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# Perfectionism and the Big Five:

# Conscientiousness Predicts Longitudinal Increases in Self-Oriented Perfectionism

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Abstract

Findings from cross-sectional studies on the relationship between perfectionism and the Big Five personality traits demonstrate that conscientiousness shows significant positive correlations with self-oriented perfectionism, and neuroticism with socially prescribed perfectionism. The question is whether conscientiousness and neuroticism also predict longitudinal changes in self-oriented and socially prescribed perfectionism. A sample of 214 adolescents aged 14-19 years completed measures of the Big Five and perfectionism twice over a period of 5 to 8 months. As was expected, conscientiousness predicted longitudinal increases in self-oriented perfectionism. Neuroticism, however, did not predict any longitudinal increases in perfectionism—neither in self-oriented nor in socially prescribed perfectionism. Providing support for McCrae and Costa's dynamic personality theory (McCrae, R. R., & Costa, P. T., Jr. [1999]. A five-factor theory of personality. In L. A. Pervin & O. P. John [Eds.], *Handbook of personality* [2nd ed., pp. 139-153]. New York: Guilford) which holds that broad personality traits play a part in the development of lower-level personality characteristics, the findings suggest that conscientiousness is a trait that plays a role in the development of self-oriented perfectionism.

*Keywords:* Perfectionism; Big Five; Personality Development; Adolescence

## Introduction

Over the past 15 years, perfectionism research has made great progress in understanding the nature, correlates, and consequences of perfectionism (see Enns & Cox, 2002). Moreover, research has gained comprehensive knowledge on the role that family factors play in the development of perfectionism (see Flett, Hewitt, Oliver, & Macdonald, 2002). In contrast, no study so far has investigated the role that personality traits play in this development. The present study aims to remedy this situation by providing the first investigation examining whether the Big Five personality traits predict longitudinal changes in perfectionism.

### *Perfectionism*

According to dictionary definitions, perfectionism is the "disposition to regard anything short of perfection as unacceptable," with perfection defined as flawlessness or an "unsurpassable degree of accuracy or excellence" (Merriam-Webster OnLine dictionary, details from the author). Scientific theory and research, however, have progressed to a more differentiated view that conceptualizes perfectionism as a multidimensional personality characteristic (e.g., Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991; Slaney, Rice, Mobley, Trippi, & Ashby, 2001).

Regarding multidimensional models of perfectionism, the most prevalent and most widely researched model is Hewitt and Flett's (1991) model of perfectionism. This model differentiates between two main forms of perfectionism: self-oriented perfectionism and socially prescribed perfectionism.[1] Self-oriented perfectionism comprises beliefs that striving for perfection and being perfect are important and is characterized by setting excessively high standards for oneself. In contrast, socially prescribed perfectionism comprises beliefs that others have high standards for oneself and that acceptance by others is conditional on fulfilling these standards (Campbell & Di Paula, 2002; Enns & Cox, 2002; Hewitt & Flett, 1991, 2004).

When reviewing the literature on self-oriented perfectionism and socially prescribed perfectionism, the findings are in agreement that socially prescribed perfectionism is a negative form of perfectionism showing strong and consistent positive correlations with negative affect and various other indicators of psychological maladjustment such as anxiety, depression, and suicidal ideation (Enns & Cox, 2002; Hewitt & Flett, 2004). Self-oriented perfectionism, in comparison, is a more ambivalent form of perfectionism (Enns & Cox, 2002). While self-oriented perfectionism too has shown positive correlations with indicators of psychological maladjustment (Hewitt & Flett, 2004), it also has shown significant positive correlations with indicators of good psychological adjustment such as positive affect, goal progress, and academic achievement (e.g., Molnar, Reker, Culp, Sadava, & DeCourville, 2006; Powers, Koestner, & Topciu, 2005; Witcher, Alexander, Onwuegbuzie, Collins, & Witcher, 2007).

### *Perfectionism and the Big Five*

Differences between self-oriented perfectionism and socially prescribed perfectionism also show when correlations with personality traits are regarded. Personality traits are broad descriptions of individual differences between people referring to consistent patterns in the way people behave, feel, and think. Traits not only represent relatively general and enduring dispositions that unite different responses to diverse stimuli producing broad consistencies in behavior, but also predict changes in personality growth and development (Allport, 1961; McCrae & Costa, 1999).

