

CORE FEATURES OF PERSONALITY DISORDER: DIFFERENTIATING GENERAL PERSONALITY DYSFUNCTIONING FROM PERSONALITY TRAITS

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The distinction between general personality dysfunctioning (GPD) and specific personality traits (SPT) is an important focus of attention in the proposed revisions of the DSM-5. The present study explores the distinction between GPD and SPT using the self-report questionnaires General Assessment of Personality Disorder (GAPD) and Severity Indices for Personality Problems (SIPP-118) to measure GPD, and the NEO-PI-R to measure SPT. The sample consisted of 424 psychiatric patients. Using principal component analysis, GPD and SPT appeared to be clearly distinct components of personality. Our GPD model consisted of three factors, i.e., Self-identity dysfunctioning, Relational dysfunctioning, and Prosocial functioning. This model remained by and large intact when combined with SFT factors. Our findings support the distinction between personality traits and personality dysfunction laid down in the recent proposal by the Personality and Personality Disorders Work Group of the DSM-5 Task Force.

The current categorical DSM-IV-TR model of personality disorders has been extensively criticized for its failure to provide a valid and clinically useful representation of the clinical phenomena in this area of interest. The Personality and Personality Disorders Work Group of the DSM-5 Task Force apparently subscribes to these criticisms, as they have proposed a revolutionary new model for the classification of personality disorders (American Psychiatric Association, 2011). The proposal consists of a four-part assessment model, including: (1) a new general definition of personality disorder based on severe or extreme deficits in core components of

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personality functioning; (2) five identified severity levels of personality functioning; (3) six personality disorder types; and (4) five broad, higher-order personality trait domains. The first two components of the model refer to general personality dysfunctioning (GPD), whereas the last components refer to specific personality traits (SPT). The model assumes GPD and SPT to be relatively independent. This study aims to test this assumption.

In the DSM-5 proposal, GPD is operationalized by so-called essential features of personality disorder. These features are derived from the perspective that personality psychopathology fundamentally emanates from disturbances in thinking about self and others. Although this perspective can be traced back to many historical and traditional roots in psychoanalytical thinking, its revival over the past decennium is partly due to the growing dissatisfaction with DSM-IV-TR and preliminary empirical support for various models showing that self and other pathology can be measured and is associated with personality pathology in general (Cloninger, 2000; Livesley, 2003; Parker et al., 2004; Verheul et al., 2008). Two such models will be used in this study, and discussed here in more detail.

First, we consider Livesley's (2003) theoretically cogent Adaptive Failure model of GPD. According to this model, personality not only involves traits, but also an intra-psyche system which is needed to fulfill adult life tasks. This system consists of three components: (1) stable and integrated representations of self and others; (2) the capacity for intimacy, to function adaptively as an attachment figure, and/or establish affiliative relationships; and (3) the capacity for pro-social behavior and/or cooperative relationships, to function in a social group (Livesley, 2003). Malfunctioning of these three basic components define the concept of disorder. Livesley developed the General Assessment of Personality Disorder (GAPD; Livesley, 2006) as a self-report instrument to assess these three basic components.

Another recent approach toward the core components of (mal)adaptive personality functioning are the Severity Indices of Personality Problems (SIPP-118; Verheul et al., 2008). The SIPP-118 was originally developed in a consensus meeting of clinical experts and has five higher-order domains, which are divided into 16 facets. The higher-order domains are: self control, identity integration, responsibility, relational functioning, and social concordance. In a validation study, it was reported that the SIPP-118 differentiates between clinical and nonclinical populations, and provides unique information over and above trait-based dimensions (Verheul et al., 2008). In sum, the SIPP-118 can be considered as a promising instrument in detecting manifest core components of personality pathology.

While these efforts to represent the GPD continuum are still somewhat experimental, it is now generally accepted that the variation in personality disorders can be delineated by a limited number of specific personality traits. Three to six broad domains of traits, that include both normal and abnormal personality characteristics, have been proposed as integrative

and comprehensive (Watson, Clark, & Cmielewski 2008; Widiger & Simonsen, 2005). The DSM-5 proposal includes five broad, higher-order personality trait domains: Negative Affectivity, Detachment, Antagonism, Disinhibition versus Compulsivity, and Psychoticism).

An important problem of dimensional models is the determination of cut-offs for pathology (Kamphuis & Noordhof, 2009; Livesley, 2007; Widiger, Simonsen, Krueger, Livesley, & Verheul, 2005). A high or low score on facets of various domains of personality traits is neither a necessary nor a sufficient criterion for the determination of pathology. To resolve this problem nonadaptive variants of the traits of the FFM have been described by Widiger & Mullins-Sweatt (2009). They use the Global Assessment of Functioning (GAF) scale on Axis V as a criterion for determining the degree of severity. According to this view, extreme traits would justify the diagnosis of a personality disorder. However, as of yet strong empirical support is lacking and dimensional trait models remain to be criticized for its failure to provide a clear trait-independent operationalization of disadaptivity (Livesley, 2007; Trull, 2005; Wakefield, 2008). The previously discussed GPD factor may help bridge this gap.

