

A Confirmatory Factor Analysis Using Two Perfectionism Measures: Maladaptive and Adaptive Perfectionism in a Social Anxiety Disorder Sample

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Abstract

Perfectionism is associated with psychological symptoms such as social anxiety. Two well-supported perfectionism measures are the Multidimensional Perfectionism Scale (Hewitt & Flett, 1991) and the Almost Perfect Scale-Revised (Slaney et al., 2001). A previous exploratory factor analysis found that these scales and another perfectionism questionnaire formed two factors: maladaptive and adaptive perfectionism (Shumaker & Rodebaugh, 2009). The former involves distress due to struggling to reach standards and the latter involves setting high standards and favoring organization. In a sample of 136 individuals with generalized social anxiety disorder, a confirmatory factor analysis identified the same two factors. However, one subscale did not fit as well into the model as the others until the error variance shared with other subscales from the same measure was accounted for. These perfectionism measures overlap significantly, supporting the investigation of adaptive and maladaptive perfectionism as meaningful constructs.

Introduction

- Perfectionism is related to many psychological symptoms, including social anxiety (see Shafran & Mansell, 2001, for a review)
- Measures of perfectionism include the Almost Perfect Scale-Revised (APS-R; Slaney, Rice, Mobley, Trippi, & Ashby, 2001) and the Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991)
- Using responses from undergraduates, Shumaker and Rodebaugh (2009) conducted an exploratory factor analysis (EFA) using subscales of the MPS, APS-R, and one other measure
 - Identified two factors: maladaptive and adaptive perfectionism
 - Maladaptive perfectionism** seems to involve distress stemming from perceptions of difficulty meeting one's standards and that others hold oneself to unreasonably high standards
 - Adaptive perfectionism** appears to encompass the setting of high standards and valuing of organization and neatness
- Unclear whether this factor structure would emerge in a social anxiety disorder sample

Method

- Investigated the joint factor structure of the APS-R and MPS in a sample of 136 individuals diagnosed with and seeking treatment for generalized social anxiety disorder (GSAD) in a multi-site randomized clinical trial
- Measures:
 - APS-R: Discrepancy (12 items, $\alpha = .96$), High Standards (7 items, $\alpha = .86$), Order (4 items, $\alpha = .84$)
 - Good reliability and convergent validity (Rice & Ashby, 2007)
 - MPS: self-oriented (Self; $\alpha = .91$), other-oriented (Other; $\alpha = .77$), socially prescribed (Socially; $\alpha = .85$) perfectionism. 15 items each.
 - Designed to measure individual and interpersonal aspects of perfectionism
- Hypothesized that maladaptive perfectionism would be defined by Discrepancy and Socially, whereas adaptive perfectionism would be defined by High Standards and Order
 - Expected Self and Other to cross-load on the two factors
- A confirmatory factor analysis was conducted with ML estimator using Mplus. Loadings were based on the previous EFA with two modifications: (a) subscales from the same scale might require correlation of error variance due to shared method variance and (b) cross-loadings might be due to method variance

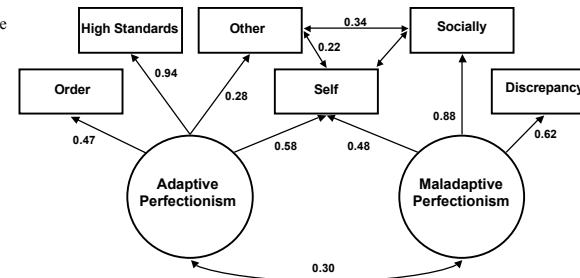
Table 1. Sample Characteristics

N	Male	Age M (SD)	White	African American	Hispanic	Asian or Pacific Islander	Other
136	60.9%	32.74 (11.55)	48.5%	20.8%	15.0%	13.8%	16.9%

Results

- Participants were diagnosed with GSAD using the Anxiety Disorders Interview Schedule for DSM-IV (DiNardo, Brown, & Barlow, 1994)
 - The average score on the Liebowitz Social Anxiety Scale (Liebowitz, 1987) was well above the GSAD cut-off of 60 recommended by Mennin et al. (2002) ($M = 76.13$, $SD = 21.30$)
- An initial model with no correlated error variances fit reasonably well (CFI = .94, RMSEA = .13)
- When the error variances among MPS subscales were permitted to correlate, Other no longer loaded on Maladaptive Perfectionism, so this path was deleted
- This revised model fit quite well (CFI = .99, TLI = .98, RMSEA = .05, SRMR = .05)
 - All subscales loaded significantly on their factor and the two factors were moderately correlated ($r = .30$, $p = .005$)
 - Adaptive Perfectionism consisted of High Standards, Order, Self, and Other
 - Maladaptive Perfectionism consisted of Discrepancy, Socially, and Self
- This finding is very similar to that of the previous study, except the cross-loading of Other was resolved through modeling of method variance

Figure 1. Factor Structure



Note. Error variances are omitted for simplicity. Correlations among error variances for Self and Other, and Socially and Other were significant ($ps < .05$). The correlation between error variances for Self and Socially was not significant, so it was removed from the model.

Discussion

- The APS-R and MPS appear to have significant common variance that is well captured by Adaptive Perfectionism and Maladaptive Perfectionism factors
- Future research could investigate the ability of these subscales and factors to predict clinically relevant variables such as severity of symptoms and quality of life