelated to negative affect and depression). Hence, Frost et al. (1993) made three important contributions. First, they showed that the different facets of perfectionism combined to form two basic dimensions of perfectionism. Second, they showed that these two basic dimensions related to different characteristics. Third, they showed that only the perfectionistic concerns dimension related to negative characteristics whereas the perfectionistic strivings dimension related to positive characteristics—and thus provided first empirical evidence that some forms of perfectionism can be positive.

Follow-up studies using the same method as Frost et al. (1993) fared less well, however, as they found positive strivings to be related to both positive and negative characteristics (Bieling, Israeli, & Anthony, 2004; Bieling, Israeli, Smith, & Anthony, 2003). Moreover, other researchers opted for different conceptions of the basic dimensions choosing different facets or different combinations of facets, while still other researchers opted for a group-based approach instead of a dimensional approach. Yet, across the different conceptions and the different approaches, the majority of studies have produced evidence in favor of the position that perfectionistic strivings are associated with positive characteristics—particularly when overlap with perfectionistic concerns is controlled for (in the case of dimensional conceptions) or when perfectionistic concerns are at low levels (in the case of group-based conceptions)—as a review of the studies will show.

The Studies

For our review of studies, the PsycINFO database was searched for all publications up to Week 2 of 2005/11 with *perfect*, *perfection*, *perfectionism*, *perfectionist*, *perfectionistic*, or *perfectionists* in the title. Including reviews of the perfectionism literature (e.g., Chang, 2003; Flett & Hewitt, 2002b; Shafran & Mansell, 2001), but excluding disserta-

tions and non-English publications, all publications that contained empirical studies investigating the two basic forms of perfectionism under different approaches and the various labels mentioned above were examined with respect to (a) how they conceptualized the positive and negative forms of perfectionism and (b) what evidence was presented in favor of the view that the positive conception of perfectionism was indeed associated with more positive characteristics than the negative conception.

A few publications were deliberately excluded from this review. Because the aim was to review evidence for the view that a positive and a negative form of perfectionism can be differentiated, we excluded studies that conceptualized positive and negative perfectionism as endpoints of a single dimension (e.g., Oliver, Hart, Ross, & Katz, 2001; Rhéaume, Ladouceur, & Freeston, 2000). Moreover, we excluded studies that employed the Positive and Negative Perfectionism Scale (PNPS; Terry-Short et al., 1995), because this scale has shown a questionable factor structure and seems in need of fundamental revision that may involve the elimination of half of its items (Haase & Prapavessis, 2004). Moreover, all conceptions of positive and negative perfectionism apart from the PNPS are based on a combination of facets derived from established multidimensional measures of perfectionism (see Table 1). While including studies with the PNPS (e.g., L. R. Burns & Fedewa, 2005; Haase, Prapavessis, & Owens, 1999, 2002; Lundh, Johnsson, Sundqvist, & Olsson, 2002) would not have altered the overall pattern of our findings, excluding these studies had the advantage of ensuring greater comparability between the different approaches and conceptions.

Conceptions and Evidence

Overall, 35 studies were found. Table 2 summarizes the 15 studies taking a dimensional approach, documenting how they conceptualized the two dimensions of perfectionistic strivings and perfectionistic concerns and summarizing the empirical evidence in favor of the notion that perfectionistic strivings are related to positive characteristics (Bieling et al., 2004; Bieling et al., 2003; Chang, Watkins, & Banks, 2004; Cox, Enns, & Clara, 2002; Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000; Dunkley, Zuroff, & Blankstein, 2003; Enns, Cox, Sareen, & Freeman, 2001; Frost et al., 1993; Hill et al., 2004; Lynd-Stevenson & Hearne, 1999; Parker & Stumpf, 1995; Rice et al., 1998; Rice, Lopez & Vergara, 2005; Stumpf & Parker, 2000; Suddarth & Slaney, 2001). Table 3 summarizes the 20 studies taking a group-based approach, documenting how they conceptualized healthy perfectionists and unhealthy perfectionists and summarizing the evidence in favor of the notion that healthy perfectionists show higher levels of positive characteristics than unhealthy perfectionists and nonperfectionists (Ashby & Bruner, 2005; Ashby & Kottman, 1996; Ashby, Kottman, & DeGraaf, 1999; Dickinson & Ashby, 2005; Dixon, Lapsley, & Hanchon, 2004; Gilman & Ashby, 2003; Gilman, Ashby, Sverko, Florell, & Varjas, 2005; Grzegorek, Slaney, Franze, & Rice, 2004; LoCicero, Ashby, & Kern, 2000; Martin & Ashby, 2004a, 2004b; Mobley, Slaney, & Rice, 2005; Parker, 1997; Periasamy & Ashby, 2002; Rhéaume, Freeston, et al., 2000; Rice, Ashby, & Preusser, 1996; Rice, Bair, Castro, Cohen, & Hood, 2003; Rice & Dellwo, 2002; Rice & Mirzadeh, 2000; Rice & Slaney, 2002). Leaving most of the details to Tables 2 and 3 and focusing on positive perfectionism, the studies can be summarized as follows.

Dimensional Conceptions: Perfectionistic Strivings and Perfectionistic Concerns

Attending to Table 2, we first take a look at how the 15 studies that followed a dimensional approach have conceptualized the two dimensions of perfectionism and what evidence they have produced in support of the position that the dimension we labeled *perfectionistic strivings* is associated with positive characteristics. For this, we categorized all studies into four categories, namely as (a) positive evidence when perfectionistic strivings were related to positive characteristics only, (b) mixed evidence when perfectionistic strivings were related to both positive and negative characteristics, (c) negative evidence when perfectionistic strivings were related to negative characteristics only, and (d) null finding when perfectionistic strivings were unrelated to any positive or negative characteristics. (Inverse relations to negative characteristics were regarded as positive and inverse relations to positive characteristics as negative.) Following this scheme, 6 of the 15 studies were categorized as positive evidence, 4 as mixed evidence, 4 as negative evidence, and 1 as a null finding. However, when we reanalyzed the evidence and controlled for overlap between perfectionistic strivings and perfectionistic concerns in the studies where this was applicable, the picture changed dramatically: now 10 of the 15 studies were categorized as positive evidence, 3 as mixed evidence, 2 as null findings, and none as negative evidence (see Table 2 for details). But let us first summarize the findings for perfectionistic strivings as they were presented in the respective studies, before we turn to our reanalysis.

In the six studies categorized as providing *positive evidence* (Chang et al., 2004; Frost et al., 1993; Parker & Stumpf, 1995; Rice et al., 2005; Stumpf & Parker, 2000; Suddarth & Slaney, 2001), the dimension of perfectionistic strivings was conceptualized as some combination of the facets that Frost et al. (1993) found to form the factor which they labeled positive strivings—personal standards, organization, self-oriented perfectionism, and other-oriented perfectionism—or as a combination of a subset of these facets. Moreover, two studies (Suddarth & Slaney, 2001; Rice et al., 2005) added high standards from the revised Almost Perfect Scale to this dimension (see Table 2). Regarding the correlations of perfectionistic strivings with the big five personality traits (John, 1990), perfectionistic strivings were related to higher levels of extraversion and conscientiousness. Moreover, they were related to higher levels of endurance and lower levels of external locus of control. Because Rotter's (1966) conception of external locus of control mainly captures individuals' beliefs that their lives are controlled by chance (e.g., Brosschot, Gebhardt, & Godaert, 1994), a lower level of external locus of control was counted as a positive characteristic (for a more differentiated conception of external control, see Levenson, 1981). Finally, perfectionistic strivings were related to greater subjective well-being in terms of positive affect and satisfaction with life as well as to lower levels of attachment avoidance, attachment anxiety, and suicidal ideation.

In the four studies categorized as providing *mixed evidence* (Bieling et al., 2003; Cox et al., 2002; Dunkley et al., 2000; Enns et al., 2001), the positive dimension representing perfectionistic strivings was again conceptualized as some combination of facets that represented positive strivings perfectionism (Frost et al., 1993). The evidence regarding achievement characteristics was positive, with perfectionistic strivings in students relating to higher perceived ability, higher exam performance, higher past year performance, and plans to study more rather than less. The evidence regarding other characteristics was mixed, however. With regard to personality traits, perfectionistic strivings were related to higher conscientiousness, but also to higher neuroticism (Enns et al., 2001). With regard

to well-being, perfectionistic strivings were related to higher levels of positive affect, but also to higher levels of negative affect (Bieling et al., 2003); and with regard to stress and coping styles, they were related higher levels of active coping, but also to higher levels of perceived hassles (Dunkley et al., 2000).