The present study aims to explore a model of GPD and to investigate whether GPD can be meaningfully distinguished from SPT. We used the GAPD and the SIPP-118 as measurement for GPD and the NEO-PI-R to measure SPT. More specifically, the joint structure of the GAPD and SIPP-118 facets was examined to explore a model of GPD, and subsequently, the joint structure of the facets of GAPD, SIPP-118, and NEO-PI-R was examined to explore to what extent GPD and SPT can be differentiated.

METHOD

PARTICIPANTS AND PROCEDURES

The data were collected by several psychiatric centers in the Netherlands. Patients were invited to participate in this study by their treating clinical psychologist or psychiatrist or completed a questionnaire as part of a routine psychological evaluation. Patients with insufficient command of the Dutch language, with organic mental disorders or mental retardation, or in acute crisis were excluded. All patients signed an informed consent form and received a € 10 gift certificate for their participation. The final sample ($N = 424$) consisted of a heterogeneous group of psychiatric patients; 370 (87.3 %) were outpatients.

The group consisted of 117 men (27.6 %) and 307 women (72.4 %) and were between 17 and 66 years old ($M = 33.9$, $SD = 11.3$). Table 1 shows the diagnostic characteristics of the participants. In 50.9% of the cases at least one DSM-IV personality disorder, as measured by the Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II, First et al., 1997), was reported. The most frequent Axis II diagnoses were borderline personality disorder (21.2%), avoidant personality disorder (20.5%),

TABLE 1. Clinical Characteristics of the Clinical Sample (N = 424)

Characteristics	N	%
Current DSM-IV Axis I diagnosis ^{a,b}		
Mood disorder	178	42.2
Anxiety disorder	58	13.8
Other disorders	124	29.5
No Axis I disorder	38	9.0
Deferred Axis-I	7	1.7
Unknown	12	2.9
Current DSM-IV Axis II diagnosis ^{a,c}		
Paranoid personality disorder	24	5.7
Schizoid personality disorder	2	0.5
Schizotypal personality disorder	0	0.0
Antisocial personality disorder	7	1.7
Borderline personality disorder	90	21.2
Histrionic personality disorder	5	1.2
Narcissistic personality disorder	10	2.4
Avoidant personality disorder	87	20.5
Dependent personality disorder	11	2.6
Obsessive-Compulsive personality disorder	21	5.0
Personality disorder NOS ^d	64	15.1
Cluster A	26	6.1
Cluster B	104	24.5
Cluster C	107	25.2
Any personality disorder	216	50.9

Notes. ^aIndividuals could be assigned to more than one diagnosis; ^bClinical diagnosis; ^cSCID-II diagnosis. ^dCut-off is 10 criteria.

and personality disorder NOS (15.1%), a pattern consistent with previous reports on naturalistic convenience samples (Zimmerman, Chelminski & Young, 2008). Consistent with other studies (e.g., Pagan, Oltmans, Whitmore, & Turkheimer, 2005; Verheul, Bartak, & Widiger, 2007), we chose a cut-off point of 10 diagnostic criteria for Personality Disorder Not Otherwise Specified (PDNOS). Most patients met criteria for one or more comorbid Axis I disorders (clinical diagnosis). The prevalence of internalizing Axis I disorders in the present sample was relatively high, the majority met criteria for a mood disorder (42%) or an anxiety disorder (13.7%).

INSTRUMENTS

*General Assessment of Personality Disorders*¹ (GAPD; Livesley, 2006). The GAPD is a recently developed questionnaire that operationalizes the core components of personality pathology of Livesley's (2003) Adaptive Failure model. The GAPD version used in this study consists of 142 items, each of which is rated on a five-point Likert-scale format, ranging from 1 (very unlike me) to 5 (very like me). The GAPD has two main scales: Self-pathology and Interpersonal problems. In our study, the internal consistency coefficients (alphas) for the main scales were .98 and .93, respectively. These main scales are divided into a total of 19 subscales, with

1. More extensive documentation on the GAPD is available from the first author.

alphas in the current sample ranging from .68–.90. The main scale Self-pathology covers items regarding the structure of personality (e.g., problems of differentiation and integration) and agency (e.g., conative pathology). The main scale Interpersonal problems is about failure of kinship functioning and failure of societal functioning. This study utilized the authorized Dutch translation by Berghuis (2007).

*Severity Indices of Personality Problems-118*² (SIPP-118; Verheul et al., 2008). The SIPP-118 is a dimensional self-report measure of the core components of (mal)adaptive personality functioning, and provides indices of the severity of personality pathology. The SIPP-118 consists of 118 four-point Likert scale items which cover 16 facets of personality functioning that cluster in five higher-order domains: Self-control, Identity integration, Relational functioning, Social concordance, and Responsibility. Two studies have reported good psychometric properties and (cross-national) validity of the SIPP-118, respectively (Arnevik, Wilberg, Monsen, Andrea, & Karterud 2009; Verheul et al., 2008).

