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Comparing Two Short Forms of the
Hewitt–Flett Multidimensional Perfectionism Scale

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Abstract

Hewitt and Flett's 45-item Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991, 2004) is a widely-used instrument to assess self-oriented, other-oriented, and socially prescribed perfectionism. With 45 items, it is not overly lengthy, but there are situations where a short form is useful. Analyzing data from 4 samples, this article compares 2 frequently used 15-item short forms of the MPS—Cox et al.'s (2002) and Hewitt et al.'s (2008)—by examining to what degree their scores replicate the original version's correlations with various personality characteristics (e.g., traits, social goals, personal/interpersonal orientations). Regarding self-oriented and socially prescribed perfectionism, both short forms performed well. Regarding other-oriented perfectionism, however, Cox et al.'s short form (exclusively comprised of negatively worded items) performed less well than Hewitt et al.'s (which contains no negatively worded items). It is recommended that researchers use Hewitt et al.'s short form to assess other-oriented perfectionism rather than Cox et al.'s.

Keywords: perfectionism; short form; five-factor model of personality; obsessive-compulsive traits; social goals; personal and interpersonal orientations

Introduction

Perfectionism has been defined as a personality disposition characterized by striving for flawlessness and setting exceedingly high standards of performance accompanied by overly critical evaluations (Flett & Hewitt, 2002; Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991; Slaney, Rice, Mobley, Trippi, & Ashby, 2001). Perfectionism has different aspects, however; and there are different dimensions of perfectionism with different characteristics (Enns & Cox, 2002). Whereas some dimensions of perfectionism may have adaptive aspects (Stoeber & Otto, 2006), other dimensions have shown close relations with key indicators of psychological maladjustment and mental health problems such as anxiety, depression, interpersonal problems, disordered eating, and suicide ideation (e.g., Blankstein, Lumley, & Crawford, 2007; R. W. Hill, Zrull, & Turlington, 1997; Minarik & Ahrens, 1996). Consequently, perfectionism is best conceptualized as a multidimensional disposition and should be assessed accordingly.

Regarding multidimensional conceptualizations of perfectionism, one of the most influential and widely researched models is Hewitt and Flett's (1991). With the recognition that perfectionism has personal and interpersonal aspects, the model differentiates three forms of perfectionism: self-oriented, other-oriented, and socially prescribed. Self-oriented perfectionism

reflects beliefs that striving for perfection and being perfect are important. Self-oriented perfectionists have exceedingly high personal standards, strive for perfection, expect to be perfect, and are highly self-critical if they fail to meet these expectations. In contrast, other-oriented perfectionism reflects beliefs that it is important for others to strive for perfection and be perfect. Other-oriented perfectionists have unrealistic standards for others, expect others to be perfect, and are highly critical of others who fail to meet these expectations. Finally, socially prescribed perfectionism reflects beliefs that striving for perfection and being perfect are important to others. Socially prescribed perfectionists believe that unrealistic standards are being imposed on the self and that others expect them to be perfect, think that others will be highly critical of them if they fail to meet their expectations, and thus feel chronic pressures (Hewitt & Flett, 1991, 2004). All three dimensions have clinical relevance, particularly socially prescribed perfectionism (Hewitt & Flett, 1991). For example, accumulating evidence suggests that socially prescribed perfectionism is linked with suicidality and hopelessness (Flett, Hewitt, & Heisel, 2014). Furthermore, socially prescribed perfectionism is linked with disordered eating, as is self-oriented perfectionism if to a lesser degree (Bardone-Cone et al., 2007). In contrast, it is mostly the targets of other-oriented perfectionists who are distressed, not other-oriented perfectionists themselves (Hewitt & Flett, 1991; see also Hewitt, Flett, & Mikail, 1995). However, clients high in other-oriented perfectionism may have a higher risk of dropping out of therapy (McCown & Carlson, 2004) which also makes other-oriented perfectionism relevant for clinical psychology.

Multidimensional Perfectionism Scale: Original Version and Short Forms

To assess the three forms of perfectionism, Hewitt and Flett (1991) developed the Multidimensional Perfectionism Scale (MPS). The MPS is comprised of 45 items of which 15 each measure self-oriented, other-oriented, and socially prescribed perfectionism. The MPS is a widely-used instrument and has demonstrated reliability and validity in numerous studies involving student, community, and clinical samples (see Hewitt & Flett, 2004, for a comprehensive review). With 45 items, the MPS is not overly lengthy. Yet, there are situations where employing the full-length MPS would be too long, demanding, or time-consuming or simply impractical, for example, studies where the MPS is combined with scales from other multidimensional perfectionism scales (Mackinnon, Sherry, & Pratt, 2013), studies with repeated administration (Stoeber & Hotham, 2013), studies using telephone interviews (Cox, Clara, & Enns, 2009), studies including informant reports (Sherry et al., 2013), or other studies where participants are pressed for time such as athletes on their way to a competition (A. Hill, Stoeber,

Brown, & Appleton, 2014).

