The latent structure of a Swedish version of Wallerstein's Scales of Psychological Capacities

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Abstract

The latent structure of a Swedish version of Wallerstein's Scales of Psychological Capacities (PSYCAP) was tried with confirmatory (CFA) and exploratory factor analyses (EFA), based on PSYCAP ratings for 207 patients with severe psychiatric disorder. As a first step, the original theoretical model with three types of capacity (capacity to relate to self, capacity to regulate self, and capacity to relate to others) was tried with a CFA. This model had a poor fit to the data, as estimated with a number of fit measures. PSYCAP data was then entered into an EFA, which suggested an alternative model with three factors. The fit-test of this model suggested that the fit was reasonable. The three factors of the alternative model were used to compute subscales, and a satisfying reliability was established. The subscales also demonstrated adequate ability to discriminate between subjects at different levels of psychological functioning, as assessed with Kernberg's concept of personality organization. This study provided some support to the PSYCAP as a personality measure based on an integrative theoretical model. Some of the problems with using CFA on personality data were highlighted.

There is a growing interest in integrative models of the mind (Jensen, Bergin, & Greaves, 1990; Spaulding, 1994; Wachtel, 1997). An important contribution in this line of work is the formulation of the concept of psychological capacity (Wallerstein, 1988a; 1990), defined as an accessible psychological resource that should be critical for psychological adjustment. Wallerstein and his colleagues (1988a; Wallerstein et al., 1989) defined a set of seventeen psychological capacities in terms of surface themes (Wiggins, 1982), in a way that "adherents of all prevailing psychodynamic theoretical perspectives can agree are attributes that comprehensively describe personality functioning and that will necessarily shift if there is 'underlying' change in intrapsychic structure, however those intrapsychic structures or the structural change are conceptualized" (Wallerstein, 1988b, p. 255). A subject's psychological capacities may be normally unfolded or they may be impaired, and the cause of impairment might be 1) a genetically limited emotional reactivity; 2) the missing of a critical period of empathic interaction with a mother figure; 3) an impaired parental environment or 4) an intrapsychic conflict (Zilberg, Wallerstein, DeWitt, Hartley, & Rosenberg, 1991).
Initially, the set of psychological capacities were organized into three groups: 1) relationship with self, 2) regulations of self and 3) relationship with others were described (DeWitt, Hartley, Rosenberg, Zilberg, & Wallerstein, 1991; Wallerstein et al., 1989). The capacities should be mildly to moderately correlated to each other, and other psychological resources should either be derived from these seventeen capacities or relatively unimportant in helping to achieve an adaptive psychological functioning.

To assess the seventeen psychological capacities, Wallerstein and his coworkers constructed the Scales of Psychological Capacities (SPC) (Wallerstein, 1988b). The SPC measures the relevant directions of deviation for each capacity, basically of exaggerated functioning, inhibited functioning, and sometimes also of deformed functioning with one, two, or three variables. In all there are 38 variables, grouped according to the three different types of psychological capacity (capacity to relate to self, regulate self, and relate to others). To guide assessment of a subject's psychological capacities, a manual was constructed (Wallerstein et al., 1989) where definitions of normal presence of the individual psychological capacities are given along with clinical vignettes and descriptions of problems that are relevant for each psychological capacity. The SPC recognizes that a subject may have problems with a certain psychological capacity in more than one direction which implies that problems with a psychological capacity are not bipolar but may well be dualistic or pluralistic. For example, a subject who has problems to empathize with others may be egocentric and/or emotionally blunting, and/or (s)he may have a tendency to become emotionally absorbed. Summing up, the concept of psychological capacity represents an effort to define the common denominator within psychodynamic theory, it also suggests a list of small building-blocks of mental activities that may prove useful in a psychodynamic-cognitive model.
A Swedish version of the Scales of Psychological Capacities, the PSYCAP, has been designed, and its interrater reliability and internal consistency has been examined in two studies (Sundin, Armelius, & Nilsson, 1994). On the basis of the reliability studies Sundin et al. (1994) revised the PSYCAP and 15 items were reformulated. These reformulations did not alter the conceptual structure of Wallerstein's Scales of Psychological Capacities; a) the 38 items were still arranged in three categories, b) a subject may exhibit problems with a certain psychological capacity in one, two or three directions. A back-translation confirmed that the Swedish version was true to the original SPC, except for the items that we had reformulated. In a later study (Sundin & Armelius, 1998), the PSYCAP was shown to produce a substantial amount of information independently of adjustment, a finding that supported the PSYCAP as a valid personality measure. The PSYCAP is shown in Table 1. For the whole scale (38 PSYCAP items) interrater reliability and internal consistency was adequate (ICC [1,1] was .64 and .65 respectively, α was .84). When treating the items