NEO-Personality Inventory Revised (NEO-PI-R; Costa & McCrae, 1992a; Hoekstra, Ormel, & de Fruyt, 1996, Dutch version). With its 240 five-point Likert scale items, the NEO-PI-R is a widely used operationalization of the Five-Factor Model (FFM) of personality. Items map onto the five personality domains, each of which is subdivided into six facets. Costa and McCrae (1992b) reviewed the extensive reliability and validity data on the NEO-PI-R.

Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II, First et al., 1997; Weertman, Arntz, & Kerkhofs, 2000, Dutch version). The SCID-II is a widely used 119-item semi-structured interview for the assessment of Axis II personality disorders. Each item is scored as 1 (absent), 2 (subthreshold), or 3 (threshold). Dimensional scores were obtained by summing the raw scores of the criteria for the Axis II categories and clusters. Interviewers were master-level psychologists who were trained by H.B. and who received monthly booster sessions to avoid drift from the guidelines.

STATISTICAL ANALYSIS

A PCA with oblique rotation (Oblimin) was conducted to explore the joint structure of the GAPD subscales and the SIPP-118 facets. Next, a similar subsequent PCA explored the joint structure of GAPD, SIPP-118, and NEO-PI-R to examine to what extent GPD and SPT facets would yield distinctive factors. While we expected generally distinct components for GPD and SPT, we felt there was insufficient evidence available to make a priori allocation of facets to factors, and therefore rejected a confirmatory approach at this stage of research. To determine the appropriate factors to abstract, we used parallel analysis (Horn, 1965) utilizing randomly generated data.

2. More extensive documentation on the SIPP-118 is available from the first author.

RESULTS

FACTOR STRUCTURE GAPD AND SIPP-118

To explore a model of maladaptive personality functioning, we conducted a PCA with Oblique (Oblimin) rotation using the subscales of the GAPD and the SIPP-118 (see Table 2). The Kaiser-Maier-Olkin measure verified the sampling adequacy for analysis, KMO = .96, and the Bartlett's test of sphericity reached statistical significance ($p < .001$), supporting the factorability of the correlation matrix. A clear three-factor structure emerged. This three-factor model explained a combined 62.9% of the variance (49.5%, 7.1%, and 6.2%, respectively). Factor 1 (F1) was composed of subscales of the GAPD and the SIPP-118 related to the concept of Self-identity

TABLE 2. Factorloadings of the Subscales and Facets of the GAPD and SIPP-118 as Measures of General Personality Dysfunction in a Clinical Sample ($N = 424$)

Variables	Factor Loadings		
	F1	F2	F3
GAPD, Self pathology, Lack of self clarity	.96	.14	.04
GAPD, Self pathology, Lack of authenticity	.88	.09	.12
GAPD, Self pathology, Sense inner emptiness	.85	.09	.05
GAPD, Self pathology, Lack of history and continuity	.84	-.07	-.12
GAPD, Self pathology, Poorly boundaries	.82	.01	-.06
GAPD, Self pathology, False self Real self disjunctions	.79	.09	.21
GAPD, Self pathology, Lack meaning purpose direction	.78	.03	.18
GAPD, Self pathology, Context dep self definition	.77	.12	-.03
GAPD, Self pathology, Difficulty setting and attaining goals	.75	-.08	.06
GAPD, Self pathology, Self state disjunctions	.73	-.13	-.21
GAPD, Self pathology, Fragmentary self-other representations	.73	-.17	.04
GAPD, Self pathology, Lack autonomy and agency	.68	-.05	.10
GAPD, Self pathology, Defective sense of self	.67	-.13	.04
GAPD, Self pathology, Poorly understanding human behavior	.42	-.28	.28
GAPD, Self pathology, Poorly differentiated images others	.38	-.29	.27
SIPP, Identity integration, Self-reflexive functioning	-.80	.01	.00
SIPP, Identity integration, Self respect	-.78	-.07	-.03
SIPP, Identity integration, Stable self image	-.77	.20	.21
SIPP, Identity integration, Purposefulness	-.75	.06	-.03
SIPP, Identity integration, Enjoyment	-.64	-.02	-.20
SIPP, Self control, Emotion regulation	-.49	.47	.27
SIPP, Social concordance, Frustration tolerance	-.47	.46	.14
SIPP, Relational functioning, Feeling recognized	-.46	.27	-.30
GAPD, Interpersonal, Cooperativeness	.01	-.70	.38
GAPD, Interpersonal, Prosocial	-.09	-.68	.20
SIPP, Social concordance, Agression regulation	.02	.79	.18
SIPP, Social concordance, Respect	.12	.78	-.13
SIPP, Social concordance, Cooperation	-.04	.63	-.40
SIPP, Responsibility, Trustworthiness	-.17	.58	.13
SIPP, Responsibility, Responsible industry	-.36	.47	.18
SIPP, Self control, Effortful control	-.41	.53	.37
GAPD, Interpersonal, Affiliation	.26	-.18	.69
GAPD, Interpersonal, Intimacy and attachment	.34	-.08	.67
SIPP, Relational functioning, Intimacy	-.36	.03	-.58
SIPP, Relational functioning, Enduring relationships	-.44	.16	-.51

