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Validity of DAS perfectionism and need for approval in relation to the five-factor model of personality

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Abstract

This study examined the validity of the perfectionism and need for approval scales of the Dysfunctional Attitude Scale (DAS; Weissman & Beck, 1978) by locating these measures within a comprehensive framework of personality, provided by the revised NEO Personality Inventory (NEO-PI-R; Costa & McCrae, 1992), in a clinical sample ($N = 132$). The results indicated that: (1) DAS perfectionism reflects the self-critical aspects of the broader perfectionism construct rather than the active achievement striving aspects; (2) DAS need for approval generally lacks an association with positive interpersonal traits and shares much in common with DAS perfectionism; and (3) with shared variance between the perfectionism and need for approval scales removed, each scale more clearly relates to negative (perfectionism) and positive (need for approval) interpersonal content, respectively.
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Keywords: Perfectionism; Self-criticism; Need for approval; Five-factor model

1. Introduction

Blatt (1974) and Beck (1983) proposed similar pairs of specific personality configurations that contribute to vulnerability to depression. Both theorists differentiated a personality style focused on issues of self-definition, self-worth, and self-control from another personality style focused on

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issues of relatedness and seeking to be loved and valued by others. From a psychodynamic orientation, Blatt and his colleagues (Blatt, 1974; Blatt, D'Afflitti, & Quinlan, 1976) presented self-criticism and dependency, while, from a cognitive perspective, Beck (1983) proposed autonomy and sociotropy. Self-criticism/autonomy has also been linked conceptually to perfectionism (e.g., Dunkley & Blankstein, 2000). Factor analysis of the Dysfunctional Attitude Scale (DAS; Weissman & Beck, 1978) has yielded two factors that appear to reflect the self-criticism/autonomy/perfectionism and dependency/sociotropy styles. These factors have been labeled "perfectionism" and "need for approval" (e.g., Imber et al., 1990).

These concepts also have relevance for treatment. For instance, in the NIMH Treatment of Depression Collaborative Research Program (TDCRP), DAS perfectionism assessed at pretreatment was found to significantly impede treatment outcome at both termination (Blatt, Quinlan, Pilkonis, & Shea, 1995; Shahar, Blatt, Zuroff, & Pilkonis, 2003) and follow-up 18 months after termination (Blatt, Zuroff, Bondi, Sanislow, & Pilkonis, 1998). Although these findings demonstrate the DAS perfectionism factor to be an important patient variable that influences the treatment process, an obstacle to interpretation of these findings is that little information is available regarding what exactly is being measured by this variable.

Numerous studies have demonstrated the five-factor model (FFM) of personality as a useful heuristic framework that is relevant to the description and understanding of specific personality vulnerability styles (see Widiger & Costa, 2002). The FFM of personality is a version of trait theory that identifies five broad domains of personality functioning as most important (e.g., Costa & McCrae, 1992). The five-factors are often referred to as neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. The revised NEO Personality Inventory (NEO-PI-R; Costa & McCrae, 1992) assesses these five-factors, which are each comprised of six, more specific, personality trait facets. Although studies have related the NEO-PI-R five domains and 30 facets to various measures of the self-criticism/autonomy/perfectionism and dependency/sociotropy styles in college student (e.g., Dunkley, Blankstein, & Flett, 1997; Hill, McIntire, & Bacharach, 1997) and patient populations (e.g., Bagby et al., 2001), to our knowledge no studies have mapped the DAS perfectionism and need for approval variables onto the FFM.

