Factor Structure of the Dutch Language Version of the Shedler-Westen Assessment Procedure (SWAP)

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Abstract: The Shedler-Westen Assessment Procedure (SWAP) is a Q-sort procedure for personality assessment. Empirical evidence for the psychometric qualities in the United States thus far is solid, but no such data exist for the Dutch language version. In this study we aim to investigate the higher order factor structure of the Personality Syndrome (PS) scales and Trait Dimension (TD) scales of the Dutch language version of the SWAP-200 (SWAP-200-NL) in a psychiatric outpatient sample (N = 282). For the TD scales Cronbach's α is also calculated. Results show acceptable to good overall reliability (i.e., Cronbach's α). Higher order factor analysis of the SWAP-200 (PS) reveals four maladaptive factors that resemble both the higher order personality traits conceptualized in section III of DSM-5 (APA, 2013), as well as the constructs identified by Widiger and Simonsen (2005) after integrating 18 alternative proposals for dimensional classification. Additionally, High-Functioning Depressive PS was most prevalent in our outpatient sample. While this PS is not described in DSM-5, it is discussed here as a possibly overlooked, clinically relevant construct. Finally, this study replicates previously identified higher order factors of the TD, adding to the instrument's robustness.

Keywords: SWAP-200, factor structure, personality, psychopathology, assessment

Driven by well-known limitations (comorbidity and heterogeneity) of the categorical model of Personality Disorder (PD) classification used in consecutive editions of the *Diagnostic and Statistical Manual of Mental Disorders* (current version: DSM-5; American Psychiatric Association, 2013) (e.g., Clark, 2007; Krueger, Skodol, Livesley, Shrout, & Huang, 2007; Widiger, Simonsen, Krueger, Livesley, & Verheul, 2005), and to provide a more valid and clinically useful tool to assess personality and its pathology, Drew Westen and Jonathan Shedler developed the Shedler-Westen Assessment Procedure (SWAP-200; Westen & Shedler, 1999a, 1999b; and its later version the SWAP-II; Westen & Shedler, 2007). This procedure intends to use clinical observations in a systematic and reliable way to derive valid and clinically meaningful conclusions about a patient's personality (Shedler & Westen, 2004); aiming to bridge the gap between science and practice.

The SWAP is a carefully assembled set of 200 jargon free items regarding personality functioning (Shedler & Westen, 1998). For example: "Tends to see own unacceptable feelings or impulses in other people instead of in himself/herself"; "Tends to express anger in passive and indirect ways"; and "Tends to distort unacceptable wishes or feelings by transforming them into their opposite." The items are scored by trained professionals who know the patient very well, either through use of a narrative based interview like the Clinical Diagnostic Interview (CDI; Westen & Muderrisoglu, 2003) or through therapeutic engagement (minimum of six therapy sessions).

The 200 items are sorted using a fixed distribution of eight categories varying from not descriptive to highly descriptive of the patient (Q-sort procedure). The objective of this approach is to avoid potential rater bias. Considering the principle of rating and ranking, the interpretation of the

items is the same for everyone: How well does this item describe my patient? This helps to avoid reliance on individual style, for example the tendency to score average or extreme (for a full review of this method, see Block, 1961). A scoring program then generates paragraph-length descriptions of the personality syndromes (PS), trait dimensions (TD), and DSM-IV/DSM-5 PD classifications characteristic of the patient (Shedler, 2009). The PS scales are identified by the developers through Q-analysis (Westen & Shedler, 1999b). This is different from conventional factor analysis, since it aims to identify types of people that group together. The interpretation of scales is different from conventional methods as well, since it is based on a prototype-matching approach. This means that an individual's score is correlated with a prototype description for the different syndromes, using the individual's scores on all SWAP items. The TD scales are identified through conventional factor analysis, thus identifying groupings of variables (Westen & Shedler, 1999b), and are scored using *T*-scores.

The goal of the SWAP is to provide the clinician with prototypical information about a patient's personality constellation, describing functionally interrelated psychological processes (concerning affectivity, cognition, motivation, interpersonal functioning, coping strategies, and defenses). These are captured in the PS descriptions. The TD scales are then used to fine-tune the PS or prototype(s). Together they are used to create a clinically useful case formulation and assist in future treatment planning. The use of prototypes, or syndromes, is a major advantage of the SWAP, since clinicians appear to prefer thinking in prototypes about their clients rather than purely thinking in categorical behaviorally defined criteria and trait dimensions (Spitzer, First, Shedler, Westen, & Skodol, 2008). This approach has important advantages: it is clinically useful, they provide richer descriptions and if used well, are reliable. But there are also disadvantages, like a vulnerability to confirmatory bias and other heuristics (for an overview, see Westen, 2012).