Notes. Exploratory Factor Analysis, Oblimin rotation. Factorscores $> |.30|$ are printed in Bold. F1 = Self-identity dysfunctioning; F2 = Prosocial functioning; F3 = Relational dysfunctioning. GAPD = General Assessment of Personality Disorders; SIPP = Severity Indices of Personality Problems (SIPP-118).

dysfunctioning. Factor loadings varied between .38 and .96, with very few cross loadings. F2 was composed of subscales that were related to the concept of social concordance or cooperativeness: Pro-social functioning. Factor loadings of the second factor were in the range from .47 and .70. The highest loading scales on F3 were related to the concept of Relational dysfunctioning. Factor loadings were between .51 and .69.

FACTOR STRUCTURE OF GAPD, SIPP-118, AND NEO-PI-R

Table 3 shows the PCA with Oblique (Oblimin) rotation of the subscales of the GAPD, SIPP-118, and NEO-PI-R together. Parallel analysis indicated the retention of seven factors as the optimal solution for rotation. Indicators of factorability were good (KMO measure of sampling adequacy = .94; Bartlett's test of sphericity $p < .001$). The seven-factor model explained a combined 64.7% of the variance. On the basis of corresponding content of the underlying variables we named the seven factors as follows: Self-identity functioning (F1), Inactivity (F2), Obliging (F3), Conscientiousness (F4), Pro-social functioning (F5), Openness to Experience (F6), and Relational functioning (F7).

F1, with factor loadings ranging from .51–.95, was composed of all the subscales of the main scale Self-pathology of the GAPD and four of the five subscales from the domain Identity integration of the SIPP-118. Therefore, this factor seems to measure the notion of Self-identity functioning. F2, with factor loadings between .36 and .69, was defined as the negative pole of an active, participating and energetic attitude. Referring to Buss & Plomin (1984), we called this factor (phlegmatic) Inactivity. F3, with factor loadings in the range from .35–.62, measured predominantly aspects of the domain agreeableness of the NEO-PI-R, and related scales of both the GAPD and the SIPP-118. This third factor was interpreted as Obliging, a factor that measured a respectful and helpful attitude and a cheerful willingness toward others. F4, with factor loadings ranging from .60–.77, clearly measured Conscientiousness. F5, with factor loadings between .37 and .82, consisted mainly of scales measuring social concordance, and the regulation of affects, aggression and impulses, and therefore measured the notion of Pro-social functioning. F6, with factor loadings between .38 and .75, also measured a unique domain of the NEO-PI-R, namely Openness to Experience. Finally, F7, with factor loadings between .38 and .78, consisted of subscales and facets of various questionnaires. The connecting term within this factor was functioning in intimate and immediate relationships: Relational functioning.

The median intercorrelation between all factors was .08. Lowest intercorrelations were between the factors Conscientiousness (F4) and Openness to Experience (F6; $r = .001$) and the factors Obliging (F3) and Conscientiousness (F4; $r = -.002$). Highest intercorrelations were between the factors Self-identity functioning (F1) and Prosocial functioning (F5; $r = .39$) and Self-identity functioning (F1) and Relational functioning (F7; $r = .39$), which are the GPD-factors.

TABLE 3. Factorloadings of the Subscales of the GAPD, Facets of the SIPP-118 and Facets of the NEO-PI-R in a Clinical Sample (N = 424)