Today's most prevalent system to describe personality traits is the "Big Five" personality system according to which personality can be described by five broad trait dimensions: neuroticism, extraversion, openness, agreeableness, and conscientiousness (Costa & McCrae, 1992; see John & Srivastava, 1999, for a review).

Consequently, a considerable number of studies have investigated how self-oriented perfectionism and socially prescribed perfectionism are related to the Big Five personality traits (Dunkley & Kyparissis, 2008; Enns, Cox, & Clara, 2005; Fee & Tangney, 2000; Hewitt & Flett,

2004; Hill, McIntire, & Bacharach, 1997; Langendörfer, Hodapp, Kreutz, & Bongard, 2006; Miquelon, Vallerand, Grouzet, & Cardinal, 2005; Nathanson, Paulhus, & Williams, 2006; Rice, Ashby, & Slaney, 2007; Sherry, Hewitt, Flett, Lee-Baggley, & Hall, 2007). Only two of the Big Five traits showed correlations with perfectionism that replicated across studies: conscientiousness and neuroticism. While extraversion, openness, and agreeableness showed an inconsistent pattern of correlations with self-oriented and socially prescribed perfectionism, a consistent pattern emerged for conscientiousness and neuroticism: All studies found conscientiousness to show significant positive correlations with self-oriented perfectionism (but not with socially prescribed perfectionism), and neuroticism to show significant positive correlations with socially prescribed perfectionism (but not with self-oriented perfectionism).

Conscientiousness is the Big Five personality trait capturing individual differences in the degree of organization, persistence, and motivation in goal-directed behavior: people high in conscientiousness are described as organized, reliable, and ambitious (Costa & McCrae, 1992; John & Srivastava, 1999). In contrast, neuroticism is the Big Five personality trait capturing individual differences in maladjustment indicated by a proneness to psychological distress and unrealistic ideas: people high in neuroticism are described as tense, emotionally unstable, and insecure (ibid.). Consequently, it is not surprising that self-oriented perfectionism (forming part of the strivings dimension of perfectionism; Stoeber & Otto, 2006) is correlated with conscientiousness whereas socially prescribed perfectionism (forming part of the concerns dimension of perfectionism; Stoeber & Otto, 2006) is correlated with neuroticism. The important question, however, is whether conscientiousness and neuroticism are merely correlates of self-oriented and socially prescribed perfectionism—or whether they predict longitudinal increases in self-oriented and socially prescribed perfectionism.

### *The Present Research*

According to McCrae and Costa's (1999) five-factor theory of personality, the Big Five personality traits form part of a dynamic personality system. In this system, the Big Five

represent endogenous basic tendencies that, together with external influences (e.g., cultural norms and expectations), lead to the formation of characteristic adaptations and the development of culturally-conditioned personal characteristics. Consequently, the cross-sectional correlations of conscientiousness/self-oriented perfectionism and neuroticism/socially prescribed perfectionism may reflect "snapshots" of dynamic processes suggesting that conscientiousness and neuroticism may be more than mere correlates of self-oriented and socially prescribed perfectionism: they may be factors that play a role in the development of the two forms of perfectionism.

Regarding the development of perfectionism in children and adolescents, Flett et al. (2002) suggest that—besides parent factors (e.g., parenting style) and environmental pressures (e.g., teachers)—the child's personality (e.g., temperament) plays an important role for the development of perfectionism. However, which personality dimensions play an important role is unclear. Whereas McCrae and Costa (1999) regard neuroticism as the Big Five personality trait that plays a role in the development of perfectionism, perfectionism researchers regard conscientiousness (rather than neuroticism) as the Big Five trait that plays a role in the development of perfectionism (e.g., Hewitt & Flett, 2007; Parker, 1997). Moreover, both views may be correct. Regarding the evidence from the previous studies on perfectionism and the Big Five, it may be that neuroticism plays a role in the development of socially prescribed perfectionism whereas conscientiousness plays a role in the development of self-oriented perfectionism.

Evidence to support this expectation is missing, however, because all previous studies on the Big Five and perfectionism are cross-sectional only. Thus they convey only information about the co-occurrence of conscientiousness/self-oriented perfectionism and neuroticism/socially prescribed perfectionism, but they do not convey information about whether conscientiousness and neuroticism have an influence on the development of self-oriented and socially prescribed perfectionism. To investigate such an influence, longitudinal

studies are needed (Taris, 2000). Consequently, the present study used a longitudinal design to investigate whether the Big Five personality traits have an influence on the development of individual differences in self-oriented and socially prescribed perfectionism.