Consequently, the 15-item short form that Cox, Enns, and Clara published in 2002—assessing each dimension with five items—has been used in many studies in research on personality and individual differences, clinical and counseling psychology, and sport and exercise psychology where the full-length MPS was considered too long (e.g., Cox et al., 2009; A. Hill et al., 2014; Mackinnon et al., 2013; Powers, Koestner, Zuroff, Milyavskaya, & Gorin, 2011; Stoeber & Hotham, 2013). Researchers, however, should note that there is another 15-item MPS short form, first employed by Hewitt, Habke, Lee-Baggley, Sherry, and Flett (2008), that is used in an increasing number of studies (e.g., Flett, Baricza, Gupta, Hewitt, & Endler, 2011; Graham et al., 2010; Nealis, Sherry, Sherry, Stewart, & Macneil, 2015; Sherry et al., 2013; M. Smith, Saklofske, & Yan, 2015). Clearly, there is a need for an MPS short form when even the scale creators themselves have resorted to using a 15-item short form at times (e.g., Flett et al., 2011; Hewitt et al., 2008).

Whereas there is no information available on how Hewitt et al.'s (2008) short form was constructed, Cox et al.'s (2002) short form was constructed with the help of exploratory factor analysis. Each of the MPS's 15-item subscales was factor-analyzed separately, a single factor was extracted, and the five items with the highest loading on the factor were selected for inclusion in the short form. The two short forms are alike in that they assess self-oriented and socially prescribed perfectionism exclusively with positively worded items, that is, items where higher ratings reflect higher perfectionism (e.g., "One of my goals is to be perfect in everything I do"). The two short forms, however, show a crucial difference in how they assess other-oriented perfectionism. Whereas Hewitt et al.'s short form uses five positively worded items (e.g., "Everything that others do must be of top-notch quality"), Cox et al.'s short form uses five negatively worded items, that is, items where higher ratings reflect lower perfectionism (e.g., "I do not have very high standards for those around me") that need to be reverse-scored before scale scores are computed.

Why is this difference crucial? Flett and Hewitt (2015) point out in their review of perfectionism measures that Cox et al. (2002), when developing their MPS short form, did not take into account a possible wording factor: Items that are negatively worded may load on a different factor from items that are positively worded (see De Cuyper, Claes, Hermans, Pieters, & Smits, 2015). Moreover, research has shown that the use of negatively worded items can be problematic because it is unclear if such items capture the intended construct in the same way as

positively worded items (DiStefano & Motl, 2006; Sinclair & Tetrick, 2000). Particularly scales that are exclusively comprised of negatively worded items are problematic (e.g., Kelloway & Barling, 1990). In extreme cases, such scales may assess a different construct than the construct they intend to capture (cf. Schaufeli & Salanova, 2007). Consequently, it is conceivable that Cox et al.'s short form of the MPS other-oriented perfectionism scale—being exclusively comprised of negatively worded items—may have similar problems capturing other-oriented perfectionism.

In recent years, there has been a reinvigorated interest in other-oriented perfectionism not only in research on personality and individual differences, but also in clinical psychology, applied psychology, and sport and exercise psychology (e.g., Ayearst, Flett, & Hewitt, 2012; A. Hill et al., 2014; Shoss, Callison, & Witt, 2015). There are several reasons for this development. First, other-oriented perfectionism has been linked to the personality traits associated with the DSM-5 personality disorders, particularly narcissistic personality disorder and antisocial personality disorder (Ayearst et al., 2012; Stoeber, 2014b). Furthermore, other-oriented perfectionism has been linked to the dark triad of personality traits, particularly grandiose narcissism (Stoeber, 2014a; Stoeber, Sherry, & Nealis, 2015). Accordingly, some researchers consider other-oriented perfectionism a defining component of “narcissistic perfectionism” (Nealis et al., 2015; M. Smith, Saklofske, Stoeber, & Sherry, in press). Second, other-oriented perfectionism has shown unique positive relations with a range of personality characteristics indicative of antisocial attitudes and interpersonal problems which suggests that it is a “dark” form of perfectionism (Stoeber, 2014a, 2015; Marcus & Zeigler-Hill, 2015). Finally, other-oriented perfectionism is an important form of perfectionism because it plays a key role in other conceptions of perfectionism such as dyadic perfectionism in the form of partner-oriented perfectionism (other-oriented perfectionism directed at one's partner; Habke, Hewitt, & Flett, 1999; Stoeber, 2012) and partner-oriented sexual perfectionism (other-oriented sexual perfectionism directed at one's partner; Stoeber & Harvey, in press; Stoeber, Harvey, Almeida, & Lyons, 2013) as well as team-perfectionism in the form of team-oriented perfectionism (other-oriented perfectionism directed at one's team members; A. Hill et al., 2014). Consequently, it is important to have a MPS short form that reliably captures all three dimensions of perfectionism of Hewitt and Flett's (1991) model, including other-oriented perfectionism.

The Present Research

Against this background, the aim of the present research was to compare the two MPS short forms—Cox et al.'s (2002) and Hewitt et al.'s (2008)—by examining to what degree the short

forms' scores would replicate the original version's correlations with various personality characteristics (e.g., personality traits, social goals, personal and interpersonal orientations). To this aim, data from four samples were analyzed. Sample 1 provided data from an unpublished study to examine the short forms' correlations with the traits of the five-factor model of personality (McCrae & Costa, 1999) and obsessive-compulsive personality traits (Samuel, Riddell, Lynam, Miller, & Widiger, 2012). Samples 2-4 provided data from three published studies (Stoeber, 2014a, 2015) to examine the short forms' correlations with the HEXACO personality traits, the dark triad personality traits, social goals, and various personal and interpersonal orientations (see Method for details).