Variable	Factor Loadings						
	F1	F2	F3	F4	F5	F6	F7
Factor 1: Self-identity functioning							
GAPD, Self pathology, Poorly boundaries	-.95	-.03	-.08	.07	.00	.09	.10
GAPD, Self pathology, Lack of authenticity	-.85	-.09	-.01	-.07	.13	-.06	-.15
GAPD, Self pathology, Fragmentary self and other representations	-.81	-.09	-.09	.05	-.15	.09	-.10
GAPD, Self pathology, Lack of self clarity	-.80	-.01	.12	-.10	.05	-.12	-.09
GAPD, Self pathology, Sense inner emptiness	-.80	-.08	.04	-.04	.04	-.09	-.06
GAPD, Self pathology, Context dependent self definition	-.80	.08	.04	.08	.02	.04	.10
GAPD, Self pathology, Lack of history and continuity	-.78	-.01	-.01	-.16	-.06	.01	.05
GAPD, Self pathology, False self Real self disjunction	-.75	-.13	.02	-.01	.10	-.01	-.28
GAPD, Self pathology, Lack autonomy and agency	-.72	.15	-.08	.30	-.06	-.08	.03
GAPD, Self pathology, Self state disjunctions	-.72	-.09	-.01	-.06	-.19	.09	.08
GAPD, Self pathology, Defective sense of self	-.63	.07	-.01	.00	-.16	.08	-.11
GAPD, Self pathology, Difficulty setting and attaining goals	-.62	.22	-.05	-.36	.06	-.10	-.01
GAPD, Self pathology, Poorly differentiated images others	-.58	.09	-.28	.01	-.03	.14	-.22
GAPD, Self pathology, Lack of meaning purpose direction	-.58	.21	.09	-.26	.06	-.09	-.20
GAPD, Self pathology, Poorly understanding of human behavior	-.53	.21	-.21	-.07	-.01	.02	-.21
SIPP, Identity integration, Self-reflexive functioning	.62	.17	-.16	.14	.06	.19	.15
SIPP, Identity integration, Purposefulness	.57	-.11	-.09	.25	.06	.12	.07
SIPP, Identity integration, Stable self image	.55	.14	-.19	.15	.35	.05	.05
SIPP, Identity integration, Enjoyment	.51	-.08	-.15	-.04	.10	.22	.19
Factor 2: Inactivity							
NEO-PI-R, Extraversion, Activity	-.04	-.69	-.06	.22	-.24	.05	.07
NEO-PI-R, Extraversion, Assertiveness	-.03	-.50	-.29	.16	-.03	.05	.15
NEO-PI-R, Extraversion, Excitement seeking	-.15	-.43	-.15	-.31	-.14	.09	.29
NEO-PI-R, Openness, Actions	.08	-.60	.03	-.27	.15	.17	.03
NEO-PI-R, Neuroticism, Self-consciousness	-.24	.36	.31	-.00	-.17	.08	-.36
Factor 3: Obliging							
GAPD, Interpersonal, Prosocial	-.23	-.03	-.62	-.19	-.11	-.08	-.16
SIPP, Identity integration, Self respect	.40	-.04	-.43	.13	.20	.04	.25
NEO-PI-R, Agreeableness, Modesty	.00	.07	.73	-.03	.07	-.04	-.18
NEO-PI-R, Agreeableness, Straightforwardness	.08	.21	.52	.33	.16	-.04	-.01
NEO-PI-R, Agreeableness, Altruism	-.14	-.08	.47	.23	.12	.18	.42
NEO-PI-R, Neuroticism, Depression	-.35	.21	.39	-.14	-.33	.02	-.05
NEO-PI-R, Neuroticism, Anxiety	-.33	.32	.35	.03	-.35	.04	-.02
Factor 4: Conscientiousness							
SIPP, Responsibility, Responsible industry	.23	-.09	.13	.68	.12	-.03	-.03
SIPP, Responsibility, Trustworthiness	.16	.06	.25	.65	.13	-.04	.03
NEO-PI-R, Conscientiousness, Dutifulness	-.05	.05	.20	.77	-.02	-.07	.12
NEO-PI-R, Conscientiousness, Order	.01	.07	-.07	.72	-.16	-.06	.03
NEO-PI-R, Conscientiousness, Self-discipline	.12	-.36	-.04	.67	.17	.01	-.04
NEO-PI-R, Conscientiousness, Achievement striving	.06	-.52	.06	.66	-.12	.14	-.09
NEO-PI-R, Conscientiousness, Deliberation	-.01	.29	-.12	.63	.32	.06	-.01
NEO-PI-R, Conscientiousness, Competence	.13	-.10	-.24	.60	.17	.12	.17
Factor 5: Prosocial functioning							
SIPP, Social concordance, Aggression regulation	.02	.05	.19	.00	.74	.03	.05
SIPP, Self control, Emotion regulation	.33	.04	-.14	.05	.64	.07	.00
SIPP, Self control, Effortful control	.20	.17	-.16	.31	.60	.09	-.04
SIPP, Social concordance, Respect	.17	-.19	.44	-.16	.52	.04	.06
SIPP, Social concordance, Frustration tolerance	.26	-.28	-.08	.21	.52	.10	-.01
NEO-PI-R, Neuroticism, Hostility	-.05	.04	-.11	-.01	-.82	.00	-.07
NEO-PI-R, Neuroticism, Impulsiveness	-.04	-.14	.11	-.41	-.48	.10	-.03
NEO-PI-R, Neuroticism, Vulnerability	-.24	.34	.29	-.29	-.37	-.10	.09
NEO-PI-R, Agreeableness, Compliance	-.17	.25	.32	.03	.66	.05	.10
NEO-PI-R, Agreeableness, Trust	.10	.06	.03	.04	.44	-.04	.44