The SWAP-200 gained popularity due to its empirically supported psychometric qualities and clinical relevance as found in the US and other countries (Shedler, 2015). However, other researchers (i.e., Widiger, 2007; Wood, Garb, Nezworski, & Koren, 2007) raised questions, in particular concerning its reliability across observers and situations and its test-retest reliability (for a review, see Blagov, Bi, Shedler, & Westen, 2012; Shedler & Westen, 2007). The SWAP-200 is translated into more than 20 languages (Lang & Shechter, 2011) including Dutch (SWAP-200-NL; Egger, Van der Heijden, Derksen, & Kuijpers, 2012). For purposes of clinical relevance we chose to focus on the SWAP-200, since it is more thoroughly investigated and it is used more in clinical practice then the SWAP-II. The goal of the current investigation is to identify the higher order factor structure of the original SWAP-200 PS and TD scales in a Dutch population of general mental health care patients, using explorative principal component analyses. We will compare the found higher order factors to the commonly reported five dimensions of personality (Waszczuk, Kotov, Ruggero, Gamez, & Watson, 2017; Widiger & Simonsen, 2005) to investigate if the clinically relevant prototypical approach of the SWAP-200 is consistent with the literature (which is the case for dimensional scales). The expectation is that higher order factors of the PD and TD scales resemble those commonly found in personality research.

Materials and Method

Participants

Participants were 65 clinicians (75% female, M_{age} = 41.1 years; *SD* = 12.8), of various theoretical orientations and years of clinical experience who scored 282 patients using the SWAP-200-NL (output data can be found in the Electronic Supplementary Materials, ESM 1 and 2). Patients sought voluntary outpatient treatment in general mental health care, 59% was female. Mean age was 31.3 years (*SD* = 13.8) and education level was 65% secondary or lower education and 33% graduates. The vast majority was Caucasian (91%). Based on information of patient's files, 38% was previously diagnosed with a depressive disorder and 19% with an anxiety disorder. In addition, 29% were previously diagnosed with a personality disorder, the Personality Disorder Not Otherwise Specified was most prevalent (13%), followed by Borderline Personality Disorder (7%), Avoidant Personality Disorder (5%), and Dependent Personality Disorder (3%).

Of the 65 clinicians, the majority had one or multiple registrations according to the Dutch register of professions in individual health care. Basic registration as a licensed health care psychologist (> 3 years of postmaster clinical education) was obtained by 39 psychologists. Of these, one was also registered as a psychotherapist (> 5 years postmaster clinical education) and seven were registered as a licensed clinical psychologist (corresponding to PsyD in the US with > 7 years postmaster clinical education). Six psychologists were registered as licensed psychotherapist only, and one was registered as psychiatrist (> 7 years postmaster clinical education). In addition, 19 were postmaster trainees with 1–3 years of supervised clinical experience. In the registered clinicians (*n* = 46), mean length of registration was 7.3 years (*SD* = 7.7). In their work, they made use of multiple theoretical orientations (as well as combinations): 35% psychodynamic, 77% cognitive behavioral, 32% interpersonal, 37% client centered, 14% was neuropsychological, and 12% reported a non-specified orientation.

Measures

Shedler-Westen Assessment Procedure, Dutch Language Version (SWAP-200-NL)

The main elements of the SWAP-200-NL are already introduced above. Additionally, it is important to understand the different scales of the SWAP-200-NL this study focuses on. Analyses will be conducted on the PS and TD scales as constructed by Westen and Shedler (1999a, 1999b), which are psychometrically very different types of scales as described in the introduction.