designed to measure each of the three types of capacity as subscales (I. the Self-scale, II. the Selfregulation-scale, and III. the Relationship-scale), the internal consistencies were less encouraging (for the three subscales, α was .64, .27. and .72 respectively). The present study examined the empirical validity of the theoretical assumption that there are three types of capacities by means of a theory-testing factor analysis.

Table 1 goes about here

Methods

Subjects

This study involved two samples. The first sample consisted of 27 psychiatric inpatients, excluded were geriatric patients and drug-abusers, patients with organic syndromes and long-standing psychotic disorders. The average age of the psychiatric inpatients was 35 years, 39% of them were women. The second sample contained 180 subjects with severe psychiatric illnesses who were inpatients at small treatment units that provide a special type of psychiatric treatment and care to small groups of inpatients in family-like settings. (Armelius, 1991). The average age was 30 years (sd =8), 46% of the patients were female.

Instruments and procedures

DSM-III-R

The psychiatric inpatients were diagnosed according to the DSM-III-*R* (American Psychiatric Association, 1987). For the majority of the subjects, diagnoses were made retrospectively by expert clinicians on the basis of journal data and a detailed knowledge of their treatment. 68% of the patients in this study had an Axis I diagnosis as main diagnosis, including 42% with schizophrenic disorder. Eleven percent of the patients qualified for an Axis II diagnosis but had no Axis I diagnosis. The most common diagnosis was borderline personality disorder. Twenty-one percent had not been diagnosed according to the DSM-III-R.

PO

All participants were also given a psychodynamic diagnosis according to Kernberg's (1975) concept of personality organization (PO). The concept of PO resonates the theoretical assumption that there are three qualitatively different types of psychic structure, neurotic PO (NPO), borderline PO (BPO), and psychotic PO (PPO)., where PPO is on the lowest level of mental health, NPO is on the highest and BPO is in-between (1990). The PO diagnoses was made by clinicians and clinical researchers who assessed three aspects of the subject's psychological functioning: degree of identity integration, level of defensive operations and reality testing. Assessments were made on a five-point rating-scale on the basis of information culled from a structural interview (Kernberg, 1981). These assessments were then summarized into a PO diagnosis. Support for interrater reliability (Armelius, Sundbom, Fransson, & Kullgren, 1990; Kullgren, 1987) and validity (Kullgren & Armelius, 1990; Sundbom, Kullgren, & Armelius, 1989) of assessment according to PO has been presented. In our two samples, 113 patients were diagnosed with PPO, 62 had BPO, and 27 were deemed to have NPO. 5 patients had not received a PO diagnosis.

PSYCAP

All subjects participated in an individual interview following a format (Sundin, 1993) developed to collect information for assessments with the PSYCAP. The interviews were conducted and video-recorded by a group of ten clinicians and clinical researchers who also

did independent assessments of the 38 PSYCAP items, guided by the manual (Wallerstein et al., 1989). Assessments were made on a four-point measurement-scale where scale-point '0' indicates a normal capacity, and scale-points '1', '2', and '3' measure different degrees of severity of personality problems. To secure a homogenous interview style and reliable PSYCAP assessments, the judges met regularly. The judges reported that they often had difficulties to obtain information from the subjects for the two items that measure the capacity to regulate sexuality. A preliminary inspection of the independent PSYCAP ratings suggested that all items had a satisfying interrater reliability except for these two items, and they were therefor excluded from further analyses, leaving us with data on 36 PSYCAP items.