TABLE 3. Continued

Variable	Factor Loadings						
	F1	F2	F3	F4	F5	F6	F7
Factor 6: Openness to experience							
NEO-PI-R, Openness, Aesthetics	-.11	-.02	.06	.05	-.04	.75	.00
NEO-PI-R, Openness, Ideas	-.02	-.13	-.16	.13	.16	.69	-.17
NEO-PI-R, Openness, Fantasy	-.01	.22	-.17	-.32	-.12	.64	.08
NEO-PI-R, Openness, Feelings	.12	.06	.16	.05	-.47	.57	.28
NEO-PI-R, Openness, Values	.17	-.15	.20	-.18	.16	.51	-.14
NEO-PI-R, Agreeableness, Tender-mindedness	-.17	.08	.36	.02	.10	.38	.28
Factor 7: Relational functioning							
GAPD, Interpersonal problems, Affiliation	-.26	.19	-.09	.01	.06	.05	-.68
GAPD, Interpersonal problems, Intimacy and attachment	-.38	-.09	-.04	.02	.12	-.01	-.64
GAPD, Interpersonal problems, Cooperativeness	-.16	.19	-.35	-.05	-.33	.06	-.40
SIPP, Relational functioning, Intimacy	.13	.14	-.19	-.32	-.01	.12	.78
SIPP, Social concordance, Cooperation	.05	-.26	.12	.04	.41	.03	.47
SIPP, Relational functioning, Feeling recognized	.40	.08	-.03	-.01	.24	.03	.43
SIPP, Relational functioning, Enduring relationships	.27	.07	-.13	.08	.09	.02	.67
NEO-PI-R, Extraversion, Warmth	-.02	-.21	.10	.09	.05	.16	.69
NEO-PI-R, Extraversion, Gregariousness	-.08	-.43	.02	-.09	.10	-.18	.63
NEO-PI-R, Extraversion, Positive emotions	.28	-.24	-.09	-.02	-.11	.32	.38

Notes. Exploratory Factor Analysis, Oblimin rotation. Factorscores >|.30| are printed in Bold. GAPD = General Assessment of Personality Disorders; SIPP = Severity Indices of Personality Problems (SIPP-118); NEO-PI-R = Revised NEO Personality Inventory. The naming of the factors are partly derived from the original scales, but differ in content after EFA.

DISCUSSION

The aim of this study was twofold: (1) to explore a model of general personality dysfunctioning (GPD); and (2) to investigate if general personality dysfunctioning and specific personality traits (SPT) can be meaningfully distinguished. Our main results suggest that indeed such a model can be derived from existing operationalizations, and that this model remains by and large intact when combined with a FFM personality inventory.

More specifically, when subjecting the operationalizations (i.e., GAPD and SIPP-118) of two of the more influential models of GPD to factor analysis, three cohesive factors emerged. These were named Self-identity dysfunctioning, Relational dysfunctioning, and Pro-social functioning. The largest factor in our model, i.e., Self-identity dysfunctioning, figures prominently in previous research on core features of personality pathology. For instance, self pathology is one of the core dimensions of both the Livesley (2003; GAPD: self-pathology) and Verheul et al. (2008; SIPP-118: identity integration) models. Other salient models, including those of Cloninger (2000) and Parker et al. (2004) also include self pathology, albeit at a lower-order level, and not in a separate domain (i.e., Cloninger, unstable self-image/self-transcendence; Parker, self-defeating/coping). Likewise, Kernberg's structural model (Kernberg & Caligor, 2005) includes identity diffusion as a core feature determining the cohesiveness of personality-organization, and the failure to develop a cohesive self plays a central role in Kohut's (1971) theorizing.

The second factor (i.e., Relational dysfunctioning) and third factor (i.e., Prosocial functioning) that emerged in our GPD model were also in line

with previous work (Benjamin, 2005; Livesley, 2003; Verheul et al., 2008). Relational dysfunctioning resonates with the widely used concept of communion (Tellegen & Waller, 2008; Wiggins, 1991). Communion refers to the motivation and ability to experience intimacy, union, and solidarity. The third factor of our GPD model (i.e., Prosocial functioning) is similar to what has often been referred to as cooperativeness (Cloninger, 2000; Livesley, 2003; Parker et al., 2004). Cooperativeness commonly has a social or societal meaning in terms of the capacity for prosocial behavior, or capacity to work together. However, in our GPD model, it also encompasses (deficits in) self-control relating to affect, aggression, and impulse regulation in the service of prosocial aims. As such, this aspect of GPD connects to what has been alternatively referred to as identity and ego functions (Livesley, 2003), coping (Parker et al., 2004), and primitive defenses (Kernberg & Caligor, 2005).

It is noteworthy that the three GPD factors that emerged from our factor analyses closely match the general definition of personality disorder as proposed by the DSM-5 Personality and Personality Disorders Work Group (American Psychiatric Association, 2011). Although this proposal is still subject to a dynamic and changing process of definition, personality disorders are represented by impairments in identity and sense of self and in the capacity for effective interpersonal functioning. Further, the definition stipulates that an impaired sense of self is evident from disturbed identity and self-direction. Failure to develop adaptive interpersonal functioning is defined by deficits in empathy and intimacy. Again, these differentiated criteria of the proposed general definition of personality disorder bear a striking resemblance to the subscales and facets that emerged from our GPD model.