Of the four studies categorized as providing *negative evidence* (Bieling et al., 2004; Dunkley et al., 2003; Hill et al., 2004; Lynd-Stevenson & Hearne, 1999), only two studies (Bieling et al., 2004; Dunkley et al., 2003) conceptualized the positive dimension of perfectionistic strivings as some combination of the facets that Frost et al. (1993) subsumed under positive strivings. Two studies used a different conceptualization (Hill et al., 2004; Lynd-Stevenson & Hearne, 1999). Following suggestions made by Adkins and Parker (1996), Lynd-Stevenson and Hearne (1999) conceptualized perfectionistic strivings as a combination of personal standards, parental expectations, and parental criticism, thereby including two facets that Frost et al. had subsumed under maladaptive evaluation concerns. Following their own multidimensional model of perfectionism, Hill et al. (2004) conceptualized perfectionistic strivings as a combination of striving for excellence, organization, planfulness, and high standards for others. Regardless of the conceptualization used, all four studies found perfectionistic strivings to be related to lower levels of well-being and perceived social support, and higher levels of perceived stress and pathological symptoms (see Table 2 for details).

Most of the mixed and negative evidence was related to the overlap between the dimensions of perfectionistic strivings and perfectionistic concerns, however. When inspecting the pattern of positive, mixed, and negative evidence, we noticed that the type of evidence produced seemed to relate to how strongly the dimension of perfectionistic strivings correlated with the dimension of perfectionistic concerns (see Table 2). All studies categorized as providing positive evidence had conceptualized the dimension of perfectionistic strivings such that it showed either zero correlations or only low to moderate correlations (.10 to .28) with the dimension of perfectionistic concerns.¹ In comparison, the studies categorized as providing mixed or negative evidence had conceptualized the dimension of perfectionistic strivings such that it showed high correlations (.45 to .70) with the dimension of perfectionistic concerns. With such substantial overlap between the two dimensions, it is conceivable that perfectionistic strivings would be „contaminated“ with perfectionistic concerns and thus show inflated correlations with negative characteristics. After controlling for this overlap, the evidence in favor of perfectionism should be more positive.

Consequently, we reinspected those studies that reported the correlation between the dimension of perfectionistic strivings and the dimension of perfectionistic concerns, and reanalyzed the evidence by computing partial correlations between perfectionistic strivings and negative characteristics, partialling out perfectionistic concerns (Hays, 1973, Formula 16.20.3). The results were as expected. Controlling for overlap with perfectionistic concerns markedly increased the evidence in support of perfectionistic strivings being a positive form of perfectionism (see Table 2). Of the four studies initially categorized as mixed evidence, two now furnished positive evidence as the critical correlations of perfectionistic strivings with negative affect and perceived hassles became nonsignificant once perfectionistic concerns were partialled out (Bieling et al., 2003;

¹In this pattern, the study of Rice et al. (2005) is disregarded because Rice et al. conducted multiple regression analyses and thus controlled for the correlation of $r = .43$ between the dimension of perfectionistic strivings and the dimension of perfectionistic concerns.

Dunkley et al., 2000). Moreover, the study initially categorized as a null finding now furnished positive evidence because perfectionistic strivings now related to higher self-esteem (Rice et al., 1998). Finally, of the four studies initially categorized as negative evidence, one now furnished positive evidence because perfectionistic strivings now related to higher levels of perceived social support and lower levels of negative affect and self-blame (Dunkley et al., 2003); one study now furnished mixed evidence because perfectionistic strivings now related to lower levels of depression, but related to higher frequency of and distress caused by obsessive-compulsive symptoms (Hill et al., 2004); and two studies furnished null findings as perfectionistic strivings were now unrelated to any positive or negative characteristics (Bieling et al., 2004; Lynd-Stevenson & Hearne, 1999). Thus, after controlling for overlap between perfectionistic strivings and perfectionistic concerns, no study remained categorized as providing negative evidence. Instead, a further four studies could be categorized as providing positive evidence (see Table 2).

Group-Based Conceptions: Healthy Perfectionists and Unhealthy Perfectionists

Turning to Table 3 and to the studies that follow a group-based approach, there are two important differences to the previous studies. First, overlap between the positive and negative conceptions is of no concern, because these studies employed cluster analysis or dichotomization of facet scores to conceptualize healthy perfectionists as individuals with high levels of perfectionistic strivings and low levels of perfectionistic concerns and unhealthy perfectionists as individuals with high levels of perfectionistic strivings and high levels of perfectionistic concerns (see Table 3 for details). Consequently, these studies allow comparison of two distinct groups of perfectionists that show little (cluster analysis) or no (dichotomization) overlap in the facets associated with perfectionistic strivings and perfectionistic concerns. Second, mean differences instead of correlations are inspected, and the critical question is whether healthy perfectionists show higher levels of positive characteristics than unhealthy perfectionists. In addition, healthy perfectionists should not show lower levels of positive characteristics than nonperfectionists, as such findings would clearly be unresponsive of the view that high levels of perfectionistic strivings are positive.

Again, all studies were categorized into four categories, namely as (a) positive evidence when healthy perfectionists showed higher levels of positive characteristics than unhealthy perfectionists and no lower levels of positive characteristics than nonperfectionists, (b) mixed evidence when healthy perfectionists showed higher levels of both positive and negative characteristics than unhealthy perfectionists or higher levels of positive characteristics than unhealthy perfectionists, but lower levels of positive characteristics than nonperfectionists, (c) negative evidence when healthy perfectionists showed higher levels of negative characteristics than unhealthy perfectionists, and (d) null finding when healthy perfectionists did not differ from unhealthy perfectionists. (As with the studies taking a dimensional approach, lower levels of negative characteristics were regarded in the same way as higher levels of positive characteristics.) Following this scheme, 12 of the 20 studies were categorized as positive evidence. Note that in all 12 studies healthy perfectionists showed higher levels of positive characteristics not only when compared to unhealthy perfectionists, but also when compared to nonperfectionists (see Table 3). Furthermore, 4 studies were categorized as mixed evidence because healthy perfectionists showed higher levels of positive characteristics than unhealthy perfectionists, but lower levels of positive characteristics than nonperfectionists. Finally, 4

studies were categorized as null findings because they did not find any significant differences between healthy and unhealthy perfectionists where positive characteristics were concerned (see Table 3 for details). No study was categorized as negative evidence.

In the 12 studies categorized as providing *positive evidence* (Ashby & Bruner, 2003; Ashby & Kottman, 1996; Dickinson & Ashby, 2005; Dixon et al., 2004; Gilman et al., 2005; LoCicero et al., 2000; Mobley et al., 2005; Periasamy & Ashby, 2002; Rice et al., 2003; Rice & Mirzadeh, 2000; Rice & Slaney, 2002; Slaney et al., 2004), healthy perfectionists were conceptualized as individuals with high scores on those facets that the dimensional approaches associated with perfectionistic strivings (i.e., personal standards, high standards, order, and organization) and low or medium scores on those facets associated with perfectionistic concerns (i.e., concern over mistakes, doubts about actions, discrepancy between actual achievements and high expectations, parental criticism, and parental expectations). Unhealthy perfectionists were conceptualized as individuals with high scores on all facets of perfectionism, and nonperfectionists as individuals with medium or low scores on all facets of perfectionism. There were three exceptions, however. Two studies arrived at cluster solutions in which unhealthy perfectionists showed only low or medium levels of organization (Rice & Mirzadeh, 2000; Rice et al., 2003), and a third study found two groups of unhealthy perfectionists: one group was labeled „pervasive perfectionists“ and showed medium levels of parental expectations and parental criticism, and the other group was labeled „mixed maladaptive perfectionists“ and showed medium levels of organization and doubts about actions (Dixon et al. 2004). With respect to characteristics investigated, findings dovetail with those of the studies taking a dimensional approach. Healthy perfectionists showed higher levels of positive personality traits and greater subjective well-being and reported more adaptive coping styles, greater social adjustment, and better academic integration as well as less obsessive-compulsive symptoms than unhealthy perfectionists. Moreover, healthy perfectionists also scored higher than nonperfectionists on many of the positive characteristics identified (see Table 3 for details).