DAS Perfectionism in Relation to the NEO-PI-R. Clarification of what the DAS perfectionism scale is measuring is important because this variable has been used to refer to different concepts. Specifically, Brown and Beck (2002) asserted that there is a clear parallel between DAS perfectionism and Hewitt and Flett's (1991) concept of self-oriented perfectionism (i.e., the setting of high personal standards for oneself), whereas Blatt et al. (1995) assumed a link between DAS perfectionism and self-criticism. Self-oriented perfectionism and self-criticism have been demonstrated to reflect two different dimensions of perfectionism (Dunkley & Blankstein, 2000; Dunkley, Zuroff, & Blankstein, 2003). In relation to the NEO, self-oriented perfectionism has been positively related to the conscientiousness factor and facets, in particular achievement striving (Hill et al., 1997). In contrast, self-criticism has been found to be primarily associated with neuroticism and negatively associated with extraversion, agreeableness, and conscientiousness (Dunkley et al., 1997; Zuroff, 1994). In relation to the NEO-PI-R 30 facets, self-criticism and related measures of autonomy (e.g., Zuroff, 1994) and socially prescribed perfectionism (e.g., Dunkley & Blankstein, 2000) have all been related to the angry hostility, depression, self-consciousness, and vulnerability facets of neuroticism and negatively related to the warmth and positive emotions facets of extraversion, the values facet of openness, and the trust facet of

agreeableness (Bagby et al., 2001; Dunkley et al., 1997; Hill et al., 1997). Because empirical evidence suggests that DAS perfectionism is more closely related to self-criticism than it is to self-oriented perfectionism (Blaney & Kutcher, 1991; Shahar & Priel, 2003; Sherry, Hewitt, Flett, & Harvey, 2003), we expected that DAS perfectionism as represented within the nomological network of the NEO-PI-R would resemble self-criticism/autonomy/socially prescribed perfectionism rather than self-oriented perfectionism.

DAS Need for Approval in Relation to the NEO-PI-R. Although a link has been demonstrated between DAS need for approval and both dependency and sociotropy, need for approval has been more strongly related to measures of sociotropy than to dependency (e.g., Blaney & Kutcher, 1991). Thus, we anticipated that DAS need for approval as represented by the nomological network of the NEO-PI-R, would more closely resemble sociotropy than dependency. In relation to the NEO-PI-R, sociotropy has been strongly related to neuroticism, especially the self-consciousness facet, along with the agreeableness facets of compliance, modesty, and tender-mindedness, and negatively related to the assertiveness facet of extraversion (Bagby et al., 2001; Dunkley et al., 1997). However, it is noteworthy that the DAS perfectionism and need for approval scales are substantially correlated which indicates to some degree a lack of specificity between them (e.g., Blaney & Kutcher, 1991; Blatt et al., 1995) that might limit the degree of correspondence between DAS need for approval and sociotropy/dependency in relation to the NEO-PI-R. Brown and Beck (2002) suggested that DAS need for approval reflects an interpersonal sort of perfectionism because the need for approval items (e.g., "If others dislike you, you cannot be happy") reflect a rigid, inflexible, and absolute thinking style similar to the perfectionism factor items (e.g., "If I fail at my work, then I am a failure as a person").

DAS "Pure" Perfectionism and "Pure" Need for Approval in Relation to the NEO-PI-R. One way that this nonspecificity between DAS perfectionism and need for approval has been handled is by examining the unique variance of these variables with their shared variance removed to address certain research questions. For example, because self-criticism/autonomy and dependency/sociotropy are related to different interpersonal styles, Blatt et al. (1998; see also Zuroff et al., 2000) residualized or "purified" the DAS perfectionism and need for approval factors by removing their shared variance to facilitate the evaluation of the differential relationships of these variables to therapeutic gain. Although pure perfectionism and pure need for approval both correlated strongly ($r = 0.80$) with their respective original subscales (Zuroff et al., 2000), it is important to examine the similarities and differences between the pure and original DAS factors in relation to the FFM. Purifying the factors might serve to enhance the negative interpersonal content of DAS perfectionism and the positive interpersonal content of DAS need for approval. On the other hand, purifying the factors might also parse the extreme, "all-or-none" form of thinking and neurotic content measured by both the original subscales.

Evidence for what the DAS perfectionism and need for approval scales are measuring is limited. The purpose of the present study was to examine the DAS perfectionism and need for approval scales in relation to the five domains and 30 facets of the NEO-PI-R. The comprehensive nature of the NEO-PI-R allowed a detailed understanding of what these variables are measuring. Because the lack of clarity regarding what the DAS variables are measuring is an obstacle to interpretation of previous findings implicating perfectionism/need for approval in treatment process and outcome, we addressed these questions in a clinical sample.