Method

Participants

Sample 1. Participants in Sample 1 were 230 University of Kent students (195 women, 35 men) recruited via the School of Psychology's research participation scheme. Mean age of students was 20.4 years ($SD = 5.3$; range: 18-50). Students self-reported their ethnicity as White (70%), Black (13%), Asian (11%), mixed race (3%), and other (3%). Students volunteered to participate for extra course credits or for a £50 raffle (~US \$71). They completed all measures online using the School's Qualtrics® platform which required them to respond to all questions to prevent missing data. The study was approved by the relevant ethics committee.

Samples 2-4. Participants in Sample 2 were the 326 students (53 male, 273 female) from Stoeber (2014a, Study 2). Mean age was 19.9 years ($SD = 4.4$; range: 17-50). Self-reported ethnicity was White (71%), Black (10%), Asian (10%), mixed race (6%), and other (3%). Participants in Sample 3 were the 338 students (64 male, 274 female) from Stoeber (2014a, Study 1). Mean age was 19.8 years ($SD = 4.1$; range: 17-50). Self-reported ethnicity was White (73%), Black (9%), Asian (11%), mixed race (5%), and other (3%). Participants in Sample 4 were the 229 students (28 male, 199 female, 2 undeclared) from Stoeber (2015). Mean age was 20.4 years ($SD = 5.3$; range: 18-58). Self-reported ethnicity was White (68%), Black (15%), Asian (11%), mixed race (4%), and other (2%). All procedures (recruitment, credits/raffle, Qualtrics®, ethical approval) were the same as for Sample 1.

Measures

Multidimensional Perfectionism Scale (MPS). All participants completed the original 45-item version of the MPS (Hewitt & Flett, 2004) capturing self-oriented perfectionism (SOP; "I demand nothing less than perfection of myself"), other-oriented perfectionism (OOP; "If I ask

someone to do something, I expect it to be done flawlessly”), and socially prescribed perfectionism (SPP; “People expect nothing less than perfection from me”). All items were presented with the MPS’s standard instruction (“Listed below are a number of statements concerning personal characteristics and traits...”) and the standard 7-point response scale. Scores for Cox et al.’s (2002) short form were computed using Items 6, 14, 28, 40, and 42 (SOP); Items 10, 19, 24, 43, and 45 (OOP); and Items 13, 31, 33, 35, and 39 (SPP). Scores for Hewitt et al.’s (2008) were computed using Items 6, 14, 15, 20, and 32 (SOP); Items 7, 16, 22, 26, and 27 (OOP); and Items 11, 25, 35, 39, and 41 (SPP; P. Hewitt, personal communication, 25 November 2008).

Sample 1. Participants in Sample 1 completed the NEO-Five Factor Inventory (Costa & McCrae, 1991) capturing neuroticism (“I often feel tense and jittery”), extraversion (“I really enjoy talking to people”), openness to experience (“I often enjoy playing with theories or abstract ideas”), agreeableness (“I generally try to be thoughtful and considerate”), and conscientiousness (“I work hard to accomplish my goals”) using the standard instruction and response scale. Furthermore, they completed the Five Factor Obsessive-Compulsive Inventory (Samuel et al., 2012) capturing perfectionism (“I’m something of a perfectionist”), fastidiousness (“I am a very methodical person; perhaps too much so”), punctiliousness (“I have such a strong sense of duty that I sometimes become over-committed”), workaholism (“I usually find myself thinking about work, even in the middle of a vacation”), doggedness (“I am to the maximum dogged, determined, and disciplined”), ruminative deliberation (“I think things over and over and over before I make a decision”), detached coldness (“I often come across as formal and reserved”), risk aversion (“I much prefer playing it safe, even if miss out on something”), excessive worry (“Sometimes unimportant details cause me a great deal of worry”), constrictedness (“I don’t experience a particularly wide range of emotions or feelings”), inflexibility (“People have often complained that I am stuck in my ways”), and dogmatism (“Matters of morality are ‘black and white’ and have no room for grey”) using the standard instruction and response scale.

Sample 2. Participants in Sample 2 completed the HEXACO Personality Inventory-Revised (Lee & Ashton, n.d.) capturing honesty-humility (“I am an ordinary person who is no better than others”), emotionality (“I feel like crying when I see other people crying”), extraversion (“I enjoy having lots of people around to talk with”), agreeableness (“I generally accept people’s faults without complaining about them”), conscientiousness (“I often check my work over repeatedly to find any mistakes”), openness to experience (“I like people who have unconventional views”),

and—in addition—altruism (e.g., “I have sympathy for people who are less fortunate than me”; see Stoeber, 2014a, for further details).

Sample 3. Participants in Sample 3 completed the Dirty Dozen scale (Jonason & Webster, 2010) capturing narcissism (“I tend to want others to admire me”), Machiavellianism (“I tend to manipulate others to get my way”), and psychopathy (“I tend to lack remorse”). Furthermore they completed Shim and Fletcher’s (2012) measures of social content and social achievement goals. For social content goals, participants were presented the word stem “When I’m with people my own age, I like it when...” followed by items capturing nurturance (“I can make them feel good”), intimacy (“They tell me about their feelings”), status (“They like me better than anyone else”), leadership (“They say I’m the boss”), and dominance (“I make them do what I want”) goals. For social achievement goals, participants completed items capturing development (“It is important to me to learn more about other students and what they are like”), demonstration–approach (“It is important to me that other students think I am popular”), and demonstration–avoidance goals (“It is important to me that I don’t embarrass myself around my friends”; see again Stoeber, 2014a, for further details).