The SWAP-200-NL was translated by Egger et al. (2012) according to procedures described by Brislin (1986), that is, the forward-backward translation method. The final translation was submitted for verification by Westen and Shedler and was confirmed after final alterations. The psychometric qualities of the SWAP-200 are thoroughly empirically investigated in the US and other countries (e.g., Germany, Italy). In all studies to date, inter-rater reliability of all SWAP-200 diagnostic scales is above .80 (Marin-Avellan, McGauley, Campbel, & Fonagy, 2005; Westen & Muderrisoglu, 2003). Discriminant validity between conceptually unrelated scales is found to approximate zero (Shedler & Westen, 2007) and convergent validity between .26 and .60 (Smith, Hilsenroth, & Bornstein 2009; Westen & Muderrisoglu, 2003).

Clinical Diagnostic Interview (CDI)

The CDI (Westen, 2002) is a systematic clinical interview based on the interviewing methods often used by experienced clinicians. It is designed to mirror and systematize this process. The interview consists of a list of questions that ask patients to tell narratives about their characteristics, their current lives and biographical information. The interview takes approximately two and a half hours and can be conducted over several sessions if desirable.

Procedures

Preceding participation, clinicians working in outpatient centers of large Dutch mental health institutes and/or private practices, followed a 3-hour training in which the use and background of the SWAP-200-NL was explained as well as the use of the SWAP-200-NL scoring program and the CDI. Clinicians were instructed to use the SWAP-200-NL either after a minimum of six therapy sessions with their patients or after using the CDI. Data were collected via a website. Support was offered by email, telephone, or face-to-face contact. Clinicians completed a questionnaire for demographic information about their patients and consecutively scored the 200 SWAP items. Data were collected anonymously and linked by a randomly generated code. The study was carried out in accordance with the Declaration of Helsinki and the Guidelines for Good Clinical Practice established by the International Conference on Harmonisation (CPMP = ICH = 135 = 95).

Statistical Analyses

SPSS 23 was used for data analysis. Cronbach's alpha and Average Inter-Item Correlations (AIC) were calculated to measure internal consistency of the TD scales of the SWAP-200-NL. According to Nunnally and Bernstein (1994) reliability coefficients of .70 are considered acceptable. Clark and Watson (1995) recommended a range of .15–.50 for the ideal mean interitem correlation, with higher ranges (i.e., .40–.50) for narrower constructs. Correlations between PS were calculated. According to Hinkle, Wiersma, and Jurs (2003), correlations of $r = .70–.90$ are considered high and correlations of $r = .50–.70$ are considered moderate. The higher order factorial structure of the SWAP-200-NL was examined using explorative principal component analysis (PCA) with promax rotation for the original PS and TD scales (syntax input can be found in ESM 3 and 4). We chose PCA because we were interested if the scales contributed to unique factors (explaining all variance), not in scale construction (correlation between scale and unique factors). The number of components to retain was based on results of parallel analysis (PA) with 1,000 permutations of the raw dataset. We used the 95th percentile for retaining factors (syntax input can be found in ESM 5).

Results

SWAP-200-NL Personality Syndromes

Distribution

Distribution of the PS within our sample is presented in Table 1. The prevalence of PS, which have overlap with DSM-5 PD categories show resemblance with prevalence numbers of personality disorders within psychiatric samples in the Netherlands as reported by Torgersen (2014). An exception is Antisocial-Psychopathic PS which seems slightly overrepresented in our sample.

Higher Order Factor Structure

With PCA and promax rotation, four bipolar factors were identified (in parentheses eigenvalues of the PCA (EV) and eigenvalues of the parallel analysis (EV_{PA})) (output data can be found in ESM 6 and 7):

(1) Constraint versus Emotionally driven ($EV_{observed} =$ 4.31; $EV_{PA} = 4.26$) containing Obsessional PS, High-Functioning Depressive PS, Health, and negative loadings on Histrionic PS, Dysregulated PS and Dependent-Victimized PS,

Table 1. Distribution of SWAP-200-NL PS in a Dutch sample of patients in general mental health care (N = 282) compared to corresponding DSM-5 PD in a Dutch psychiatric population

T-score	55–60		≥ 60		Range in % in Dutch psychiatric population for corresponding DSM-IV/5 PD
Scale	N	%	N	%	
Dysphoric	58	21	37	13	N/A
Antisocial-psychopathic	25	8	41	15	0.0–13.7
Schizoid-schizotypal	39	14	26	9	0.0–21.3
Paranoid	34	12	19	7	0.0–28.7
Obsessional	43	15	27	10	3.4–34.6
Histrionic	33	12	30	11	1.0–15.2
Narcissistic	15	5	10	4	0.0–25.6
Avoidant	62	22	31	11	2.1–31.6
High-functioning depressive	58	21	78	28	N/A
Dysregulated	49	17	47	17	1.7–42.7
Dependent-victimized	30	11	34	12	1.4–20.5
Hostile-externalizing	21	7	24	9	N/A
Health	47	17	94	33	N/A

Note. If used categorically, cut-off points of the SWAP-200 PS scales are as follows: $T \leq 55$: limited match with PS or PS not clinically relevant; $T = 55$–60: moderate match or features of PS; $T \geq 60$: strong match or PS present. PD = personality disorder; PS = personality syndrome.