2. Method

2.1. Participants

Participants were a subset of the 168 participants recruited for the New Haven site of the Collaborative Longitudinal Personality Disorders Study (CLPS), a multiple-site, longitudinal, repeated-measures study of personality disorders (see Gunderson et al., 2000). All participants were treatment seekers or consumers from multiple clinical settings. To obtain a full range of personality pathology, recruitment of participants was targeted for patients meeting fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994) criteria for at least one of four representative personality disorders, namely borderline, schizotypal, avoidant, and obsessive-compulsive, with major depressive disorder (MDD) without any personality disorder serving as a comparison group. As detailed by McGlashan et al. (2000), expected rates for DSM-IV Axis I/II and Axis II/II diagnostic co-occurrence for a clinical sample were found. In the present study conducted at the 24- or 36-month follow-ups, there were 132 participants (51 men; 81 women), representing 79% of the original New Haven sample, with a mean age of 33.76 years (SD = 8.28).

Axis I diagnoses were assessed during the follow-up using the Longitudinal Follow-Up Evaluation (LIFE; Keller et al., 1987). Twenty-eight percent of the sample, including the MDD comparison group, met current criteria for major depression, with 36% meeting criteria for some form of mood disorder at the follow-up. Forty-one percent of the sample met criteria for an anxiety disorder, 16% met criteria for a substance use disorder, and 13% met criteria for an eating disorder. Axis II diagnoses were assessed using the Diagnostic Interview for DSM-IV Personality Disorders (DIPD-IV; Zanarini, Frankenburg, Sickel, & Yong, 1996). Fifty-five percent of the sample met criteria for one or more personality disorders, the most prevalent of which were avoidant personality disorder (33%), obsessive-compulsive personality disorder (24%), and borderline personality disorder (22%). At the time of testing, 21% of the sample did not meet DSM-IV criteria for an Axis I/II diagnosis.

2.2. Procedure

At their 24-month follow-up, 122 participants completed a battery of questionnaires that included the DAS and the NEO-PI-R. There were an additional 10 participants who did not complete both the DAS and the NEO-PI-R at their 24-month follow-up but did so at their 36-month follow-up. These 10 participants were included in the analyses in an effort to retain as many participants of the original baseline sample as possible.

2.3. Measures

Dysfunctional Attitude Scale (*DAS*). The DAS (Weissman & Beck, 1978) is a 40-item measure intended to assess cognitive vulnerability to depression. The perfectionism and need for approval scales were derived based on the factor analytic results of Imber et al. (1990), who found that 11 items loaded substantially on need for approval and 15 items loaded substantially on perfectionism. Consistent with Imber et al. (1990), the items with high loadings for each scale were

summed in the present study, and the resulting composites had high internal consistency ($\alpha = 0.85$ for need for approval and $\alpha = 0.91$ for perfectionism). The two DAS scales were strongly correlated ($r = 0.74$), as they were in the TDCRP data (Zuroff, Blatt, Sanislow, Bondi, & Pilkonis, 1999). As in previous studies (e.g., Blatt et al., 1998), residualized or "purified" versions of the DAS scales were created using regression procedures to remove the overlapping, shared variance between the scales. "Pure" perfectionism and "pure" need for approval each correlated 0.68 with their respective original scale.

The revised NEO Personality Inventory (*NEO-PI-R*). The NEO-PI-R (Costa & McCrae, 1992) is a 240-item self-report questionnaire designed to provide a comprehensive assessment of the five-factor model of personality. The neuroticism (N), extraversion (E), openness (O), agreeableness (A), and conscientiousness (C) domain scales are each defined by six eight-item facet scales. Costa and McCrae (1992) reported extensive evidence supporting the internal consistency and validity of the NEO-PI-R domain and facet scales.

3. Results

The means and standards deviations of DAS perfectionism ($M = 47.28$; SD = 17.75) and DAS need for approval ($M = 41.26$; SD = 13.34) were comparable to those reported previously for a clinical population (Zuroff et al., 1999). Correlational analyses were carried out to examine the relation between the NEO-PI-R five domains and 30 facets and perfectionism, need for approval, pure perfectionism, and pure need for approval. To keep the number of statistical tests to a manageable size, results are only reported for the total sample. Inspection of the correlation matrices for the personality disorder and without personality disorder samples suggested that the results were comparable between those who did or did not have a personality disorder.