In the four studies categorized as providing *mixed evidence* (Martin & Ashby, 2004a; Parker, 1997; Rhéaume, Freeston, et al., 2000; Rice & Dellwo, 2002), healthy perfectionists, unhealthy perfectionists, and nonperfectionists were conceptualized in the same way as in the studies categorized as positive evidence, except for one study in which the cluster of unhealthy perfectionists showed only medium-high levels of personal standards (Rice & Dellwo, 2002). Moreover, one study employed the Perfectionism Inventory (see Table 1) and conceptualized healthy perfectionists as individuals who show high levels of perfectionist tendencies and experience few negative consequences of perfectionism, and unhealthy perfectionists as individuals who show high levels of perfectionist tendencies and experience many negative consequences of perfectionism (Rhéaume, Freeston, et al., 2000). With respect to the characteristics investigated, all studies found healthy perfectionists to show higher levels of positive personality traits, greater subjective well-being, higher social integration, and greater academic adaptation than nonperfectionists (see Table 3 for details). However, healthy perfectionists also showed higher levels of neuroticism and depression than nonperfectionists (Parker, 1997; Rice & Dellwo, 2002). Moreover, two studies indicated that healthy perfectionists may be overly critical and unbalanced in their thinking: In one of these studies, healthy perfectionists showed higher evidence requirements than unhealthy perfectionists in a cognitive task designed to capture obsessive-compulsive tendencies (Rhéaume, Freeston, et al., 2000). In the other study, they showed lower levels of relativistic thinking than

nonperfectionists (Martin & Ashby, 2004a) which indicates that even healthy perfectionists may sometimes have a tendency for „black and white thinking” (Enns & Cox, 2002).

It is important to note that in all studies categorized as mixed evidence, only one negative characteristic showed higher levels in healthy perfectionists than in unhealthy perfectionists or nonperfectionists. All other differences constituted positive evidence. Moreover, in two of the studies categorized as *null findings* because there were no differences between healthy and unhealthy perfectionists (Ashby et al., 1999; Gilman & Ashby, 2003), healthy perfectionists showed higher levels of subjective well-being (enjoyment, satisfaction) than nonperfectionists. Thus, across all studies taking a group-based approach, the great majority of all differences identified between healthy perfectionists, unhealthy perfectionists, and nonperfectionists lend support to the conception that high levels of perfectionistic strivings are associated with positive characteristics when levels of perfectionistic concerns are low.

Summary, Critical Evaluation, and Limitations

In sum, studies taking a dimensional approach have shown the dimension of perfectionistic strivings to be related to higher levels of conscientiousness, extraversion, endurance, positive affect, satisfaction with life, active coping styles, and achievement, and to lower levels of external control and suicidal ideation. Moreover, when overlap with the dimension representing perfectionistic concerns was taken into account, perfectionistic strivings were also related to higher levels of perceived social support and lower levels of depression, self-blame, and perceived hassles. Moreover, studies taking a group-based approach have found that individuals with high levels of perfectionistic strivings and low levels of perfectionistic concerns (healthy perfectionists) show higher levels of self-esteem, agreeableness, social integration (e.g., greater social interest, greater willingness to go along with others), and academic adaptation (e.g., higher grade point average [GPA], greater GPA satisfaction), and lower levels of anxiety, depression, procrastination, defensiveness, maladaptive coping styles, and interpersonal problems and report fewer somatic complaints and psychological symptoms than individuals with high levels of perfectionistic strivings and high levels of perfectionistic concerns (unhealthy perfectionists) or individuals with low levels of perfectionistic strivings (nonperfectionists). Taken together, both dimensional and group-based conceptions have accumulated a large body of evidence suggesting that two forms of perfectionism be differentiated—perfectionistic strivings and perfectionistic concerns—and that only the perfectionistic concerns dimension is associated with all those negative characteristics that traditional views have associated with perfectionism. In contrast, the perfectionistic strivings dimension is associated with positive characteristics and unrelated or even inversely related to those negative characteristics traditionally associated with perfectionism.

Two exceptions deserve attention. First, some studies found perfectionistic strivings to be related to higher levels of obsessive-compulsive symptoms and higher evidence requirements and to lower levels of relativistic thinking, indicating that perfectionistic strivings may be associated with a tendency for obsessive-compulsiveness and rigidity even when overlap with perfectionistic concerns is controlled for or when there are low levels of perfectionistic concerns (Hill et al., 2004; Martin & Ashby, 2004a; Rhéaume, Freeston, et al., 2000). Second, some studies found healthy perfectionists to have higher levels of neuroticism and depression than nonperfectionists indicating that perfectionistic strivings

may sometimes be associated with negative affectivity even when perfectionistic concerns are low (Parker, 1997; Rice & Dellwo, 2002).

Regarding the positive evidence, two notes of caution are in order. First, some positive evidence may have been counted twice as four studies in Tables 2 and 3 may not represent independent evidence, but appear to be based on the same samples. This concerns the sample of medical students who seem to have been examined in two studies following a dimensional conception (Cox et al., 2002; Enns et al., 2001) and the sample of talented sixth graders who also seem to have been examined in two studies—one following a group-based conception (Parker, 1997) and one following a dimensional conception (Stumpf & Parker, 2000). Second, some positive evidence may be attributed to content overlap between the characteristics identified and the measures employed to conceptualize perfectionistic strivings and perfectionistic concerns. Regarding the dimensional conceptions and focusing on the positive dimension representing perfectionistic strivings (Table 2), this concerns in particular the findings that perfectionistic strivings are associated with higher levels of conscientiousness (Cox et al., 2002; Enns et al., 2001; Parker & Stumpf, 1995), as standard measures of conscientiousness contain items that make a direct reference to perfectionism and striving for excellence (e.g., Costa & McCrae, 1992). Consequently, in evaluating the positive evidence for the dimensional conceptions, more weight should be given to those characteristics that do not show content overlap with perfectionistic strivings. Regarding the group-based conceptions and focusing on differences between healthy and unhealthy perfectionists (Table 3), content overlap concerns in particular the findings that healthy perfectionists show less procrastination, doubting, and anxiety than unhealthy perfectionists (Ashby & Bruner, 2005; Ashby & Kottman, 1996; Mobley et al., 2005) as those characteristics show substantial content overlap and thus high correlations with the measures employed to conceptualize the dimension of perfectionistic concerns (Stöber & Joormann, 2001). As healthy and unhealthy perfectionists differ with respect to perfectionistic concerns (see Figure 1), characteristics that show content overlap with perfectionistic concerns do not make for convincing evidence. Consequently, in evaluating the positive evidence for the group-based conceptions, more weight should be given to those characteristics that show content overlap with neither perfectionistic strivings nor perfectionistic concerns and to those characteristics in which healthy perfectionists differ from both unhealthy perfectionists and nonperfectionists. Hence, characteristics such as extraversion and agreeableness, satisfaction with life and coping styles as well as all indicators of achievement and performance (particularly objective measures such as GPA) should be given greater weight in the summary of the evidence.

Regarding the limitations of our review, we see three main reservations. First, when categorizing characteristics as positive, we relied on our general knowledge of the research findings on these characteristics and on the general understanding of these characteristics. While we would hold that the characteristics that we conceived of as positive do have this quality for most individuals most of the time, we are aware that the positivity of psychological characteristics may depend on situational circumstances. Take coping for example. While active coping such as problem-focused coping is generally regarded as a positive characteristic, it is not helpful when stressors are not changeable (Vitaliano, DeWolfe, Maiuro, Russo, & Katon, 1990). And while passive coping such as disengagement is generally regarded as negative, it may provide some relief in the early stages of the coping processes and thus help individuals to use more effective coping later in the process (Scheier, Weintraub, & Carver, 1986). Second, our review focused on linear correlations and main effects and did not take moderator effects or interactions into

account. However, only one of the studies we reviewed reported an interaction effect with perfectionistic strivings (Dunkley et al., 2000). While this study found perfectionistic strivings related to active coping styles and unrelated to perceived hassles once overlap with perfectionistic concerns was partialled out (see Table 2), moderator analyses showed that under unfavorable conditions (i.e., high levels of perceived hassles and/or low levels of perceived social support) perfectionistic strivings were related to higher levels of perceived distress. Third, when categorizing studies as positive, mixed, or negative evidence, we looked only at the significance of correlations and mean differences. Such a „vote counting” (Light & Smith, 1971) procedure is likely to have low power and has been shown to underestimate effects (Hedges & Olkin, 1980). As such underestimation may have cut both ways—we may have underestimated the associations of perfectionistic strivings with positive characteristics, or their associations with negative characteristics—it remains for future studies to employ more powerful quantitative methods of research synthesis (Glass, McGaw & Smith, 1981; Hunter, Schmidt & Jackson, 1982). For a quantitative synthesis of findings, however, greater comparability of the positive conceptions of perfectionism would be required, as would a consensual agreement as to which facets represent the core facets of perfectionism on which to build the dimensions of perfectionistic strivings and perfectionistic concerns, and which facets may be disregarded.