(2) Negative emotionality versus Emotional stability ($EV_{observed} = 2.52$; $EV_{PA} = 2.44$) containing Paranoid PS, Dysregulated PS, Hostile-Externalizing PS, Antisocial PS, and a negative loading on Health and High-Functioning Depressive PS,

(3) Compliance versus Antagonism ($EV_{observed} = 2.38$; $EV_{PA} = 2.35$) containing Dysphoric PS, High-Functioning Depressive PS, and a negative loading on Antisocial-Psychopathic PS,

(4) Introversion ($EV_{observed} = 1.36$; $EV_{PA} = 1.31$) containing Schizoid-Schizotypal PS, and Avoidant PS and a negative loading on High-Functioning Depressive PS. These factors accounted for 81.3% of the variance. The factor loadings are presented in Table 2.

Correlations

PS scales intercorrelations are presented in Table 3 (moderate to high correlations only). Average within higher order factor correlations (.38–.68) are low to moderate, but higher than average between higher order factor correlations (.25–.28), which are negligible (output data can be found in ESM 8).

SWAP-200-NL Trait Dimensions

Reliability

For the TD a median α of .70 was found, with a range of .43–.90. For 6 of the 12 scales Cronbach's α was acceptable to good (i.e., Cronbach's α = .70–.90). α was moderate (α = .50–.69) for Schizoid Orientation, Oedipal Conflict, Emotional dysregulation, Thought Disorder and Dissociation and low (i.e., α = .43) for Sexual Conflict. AIC were overall sufficient ranging from .20 to .38 for 8 scales.

Higher Order Factor Structure

Four factors were identified based on PA and interpretability (output data can be found in ESM 9). These four factors account for 58.3% of the variance: (1) Antagonism ($EV_{observed} = 4.31$; $EV_{PA} = 1.37$) containing Narcissism, Psychopathy, and a negative loading on Dysphoria, (2) Introversion ($EV_{observed} = 4.31$; $EV_{PA} = 1.37$) containing

Table 2. Factor loadings for PCA with promax rotation of SWAP-200-NL PS scales

Scale	Constraint versus emotionally driven	Negative emotionality versus emotional stability	Compliance versus antagonism	Introversion	Percentage explained variance per factor
Dependent-victimized	−.78				33.18
Histrionic	−.69				
Obsessional	.87				
Dysregulated	−.50	.68			19.35
High-functioning Depressive	.57	−.63	.76	−.51	
Health	.78	−.76			
Paranoid		.83			
Hostile-externalizing		.77			
Antisocial-psychopathic		.62	−.84		18.33
Dysphoric			.91		
Avoidant			.69	.65	10.48
Schizoid-schizotypal				.95	
Narcisisstic					

Note. Absolute factor loadings > .50 are in bold. PCA = principal component analysis; PS = personality syndrome.

Table 3. Intercorrelations among the PS scales of the SWAP-200-NL

	Dependent-victimized	Histrionic	Obsessional	Dysregulated	High-functioning depressive	Health	Paranoid	Hostile-externalizing	Antisocial-psychopathic	Dysphoric	Avoidant	Schizoid-schizotypal	Narcissistic
Dependent-victimized	1												
Histrionic	.75**	1											
Obsessional		-.50**	1										
Dysregulated			-.53**	1									
High-functioning depressive			.71**	-.56**	1								
Health			.51**	-.56**	.87**	1							
Paranoid				.52**	.53**		1						
Hostile-externalizing							.68**	1					
Antisocial-psychopathic						-.63**		.63**	1				
Dysphoric									-.63**	1			
Avoidant									-.67**	.75**	1		
Schizoid-schizotypal											.75**	1	
Narcisisstic												.65**	1

Notes. Only correlations > .50 are shown. **Correlation is significant at the .01 level (two-tailed). PS = personality syndrome.