Sample 4. Participants in Sample 4 completed the Humor Styles Questionnaire (Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003) capturing affiliative humor (“I laugh and joke a lot with my closest friends”), self-enhancing humor (“If I am feeling depressed, I can usually cheer myself up with humor”), aggressive humor (“If I don’t like someone, I often use humor or teasing to put them down”), and self-defeating humor (“I often go overboard in putting myself down when I am making jokes or trying to be funny”); and the Inventory of Callous and Unemotional traits (Essau, Sasagawa, & Frick, 2006) capturing callous (“I do not care who I hurt to get what I want”), unemotional (“I do not show my emotions to others”), and uncaring traits (“I always try my best,” reverse-scored). Furthermore, they completed Van Lange, De Bruin, Otten, and Joireman’s (1997) measure of social value orientations differentiating prosocial (equal gains for oneself and the other), individualistic (maximizing one’s gains regardless of the other’s gains), and competitive orientations (maximizing the difference between one’s gains and the other’s gains). In addition, Sample 4 completed the adult version of the Self- and Other-Interest Inventory (Gerbasi & Prentice, 2013) capturing self-interest (“I am constantly looking for ways to get ahead”) and other-interest (“I am constantly looking for ways for my acquaintances to get ahead”); and the Intrapersonal–Interpersonal Self-Evaluation Scale (Leising, Borkenau, Zimmermann, Roski, Leonhardt, & Schütz, 2013) capturing intrapersonal (“I am pretty much

exactly as I would like to be”) and interpersonal (“I am superior to others”) positive self-evaluations (see Stoeber, 2015, for further details).

Data Screening

Because multivariate outliers distort the results of correlation analyses, participants that showed a Mahalanobis distance with a χ^2 value significant at $p < .001$ (Tabachnick & Fidell, 2007) were excluded from further analysis so the final samples comprised 223, 321, 330, and 227 participants (cf. Stoeber, 2014a, 2015). Next, Box’s M tests examined whether the variance–covariance matrices of male and female participants differed. Because Box’s M is highly sensitive to even minor differences, it is tested against a $p < .001$ significance level (Tabachnick & Fidell, 2007). In all samples, Box’s M was nonsignificant. Consequently, analyses were collapsed across gender. Finally, we examined the reliabilities of all scale scores. All scores showed satisfactory Cronbach’s alphas $\geq .70$ except other-oriented perfectionism measured with Cox et al.’s short form in all samples (alphas = .53-.65), other-oriented perfectionism measured with Hewitt et al.’s short form in Sample 1 (alpha = .69), openness to experience in Sample 1 (alpha = .66), and aggressive humor in Sample 4 (alpha = .66; see Stoeber, 2014a, 2015).

Results

Intercorrelations

First, the correlations between the original version and short form scores of self-oriented, other-oriented, and socially prescribed perfectionism were examined. Table 1 shows the results (for means and standard deviations, see Table S1 [supplementary material]). As expected, all correlations between scores assessing the same perfectionism dimension were very large ($.72 \leq r_s \leq .95$), except for the correlation between the two other-oriented perfectionism short forms ($.23 \leq r_s \leq .33$). Furthermore, only Hewitt et al.’s other-oriented perfectionism short form showed sizeable positive correlations with self-oriented and socially prescribed perfectionism measured with the full-length MPS across the four samples ($.27 r_s \leq .59$), as would be expected from Hewitt and Flett’s (1991) multidimensional model of perfectionism. Cox et al.’s short form did not ($.10 \leq r_s \leq .24$).

Correlations with the Personality Characteristics

Next, the correlations of the original version and short form scores with the personality characteristics were examined. Table 2 shows the results. Because the correlations that the original version showed in Samples 2-4 have been previously examined (Stoeber, 2014a, 2015), the present examination focused on Sample 1. Regarding the original version’s correlations with

the five-factor model traits, the resulting pattern of correlations was as expected from previous research (e.g., R. Hill, McIntire, & Bacharach, 1997): Self-oriented perfectionism showed a significant positive correlation with conscientiousness, other-oriented perfectionism a significant negative correlation with agreeableness, and socially prescribed perfectionism a significant positive correlation with neuroticism as well as negative correlations with extraversion and agreeableness. Regarding the correlations with the obsessive-compulsive traits, all three forms of perfectionism showed significant positive correlations with self-oriented perfectionism showing the largest correlations (average $r = .44$) followed by socially prescribed perfectionism (average $r = .27$) and other-oriented perfectionism (average $r = .18$).¹

To gauge whether the correlations of the short form scores replicated those of the original version, I examined whether the correlations of the short form were within the 95% confidence interval (CI) of the correlation of the original version. If the answer was yes, the comparison was scored as a “hit” (●); else, it was scored as a “miss” (○). Table 2 shows the results. As regards self-oriented perfectionism, both short forms performed well. Cox et al.’s short form did not show any misses. All 49 correlations were within the 95% CI of the original version’s correlation (corresponding to a 100% hit rate). Hewitt et al.’s short form also performed well showing only one miss: The significant positive correlation the short form showed with dominance goals in Sample 3 was outside the 95% CI. All other correlations were within the 95% CI (corresponding to a 98% hit rate).²

As regards other-oriented perfectionism, the picture was different. Particularly, Cox et al.’s short form showed a high number of misses, that is, 24 misses (corresponding to a 51% hit rate). What is more, Cox et al.’s short form missed all the significant positive correlations that other-oriented perfectionism measured with the original version showed with the obsessive-compulsive traits in Sample 1, the significant negative correlation with five-factor model agreeableness in Sample 1 and HEXACO honesty-humility in Sample 2, the significant positive correlations with the dark triad personality traits and leadership goals and the significant negative correlations with prosocial goals (nurturance, intimacy) in Sample 3, and the significant positive correlation with

¹Average correlations were computed using Fisher’s z-transformations.