Regarding our second aim, our results suggest that the factors observed in the GPD model remain largely intact when combined with facets of personality traits (SPT) in a joint factor analysis. In addition to the three factors of the GPD model, four factors associated with the FFM emerged. The Openness to Experience and Conscientiousness factors were most unequivocal in that all the six facets, and only these facets, that were originally part of these domains, comprised these factors. As in most previous studies utilizing the NEO-PI-R in the domain of PD, Openness to Experience was not associated with GPD (Saulsman & Page, 2002), nor was Conscientiousness. The other FFM traits, N, E, and A were subsumed under different factors. Facets of Neuroticism were scattered over different personality dysfunction factors. This finding is in line with the study by Dyce and O'Connor (1998) who showed that, while Neuroticism as a whole was related to all personality disorders, its comprising facets were distributed over various specific personality disorders. Most facets of Extraversion and Agreeableness mixed with putative GPD facets, therefore we renamed these factors as Inactivity and Obliging respectively. It appears that conceptual overlap is highest in these two domains; i.e., that these traits are most readily translated to pathology of the Axis II type, or con-

versely, that GPD factors apparently have (high end) trait-like features. This issue of conceptual overlap or bipolarity (Widiger, Livesley, & Clark, 2009) needs further investigation.

Several methodological limitations of the present study deserve comment. First, in view of the modest number of participants per variable, our findings are in need of cross-validation. Moreover, it is recommended that these future studies include samples with different PD distributions. While the composition of our sample is commensurate to those other published reports on naturalistic convenience samples, it includes relatively few patients with predominant cluster A or C personality pathology. In this regard, it may be noted that the traits being considered for DSM-5 are more pathological. An analysis using these traits might give different results. The prominence of the factor Self-identity dysfunctioning in our study with its predominantly unique loadings is notable, as the concept of self-pathology is both anchored in theory (Kernberg & Caligor, 2005; Kohut, 1971; Livesley, 2003) and clinically relevant and useful for the understanding of personality. Further, it should be acknowledged that the GAPD and the SIPP-118 are relatively recently developed instruments. To date, there is no published data on the psychometric properties of the GAPD, while data are beginning to accumulate on the SIPP-118 psychometrics (Arnevik et al, 2009; Feenstra, Hutsebaut, Verheul, & Busschbach, 2011; Verheul et al., 2008). However, these two instruments are among the primary currently available operationalizations for conducting preliminary tests of the concept of general personality disorder, so prominently featured in the current DSM-5 proposals.

In conclusion, the DSM-5 Personality and Personality Disorders Work Group proposes an alternative model of personality, personality disorder assessment, and classification. The model consists of generic criteria for personality disorder, consisting of severe deficits in self, and in the capacity for interpersonal relatedness, which are combined with personality trait assessment and descriptions of major personality (disorder) types (American Psychiatric Association, 2011). Our study shows that general personality related dysfunction can be meaningfully distinguished from specific personality traits, and we hope that our findings may contribute to the empirical foundation of the DSM-5 proposals for a renewed integrative assessment of personality disorders.

REFERENCES

- American Psychiatric Association (2011). *DSM-5 Development*. Updated June, 21, 2011. Retrieved June, 2011, from American Psychiatric Association website: <http://www.dsm5.org/ProposedRevisions/Pages/PersonalityandPersonalityDisorders.aspx>.
- Arnevik, E., Wilberg, T., Monsen, J. T., Andrea, H., & Karterud, S. (2009). A cross-national validity study of the Severity Indices of Personality Problems (SIPP-118). *Personality and Mental Health, 3*, 41-55.
- Benjamin, L. S. (2005). Interpersonal theory