Schizoid, Dissociation, and a negative loading on Psychological health, (3) Affective Instability ($EV_{observed}$ = 4.31; EV_{PA} = 1.37) containing Emotional dysregulation and a negative loading on Obsessionality, (4) Problematic Sexuality ($EV_{observed}$ = 4.31; EV_{PA} = 1.37) containing Oedipal conflict, Sexual conflict, and a negative loading on Hostility. The factor loadings are presented in Table 4.

Discussion

To the authors' knowledge, this is the first psychometric investigation of the higher-order factor structure of the SWAP-200-NL. It demonstrates that a four higher order factor solution, best fits the 12 PS scales: Negative emotionality versus Emotional stability (NS), Introversion (Iv), Compliance versus Antagonism (CA) and Constraint versus Emotionally driven (CE). The correlational pattern hence suggests minimal comorbidity with PS not within the same higher order factor. Prevalence analysis supported the presence of a clinically relevant PS that is not captured by DSM-5 section II, that is, High-functioning depressive PS.

Westen, Shedler, Bradley, and DeFife (2012) did report a hierarchical structure of PS scales of the SWAP-II in a large sample of patients from 1,201 US psychiatrists and clinical psychologists. The differences in item set (about 90% overlap), method (Q-analysis), and type of dataset (mainly based on current treatment), however, make comparison with our present data irrelevant.

The factors identified here resemble those commonly found in other studies on personality: Conscientiousness, Antagonism, Negative emotionality, and Internalizing (Waszczuk et al., 2017). Moreover, they found factors considerably overlap the trait dimensions described in section III of DSM-5 and the constructs identified by Widiger and Simonsen (2005), after integrating 18 alternative proposals for dimensional classification. They integrated maladaptive personality traits from several instruments and found the following four common constructs: Emotional dysregulation versus emotional stability, Extraversion versus introversion, Antagonism versus compliance, Constraint versus impulsivity. Even though the considerable overlap, there are important differences. (1) Our factor NS encompasses more than the corresponding construct (Emotional dysregulation vs. emotional stability) proposed by Widiger and Simonsen, particularly suspicion and oppositional tendency are more heavily represented. (2) Our factor Introversion does not represent the externalizing pole represented in the corresponding construct (Extraversion vs. Introversion). This pole is represented in the factor Constraint versus Emotionally driven with the scale Histrionic PS. It can be hypothesized that the facet externalizing is conceptually linked with (dis)abilities to constrain oneself. (3) The factor

Table 4. Factor loadings for PCA with promax rotation of SWAP-200-NL TD scales

Scale	Antagonism	Introversion	Affective instability	Problematic sexuality
Dysphoria	−.74			
Narcisissm	.77			
Psychopathy	.76			
Psychological health		−.76		
Shizoid orientation		.78		
Dissociation		.61		
Obsessionality			−.69	
Emotional dysregulation			.74	
Hostility				−.52
Oedipal conflict				.75
Sexual conflict				.58
Thought disorder				

Note. Absolute factor loadings > .50 are in bold. PCA = principal component analysis; TD = trait dimension.

CA lacks the suspiciousness component of the corresponding construct (Antagonism vs. compliance) but also entails dysphoria. Lastly (4) the factor CE encompasses additional components to the corresponding construct (Constraint vs. Impulsivity), more specifically the Histrionic and Dependent-victimized scales, but lacks the impulsivity component (which is however represented within the factor Compliance vs. Antagonism).

The reliability of the TD scales is lower than found in US samples. Inspection revealed that the scales contain very few items (between six and eight), which can explain lower reliability (Emons, Sijtsma, & Meijer, 2007). However, Shedler and Westen (2004) found Cronbach's αs to be generally larger than .70. This discrepancy may lie in a substantial difference in population size and variability, $N = 530$ in the US sample versus $N = 282$ in our current sample. The higher order TD factors show a different structure then identified by Widiger and Simonsen (2005). The factors Antagonism and Introversion, match, respectively with the constructs Antagonism versus compliance and Introversion versus extraversion. The factor Affective instability shows overlap with Emotional dysregulation versus emotional stability and Constraint versus impulsivity, which makes it difficult to interpret. Lastly, the factor Problematic sexuality appears as a separate factor. This finding may point out an overlooked trait. The lexical approach that founded the Five Factor Model (FFM; Costa & McCrae, 1992), for example, used exclusion criteria which consequently may have caused elimination of personality constructs like sexuality (Norman, 1967; Schmitt & Buss, 2000). The found factors in this study do however show strong resemblance with those identified by Shedler and Westen (2004). Therefore, this study adds to the robustness of the instrument by an overall replication in a Dutch sample of previously found higher order TD factors in a US sample.