To address this question, we investigated a sample of adolescent school students aged 14-19 years. Adolescents were chosen because adolescence is the period of life in which personality and identity are formed making adolescence a most suitable period of life to study changes in personality characteristics (Steinberg, 2008). Moreover, there are so far no published studies on how self-oriented and socially prescribed perfectionism are related to the Big Five in adolescents of this age range. Based on the empirical findings from the cross-sectional studies, we expected that conscientiousness would predict increases in self-oriented perfectionism, and neuroticism would predict increases in socially prescribed perfectionism.

## Method

### *Participants*

A sample of 350 adolescents (171 male, 179 female) was recruited at three high schools in Eastern Germany in connection with a longitudinal study on personal goals in high school students (Stoeber, 2002). Mean age of adolescents was 16.0 years (*SD* = 1.2 years; range: 14-19 years). Previous to conducting the study, it was approved by the school administration office. Informed consent was obtained from adolescents (all adolescents) and from one of their parents (only adolescents under 18 years).

### *Measures*

*Big Five.* To measure the Big Five personality traits, we used the NEO Five Factor Inventory (NEO-FFI; Costa & McCrae, 1992; German version: Borkenau & Ostendorf, 1993). The NEO-FFI is a widely-used reliable and valid measure of the Big Five (Borkenau & Ostendorf, 1993; Costa & McCrae, 1992; John & Srivastava, 1999). It comprises five scales of 12 items each that capture individual differences in neuroticism (e.g., "I often feel tense and jittery"), extraversion (e.g., "I am a cheerful, high-spirited person"), openness (e.g., "I have a

lot of intellectual curiosity"), agreeableness (e.g., "I generally try to be thoughtful and considerate"), and conscientiousness (e.g., "I try to perform all the tasks assigned to me conscientiously"). Adolescents responded to all items on a 6-point scale from "completely disagree" (1) to "completely agree" (6). Scores were formed by averaging across items. With Cronbach's alphas ≥ .70, all scores displayed satisfactory reliability (internal consistency) (see Table 1).

*Perfectionism.* To measure self-oriented perfectionism and socially prescribed perfectionism, we used the respective scales from the Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991, 2004; German translation: Stoeber, 2000). The MPS is a widely-used reliable and valid instrument to measure self-oriented and socially prescribed perfectionism (Enns & Cox, 2002; Hewitt & Flett, 1991, 2004). The original scales comprise 15 items to capture self-oriented perfectionism (e.g., "I strive to be as perfect as I can be") and 15 items to capture socially prescribed perfectionism (e.g., "People expect nothing less than perfection from me"). Because the perfectionism measures were part of a larger questionnaire study (Dalbert & Stoeber, 2006; Stoeber, 2002), abbreviated versions were used: Based on data from university students (Stoeber, 2000), only those items with the highest factorial validity (i.e., high factor loadings on the target factor and low loadings on the non-target factor) were included. For self-oriented perfectionism 8 items were selected (MPS Items 6, 8, 12, 14, 15, 20, 28, and 40), and for socially prescribed perfectionism 10 items (MPS Items 13, 18, 21, 25, 30, 33, 35, 39, 41, and 44) (Hewitt & Flett, 2004; see Stoeber, 2002; Langendörfer et al., 2006, provide further validity information). Adolescents responded to all items on the same 6-point scale used with the NEO-FFI. Scores were formed by averaging across items. With Cronbach's alphas ≥ .70, all scores displayed satisfactory reliability (see Table 1).

### *Procedure*

The adolescents completed the first questionnaire in the middle of the school year (December-January) during school hours (Time 1 [T1]). After five months, at the end of the

school year (June-August), adolescents were mailed the follow-up questionnaire (Time 2 [T2]) together with a self-addressed free-post envelope to return within four weeks. As an incentive, adolescents who returned the questionnaire entered a lottery for two cash prizes of 25 Euro (approx. US $31). Adolescents who did not return the questionnaire within four weeks were sent a reminder letter. After waiting another four weeks for late returns, the data collection was closed. As a consequence of this procedure, the time that adolescents returned the T2 questionnaires varied from five to eight months.