Challenges for Future Research

Core Facets

Regarding the question of the core facets of perfectionistic strivings and perfectionistic concerns, we would argue that (a) organization and order, (b) parental expectations and criticism, and (c) other-oriented perfectionism may be disregarded when conceptualizing the two dimensions of perfectionistic strivings and perfectionistic concerns or when differentiating between healthy perfectionists, unhealthy perfectionists, and nonperfectionists. Regarding organization and order, the correlations of organization with personal standards are only moderate and those with overall perfectionism are rather low (e.g., Frost et al., 1990; Slaney, Rice, Mobley, Trippi, & Ashby, 2001). Accordingly, Frost et al. (1990) recommended excluding organization when computing overall perfectionism scores. Moreover, confirmatory factor analyses on facets of perfectionism that included both organization and order found that these two facets formed a third, separate factor independent of the two dimensions of perfectionistic strivings and perfectionistic concerns (Rice et al., 2005; Suddarth & Slaney, 2001). Thus organization and order do not form part of the two-dimensional space of the conceptual framework that bridges dimensional and group-based approaches (Figure 1) and may better be disregarded, even though many studies following the group-based approach have included order to differentiate between perfectionists and nonperfectionists. Regarding parental expectations and criticism, particularly the early studies following a dimensional approach have included these facets as part of the perfectionistic concerns dimension (see Table 2). However, recent studies investigating the influence of parenting on positive and negative perfectionism have treated parental expectations and criticism as facets of perfectionistic parenting (e.g., Enns, Cox, & Clara, 2002; Randolph & Dykman, 1998; Rice et al., 2005), suggesting that parental expectations and criticism represent developmental antecedents of perfectionism, not core facets of perfectionism itself. Regarding other-oriented perfectionism, only a few studies included this facet as part of the dimension of perfectionistic strivings. This may reflect the ambivalent theoretical status of this facet and the ambivalent findings regarding

positive and negative characteristics (Enns & Cox, 2002). Consequently, other-oriented perfectionism is mostly disregarded in the current debate over the clinical relevance of multidimensional perfectionism (Dunkley, Blankstein, Masheb, & Grilo, 2006; Hewitt, Flett, Besser, Sherry, & McGee, 2003; Shafran, Cooper, & Fairburn., 2002, 2003). Moreover, many recent studies following Hewitt and Flett's (1991) model of multidimensional perfectionism have focused on differences between self-oriented perfectionism and socially prescribed perfectionism only, and disregarded other-oriented perfectionism (e.g., Kobori & Tanno, 2005; Powers, Koestner, & Topciu, 2005). Consequently, we suggest that researchers may restrict their conceptions of the two dimensions of perfectionistic strivings and perfectionistic concerns and the groups of healthy and unhealthy perfectionists to the following core facets of perfectionism (see Table 1): personal standards, self-oriented perfectionism, high standards, striving for excellence, and perfectionistic tendencies, on the one hand; and concern over mistakes, doubts about actions, socially prescribed perfectionism, discrepancy, and negative consequences of perfectionism, on the other.

Positive Effects

While our review presents converging evidence that perfectionistic strivings are related to positive characteristics when the influence of perfectionistic concerns is controlled for, the question remains as to whether perfectionistic strivings also have positive *effects*, for example, if perfectionistic strivings predict longitudinal increases in subjective well-being or academic achievements. So far, however, there is only one longitudinal study comparing positive strivings and perfectionistic concerns (Enns et al., 2001). While this study found that perfectionistic concerns had negative longitudinal effects, predicting increases in depression and hopelessness, no positive longitudinal effects for perfectionistic strivings were found. Turning to studies that have investigated longitudinal effects of core facets associated with perfectionistic strivings and perfectionistic concerns—notably self-oriented perfectionism and socially prescribed perfectionism—there are findings that self-oriented perfectionism may predict progress in attainment of important personal goals and decreases in negative affect (Powers et al., 2005). Other studies, however, found no positive longitudinal effects of self-oriented perfectionism (e.g., Enns, Cox, & Clara, 2005). Moreover, O'Connor and O'Connor (2003) found self-oriented perfectionism to interact with self-reported coping styles: Individuals with high levels of self-oriented perfectionism and low levels of adaptive coping showed increases in hopelessness, suggesting that facets associated with positive perfectionism may have negative longitudinal effects under unfavorable conditions (see also Dunkley et al., 2000). However, self-oriented perfectionism alone can not be considered a good proxy for positive perfectionistic strivings if overlap with socially prescribed perfectionism or self-criticism is not controlled for (Dunkley et al., 2006; Hewitt et al., 2003; Shafran et al., 2002; Sherry, Hewitt, Flett, & Harvey, 2003). Consequently, more longitudinal studies looking at the whole dimension of perfectionistic strivings are needed as are longitudinal studies comparing healthy and unhealthy perfectionists.

Because positive effects of perfectionistic strivings remain to be demonstrated, it seems premature to speak of functional or adaptive perfectionism or to refer to healthy perfectionists as functional or adaptive perfectionists, because the adjectives *functional* and *adaptive* have strong connotations that many researchers find unfitting in association with perfectionism (e.g., Flett & Hewitt, 2002a; R. O. Frost, cited in Benson, 2003). In common language usage, *functional* denotes that something is (connected with) a function contributing to the development or maintenance of a larger whole, and *adaptive* denotes

that something has the capacity of adaptation whereby adaptation usually means adjustment to environmental conditions (Merriam-Webster, 2005). Accordingly, adaptation is a key term in evolutionary psychology, where it refers to attributes that enhance a creature's fitness in terms of its chances to survive and reproduce (e.g., Schmitt & Pilcher, 2004). To date, research on positive conceptions of perfectionism has neither delineated the function that striving for perfection may serve in the development of the individual nor specified the environmental conditions under which striving for perfection would be adaptive. Therefore, we chose to follow Parker (1997, 2000; Stumpf & Parker, 2000; cf. Greenspon, 2000) and speak of healthy and unhealthy perfectionists, because *healthy* does not necessarily denote that something is conducive to health, but may simply denote that something (or someone) enjoys or evinces good health (Merriam-Webster, 2005). As our review shows that individuals with high levels of perfectionistic strivings and low levels of perfectionistic concerns by and large do evince good mental health compared to individuals with high levels of perfectionistic strivings and high levels of perfectionistic concerns, we found that labeling the two groups as healthy perfectionists and unhealthy perfectionists was most fitting.

Developmental Analysis

Regarding the question of the development of perfectionism, most researchers have stressed that the family environment, and particularly the parents, play a crucial role (e.g., Blatt, 1995; Hamachek, 1978; Pacht, 1984; Shafran & Mansell, 2001). With respect to the facets of perfectionistic concerns, research has produced converging evidence that concern over mistakes, doubts about actions, and socially prescribed perfectionism all are associated with anxious, overprotective, affectionless, and harsh parenting (for a review, see Flett, Hewitt, Oliver, & Macdonald, 2002). With respect to the facets of perfectionistic strivings, however, there is no such evidence. The same studies that show strong links between parenting practices and facets of perfectionistic concerns show only weak and often inconsistent links between parenting practices and facets of perfectionistic strivings (e.g., Kawamura, Frost, & Harmatz, 2002; Kenney-Benson & Pomerantz, 2005; Stöber, 1998). This may indicate that general parenting styles are only loosely related to positive perfectionism, if at all. However, recent evidence from a longitudinal study (Enns et al., 2002) suggests that a specific child-rearing style termed „perfectionistic parenting” (Randolph & Dykman, 1998) may play a role in the development of positive perfectionism. Whereas harsh parenting (subsuming parental overprotection, lack of care, critical parenting, and parental pressure to be perfect) emerged as a developmental antecedent of negative perfectionism only, perfectionistic parenting (subsuming parental pressure to be perfect and high parental standards) emerged as a developmental antecedent of both positive and negative perfectionism.

Moreover, studies have consistently found that children who show high levels of perfectionistic strivings (personal standards, self-oriented perfectionism) tend to have parents who also show high levels of perfectionistic strivings. This relationship seems particularly strong when parent and child are of the same gender (Frost, Lahart, & Rosenblate, 1991; Soenens, Elliot, Goossens, Vansteenkiste, Luyten, & Duriez, 2005; Vieth & Trull, 1999). This may indicate that modeling by parents may play a role in the development of positive perfectionism (Hamachek, 1978; Neumeister, 2004), but genetic factors should not be overlooked either as a recent twin study found high heritability values for perfectionistic personal standards (Tozzi et al., 2004). Consequently, a comprehensive developmental analysis of positive perfectionism would also have to take

account of the possible interplay between nature and nurture (Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000).