Statistical procedures

To examine the conceptual structure of the 36 items PSYCAP, we computed a confirmatory factor analysis (CFA), using AMOS (Analysis of Moment Structures) (Arbuckle, 1997) statistical package. In contrast to an exploratory factor analysis (EFA), which is a theory-generating procedure that determines the number of factors and whether the factors are correlated or uncorrelated, the CFA provides researchers with a theory-testing procedure where a model is created in advance, based on a strong theoretical (or empirical) foundation (Stevens, 1996). The model specifies the number of unobserved factors, whether these factors are correlated or uncorrelated, and which variables will load on which factor (or factors). The residuals for the latent variable value's structural equation latent variables are also included in the model ("v error").

With AMOS, the adequacy of the model based on the researchers' hypothesis is tested with an overall chi square (χ^2). This chi square statistic estimates the fit of the model to the data, and p is the probability of getting as large a discrepancy as occurred with the sample, if the hypothesis that the model fits the population is true. Chi-square is a badness-of-fit measure in the sense that a small chi-square corresponds to good fit and a large chi-square to bad fit. Zero chi-square corresponds to perfect fit. Thus, a nonsignificant chi-square value ($p > .05$) indicates a good fit between the model and the data structure. However, there are several problems with this statistic, maybe the most important is that it is sensitive to departures from multivariate normality (Jöreskog & Sörbom, 1983). Research into impact of non-normality distributed data has suggested that the chi-square value tend to be positively inflated and thus to reject too frequently fitted CFA models (Curran, West, & Finch, 1996; Hu, Bentler, & Kano, 1992). Second, in more complex problems, the chi square statistic will nearly always be statistically significant (Marsh & Hocevar, 1985). A third problem is that it is sensitive to sample size; with increasingly large samples the more likely the rejection of the model and the more likely a Type II error (Bentler & Bonett, 1980; Cochran, 1952; Gulliksen & Tukey, 1958; Marsh & Balla, 1994).

Therefor, several writers have recommended that the researcher report multiple indexes of fit, which evaluates the fit of the model slightly different (Browne & Mels, 1992; Hoyle & Panter, 1995; Hu & Bentler, 1995; Jaccard & Wan, 1996), and along with the overall chi square test, AMOS provides a large number of other fit indexes. Following Browne and Mels (1992), we elected to report overall chi square (χ^2), relative chi-square (χ^2 / df), and RMSEA (the root mean square error of approximation) with 90% confidence interval. The relative chi-square (χ^2 / df) accounts for the degrees of freedom needed to fit the model, and is an attempt to make the test statistic less dependent of sample size (Wheaton et al., 1977). Different ratios have been suggested to be indicative of a satisfactory fit. Marsh and Hocevar (1985) suggested that ratios of 5.00 or less are reasonable, Carmines and McIver (1981) suggested that ratios below 3.00 are indicative of an acceptable fit, while Byrne (1989) argued that only a ratio below 2.00 represents an adequate fit between the hypothetical model and the sample data. The RMSEA determines the proportion of variance not explained by the model

and thus provides a 'badness-of-fit' estimate. This fit statistic has been found to be relatively unaffected by sample size, and shows the model's badness of fit per degree of freedom at various model complexity levels (Marsh & Balla, 1994). According to Browne and Cudeck (1993), a value of 0.08 or smaller for RMSEA indicate a close fit while an RMSEA greater that 0.1 suggests that the model has a poor fit. A 90 percent confidence interval of an RMSEA value, especially its left endpoint, and a test of RMSEA <.05 is informative for evaluation of the fit of a model (Browne & Cudeck, 1993; Marsh & Balla, 1994).

AMOS also provides comparative fit statistics, which compares the specified model with a null model (or independent model), which assumes no common factors. We elected CFI (the comparative fit index), which is a normed fit index that performs well at different sample sizes (Bentler, 1990). CFI values fall in the range from 0 to 1, values close to 1 indicate a very good fit.