Of the 350 adolescents who were mailed the T2 questionnaire, 217 (62%) returned the questionnaire. One adolescent did not complete the perfectionism measures at T2 and two adolescents were identified as multivariate outliers (see *Preliminary Analyses* below), resulting in a longitudinal sample of 214 adolescents (87 males, 127 females) with a mean age of 15.9 years (*SD* = 1.1; range: 14-19 years).

### *Preliminary Analyses*

*Multivariate outliers.* Because multivariate outliers can significantly distort results of multivariate analyses, we first inspected the longitudinal sample for multivariate outliers. Two adolescents showed a Mahalanobis distance greater than the critical value of $\chi^2(14) = 36.12$, $p < .001$ (see Tabachnick & Fidell, 2007) and were excluded from the analyses.

*Gender.* Next, we inspected whether the variance–covariance matrices of male and female adolescents were different. This was not the case, Box's $M = 128.74$, $F(105, 104622) = 1.14$, $p = .16$ (see again Tabachnick & Fidell, 2007). Consequently, the data were collapsed across gender.

*Stability.* Finally, we examined whether mean scores changed from T1 to T2 (see Table 1, Means). Results showed that the means of socially prescribed perfectionism and neuroticism decreased slightly, $t$s(213) > 3.32, $p$s < .01, whereas those of conscientiousness and agreeableness increased slightly, $t$s(213) > 2.46, $p$s < .05. Self-oriented perfectionism, extraversion, and openness showed no significant mean changes, $t$s(213) < 1.52, $p$s > .13.

# Results

## *Correlations*

First, we computed bivariate correlations between all variables at Time 1 (T1) and Time 2 (T2) to investigate how perfectionism and the Big Five were correlated cross-sectionally within T1 and T2. Table 1 shows the results for both measurement points, T1 and T2. In line with the findings from previous cross-sectional studies, conscientiousness showed significant positive correlations with self-oriented perfectionism (but not with socially prescribed perfectionism) and neuroticism showed significant positive correlations with socially prescribed perfectionism (but not with self-oriented perfectionism). Further inspection of the correlations revealed that other Big Five dimensions too showed correlations with perfectionism. Reflecting the inconsistent findings from previous research, extraversion and agreeableness showed significant negative correlations with both dimensions of perfectionism whereas openness showed significant negative correlations only with socially prescribed perfectionism (see Table 1). Consequently, we controlled for the possible influence of the other Big Five personality dimensions in the next step.

## *Multiple Regressions*

Next, we computed two hierarchical regression analyses to investigate our hypotheses that (a) conscientiousness at T1 predicts increases in self-oriented perfectionism from T1 to T2 and (b) neuroticism at T1 predicts increases in socially prescribed perfectionism from T1 to T2. Both analyses followed the regressor variable approach investigating residual changes from T1 to T2 (Taris, 2000) and comprised three steps. In the first regression analysis, self-oriented perfectionism at T2 was the criterion. In Step 1, self-oriented perfectionism at T1 was entered to set the baseline against which residual changes were examined; in Step 2, conscientiousness at T1 was entered to test our hypothesis; and in Step 3, the remaining personality factors (neuroticism, extraversion, openness, and agreeableness) were entered to explore whether the other dimensions made any significant contributions. In the second regression analysis, socially

prescribed perfectionism at T2 was the criterion. In Step 1, socially prescribed perfectionism at T1 was entered to set the baseline against which residual changes were examined; in Step 2, neuroticism at T1 was entered to test our hypothesis; and in Step 3, the remaining personality factors (conscientiousness, extraversion, openness, and agreeableness) were entered to explore whether the other dimensions made any significant contributions.

The results confirmed our expectation that conscientiousness predicted increases in self-oriented perfectionism (see Table 2, upper part). In contrast, the expectation that neuroticism predicted changes in socially prescribed perfection found no support (see Table 2, lower part). Likewise, none of the other Big Five dimensions predicted longitudinal changes in self-oriented or socially prescribed perfectionism. Only conscientiousness predicted longitudinal changes in perfectionism, and only in self-oriented perfectionism.