²Note that with 5% misses to be expected by chance, only hit rates below 95% are significantly different from a 100% hit rate.

aggressive humor and callous traits in Sample 4. For all these variables, Cox et al.'s short form showed nonsignificant correlations. In comparison, Hewitt et al.'s short form showed only 11 misses (corresponding to a 78% hit rate). What is more, Hewitt et al.'s short form showed significant correlations with all those variables that Cox et al.'s short form did not show significant correlations with: significant positive correlations with all obsessive-compulsive traits that the original version showed significant positive correlations with; significant positive correlations with the dark triad personality traits, leadership goals, aggressive humor, and callous traits; and significant negative correlation with five-factor model agreeableness, HEXACO honesty-humility, and prosocial goals (nurturance, intimacy).

As regards socially prescribed perfectionism, both short forms performed well. In particular, Cox et al.'s short form again did not show any misses (corresponding to a 100% hit rate). Hewitt et al.'s short form performed not quite as well showing 8 misses (corresponding to an 84% hit rate). Note, however, that none of the misses affected any significant correlations that the original version showed, with one exception: The significant negative correlation that the original version showed with affiliative humor in Sample 4 was not significant when socially prescribed perfectionism was measured with Hewitt et al.'s short form.

Discussion

The aim of the present research was to compare Cox et al.'s (2002) and Hewitt et al.'s (2008) short forms of the Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991, 2004) by examining to what degree their scores replicated the correlations of the original version (the full-length MPS) with various personality characteristics (e.g., personality traits, social goals, personal and interpersonal orientations) across four samples. Results showed that Cox et al.'s short form performed well compared to the original version as regards self-oriented and socially prescribed perfectionism: No correlation of the short form scores was outside the 95% confidence interval of the original version's correlations. Hewitt et al.'s short form also performed well as regards self-oriented perfectionism. Only one correlation (corresponding to 2% of all correlations) was outside the 95% confidence interval of the original version's correlation. As regards socially prescribed perfectionism, Hewitt et al.'s short form again performed well. Even though 16% of the correlations were outside the respective confidence interval, only one of these correlations was not significant ($p < .05$) when the correlation of the original version was significant.

As regards other-oriented perfectionism, however, Hewitt et al.'s short form clearly outperformed Cox et al.'s which had problems replicating the pattern of correlations that the

original version showed. First, 49% of all correlations that Cox et al.'s other-oriented perfectionism short form showed were outside the 95% confidence interval of the original version's correlation. Second, Cox et al.'s short form missed many significant correlations that are theoretically important for the understanding of other-oriented perfectionism and how it differs from self-oriented and socially prescribed perfectionism (Hewitt & Flett, 1991; Stoeber, 2014a, 2015). In particular, using Cox et al.'s short form to measure other-oriented perfectionism in the present samples would have missed the positive correlations with obsessive-compulsive traits, the dark triad personality traits (narcissism, Machiavellianism, psychopathy), leadership goals, aggressive humor, and callous traits as well as the negative correlation with agreeableness, honesty-humility, and prosocial goals (nurturance, intimacy) that were all significant when the original version was used to measure other-oriented perfectionism. In contrast, Hewitt et al.'s short form found all these correlations to be significant, just like the original version. Moreover, with Hewitt et al.'s short form, only 22% of all correlations were outside the 95% confidence interval of the original version's correlation.

The present research has important implications for researchers who find themselves in situations where they want to, or have to, use a short form of the MPS because the 45-item original version would be too long, demanding, or time-consuming. In these situations, researchers need an MPS short form at their disposition that they can expect to produce the same (or very similar) findings as the original scale with respect to all three dimensions of perfectionism, including other-oriented perfectionism. Unfortunately, the present findings indicate that Cox et al.'s (2002) 15-item MPS short form can be expected to produce very similar findings only with respect to self-oriented and socially prescribed perfectionism, but not other-oriented perfectionism. In contrast, Hewitt et al.'s (2008) 15-item short form can be expected to produce very similar findings for all three dimensions, including other-oriented perfectionism.

The present findings are in line with previous findings indicating that it is problematic when scales try to capture constructs exclusively with negatively worded items as does the other-oriented perfectionism scale of Cox et al.'s short form, whereas Hewitt et al.'s short form consists of positively worded items only. It makes a difference whether items capture the extent to which people have perfectionistic expectations of others (e.g., "If I ask someone to do something, I expect it to be done flawlessly") or the extent to which they do not have such expectations (e.g., "I do not have very high standards for those around me"). Comparing the two other-oriented perfectionism short forms, the key finding of the present research is that other-oriented

perfectionism—as conceptualized by Hewitt and Flett (1991, 2004)—is better captured by the extent to which people agree that they have extremely high expectations of others (as does Hewitt et al.’s short form) than the extent to which they disagree that they have low expectations of others (as does Cox et al.’s). Consequently, Hewitt et al.’s short form is the better choice for researchers seeking an MPS short form that can be expected to provide a reliable and valid assessment of all three forms of perfectionism of Hewitt and Flett’s (1991) multidimensional model of perfectionism.