Following the data structure theory implicit in the assumption of three types of psychological capacity (Wallerstein, 1988b), we specified a model with three unobserved factors. According to this model, PSYCAP v1-v17 would cluster to form the first factor, which we called I Relations to self, PSYCAP v18-v23 would belong to the second factor, II. Selfregulation, and the remaining PSYCAP items, v24-v36, would cluster to form the third factor, labeled III. Relations to others. Also based on the theoretical model (Wallerstein, 1988a), we assumed that the correlations between the three unobserved factors would be positive, and mild to moderate. This model was compared to the independence model (or null model), assuming no underlying structure. The independence model represents the assumption that the PSYCAP measures general severity of psychological problems.

RESULTS

The latent structure of the PSYCAP

A CFA was undertaken to test the theoretically instigated pattern with three types of capacities; capacity to relate to self, capacity to regulate self, and capacity to relate to others (Wallerstein, 1998b). In line with DeWitt et al (1991), we assumed a weak to moderate correlation between the three latent factors. The model was built in AMOS, and PSYCAP data for the two samples (n=207) were used.

As is shown in Table 2, the results indicated a poor fit between the empirical data and the specified model (listed as *Model B. Original* in Table 2). Overall chi square was very large (χ^2 = 2400.38) and so was relative chi square (χ^2 / df =4.06). RMSEA was 0.12, which indicates that a notable portion of variance was not explained by the model. A comparison of Model B with the independence model, which is built on the assumption that the variables in the model are completely uncorrelated, the original model offers a slightly improved fit to the data structure (CFI = .80). The three subscales were moderately to strongly related to each other (a moderate Pearson correlation was obtained between factors 1 and 2 (.64) and factors 2 and 3 (.55), the correlation between factors 2 and 3 was strong (.95).

Table 2 goes about here

In an attempt to improve the original model, we performed an exploratory factor analysis (EFA) with oblique rotation on the basis of the PSYCAP ratings for the two samples (n=207). Ten factors with eigenvalues greater than one (7.8, 4.7, 2.5, 1.9, 1.7, 1.6, 1.2, 1.1, 1.1, 1.0) were identified. Scree plot criteria (Cattell, 1966) to determine the number of meaningful factors indicated that the factor structure was best described as having three factors, which

was the number of factors specified in the original model. The three largest factors accounted for 22.6, 13.1, and 6.9.respectively (or 41.5% of the total variance explained). Table 3 shows all loadings above $|.50|$ on the three largest oblique factors.

Table 3 goes about here

In all, 18 of the 36 PSYCAP variables had loadings > $|.50|$ on one of the three factors, two of these variables loaded above $|.50|$ on two factors. This model (*Model D. EFA* in Table 2) was tested with a CFA, based on the same set of PSYCAP data (n=207). As is shown in Table 2, χ^2 suggested that this model had a poor fit to the data. In contrast, the results from the relative chi square test (χ^2 / df = 2.46) and the RMSEA (.08) suggested that the fit between Model B had an acceptable fit. This model also had a substantially improved fit compared to the independence model, suggested by CFI (.96).

PSYCAP subscales

Three subscales were constructed on the basis of Model D EFA. Five variables loaded above $|.50|$ on factor 1, four of them dealt with depressed mood and one variable tapped negative image of self. This factor was named *PSYCAP1 Capacity to handle negative affects*. The second factor carried 6 variable loadings above $|.50|$, all of which dealt with difficulties to manage impulses and affects, and to follow socially accepted rules and conventions. This factor was labeled *PSYCAP2 Capacity to abide by standards and rules*. The third factor had 9 variable loadings above $|.50|$, 6 of them dealt with difficulties in relations to others, the other three variable loadings were v1 Incoherent self, v33 Difficulties to rely on self, and v9 Rigidity. This factor was labeled *PSYCAP3 Capacity to relate to others.*

Internal consistencies for the PSYCAP subscales are tabulated in Table 4 to Table 6. The internal consistencies for the three subscales were adequate (α was .81, .84, and .85 respectively), which suggested that each subscale measures a homogenous construct.

Tables 4 - 6 go about here

In Table 7 we see that the correlation between PSYCAP1 and PSYCAP2 was weak (*r*=.26), while moderate correlations were obtained between PSYCAP1 and PSYCAP3 (*r*=.54) and between PSYCAP2 and PSYCAP3 (*r*=.61).