### *Cross-Lagged Analysis*

To further examine the effect that conscientiousness predicted longitudinal increases in self-oriented perfectionism, a cross-lagged analysis was conducted. In research on personality changes across time, cross-lagged analyses are important because they give an indication of the specificity and direction of the effect. Moreover, they guard against alternative explanations that the longitudinal effect of conscientiousness on self-oriented perfectionism merely reflects the fact that conscientiousness at Time 1 predicts conscientiousness at Time 2 and that the high correlation between conscientiousness at Time 2 and self-oriented perfectionism at Time 2 (see Table 1) is responsible for the effect of conscientiousness at Time 1 on self-oriented perfectionism at Time 2 (cf. Taris, 2000). In addition, cross-lagged analyses allow for the exploration of both cross-lagged effects simultaneously: the expected effect that conscientiousness predicts increases in self-oriented perfectionism and the complementary effect that self-oriented perfectionism predicts increases in conscientiousness. The cross-lagged analysis was computed with Amos 16.0 (Arbuckle, 2007). Figure 1 displays the results. As expected, conscientiousness at Time 1 showed a cross-lagged effect on self-oriented

perfectionism at Time 2 when controlling for the longitudinal effect of conscientiousness on conscientiousness. In contrast, self-oriented perfectionism at Time 1 did not show a cross-lagged effect on conscientiousness at Time 2. Thus, the cross-lagged analysis further corroborated the results of the regression analysis: Conscientiousness predicted increases in self-oriented perfectionism, but not vice versa.

## Discussion

The aim of the present study was to investigate whether the Big Five personality traits have an influence on the development of perfectionism. To this aim a longitudinal study was conducted with a sample of adolescent school students tested twice over a period of five to eight months. Focusing on two central forms of perfectionism—self-oriented perfectionism and socially prescribed perfectionism—two hypotheses were investigated, namely that conscientiousness predicted increases in self-oriented perfectionism, and that neuroticism predicted increases in socially prescribed perfectionism. Only the first hypothesis was supported: Conscientiousness predicted increases in self-oriented perfectionism, indicating that individual differences in trait conscientiousness play a role in the development of self-oriented perfectionism.

The finding has important implications for multidimensional models of perfectionism. Conscientiousness has long been discussed as a factor that plays a role in the development of perfectionism (e.g., Hewitt & Flett, 2007; Parker, 1997), but the present longitudinal study is the first to demonstrate that conscientiousness predicts increases in perfectionism, however, in self-oriented perfectionism only. Thus people high in trait conscientiousness—being highly organized, reliable, and ambitious—are prone not only to be high in self-oriented perfectionism, but also to increase in self-oriented perfectionism over time.

But how about neuroticism and socially prescribed perfectionism? In the present study, neuroticism showed positive correlations with socially prescribed perfectionism in the cross-sectional analyses, confirming previous findings that socially prescribed perfectionism is a

"neurotic form" of perfectionism (Hamachek, 1978). However, no evidence was found to support the assertion that neuroticism plays a role in the development of socially prescribed perfectionism. Because null findings do not make for convincing arguments, further research is needed to investigate whether personality traits—be it neuroticism or other traits—play a role in the development of socially prescribed perfectionism.

The present findings have some limitations. First, the findings may be restricted to adolescence. Consequently, future studies need to examine whether trait conscientiousness continues to be a factor that influences the development of self-oriented perfectionism beyond adolescence. Moreover, the interval investigated (five to eight months) was relatively short and arbitrary (determined by the end of the school year) and included only two assessment points. Therefore, future studies may profit from investigating longer intervals, taking more meaningful developmental periods into account (e.g., investigating undergraduate students over the course of their first three years at university), and including more than two assessment points. Moreover, they may profit from including measures of academic achievement and measures of parent factors and environmental pressures (Flett et al., 2002). Second, the findings are limited to the two forms of perfectionism investigated. Although Hewitt and Flett's (1991) multidimensional model of perfectionism is the most prevalent in research on perfectionism, there are other widely-used multidimensional models of perfectionism that emphasize different aspects of evaluative concerns perfectionism, namely concern over mistakes and doubts about action (Frost et al., 1990) and feelings of discrepancy between expectations and results (Slaney et al., 2001). Because these aspects do not have such a strong social component as socially prescribed perfectionism, future studies may focus on these aspects when investigating longitudinal effects of neuroticism on perfectionism. Finally, cross-sectional studies on perfectionism employing a hierarchical assessment of the Big Five taking domains and facets into account (Costa & McCrae, 1995) have demonstrated that some facets of conscientiousness (e.g., achievement striving) show higher correlations with self-oriented

perfectionism than others (e.g., deliberation) (Dunkley & Kyparissis, 2008; Hill et al., 1997). Consequently, future studies may profit from using measures of the Big Five traits that allow for a hierarchical assessment of domains and facets to investigate which facets of conscientiousness are responsible for increases of self-oriented perfectionism.