Conclusions

Perfectionism is a personality style that may affect an individual's strivings in all areas of his or her life. While particularly relevant in educational settings and at the workplace, individual differences in perfectionism play a major role also in sport and exercise (e.g., Anshel & Eom, 2003; Dunn, Gotwals, & Dunn, 2005). Moreover, perfectionism may affect an individual's social life, influencing relationships with family members, romantic partners, and work colleagues and impact on hobbies and recreational pursuits, personal appearance, and religious life (e.g., Flett, Hewitt, Shapiro, & Rayman, 2003; Slaney & Ashby, 1996). Perfectionism already plays a role in childhood and adolescence (e.g., Accordino, Accordino, & Slaney, 2000; Parker, 2002) and it is experienced across different ethnic groups and different cultures (Castro & Rice, 2003; Chang et al., 2004; Kobori, Yamagata, & Kijima, 2005; Slaney, Chadha, Mobley, & Kennedy, 2000).

Consequently, it is important to acknowledge that perfectionism does not necessarily represent a negative, dysfunctional or even pathological characteristic. Instead, perfectionism is a multidimensional phenomenon with many facets—some of which are positive, some of which are negative (Enns & Cox, 2002)—that combine to two basic dimensions of perfectionism, perfectionistic strivings and perfectionistic concerns, which again differentiate between healthy and unhealthy perfectionists (Figure 1). This differentiation between healthy and unhealthy perfectionists best corresponds to what Hamachek (1978) had in mind when, almost 30 years ago, he suggested that two forms of perfectionism be differentiated and made first suggestions to describe the differences between „normal perfectionists” and „neurotic perfectionists.” Translated to the present conceptions, normal perfectionists are individuals who show high levels of perfectionistic strivings, but are not overly distressed by the issues that are combined in the dimension of perfectionistic concerns, namely concerns over mistakes, doubts about actions, feelings of discrepancy between actual achievements and high expectations, self-criticism, and the fear of failure to live up to one's own standards and to the high expectations of others. In contrast, neurotic perfectionists show high levels of perfectionistic strivings and are overly distressed by the issues combined in the dimension of perfectionistic concerns. Thus, perfectionistic concerns may be the factor that distinguishes clinical forms of perfectionism from a healthy pursuit of excellence (Shafran et al., 2002; see also Dunkley et al., 2006). In contrast, perfectionistic strivings in themselves are not only normal, but may be positive—if only perfectionists could focus on doing their best rather than worrying about mistakes, enjoy striving for perfection rather than being afraid of falling short of it, and concentrate on what has been achieved rather than pondering the discrepancy between what has been achieved and what might have been achieved if everything had worked out perfectly. In this form, perfectionism would be a perfectly positive disposition.

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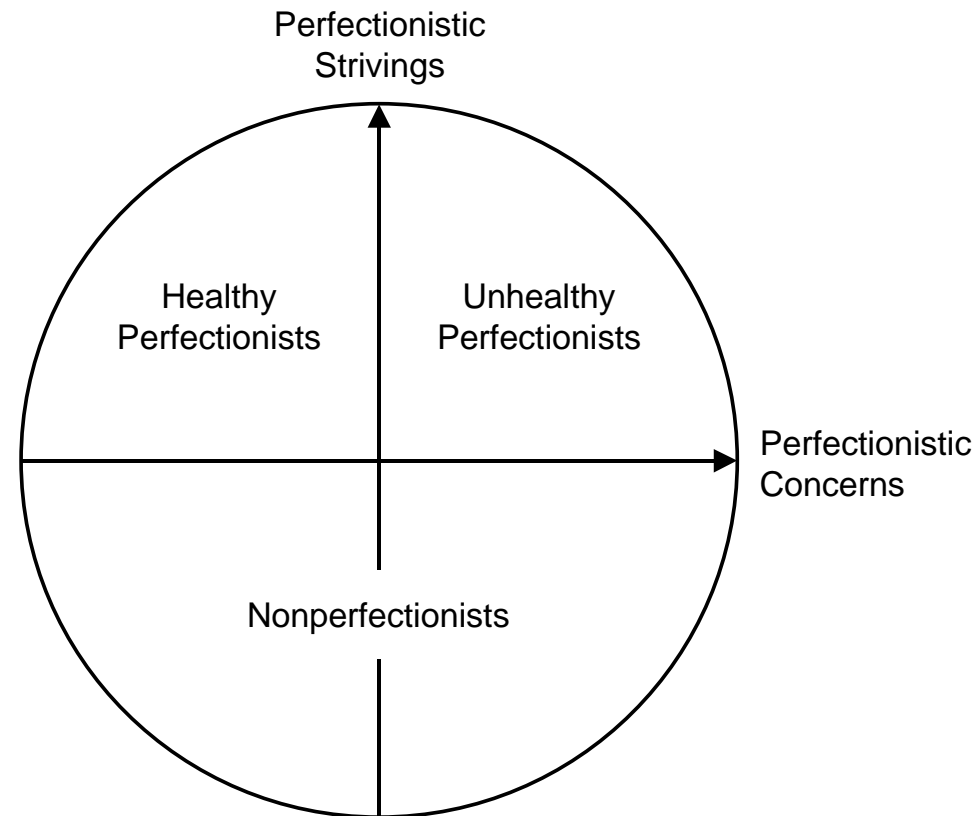


Figure 1. Common conceptual framework combining both dimensional and group-based conceptions of the two basic forms of perfectionism. Two basic dimensions of perfectionism are distinguished (perfectionistic strivings, perfectionistic concerns) and can be used to differentiate between groups of perfectionists (healthy perfectionists, unhealthy perfectionists, nonperfectionists).

Table 1

Multidimensional Perfectionism: Measures, Facets, and Sample Items

Measure	Facets	Sample items
APS (Almost Perfect Scale; Johnson & Slaney, 1996)	Standards and order	I have high standards for my performance at work or at school; I try to do my best at everything I do; I am an orderly person
APS-R (Almost Perfect Scale-Revised; Slaney et al., 2001)	High standards	I have high standards for my performance at work or at school; I try to do my best at everything I do; I have a strong need to strive for excellence
	Order	I am an orderly person; I like to always be organized and disciplined; Neatness is important to me
	Discrepancy	My performance rarely measures up to my standards; I often feel frustrated because I can't meet my goals; My best just never seems to be good enough for me
FMPS (Frost Multidimensional Perfectionism Scale; Frost et al., 1990)	Personal standards	I have extremely high goals; I expect higher performance in my daily tasks than most people; It is important to me to that I be thoroughly competent in everything I do
	Organization	Organization is very important to me; I am an organized person; I try to be a neat person
	Concern over mistakes	People will probably think less of me, if I make a mistake; If I do not do well all the time, people will not respect me; If I fail partly, it is as bad as being a complete failure
	Doubts about actions	I usually have doubts about the simple everyday things that I do; I tend to get behind in my work because I repeat things over and over; Even when I do something very carefully, I often feel that it is not quite right.
	Parental expectations	My parents wanted me to be the best at everything; My parents set very high standards for me; Only outstanding performance is good enough in my family
	Parental criticism	As a child, I was punished for doing things less than perfect; My parents never tried to understand my mistakes; I never felt like I could meet my parents' standards.