In addition to reporting zero-order correlations, we examined the semipartial correlations between each DAS variable and the five domain summary scores in order to assess the unique predictive contributions of each five-factor domain after shared variance with the other domains was partialled out. We also examined the semipartial correlations between each DAS variable and the six facets of each domain in order to assess the unique predictive contributions of each domain facet after shared variance with the other domain facets was partialled out. It should be mentioned that some semipartial correlations between DAS variables and certain NEO-PI-R domains and facets were larger, and sometimes of opposite direction, than the zero-order correlations due to suppressor effects (see Cohen & Cohen, 1983). To facilitate comparison, below we emphasize the results where both the zero-order correlations and semipartial correlations were significant.

DAS Variables and the NEO-PI-R Five Domains. Table 1 presents the zero-order and semipartial correlations between the DAS variables and the NEO-PI-R 5 domain summary scores. As shown in Table 1, both perfectionism and need for approval had strong correlations with neuroticism, with perfectionism also being uniquely negatively related to extraversion. Pure perfectionism and pure need for approval were distinguished in that pure perfectionism had significant negative zero-order and semipartial correlations with extraversion and agreeableness, whereas pure need for approval had significant positive zero-order and semipartial correlations with agreeableness.

Table 1
Zero-order and semipartial correlations of perfectionism, need for approval, pure perfectionism, and pure need for approval with the NEO-PI-R five-factor summary scores

NEO variables	Perfectionism		Approval		Pure perfectionism		Pure approval	
	r	*sr*	*r*	*sr*	*r*	*sr*	*r*	*sr*
Neuroticism	0.56***	0.56***	0.53***	0.61***	0.26**	0.16	0.16	0.29**
Extraversion	−0.34***	−0.23**	−0.23**	−0.07	−0.26**	−0.26**	0.03	0.14
Openness	0.01	0.12	0.07	0.10	−0.06	0.08	0.09	0.01
Agreeableness	−0.13	−0.08	0.14	0.21**	−0.34***	−0.35***	0.35***	0.40***
Conscientious.	−0.09	0.22**	−0.07	0.16	−0.06	0.15	−0.00	−0.01

Note. Conscientious. = Conscientiousness.
** $p < 0.01$.
*** $p < 0.001$.

DAS Variables and the NEO-PI-R 30 Facets. Table 2 presents the zero-order and semipartial correlations between the DAS variables and the NEO-PI-R 30 facets. As shown in Table 2, both perfectionism and need for approval had significant positive zero-order and semipartial correlations with the self-consciousness and modesty facets and negative zero-order and semipartial correlations with the positive emotions facet. Perfectionism and need for approval were distinguished in that perfectionism had significant negative zero-order and semipartial correlations with the trust and deliberation facets, whereas need for approval had significant positive zero-order and semipartial correlations with the fantasy facet. To examine whether perfectionism and need for approval could be further distinguished from neuroticism in relation to the facets of the other FFM domains, we also examined the relation between residuals of perfectionism and need for approval with neuroticism controlled and the facets of extraversion, openness, agreeableness, and conscientiousness. Controlling for neuroticism, perfectionism maintained negative relations with warmth ($r = -0.20$, $p < 0.05$), positive emotions ($r = -0.22$, $p < 0.05$), and trust ($r = -0.24$, $p < 0.01$), whereas need for approval maintained a relation with only modesty ($r = 0.24$, $p < 0.01$).

Considering the purified versions of perfectionism and need for approval, Table 2 shows that pure perfectionism and pure need for approval had weaker correlations with the neuroticism facets relative to their original scales. Pure perfectionism had significant negative correlations with the angry hostility, trust, positive emotions, and openness to values facets. In contrast, pure need for approval had significant positive correlations with the openness to values, trust, and modesty facets.

4. Discussion

We located the DAS perfectionism and need for approval scales within a comprehensive framework of personality, the five-factors and 30 facets of the NEO-PI-R, in order to better understand what they are measuring. Consistent with previous studies (e.g., Dunkley et al., 1997), the present findings demonstrated the usefulness of the NEO-PI-R domains and facets in gaining a better understanding of the similarities and differences between the DAS scales.