- of personality disorders: The structural analysis of social behavior and interpersonal reconstructive therapy. In J. F. Clarkin & M. F. Lenzenweger (Eds.), *Major theories of personality disorder* (2nd ed., pp. 157–230). New York: Guilford Press.
- Berghuis, H. (2007). *General assessment of personality disorder* (GAPD). Version 2007. Amersfoort: Symfona groep.
- Buss, A., & Plomin, R. (1984). *Temperament: Early personality traits*. Hillsdale, NJ: Erlbaum.
- Cloninger, C. R. (2000). A practical way to diagnose personality disorder: A proposal. *Journal of Personality Disorders*, *14*, 99–108.
- Costa, P. T., & McCrae, R. R. (1992a). *Revised NEO personality inventory (NEO-PI-R) and the five factor inventory (NEO-FFI): professional manual*. Odessa, FL: Psychological Assessment Resources Inc.
- Costa, P. T., & McCrae, R. R. (1992b). The five-factor model of personality and its relevance to personality disorders. *Journal of Personality Disorders*, *6*, 343–359.
- Dyce, J. A., & O'Connor, B. P. (1998). Personality disorders and the five-factor model: A test of facet-level predictions. *Journal of Personality Disorders*, *12*, 31–45.
- Feenstra, D. J., Hutsebaut, J., Verheul, R., & Busschbach, J.J.V. (2011). Severity Indices of Personality Problems (SIPP-118) in adolescents: Reliability and validity. *Psychological Assessment*, *23*, 646–655.
- First, M. B., Gibbon, M., Spitzer, R. L., Williams, J.B.W., & Benjamin, L. (1997). *Structured clinical interview for DSM-IV Axis I personality disorders* (SCID-I). Washington, DC: American Psychiatric Press.
- Hoekstra, H. A., Ormel, J., & de Fruyt, F. (1996). *NEO-PI-R: Dutch version*. Amsterdam: Hogrefe.
- Horn, J. L. (1965). A rationale and test for the number of factors in factor analysis. *Psychometrika*, *30*, 179–185.
- Kamphuis, J. H., & Noordhof, A. (2009). On categorical diagnoses in DSM-V: Cutting dimensions at useful points? *Psychological Assessment*, *21*, 294–301.
- Kernberg, O. F., & Caligor, E. (2005). A psychoanalytic theory of personality disorders. In J. F. Clarkin & M. F. Lenzenweger (Eds.) *Major theories of personality disorder* (2nd ed., pp. 114–156). New York: Guilford Press.
- Kohut, H. (1971). *The analysis of the self*. New York: International Universities Press.
- Livesley, W. J. (2003). *Practical management of personality disorders*. New York: Guilford Press.
- Livesley, W. J. (2006). *General assessment of personality disorder* (GAPD). Vancouver, BC: Department of Psychiatry, University of British Columbia.
- Livesley, W. J. (2007). A framework for integrating dimensional and categorical classifications of personality disorder. *Journal of Personality Disorders*, *21*, 199–224.
- Pagan, J. L. Oltmanns, T. F., Whitmore, M. J., & Turkheimer, E. (2005). Personality disorder not otherwise specified: Searching for an empirically-defined diagnostic threshold. *Journal of Personality Disorders*, *19*, 674–689.
- Parker, G., Hadzi-Pavlovic, D., Both, L., Kumar, S., Wilhelm, K., & Olley, A. (2004). Measuring disordered personality functioning: To love and work re-visited. *Acta Psychiatrica Scandinavica*, *110*, 230–239.
- Saulsman, L. M., & Page, A. C. (2002). The five-factor model and personality disorder empirical literature: A meta-analytic review. *Clinical Psychology Review*, *23*, 1055–1085.
- Tellegen, A., & Waller, N. G. (2008). Exploring personality through test construction: Development of the multidimensional personality questionnaire. In G. J. Boyle, G. Matthews, & D. H. Saklofske (Eds.), *Handbook of personality theory and testing: Vol. II Personality measurement and assessment*. London: Sage.
- Trull, T. J. (2005). Dimensional models of personality disorder: Coverage and cutoffs. *Journal of Personality Disorders*, *19*, 262–282.
- Verheul, R., Andrea, H., Berghout, C. C., Dolan, C., van Busschbach, J. J., van der Kroft, P.J.A., et al. (2008). Severity indices of personality problems (SIPP-118): Development, factor structure, reliability, and validity. *Psychological Assessment*, *20*, 23–34.
- Verheul, R., Bartak, A., & Widiger, T. (2007). Prevalence and construct validity of

- personality disorder not otherwise specified (PDNOS). *Journal of Personality Disorder*, 21, 359–370.
- Wakefield, J. C. (2008). The perils of dimensionalization: Challenges in distinguishing negative traits from personality disorders. *Psychiatric Clinics of North America*, 31, 379–393.
- Watson, D., Clark, L. A., & Cmielewski, M. (2008). Structures of personality and their relevance to psychopathology: II. Further articulation of a comprehensive unified trait structure. *Journal of Personality*, 76, 1545–1585.
- Weertman, A., Arntz, A., & Kerkhofs, M.L.M. (2000). *SCID-II. Gestructureerd Klinisch Interview DSM-IV As-II Persoonlijkheidsstoornissen*. Amsterdam: Pearson.
- Widiger, T. A., Livesley, W. J., & Clark, L. A. (2009). An integrative dimensional classification of personality disorder. *Psychological Assessment*, 21, 243–255.
- Widiger, T. A., & Mullins-Sweatt, S. N. (2009). Five-factor model of personality disorder: A proposal voor DSM-V. *Annual Review of Clinical Psychology*, 5, 197–220.
- Widiger, T. A., & Simonsen, E. (2005). Alternative dimensional models of personality disorder: Finding a common ground. *Journal of Personality Disorders*, 19, 110–130.
- Widiger, T. A., Simonsen, E. M. D., Krueger, R., Livesley, W. J., & Verheul, R. (2005). Personality disorder research agenda for DSM-V. *Journal of Personality Disorders*, 19, 315–338.
- Wiggins, J. S. (1991). Agency and communion as conceptual coordinates for the understanding and measurement of interpersonal behavior. In W. M. Grove & D. Cicchetti (Eds.), *Thinking clearly about psychology: Vol. 2. Personality and psychopathology* (pp. 89–113). Minneapolis, MN: University of Minnesota Press.
- Zimmerman, M., Chelminski, I., & Young, D. (2008). The frequency of personality disorders in psychiatric patients. *Psychiatric Clinics of North America*, 31, 405–420.