Nonetheless, the present findings have important implications for the understanding of the development of perfectionism because they provide the first evidence that personality traits predict longitudinal changes in perfectionism. Thus they highlight the need to take personality traits into account when explaining why some people are happy with less-than-perfect results whereas others develop a disposition to strive for perfection regarding anything short of perfection as unacceptable. In explaining this development, high levels of conscientiousness may be a contributing factor.

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## Footnotes

[1]The model comprises a further dimension, other-oriented perfectionism, which captures individual differences in holding perfectionistic standards for others. Because other-oriented perfectionism is not regarded to be core dimension of multidimensional perfectionism (e.g., Enns & Cox, 2002; Stoeber & Otto, 2006), it was excluded from the present study.

Table 1

*Correlations and descriptive statistics*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T1 | | | | | | | | | | | | | | |
| 1. Self-oriented perfectionism | | | | | | | | | | | | | | |
| 2. Socially prescribed perfectionism | .28*** | | | | | | | | | | | | | |
| 3. Neuroticism | –.11 | .32*** | | | | | | | | | | | | |
| 4. Extraversion | –.16* | –.24*** | –.37*** | | | | | | | | | | | |
| 5. Openness | –.02 | –.17* | –.15* | .07 | | | | | | | | | | |
| 6. Agreeableness | –.23*** | –.41*** | –.28*** | .35*** | .18* | | | | | | | | | |
| 7. Conscientiousness | .61*** | .06 | –.38*** | .02 | .06 | .08 | | | | | | | | |
| T2 | | | | | | | | | | | | | | |
| 8. Self-oriented perfectionism | .73*** | .21** | –.14* | –.16* | –.03 | –.15* | .54*** | | | | | | | |
| 9. Socially prescribed perfectionism | .15* | .52*** | .20** | –.23*** | –.19** | –.24*** | –.03 | .28*** | | | | | | |
| 10. Neuroticism | –.13 | .24*** | .75*** | –.30*** | –.17* | –.28*** | –.28*** | –.08 | .32*** | | | | | |
| 11. Extraversion | –.11 | –.15* | –.31*** | .82*** | .04 | .32*** | –.03 | –.13 | –.25*** | –.36*** | | | | |
| 12. Openness | –.09 | –.20** | –.18** | .14* | .80*** | .17* | .00 | –.10 | –.24*** | –.15* | .14* | | | |
| 13. Agreeableness | –.18** | –.31*** | –.22*** | .26*** | .09 | .73*** | .07 | –.12 | –.31*** | –.31*** | .27*** | .13 | | |
| 14. Conscientiousness | .52*** | –.05 | –.31*** | –.02 | –.01 | .03 | .78*** | .59*** | –.09 | –.28*** | .02 | –.04 | .10 | |
| *M* | 3.90 | 2.63 | 3.17 | 4.20 | 4.06 | 4.12 | 4.14 | 3.81 | 2.49 | 2.98 | 4.21 | 4.10 | 4.20 | 4.26 |
| *SD* | 1.08 | 0.67 | 0.86 | 0.78 | 0.73 | 0.62 | 0.77 | 1.10 | 0.65 | 0.85 | 0.77 | 0.75 | 0.60 | 0.74 |
| Cronbach's alpha | .91 | .79 | .83 | .82 | .73 | .70 | .84 | .93 | .80 | .86 | .84 | .76 | .72 | .86 |

*Note.* $N = 214$. T1 = Time 1, T2 = Time 2 (5-8 months later). Scores are mean scores with a possible range of 1-6 ("strongly disagree"-"strongly agree").