Table 2
Zero-order and semipartial correlations of perfectionism, need for approval, pure perfectionism, and pure need for approval with the neuroticism, extraversion, openness, agreeableness, and conscientiousness facets

NEO variables	Perfectionism		Approval		Pure perfectionism		Pure approval	
	r	*sr*	*r*	*sr*	*r*	*sr*	*r*	*sr*
Neuroticism facets								
Anxiety	0.50***	0.07	0.50***	0.15	0.19*	−0.07	0.19*	0.15
Angry hostility	0.33***	0.11	0.16	−0.11	0.31***	0.28**	−0.12	−0.28**
Depression	0.46***	0.04	0.47***	0.07	0.18*	−0.01	0.19*	0.05
Self-conscious.	0.59***	0.46***	0.61***	0.48***	0.20*	0.17	0.27**	0.20
Impulsiveness	0.21*	−0.09	0.22*	−0.04	0.07	−0.08	0.10	0.04
Vulnerability	0.44***	0.16	0.39***	0.13	0.22*	0.10	0.11	0.02
Extraversion facets								
Warmth	−0.35***	−0.14	−0.17*	−0.03	−0.33***	−0.18	0.13	0.11
Gregariousness	−0.24**	−0.08	−0.16	−0.04	−0.19*	−0.08	0.03	0.04
Assertiveness	−0.26**	−0.16	−0.23**	−0.21	−0.14	−0.01	−0.05	−0.14
Activity	−0.07	0.25**	−0.00	0.25*	−0.10	0.10	0.07	0.10
Excite.-seeking	−0.02	0.08	−0.11	−0.04	0.09	0.17	−0.14	−0.15
Pos. emotions	−0.43***	−0.38***	−0.26**	−0.24*	−0.36***	−0.29**	0.09	0.05
Openness facets								
Fantasy	0.16	0.20*	0.20*	0.25*	0.01	0.03	0.13	0.14
Aesthetics	0.03	0.03	0.04	0.03	−0.01	0.02	0.03	0.01
Feelings	−0.03	−0.01	0.04	−0.01	−0.08	−0.00	0.08	−0.01
Actions	−0.04	−0.03	−0.01	0.05	−0.05	−0.09	0.03	0.10
Ideas	0.00	−0.02	−0.06	−0.19	0.07	0.18	−0.09	−0.26*
Values	−0.14	−0.19	0.06	0.03	−0.26**	−0.31**	0.23**	0.25**
Agreeableness facets								
Trust	−0.44***	−0.47***	−0.11	−0.15	−0.53***	−0.54***	0.32***	0.30**
Straightforward.	−0.04	−0.03	0.11	−0.03	−0.18*	−0.02	0.21*	−0.01
Altruism	−0.16	−0.05	0.02	0.00	−0.25**	−0.07	0.20*	0.05
Compliance	0.01	0.12	0.15	0.13	−0.16	0.04	0.22*	0.06
Modesty	0.23**	0.27**	0.37***	0.38***	−0.06	−0.02	0.29**	0.27**
Tender-minded.	−0.08	−0.01	0.03	−0.08	−0.16	0.07	0.14	−0.11
Conscientiousness facets								
Competence	−0.13	0.01	−0.12	−0.06	−0.07	0.08	−0.03	−0.10
Order	0.08	0.30**	0.08	0.21	0.04	0.21	0.03	−0.01
Dutifulness	−0.07	−0.02	−0.08	−0.07	−0.01	0.05	−0.05	−0.09
Achieve. striving	0.00	0.19	−0.02	0.07	0.02	0.20	−0.03	−0.10
Self-discipline	−0.12	−0.34*	−0.05	−0.07	−0.13	−0.42**	0.06	0.26
Deliberation	−0.19*	−0.23*	−0.16	−0.17	−0.11	−0.16	−0.02	0.00

Note. Self-conscious. = Self-consciousness; Excite. = Excitement; Pos. = Positive; Straightforward. = Straightforwardness; Minded. = Mindedness; Achieve. = Achievement.
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