Table 1 (continued-1)

Measure	Facets	Sample items
MPS (Multidimensional Perfectionism Scale; Hewitt & Flett, 1991)	Self-oriented perfectionism	One of my goals is to be perfect in everything I do; It makes me uneasy to see an error in my work; I never aim for perfection in my work (reverse-keyed)
	Socially prescribed perfectionism	The people around me expect me to succeed in everything I do; Anything that I do less than excellent will be seen as poor work by those around me; Those around me readily accept that I can make mistakes too (reverse-keyed)
	Other-oriented perfectionism	If I ask someone to do something, I expect it to be done flawlessly; I have high expectations for the people who are important to me; I do not have very high standards for those around me (reverse-keyed)
PI (Perfectionism Inventory; Hill et al., 2004)	Striving for excellence	I must achieve excellence in everything I do; I drive myself rigorously to achieve high standards; My work needs to be perfect, in order for me to be satisfied
	Organization	I would characterize myself as an orderly person; I always like to organized and disciplined; I think things should be put away in their place
	Planfulness	I tend to deliberate before making up my mind; I think through my options carefully before making a decision; I need time to think up a plan before I take action
	High standards for others	I get upset when other people do not maintain the same standards I do; I have little tolerance for other people's careless mistakes; I'm not very patient with people's excuses for poor work
	Concern over mistakes	If I make mistakes, people might think less of me; I am particularly embarrassed by failure; If I make a serious mistake, I feel like I'm less of a person
	Rumination	I spend a lot of time worrying about things that I've done, or things I need to do; If I make a mistake, my whole day is ruined; After I turn a project in, I can't stop thinking of how it could have been better
	Need for approval	I'm concerned with whether or not other people approve of my actions; I compare my work to others and often feel inadequate; I often don't say anything, because I'm scared I might say the wrong thing
	Perceived parental pressure	I always felt that my parents wanted me to be perfect; Growing up, I felt a lot of pressure to do everything right; My parents hold me to high standards

Table 1 (continued-2)

Measure	Facets	Sample items
PQ (Perfectionism Questionnaire; Rhéaume, Freeston, et al., 2000)	Perfectionist tendencies	I like the things I do to be perfect; I always try to do well all the things I set out to do; I need everything to be perfect
	Negative consequences of perfectionism	My perfectionistic tendencies lead me to doubt my performance; Everything is spoiled if an imperfection gets by me; If I lowered my personal criteria, I would feel a lesser person

Note. Measures ordered alphabetically by abbreviated name of measure. Only perfectionism measures and facets used in conceptions of positive and negative perfectionism are listed (see Tables 2 and 3). Consequently, the APS subscales Relationships, Anxiety, and Procrastination were omitted as they seem to capture correlates rather than defining aspects of perfectionism (Slaney, Rice, & Ashby, 2002).

Table 2

Studies With a Dimensional Approach (Perfectionistic Strivings and Perfectionistic Concerns): Conceptions, Correlations, and Categorization of Evidence

Study	Sample/s	Dimensions	Conception	$r(\text{Dim.})^a$	Correlates ^b	Evidence ^c
Chang et al. (2004)	150 Black and 150 White female undergraduates	Adaptive perfectionism	Additive combination of FMPS personal standards and organization scores	.10 ^d	Positive affect and satisfaction with life in White and suicidal ideation (–) in Black females	Positive
		Maladaptive perfectionism	Additive combination of FMPS concern over mistakes, doubts about actions, parental expectations, and parental criticism scores		Perceived stress, positive affect (–), negative affect, and suicidal ideation in both groups, satisfaction with life (–) in White females	
Frost et al. (1993)	553 undergraduates (51% female)	Positive strivings	Additive combination of FMPS personal standards and organization and MPS self-oriented perfectionism and other-oriented perfectionism scores	.28	Positive affect	Positive
		Maladaptive evaluation concerns	Additive combination of FMPS concern over mistakes, doubts about actions, parental expectations, and parental criticism and MPS socially prescribed perfectionism scores		Negative affect, depression	
Parker & Stumpf (1995)	855 academically talented sixth graders (38% female)	Healthy perfectionism	Oblique second-order factor combination of factors representing FMPS personal standards and organization	<i>na</i>	Extraversion, conscientiousness	Positive
		Dysfunctional perfectionism	Oblique second-order factor combination of factors representing FMPS concern over mistakes, doubts about actions, parental expectations, and parental criticism		Extraversion (–), conscientiousness (–), neuroticism, agreeableness (–)	

Table 2 (continued-1)

Study	Sample/s	Dimensions	Conception	$r(\text{Dim.})^a$	Correlates ^b	Evidence ^c
Rice et al. (2005)	241 university students (82% female)	Adaptive perfectionism	Latent factor combination of FMPS personal standards and organization, MPS self-oriented perfectionism, and APS-R high standards and order	.43	Attachment avoidance (-), attachment anxiety (-)	Positive
		Maladaptive perfectionism	Latent factor combination of FMPS concern over mistakes and doubts about actions and APS-R discrepancy		Attachment avoidance, attachment anxiety	
Stumpf & Parker (2000)	855 academically talented sixth graders (38% female)	Healthy perfectionism	Orthogonal second-order factor combination of factors representing FMPS personal standards and organization	.00	Conscientiousness, endurance	Positive
		Unhealthy perfectionism	Orthogonal second-order factor combination of factors representing FMPS concern over mistakes, doubts about actions, parental expectations, and parental criticism		Neuroticism, self-esteem (-)	
Suddarth & Slaney (2001)	196 undergraduates (79% female)	Adaptive perfectionism	Orthogonal factor representing FMPS personal standards, MPS self-oriented perfectionism and other-oriented perfectionism, and APS-R high standards	.00	External locus of control (-)	Positive
		Maladaptive perfectionism	Orthogonal factor representing FMPS concern over mistakes, doubts about actions, parental criticism, parental expectations, MPS socially prescribed perfectionism, and APS-R discrepancy		External locus of control, trait anxiety, psychological symptoms	

Table 2 (continued-2)

Study	Sample/s	Dimensions	Conception	$r(\text{Dim.})^a$	Correlates ^b	Evidence ^c
Bieling et al. (2003)	198 undergraduates (75% female)	Adaptive perfectionism	Additive combination of standardized FMPS personal standards and organization and MPS self-oriented perfectionism and other-oriented perfectionism scores	.45	Positive affect, exam performance, plans to study more, plans to study less (-); <i>negative affect</i> [<i>ns</i>]	Mixed ↓ Positive
		Maladaptive perfectionism	Additive combination of standardized FMPS concern over mistakes, doubts about actions, parental expectations, parental criticism, and MPS socially prescribed perfectionism scores		Positive affect (-), exam preparedness, plans to study more; negative affect	
Cox et al. (2002)	412 adult outpatients (58% female); 288 undergraduates (63% female); 96 medical students (42% female)	Adaptive perfectionism	Additive combination of FMPS personal standards and organization and MPS self-oriented perfectionism	<i>na</i>	Outpatients/undergraduates: conscientiousness, <i>neuroticism</i> , <i>depression</i> ; medical students: recent and anticipated academic achievement	Mixed
		Maladaptive perfectionism	Additive combination of FMPS concern over mistakes, doubts about actions, and parental criticism and MPS socially-prescribed perfectionism		Outpatients/undergraduates: neuroticism, depression; Outpatients: conscientiousness (-)	
Dunkley et al. (2000)	443 undergraduates (69% female)	Personal standards perfectionism	Latent factor representing FMPS personal standards and MPS self-oriented perfectionism	.55 ^d	Active coping styles; <i>hassles</i> [<i>ns</i>]	Mixed ↓ Positive
		Evaluative concerns perfectionism	Latent factor representing FMPS concern over mistakes and doubts about actions and MPS socially prescribed perfectionism		Distress, avoidant coping styles, social support (-); hassles	

Table 2 (continued-3)

Study	Sample/s	Dimensions	Conception	$r(\text{Dim.})^a$	Correlates ^b	Evidence ^c
Enns et al. (2001)	96 medical students (42% female)	Adaptive perfectionism	Additive combination of standardized FMPS personal standards and MPS self-oriented perfectionism scores	<i>na</i>	Conscientiousness, past year performance, ability to achieve; <i>neuroticism</i>	Mixed
		Maladaptive perfectionism	Additive combination of standardized FMPS concern over mistakes and doubts about actions and MPS socially prescribed perfectionism scores		Depression, hopelessness, suicide ideation, neuroticism	
Bieling et al. (2004)	198 undergraduates (75% female)	Positive striving	Additive combination of standardized FMPS personal standards and organization and MPS self-oriented perfectionism and other-oriented perfectionism scores	.45	<i>Depression, anxiety, stress, test anxiety</i> [all <i>ns</i>]	Negative ↓ ∅
		Maladaptive evaluation concerns	Additive combination of standardized FMPS concern over mistakes, doubts about actions, parental expectations, parental criticism and MPS socially prescribed perfectionism scores		Depression, anxiety, stress, test anxiety	
Dunkley et al. (2003)	163 full-time university students (61% female)	Personal standards perfectionism	Latent factor representing FMPS personal standards and MPS self-oriented perfectionism	.61	<i>Perceived social support</i> (-) [+], <i>self-blame</i> [-], <i>negative affect</i> [-]	Negative ↓ Positive
		Self-critical perfectionism	Latent factor representing FMPS concern over mistakes and doubts about actions, MPS socially prescribed perfectionism, and DEQ self-criticism		Hassles, perceived efficacy (-), event stress, perceived criticism, positive affect (-), avoidant coping styles; perceived social support (-), self-blame, negative affect	