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

Table 2

*Longitudinal Hierarchical Regression Analyses: Predicting Perfectionism at Time 2*

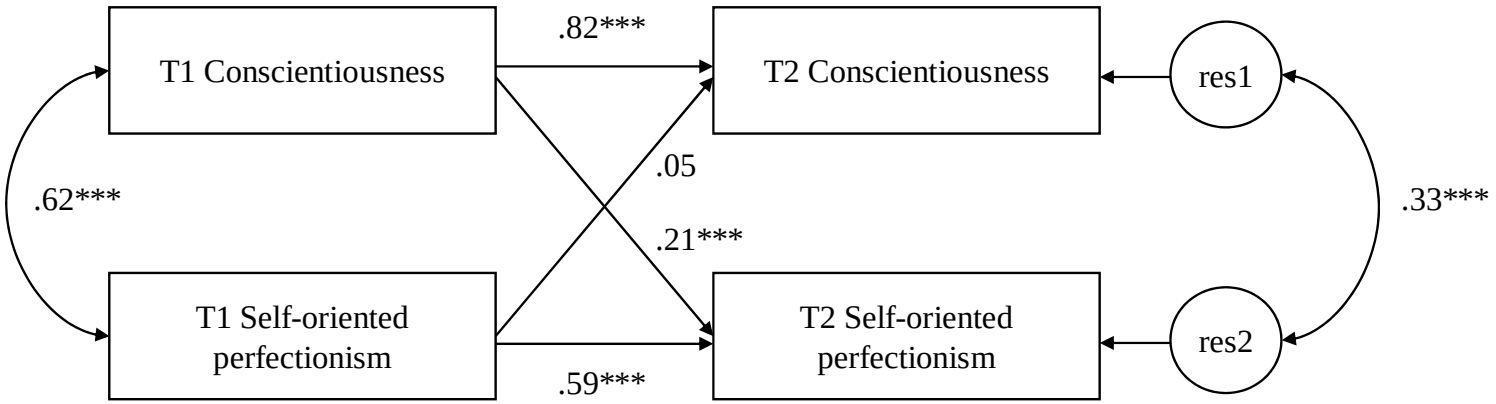
| DV = T2 Self-oriented perfectionism | *B* | *SE B* | β | $R^2$ | $R^2$change |
|---|---|---|---|---|---|
| Step 1 | | | | .529*** | .529*** |
| T1 Self-oriented perfectionism | 0.74 | 0.05 | .73*** | | |
| Step 2 | | | | .545*** | .016** |
| T1 Self-oriented perfectionism | 0.65 | 0.06 | .63*** | | |
| T1 Conscientiousness | 0.22 | 0.08 | .16** | | |
| Step 3 | | | | .551*** | .006 |
| T1 Self-oriented perfectionism | 0.63 | 0.06 | .62*** | | |
| T1 Conscientiousness | 0.22 | 0.09 | .15* | | |
| T1 Neuroticism | –0.06 | 0.07 | –.05 | | |
| T1 Extraversion | –0.12 | 0.07 | –.08 | | |
| T1 Openness | –0.04 | 0.07 | –.03 | | |
| T1 Agreeableness | 0.00 | 0.09 | .00 | | |
| DV = T2 Socially prescribed perfectionism | *B* | *SE B* | β | $R^2$ | $R^2$change |
| Step 1 | | | | .269*** | .269*** |
| T1 Socially prescribed perfectionism | 0.50 | 0.06 | .52*** | | |
| Step 2 | | | | .270*** | .001 |
| T1 Socially prescribed perfectionism | 0.49 | 0.06 | .51*** | | |
| T1 Neuroticism | 0.02 | 0.05 | .03 | | |
| Step 3 | | | | .292*** | .022 |
| T1 Socially prescribed perfectionism | 0.47 | 0.06 | .49*** | | |
| T1 Neuroticism | –0.01 | 0.05 | –.02 | | |
| T1 Conscientiousness | 0.00 | 0.05 | .00 | | |
| T1 Extraversion | –0.10 | 0.06 | –.12 | | |
| T1 Openness | –0.09 | 0.05 | –.10 | | |
| T1 Agreeableness | 0.02 | 0.07 | .02 | | |

*Note.* $N$ = 214. DV = dependent variable. T1 = Time 1, T2 = Time 2 (5-8 months later). Significance levels for *B* are the same as those for β.

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

Figure Caption

*Figure 1*. Cross-lagged effects of conscientiousness and self-oriented perfectionism over time (T1, T2). res1, res2 = residuals.


T1 Conscientiousness
.82***
T2 Conscientiousness
res1
.62***
.05
.21***
.33***
T1 Self-oriented perfectionism
T2 Self-oriented perfectionism
res2
.59***

[Figure 1]