DAS Perfectionism in Relation to the NEO-PI-R. Contrary to the prevailing assumption that DAS perfectionism primarily refers to high personal standards and motivation to attain

perfection (e.g., Brown & Beck, 2002), the present study adds to recent studies indicating that DAS perfectionism actually more closely resembles the primarily maladaptive, self-critical aspects of the perfectionism construct (Shahar & Priel, 2003; Sherry et al., 2003). DAS perfectionism was not significantly positively related to the conscientiousness domain and facets in contrast to self-oriented perfectionism, which has been primarily positively related to the conscientiousness domain and facets, especially achievement striving (Hill et al., 1997). Instead, DAS perfectionism was primarily associated with the neuroticism domain and self-consciousness facet, consistent with previous studies relating the NEO to self-criticism (e.g., Dunkley et al., 1997; Zuroff, 1994). After controlling for neuroticism, perfectionism was uniquely negatively associated with the extraversion domain and its facets of warmth and positive emotions and the trust facet of agreeableness, which is in keeping with previous research distinguishing self-criticism/autonomy from neuroticism in terms of its negative interpersonal content (e.g., Dunkley et al., 1997; Zuroff, 1994).

DAS Need for Approval in Relation to the NEO-PI-R. Consistent with previous studies relating the NEO-PI-R to sociotropy (e.g., Bagby et al., 2001; Dunkley et al., 1997), DAS need for approval was primarily associated with the neuroticism domain and facets, in particular self-consciousness. In addition, need for approval was positively related to the modesty facet of agreeableness and was negatively related to the assertiveness facet of extraversion, as has been found for both dependency and sociotropy. However, in contrast to the relation found between positive interpersonal traits and both dependency and sociotropy in previous studies (Bagby et al., 2001; Dunkley et al., 1997; Zuroff, 1994), need for approval was *negatively* related to the warmth facet and unrelated to the gregariousness facet of extraversion and the agreeableness domain and facets (with exception to modesty). Further, DAS need for approval appears to overlap with self-criticism and DAS perfectionism in that both need for approval and perfectionism were uniquely related to self-consciousness, as Dunkley et al. (1997) found for both sociotropy and self-criticism. Overall, as Brown and Beck (2002) suggested, DAS need for approval might be better construed as a sort of perfectionism about gaining social approval than passive-receptive wishes to be loved, cared for, nurtured, and protected.

DAS "Pure" Perfectionism and "Pure" Need for Approval in Relation to the NEO-PI-R. As expected, when the overlapping effects of each DAS factor were removed from the other (i.e., "purified"), perfectionism related more to negative interpersonal traits, whereas need for approval related more to positive interpersonal traits. These results are consistent with findings that pure perfectionism disrupts the patients' quality of interpersonal relations in the treatment process (Zuroff et al., 2000) and offer an explanation for why perfectionism, in contrast to need for approval, predicts negative therapeutic outcome. On the other hand, pure perfectionism and pure need for approval had weak correlations with the neuroticism facets in contrast to their original factors. This highlights a fundamental difference between the purified DAS variables and measures of self-criticism/autonomy and dependency/sociotropy, which have been considered to reflect distinct neurotic styles (Dunkley et al., 1997; Zuroff, 1994).

There are strengths and certain limitations of the present study. We compared the representation within the framework of the FFM of the DAS variables to the representation of other measures of the self-definition and interpersonal dimensions, which were examined in other studies with various college student and patient populations. It would be valuable to compare the relations to the NEO-PI-R of the DAS with these other measures in the same sample of patients.

However, because DAS perfectionism has been demonstrated to be an important variable in patient populations (e.g., Blatt et al., 1995; Shahar et al., 2003), an important contribution of the present study was examining the relations between the DAS variables and the NEO-PI-R in a clinical sample. As we used a heterogeneous clinical sample that included a substantial portion of DSM-IV personality disorder patients but was not limited to personality disorder patients, it is difficult to know whether substantially different relations between the DAS and the NEO-PI-R would be found in a different sample type (e.g., MDD patients). Thus, the generalizability of the present results should be examined in other patient populations, different age groups, and student populations.

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