Another noteworthy finding—going beyond the main aim of the present study—is that all three forms of perfectionism showed significant positive correlations with obsessive-compulsive personality traits (Samuel et al., 2007). The finding is noteworthy for two reasons. First, it confirms Ayearst et al.’s (2012) position that all three forms of perfectionism are related to pathological personality traits defining the DSM-5 personality disorders, so the DSM-5 is mistaken in neglecting interpersonal aspects of perfectionism (e.g., other-oriented and socially prescribed perfectionism) when regarding the role that perfectionism plays in personality disorders (see also Stoeber, 2014b). Second, the finding challenges conceptions of self-oriented perfectionism as an adaptive form of perfectionism (e.g., Stoeber & Corr, 2015), particularly as self-oriented perfectionism showed larger correlations with obsessive-compulsive personality traits than the other forms of perfectionism. This finding is in line with research showing that self-oriented perfectionism is linked with workaholism which is defined as working excessively and compulsively (Stoeber, Davis, & Townley, 2013). Note, however, that in the present study, self-oriented perfectionism also showed significant positive correlations with desirable characteristics (conscientiousness, nurturance, intimacy, and social development goals) and significant negative correlations with undesirable characteristics (callous and uncaring traits, aggressive humor). Consequently, self-oriented perfectionism is perhaps best regarded a mixed adaptive–maladaptive form of perfectionism.

Limitations and Future Studies

The present findings have a number of limitations. First, all measures were presented online. Whereas the majority of studies comparing online and paper-and-pencil presentation of personality questionnaires did not find meaningful differences (Pettit, 2002; Riva, Teruzzi, & Anolli, 2003), there are questionnaires where the two presentation modes show differences (e.g., Buchanan et al., 2005). Consequently, future studies may want to replicate the present findings with paper-and-pencil measures. Second, the short form scores were computed from the original

version and all comparisons were made within the same samples. Future studies should compare original version and short forms in independent samples (G. Smith, McCarthy, & Anderson, 2000). Finally, the samples that were examined in the present research were predominantly female. Whereas this is representative of British university students in psychology (Universities and Colleges Admissions Service, 2015), future studies should reinvestigate the present findings examining student samples with a greater proportion of men to corroborate that the findings generalize to male students. Moreover, future studies should investigate to what degree the present findings replicate in non-student samples such as community and clinical samples.

Conclusion

The 45-item Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991) is a widely used self-report measure to assess individual differences in self-oriented, other-oriented, and socially prescribed perfectionism and has shown reliability and validity in numerous studies (e.g., Hewitt & Flett, 2004). There are, however, situations where researchers want or need a MPS short form. There are two 15-item short forms available: Cox et al.'s (2002) and Hewitt et al.'s (2008). But which short form should researchers use? The present research found that both short forms performed well when assessing self-oriented and socially prescribed perfectionism. However, only Hewitt et al.'s short form performed well when assessing other-oriented perfectionism. Cox et al.'s did not. Consequently, it is recommended to use Hewitt et al.'s short form when researchers want a reliable and valid MPS short form capturing all three dimensions of perfectionism, including other-oriented perfectionism.

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Table 1

Original Version (OV), Cox et al. 's Short Form (SF-C), and Hewitt et al. 's Short Form (SF-H) of the Hewitt–Flett Multidimensional Perfectionism Scale: Intercorrelations and Cronbach 's Alphas

Variable	Correlation									α
	1	2	3	4	5	6	7	8	9	
Sample 1 \ Sample 2 ^a										
Self-oriented perfectionism										
1. OV		.95***	.93***	.38***	.18**	.43***	.46***	.42***	.48***	.92
2. SF-C	.95***		.92***	.38***	.15**	.45***	.44***	.42***	.49***	.86
3. SF-H	.93***	.91***		.35***	.09	.46***	.47***	.45***	.49***	.86
Other-oriented perfectionism										
4. OV	.33***	.31***	.32***		.72***	.83***	.53***	.51***	.55***	.77
5. SF-C	.10	.06	.06	.75***		.33***	.24***	.17**	.23***	.63
6. SF-H	.41**	.44***	.45***	.73***	.23**		.59***	.59***	.61***	.75
Socially prescribed perfectionism										
7. OV	.46***	.45***	.53***	.33***	.10	.42***		.92***	.89***	.86
8. SF-C	.45***	.45***	.53***	.29***	.01	.45***	.93***		.86***	.82
9. SF-H	.50***	.51***	.56***	.20**	-.02	.33***	.88***	.88***		.75
α	.92	.85	.85	.76	.65	.69	.84	.80	.76	

[Table 1, continued]

Sample 3 \ Sample 4^b

Self-oriented perfectionism

1. OV		.94***	.91***	.23***	.11	.27***	.40***	.37***	.44***	.90
2. SF-C	.95***		.90***	.22**	.04	.31***	.39***	.38***	.45***	.80
3. SF-H	.91***	.92***		.24***	.05	.35***	.46***	.46***	.49***	.83

Other-oriented perfectionism

4. OV	.37***	.35***	.37***		.73***	.79***	.34***	.31***	.20**	.72
5. SF-C	.23***	.16**	.14*	.70***		.32***	.16*	.13*	.06	.53
6. SF-H	.34***	.39***	.44***	.80***	.24***		.41***	.43***	.35***	.70

Socially prescribed perfectionism

7. OV	.50***	.52***	.55***	.42***	.18***	.46***		.93***	.89***	.86
8. SF-C	.46***	.49***	.53***	.42***	.15**	.49***	.93***		.88***	.83
9. SF-H	.52***	.55***	.55***	.39***	.15**	.44***	.90***	.87***		.75

α .91 .83 .85 .75 .60 .74 .86 .82 .77

Note. N = 223 (Sample 1), N = 321 (Sample 2), N = 330 (Sample 3), N = 227 (Sample 4). Intercorrelations of scores measuring the same perfectionism dimension are boldfaced. .