The correlations between PS not within the same higher order factor are negligible, which suggests that overlap or comorbidity between these PS is low. As compared to Lenzenweger, Lane, and Loranger (2007), these results implicate stronger discriminative PS scales than categories of the DSM-IV/5. Looking into the prevalence numbers (which are generally in line with the general psychiatric population for most PS), the relatively high prevalence of the scale High-Functioning Depressive PS is noteworthy. This PS was earlier identified by Westen and Shedler (1999b). This construct most probably fits a considerable number of patients who are currently overlooked because of functional adaptability, but who suffer significantly internally. A selection of items that capture this factor are: "Is capable of sustaining a meaningful love relationship characterized by genuine intimacy and caring" and "Is psychologically insightful; Is able to understand self and others in subtle and sophisticated ways," but also "Tends to be self-critical; sets unrealistically high standards for self and is intolerant of own human defects" and "Tends to feel listless, fatigued, or lacking in energy." Clinically, this finding makes sense since the SWAP-200(-NL) can thus contribute to identification and treatment of these clients. Another possible understanding of the found high prevalence, can be that it represents a more general factor of personality pathology as proposed by (among others) Rushton and Irwing (2011), considering the moderate to high correlations with all higher order factors. This hypothesis deserves further investigation.

Also, the results adds positively to the discussion of the existence of a Depressive PD (the corresponding scale Dysphoric PS had a prevalence of 13.1%), which was presented in the appendix of the DSM-IV but is totally omitted in the DSM-5. Westen and Shedler (1999b) found an even higher prevalence of this factor (over 20%). A possible understanding of these high prevalence is that these PS

scales, as well as the earlier discussed TD factor Problematic sexuality, assess constructs that are not captured by for example DSM-5 and FFM and therefore imply unique qualities of the SWAP-200(-NL).

Several limitations of this study must be considered. First, the online scoring program, although robust, did not support the option in the original/US program to visually cluster items by given score, which would give clinicians a clear overview for reevaluation. One can imagine that scrolling down all items for reevaluation can lower reliable input given the extra effort and time. Clinicians might be tempted to take short-cuts or be more easily satisfied. Second, for this study we choose to also include novice psychologists (1–3 years postmaster clinical experience). This might have influenced the results, since the instrument expects the user to make effective use of transference and counter-transference, an ability usually developed by face-to-face time, which builds with years of experience. In previously done research clinicians were more experienced (Shedler & Westen, 2007). Nevertheless, several findings showed strong comparison with earlier research. A final limitation is that in the current study, a combination of SWAP-200-NL profiles based on a minimum of six therapeutic sessions and based on the CDI was used for analyses. A minimum of six therapeutic sessions is very broad and could imply therapeutic relations that exist more than a year. We did not collect data on the duration of therapeutic sessions. Differences in the time clinicians have spent with their patients may thus have varied greatly, possibly influencing how well one knew their patients. This study does not differentiate on this area, which would actually be a very interesting aspect to look into further.

Notwithstanding the above limitations, the present study provides a first exploration of the SWAP-200 in a Dutch sample. However, it is necessary that future research focuses on inter-rater reliability and test-retest reliability and validity to get more insights into the instrument's robustness. Furthermore, interesting research questions concern whether reliability or validity statistics differ between experienced versus novice clinicians or between SWAP-200-NL profiles based on the CDI or based on a certain number of therapeutic sessions.

In conclusion, the prototype-matching approach of the SWAP-200-NL may be regarded as a clinically useful and relevant instrument for the identification of personality pathology as empirically conceptualized. Also, it can capture personality constructs, such as the High-Functioning Depressive PS, that may be easily overlooked in clinical practice. We therefore think that this study will advocate mfurther investigation of the psychometric qualities of the SWAP-200-NL and may also stimulate personality theory research, for instance on the SWAP PS and their refinement.

Electronic Supplementary Materials

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