Table 2 (continued-4)

Study	Sample/s	Dimensions	Conception	$r(\text{Dim.})^a$	Correlates ^b	Evidence ^c
Hill et al. (2004)	616 undergraduates (62% female)	Conscientious perfectionism	Additive combination of PI striving for excellence, organization, planfulness, and high standards for others	.54	<i>Depression</i> [-]; <i>anxiety</i> , <i>OC symptoms</i> , <i>fear of negative evaluation</i> , <i>somatic complaints</i> , <i>interpersonal sensitivity</i> , <i>hostility</i> , <i>phobic anxiety</i> , <i>paranoia</i> , <i>psychoticism</i> [all <i>ns</i>]; <i>OC symptoms frequency</i> , <i>OC symptoms distress</i>	Negative ↓ Mixed
		Self-evaluative perfectionism	Additive combination of PI concern over mistakes, rumination, need for approval, and perceived parental pressure		Depression; anxiety, OC symptoms, fear of negative evaluation, somatic complaints, interpersonal sensitivity, hostility, phobic anxiety, paranoia, psychoticism; OC symptoms frequency, OC symptoms distress	
Lynd-Stevenson & Hearne (1999)	142 undergraduates (71% female)	Active perfectionism	Additive combination of standardized FMPS personal standards, parental expectations, and parental criticism scores	.70	<i>Stressful life events</i> , <i>depression</i> [<i>ns</i>]	Negative ↓ ∅
		Passive perfectionism	Additive combination of standardized FMPS concern over mistakes and doubts about actions scores		Stressful life events, depression	

Table 2 (continued-5)

Study	Sample/s	Dimensions	Conception	$r(\text{Dim.})^a$	Correlates ^b	Evidence ^c
Rice et al. (1998)	464 undergraduates (74% female)	Adaptive perfectionism	Additive combination of FMPS personal standards and organization and APS standards/order and procrastination (reverse-scored) scores	.24	[Self-esteem]	∅ ↓ Positive
		Maladaptive perfectionism	Additive combination of FMPS concern over mistakes, doubts about actions, parental expectations, and parental criticism and APS difficulty in relationships, anxiety, and procrastination scores		Self-esteem (-), depression	

Note. Conceptions ordered alphabetically by reference within each class of evidence (see Table Footnote c). Dimensions: The first dimension always represents the perfectionistic strivings dimension, the second the perfectionistic concerns dimension. Conception: APS = Almost Perfect Scale, APS-R = Almost Perfect Scale-Revised, DEQ = Depressive Experiences Questionnaire, FMPS = Frost Multidimensional Perfectionism Scale, MPS = Hewitt and Flett's Multidimensional Perfectionism Scale, PI = Perfectionism Inventory, PQ = Perfectionism Questionnaire. Correlates: OC = obsessive-compulsive. *na* = information not available.

^aCorrelation between dimensions. ^bCritical correlates (negative characteristics related to positive conceptions of perfectionism) italicized; all correlates represent zero-order correlations (except for Rice et al., 2005, and Slaney & Suddarth, 2001: regression weights); only significant correlates ($p < .05$) are reported; (-) = correlate with negative sign; entries in square brackets indicate changes in correlates after partialling out negative perfectionism, such as additional correlates [Self-esteem], nonsignificant relationships [*ns*], and/or reversed relationships [+]. ^cEvidence: positive = positive conception of perfectionism related to positive characteristics only, mixed = positive conception of perfectionism related to both positive and negative characteristics, negative = positive conception of perfectionism related to negative characteristics only, ∅ (inconclusive) = positive conception of perfectionism unrelated to any positive or negative characteristics; an entry of „Evidence X \Rightarrow Evidence Y“ indicates a change in the classification of evidence after partialling out the influence of negative perfectionism from the critical correlations in those studies that reported the correlation between positive and negative perfectionism (see text for details). ^dWeighted mean correlation/s for combined sample.

Table 3

Studies With a Group-Based Approach (Healthy Perfectionism and Unhealthy Perfectionism): Conceptions, Differences, and Categorization of Evidence

Study	Sample/s	Groups	Conception	Differences ^a	Evidence ^b
Ashby & Bruner (2005)	144 undergraduates (60% female)	Adaptive perfectionists (HP)	Cluster with high APS-R high standards and low discrepancy scores	(a) HP with less OC checking, slowness, and doubting than UHP (b) HP with less OC slowness than NonP	Positive
		Maladaptive perfectionists (UHP)	Cluster with high APS-R high standards and high discrepancy scores		
		Nonperfectionists (NonP)	Cluster with low APS-R high standard and medium discrepancy scores		
Ashby & Kottman (1996)	123 undergraduates (51% female)	Normal perfectionists (HP)	Top third of APS-R high standards and below-median discrepancy scores	(a) HP with fewer inferiority feelings, less procrastination, fewer intimacy difficulties, and lower anxiety than UHP (b) <i>na</i>	Positive
		Neurotic perfectionists (UHP)	Top third of APS-R high standards and above-median discrepancy scores		
Dickinson & Ashby (2005)	131 undergraduates (67% female)	Adaptive perfectionists (HP)	Cluster with high APS-R high standards and low discrepancy scores	(a) HP with lower immature ego defenses (e.g., projection, passive aggression, dissociation) than UHP (b) —	Positive
		Maladaptive perfectionists (UHP)	Cluster with high APS-R high standards and high discrepancy scores		
		Nonperfectionists (NonP)	Cluster with low APS-R high standards and low discrepancy scores		

Table 3 (continued-1)

Study	Sample/s	Groups	Conception	Differences ^a	Evidence ^b
Dixon et al. (2004)	142 academically talented junior high school students (64% female)	Mixed-adaptive perfectionists (HP)	Cluster with high FMPS personal standards and organization, medium concern over mistakes, low doubts about actions, medium parental expectations, and low parental criticism scores	(a) HP with better adjustment and lower anxiety than UP1, less dysfunctional coping styles than UP2, and more mastery coping styles, perception of greater personal security, and less depression, somatization, OC symptoms, and interpersonal sensitivity than both UHP1 and UHP2	Positive
		Pervasive perfectionists (UHP1)	Cluster with high FMPS personal standards, organization, concern over mistakes, doubts about actions, and medium parental expectations and criticism scores		
		Mixed-maladaptive perfectionists (UHP2)	Cluster with high FMPS personal standards, medium organization, high concern over mistakes, medium doubts about actions and high parental expectations and criticism scores	(b) HP with better adjustment and higher academic competence than NonP	
		Nonperfectionists (NonP)	Cluster with overall low FMPS scores		
Gilman et al. (2005)	291 Croatian and 341 American adolescent school students (60% female)	Adaptive perfectionists (HP)	Cluster with high APS-R high standards and low discrepancy scores	(a) All HP with higher satisfaction regarding family, school, self, and life in general than UHP and American HP also regarding friends and living environment	Positive
		Maladaptive perfectionists (UHP)	Cluster with high APS-R high standards and high discrepancy scores		
		Nonperfectionists (NonP)	Cluster with low APS-R high standards and low/medium discrepancy scores (Americans/Croatians)	(b) Croatian HP with higher satisfaction regarding family, school, and living environment than NonP	

Table 3 (continued-2)

Study	Sample/s	Groups	Conception	Differences ^a	Evidence ^b
Grzegorek et al. (2004)	273 undergraduates (74% female)	Adaptive perfectionists (HP)	Cluster with high APS-R high standards and order and low discrepancy scores	(a) HP with higher self-esteem, greater GPA satisfaction, and lower self-criticism than UHP (b) HP with higher self-esteem, higher GPA, greater GPA satisfaction, and lower self-criticism than NonP	Positive
		Maladaptive perfectionists (UHP)	Cluster with high APS-R high standards and order and high discrepancy scores		
		Nonperfectionists (NonP)	Cluster with low APS-R high standards and order and medium discrepancy scores		
LoCicero et al. (2000)	195 middle school students (59% female)	Adaptive perfectionists (HP)	Top third of APS-R high standards scores and below average discrepancy scores	(a) HP with higher social interest and greater willingness to go along with others than UHP (b) HP with greater willingness to go along with others than NonP	Positive
		Maladaptive perfectionists (UHP)	Top third of APS-R high standards scores and above average discrepancy scores		
		Nonperfectionists (NonP)	Lower two thirds of APS-R high standards scores		
Mobley et al. (2005)	251 African American undergraduates (69% female)	Adaptive perfectionists (HP)	Cluster with high APS-R high standards and order and low discrepancy scores	(a) HP with higher self-esteem and lower anxiety and depression than UHP (b) HP with higher self-esteem and lower anxiety and depression than NonP	Positive
		Maladaptive perfectionists (UHP)	Cluster with high APS-R high standards and order and high discrepancy scores		
		Nonperfectionists (NonP)	Cluster with low APS-R high standards and order and medium discrepancy scores		