^aStatistics for Sample 1 are below the diagonal, for Sample 2 above.

^bStatistics for Sample 3 are below the diagonal, for Sample 4 above.

*p < .05. **p < .01. ***p < .001.

Table 2

Comparing Cox et al. 's Short Form (SF-C) and Hewitt et al. 's Short Form (SF-H) with the Original Version (OV) of the Hewitt–Flett Multidimensional Perfectionism Scale: Are the SFs ' Correlations Within the 95% Confidence Interval (CI) of the OV's Correlation?

Sample and variable	Self-oriented perfectionism				Other-oriented perfectionism				Socially prescribed perfectionism			
	OV	SF-C	SF-H	CI	OV	SF-C	SF-H	CI	OV	SF-C	SF-H	CI
Sample 1												
Five-factor model traits												
Neuroticism	.10	.09	.09	●/●	-.04	-.08	-.03	●/●	.35***	.26***	.30***	●/●
Extraversion	-.13*	-.12	-.14*	●/●	-.05	.11	-.14*	○/●	-.33***	-.27***	-.24***	●/●
Openness to experience	.09	.07	.05	●/●	.00	.11	-.09	●/●	.09	.07	.04	●/●
Agreeableness	-.05	-.05	-.09	●/●	-.40***	-.11	-.40***	○/●	-.33***	-.29***	-.19**	●/○
Conscientiousness	.54***	.49***	.46***	●/●	.08	.07	.12	●/●	.01	.03	.14*	●/●
Obsessive-compulsive traits												
Perfectionism	.79***	.75***	.73***	●/●	.27***	.09	.36***	○/●	.32***	.33***	.35***	●/●
Fastidiousness	.63***	.58***	.60***	●/●	.21**	.01	.34***	○/○	.26***	.28***	.30***	●/●
Punctiliousness	.54***	.52***	.53***	●/●	.13	.01	.29**	●/○	.26***	.30***	.33***	●/●
Workaholism	.59***	.58***	.54***	●/●	.23***	.05	.36***	○/○	.28***	.28***	.30***	●/●
Doggedness	.48***	.43***	.45***	●/●	.18**	.06	.29***	●/●	.14*	.16*	.16*	●/●
Ruminative deliberation	.56***	.53***	.53***	●/●	.24***	.00	.29***	○/●	.34***	.34***	.33***	●/●
Detached coldness	.19**	.17**	.24***	●/●	.27***	-.04	.41***	○/○	.44***	.41***	.28***	●/●
Risk aversion	.34***	.34***	.31***	●/●	.01	-.06	.15*	●/○	.17*	.20**	.19**	●/●
Excessive worry	.38***	.35***	.31***	●/●	.01	.02	.01	●/●	.28***	.22***	.30***	●/●
Constrictedness	-.02	.00	.06	●/●	.27***	-.01	.36***	○/●	.19**	.21**	.07	●/●
Inflexibility	.34***	.33***	.36***	●/●	.19**	-.05	.33***	○/○	.32***	.34***	.27***	●/●
Dogmatism	.13*	.14*	.19**	●/●	.18**	.04	.27***	○/●	.15*	.16*	.11	●/●

[Table 2, continued]

Sample 2

HEXACO personality traits

Honesty-humility	-.11	-.13*	-.14*	●/●	-.34***	-.06	-.39***	○/●	-.31***	-.30***	-.30***	●/●
Emotionality	.18**	.14*	.11	●/●	.15**	.22***	.04	●/○	.11	.08	.16**	●/●
Extraversion	.11	.11*	.08	●/●	.13*	.11	.03	●/●	-.16**	-.11	-.08	●/●
Agreeableness	-.08	-.06	-.02	●/●	-.30***	-.18**	-.24***	○/●	-.17**	-.16**	-.20***	●/●
Conscientiousness	.64***	.60***	.54***	●/●	.12*	.13*	.10	●/●	.05	.02	.11*	●/●
Openness to experience	-.04	-.01	-.07	●/●	-.10	-.03	-.12*	●/●	-.13*	-.12*	-.11	●/●
Altruism	.15**	.16**	.10	●/●	-.05	.09	-.13*	○/●	-.13*	-.10	-.06	●/●

Sample 3

Dark triad

Narcissism	.08	.08	.14*	●/●	.20***	-.01	.29***	○/●	.17**	.19***	.19***	●/●
Machiavellianism	.00	.02	.05	●/●	.21***	.00	.29***	○/●	.12*	.15**	.11*	●/●
Psychopathy	-.09	-.06	.01	●/●	.12*	-.08	.25***	○/○	.08	.11*	.06	●/●

Social content goals

Nurturance	.21***	.18**	.10	●/●	-.19***	-.09	-.17**	●/●	-.04	-.03	.09	●/○
Intimacy	.15**	.13*	.05	●/●	-.13*	-.02	-.16**	●/●	-.06	-.06	.05	●/○
Status	.13*	.10	.12*	●/●	.01	-.11*	.08	○/●	.16**	.17**	.21***	●/●
Leadership	.20***	.20***	.26***	●/●	.29***	.02	.36***	○/●	.28***	.28***	.29***	●/●
Dominance	.04	.08	.16**	●/○	.29***	-.02	.41***	○/○	.25***	.28***	.20***	●/●

Social achievement goals

Development	.37***	.33***	.29***	●/●	-.03	-.08	.04	●/●	.10	.12*	.24***	●/○
Demonstration–approach	.07	.10	.15**	●/●	.19***	-.06	.30***	○/○	.28***	.29***	.27***	●/●
Demonstration–avoidance	.19***	.17**	.20***	●/●	.07	-.03	.15**	●/●	.20***	.18**	.22***	●/●

Sample 4

Humor styles

Affiliative	.11	.11	-.02	●/●	-.11	.04	-.20**	○/●	-.22***	-.23***	-.09	●/○
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[Table 2, continued]

Self-enhancing	-.04	-.01	-.03	●/●	.01	.05	.04	●/●	-.19**	-.13	-.09	●/●
Aggressive	-.23***	-.17*	-.17*	●/●	.16*	.02	.14*	○/●	.01	.00	-.04	●/●
Self-defeating	.04	.06	.08	●/●	-.11	-.23***	.05	●/○	.25***	.21**	.29***	●/●
Callous-unemotional-uncaring traits												
Callous	-.25***	-.19**	-.16*	●/●	.27***	.03	.31***	○/●	.10	.13*	-.05	●/○
Unemotional	.11	.09	.11	●/●	.11	.07	.08	●/●	.26***	.24***	.21**	●/●
Uncaring	-.39***	-.39***	-.33***	●/●	.12	.06	.08	●/●	-.10	-.06	-.23***	●/○
Social value orientations												
Prosocial	.06	.05	.07	●/●	-.23***	-.15*	-.20**	●/●	-.03	-.06	.01	●/●
Individualistic	-.01	-.01	-.04	●/●	.21**	.13*	.18**	●/●	.00	-.01	-.02	●/●
Competitive	-.12	-.10	-.07	●/●	.12	.07	.13	●/●	.12	.19**	.04	●/●
Self- and other-interest												
Self-interest	.45***	.47***	.43***	●/●	.20**	.12	.18**	●/●	.18**	.21**	.29***	●/●
Other-interest	.27***	.27***	.25***	●/●	-.10	-.02	-.05	●/●	.11	.13*	.25***	●/○
Positive self-evaluations												
Intrapersonal	-.22***	-.22***	-.22***	●/●	.03	.02	.02	●/●	-.32***	-.24***	-.31***	●/●
Interpersonal	.11	.11	.10	●/●	.32***	.18**	.28***	○/●	-.08	-.02	-.09	●/●

Note. Ns = see Table 1. CI: Is the SF's correlation within the 95% CI of the OV's correlation? ● = yes ("hit"), ○ = no ("miss"). The symbol before the slash refers to OV/SF-C, the one behind the slash to OV/SF-H.

*p < .05. **p < .01. ***p < .001.

Table S1

Means and standard deviations for Table 1

	Sample 1		Sample 2		Sample 3		Sample 4	
	M	SD	M	SD	M	SD	M	SD
Average scores								
Self-oriented perfectionism								
OV	4.35	1.07	4.42	1.08	4.55	1.03	4.65	0.96
SF-C	4.37	1.27	4.42	1.29	4.55	1.24	4.70	1.12
SF-H	4.13	1.27	4.14	1.29	4.27	1.23	4.42	1.17
Other-oriented perfectionism								
OV	3.70	0.70	3.67	0.72	3.71	0.69	3.77	0.65
SF-C	3.97	0.92	3.95	0.93	4.04	0.91	4.03	0.81
SF-H	3.38	0.95	3.35	1.04	3.38	1.03	3.59	0.98
Socially prescribed perfectionism								
OV	3.75	0.86	3.61	0.85	3.70	1.03	3.85	0.85
SF-C	3.64	1.19	3.41	1.18	3.57	1.23	3.80	1.21
SF-H	3.96	1.13	3.93	1.07	4.04	1.13	4.26	1.09
Sum scores								
Self-oriented perfectionism								
OV	65.32	16.11	66.31	16.16	68.29	15.49	69.74	14.34
SF-C	21.87	6.36	22.08	6.46	22.75	6.18	23.49	5.59
SF-H	20.66	6.35	20.70	6.46	21.37	6.17	22.09	5.87

[Table S1, continued]

Other-oriented perfectionism								
OV	55.44	10.55	55.01	10.79	55.71	10.42	56.55	9.75
SF-C	19.85	4.62	19.77	4.63	20.21	4.53	20.13	4.06
SF-H	16.92	4.76	16.78	5.21	16.92	5.20	17.97	4.90
Socially prescribed perfectionism								
OV	56.23	12.84	54.12	12.82	55.47	13.30	57.79	12.79
SF-C	18.22	5.96	17.05	5.92	17.86	6.16	19.01	6.03
SF-H	19.82	5.64	19.62	5.34	20.22	5.66	21.32	5.46

Note. N = 223 (Sample 1), N = 321 (Sample 2), N = 330 (Sample 3), N = 227 (Sample 4). Average scores = scale scores computed by averaging responses across items; sum scores = scale scores computed by summing responses across items. OVF = original version, SF-C = Cox et al.'s short form, and SF-H = Hewitt et al.'s short form of the Hewitt–Flett Multidimensional Perfectionism Scale (HF–MPS). The HF–MPS uses a response scale from 1 (strongly disagree) to 7 (strongly agree) with 4 being the midpoint.