Table 3 (continued-3)

Study	Sample/s	Groups	Conception	Differences ^a	Evidence ^b
Periasamy & Ashby (2002)	260 undergraduates (69% female)	Adaptive perfectionists (HP)	Top one-third of APS-R high standards and below-average discrepancy scores	(a) HP with lesser external locus of control (powerful-others) than UHP (b) HP with greater internal locus of control than NonP	Positive
		Maladaptive perfectionists (UHP)	Top one-third of APS-R high standards and above-average discrepancy scores		
		Nonperfectionists (NonP)	<i>na</i>		
Rice et al. (2003)	139 undergraduates (75% female)	Adaptive perfectionists (HP)	Cluster with high FMPS personal standards and organization and medium concern over mistakes, doubts about actions, parental expectations, and parental criticism scores	(a) HP with greater personal and interpersonal control and fewer depressed/distorted cognitions than UHP (b) HP with greater personal control than NonP	Positive
		Maladaptive perfectionists (UHP)	Cluster with high FMPS personal standards, low organization, and high concern over mistakes, doubts about actions, parental expectations and parental criticism scores		
		Nonperfectionists (NonP)	Cluster with low scores on all FMPS subscales		

Table 3 (continued-4)

Study	Sample/s	Groups	Conception	Differences ^a	Evidence ^b
Rice & Mirzadeh (2000)	179 undergraduates (72% female)	Adaptive perfectionists (HP)	Cluster with high FMPS personal standards and organization, low concern over mistakes and doubts about actions, medium parental expectations, and low parental criticism scores	(a) HP with better academic integration and lower depression than UHP (b) <i>na</i>	Positive
		Maladaptive perfectionists (UHP)	Cluster with high FMPS personal standards, medium organization, and high concern over mistakes, doubts about actions, parental expectations, and parental criticism scores		
		Nonperfectionists (NonP)	Cluster with low FMPS personal standards and organization, low concern over mistakes, medium doubts about actions, and low parental expectations and parental criticism scores		
Rice & Slaney (2002)	Study 1: 258 undergraduates (79% female); Study 2: 375 undergraduates (77% female)	Adaptive perfectionists (HP)	Cluster with high APS-R high standards and order and low discrepancy scores	(a) HP with higher self-esteem, higher GPA (Study 2), more positive affect, less depressed affect, lower state/trait anxiety, and fewer somatic complaints than UHP (b) HP with higher self-esteem, higher GPA (Study 2), and lower state/trait anxiety than NonP	Positive
		Maladaptive perfectionists (UHP)	Cluster with high APS-R high standards and order and high discrepancy scores		
		Nonperfectionists (NonP)	Cluster with low APS-R high standards and order and medium discrepancy scores		

Table 3 (continued-5)

Study	Sample/s	Groups	Conception	Differences ^a	Evidence ^b
Martin & Ashby (2004a)	240 undergraduates (65% female)	Adaptive perfectionists (HP)	Cluster with high APS-R high standards and low discrepancy scores	(a) HP with a more evaluativistic epistemic style than UHP (b) HP with a less relativistic epistemic style than NonP	Mixed
		Maladaptive perfectionists (UHP)	Cluster with high APS-R high standards and high discrepancy scores		
		Nonperfectionists (NonP)	Cluster with low APS-R high standards and medium discrepancy scores		
Parker (1997)	820 academically talented sixth graders (37% female)	Healthy perfectionists (HP)	Cluster with high FMPS personal standards, high organization, and low concern over mistakes, doubts about actions, parental expectations, and parental criticism scores	(a) HP with higher extraversion, agreeableness, and conscientiousness and lower neuroticism than UHP (b) HP with higher extraversion, agreeableness, and conscientiousness, but <i>higher neuroticism</i> than NonP	Mixed
		Dysfunctional or unhealthy perfectionists (UHP)	Cluster with high FMPS personal standards, medium organization, and high concern over mistakes, doubts about actions, parental expectations, and parental criticism scores		
		Nonperfectionists (NonP)	Cluster with low scores on all FMPS subscales		
Rhéaume, Freeston, et al. (2000)	32 adults (65% female)	Functional perfectionists (HP)	Above-median PQ perfectionist tendencies and below-median negative consequences of perfectionism	(a) HP with fewer OC behaviors, fewer OC responsibility beliefs and faster decision times, but <i>higher evidence requirements</i> than UHP (b) <i>na</i>	Mixed
		Dysfunctional perfectionists (UHP)	Above-median PQ perfectionist tendencies and above-median negative consequences of perfectionism		

Table 3 (continued-6)

Study	Sample/s	Groups	Conception	Differences ^a	Evidence ^b
Rice & Dellwo (2002)	311 undergraduates (75% female)	Adaptive perfectionists (HP)	Cluster with high FMPS personal standards, organization, and parental expectations, medium concern over mistakes, doubts about actions, and parental criticism scores	(a) HP with higher self-idealization, higher self-esteem, better academic and social integration, and lower depression than UHP	Mixed
		Maladaptive perfectionists (UHP)	Cluster with high FMPS concern over mistakes, doubts about actions, parental expectations, and parental criticism, medium personal standards, and low organization scores	(b) HP with <i>higher depression</i> than NonP	
		Nonperfectionists (NonP)	Cluster with low scores on all FMPS subscales		
Ashby et al. (1999)	122 undergraduates (50% female)	Adaptive perfectionists (HP)	Above-median APS-R high standards and below-median discrepancy scores	(a) —	∅
		Maladaptive perfectionists (UHP)	Above-median APS-R high standards and above-median discrepancy scores	(b) HP with greater satisfaction from leisure activities in terms of need for freedom, enjoyment, and involvement than NonP	
		Nonperfectionists (NonP)	Below-median APS-R high standards		
Martin & Ashby (2004b)	200 undergraduates (64% female)	Adaptive perfectionists (HP)	Cluster with high APS-R high standards and low discrepancy scores	(a) —	∅
		Maladaptive perfectionists (UHP)	Cluster with high APS-R high standards and high discrepancy scores	(b) —	
		Nonperfectionists (NonP)	Cluster with low APS-R high standards and medium discrepancy scores		

Table 3 (continued-7)

Study		Groups	Conception	Differences ^a	Evidence ^b
Gilman & Ashby (2003)	132 middle school students (63% female)	Adaptive perfectionists (HP)	Top one-third of APS-R high standards and below-average discrepancy scores	(a) —	∅
		Maladaptive perfectionists (UHP)	Top one-third of APS-R high standards and above-average discrepancy scores	(b) HP with higher satisfaction with self than NonP	
		Nonperfectionists (NonP)	Lower one-third of APS-R high standards scores		
Rice et al. (1996)	58 undergraduates (48% female)	Normal perfectionists (HP)	Above-median APS standards and organization and below-median FMPS concern over mistakes scores	(a) — (b) <i>na</i>	∅
		Neurotic perfectionists (UHP)	Above-median APS standards and organization and above-median FMPS concern over mistakes scores		

Note. Conceptions ordered alphabetically by reference within each class of evidence (see Table Footnote b). Groups: HP = healthy perfectionists, UHP = unhealthy perfectionists, NonP = nonperfectionists. Conception: APS = Almost Perfect Scale, APS-R = Almost Perfect Scale-Revised, DEQ = Depressive Experiences Questionnaire, FMPS = Frost Multidimensional Perfectionism Scale, MPS = Hewitt and Flett's Multidimensional Perfectionism Scale, PI = Perfectionism Inventory, PQ = Perfectionism Questionnaire. Differences: GPA = grade point average, OC = obsessive-compulsive, *na* = information not available.

^a(a) differences in positive or negative characteristics between HP and UHP, (b) differences in positive or negative characteristics between HP and NonP; only significant differences ($p < .05$) reported, critical differences italicized. ^bEvidence: Positive = HP show higher levels of positive characteristics relative to UHP; Mixed = HP show higher levels of positive characteristics relative to UHP, but lower levels of some positive characteristic compared NonP; ∅ (inconclusive) = no difference in positive characteristics between HP and UHP. (Lower/higher levels of negative characteristics are interpreted in the same way as higher/lower levels of positive characteristics.)