Table 7 goes about here

Criterion-related validity

To examine if the PSYCAP subscales discriminated between psychiatric patients grouped according to Kernberg's personality organization, an analysis of variance was computed based on the PSYCAP data from the two samples (n=207). Those who were judged to have a neurotic PO were expected to exhibit relatively well-developed psychological capacities. The groups of psychiatric patients who had obtained borderline and psychotic PO respectively were assumed to present severely impaired psychological resources. The mean scores on the three PSYCAP subscales by Kernberg's PO (NPO, BPO, and PPO) are tabulated in Table 8.

Table 8 goes about here

As can be seen in Table 8, the average PSYCAP subscale scores for psychiatric inpatients with NPO suggested that their psychological resources were mildly to moderately impaired while those with PPO had severe psychological problems, especially to handle emotion as measured with PSYCAP1 and PSYCAP2. The mean scores for patients with BPO were in-between those with NPO and PPO. Analyses of variance revealed a significant difference between the three groups on all the three PSYCAP subscales [$F(2, 201) = 24.78$, $\rho < .001$, $F(2, 201) = 5.12$, $\rho < .007$, and $F(2, 200) = 5.63$, $\rho < .004$). Post hoc analyses was conducted using Bonferroni test for multiple comparisons to determine which groups were the sources of variance. Alpha was set at .01. The results showed that patients with PPO had significantly more problems to handle negative affect compared to patients with NPO ($p < .001$) and BPO ($p > .001$). PPO patients had more difficulties to abide by rules and conventions compared to patients with BPO ($p < .001$). On PSYCAP3, both BPO and PPO patients had more difficulties to relate to others than patients with NPO ($p < .005$ and $p < .007$ respectively).

Discussion

This study contributes to the efforts towards unification and integration of different theoretical perspectives. The confirmatory and exploratory factor analyses suggested a model with three meaningful factors that may prove useful in the investigation of various maladaptive psychological patterns. The analyses suggested that 'psychological capacity' is best understood as a multidimensional construct; a model composed of three dimensions fitted the data better than the independence model. However, the result of the conventional model testing, i.e., the overall chi square was disappointing. This is not surprising, an extensive literature reports problems when using confirmatory factor analysis in personality research (Borkenau & Ostendorf, 1990; Holden & Fekken, 1994; McCrae et al., 1996), and alternative indexes for evaluating model fit is needed, especially in this line of research (Curran et al., 1996; Hu, 1992). The traditional chi square index will not produce an appropriate test value when, as is often the case in personality research, the researcher uses a suboptimal sample size. The data structure of a small sample will not fit the large sample theoretical distribution of the chi square test statistic, and a Type I error will arise (Raykov, 1997). In addition, most models used in personality research are complex, and cannot reproduce perfectly a population covariance matrix (Raykov, 1997). Recent advances in model evaluation account for sample size and model complexity. Rather than the unrealistic assumption of perfect model fit to the population covariance matrix, these fit indexes are concerned with the assumption that the model is a reasonable approximation of it. In this study, we used relative chi-square (χ^2 / df), and RMSEA as alternative ways of assessing model fit, with rther encouraging result.

The original model of the latent structure of PSYCAP with three separate types of capacity was not supported. Instead, each of the three factors consisted of items that measure each of the three types of capacity. The first and second factor involved difficulties to handle emotion. While the first factor dealt with problems to handle negative emotion and negative self-image, the theme of the second was difficulties to control impulses and to abide by social rules. The third factor represented the capacity to relate to other people, defined by strong loadings from PSYCAP items that deal with difficulties to engage in reciprocal and trusting relations. In addition, this factor dealt with difficulties to maintain a stable and consistent image of self (v1 Incoherent self) and refusal to accept new experiences and ideas (v12 Rigidity). There was no variable loading on this factor from PSYCAP items that measure difficulties to handle emotion and impulses on this factor.

With the Scales of Psychological Capacities, Wallerstein and collaborators (DeWitt et al., 1991; Wallerstein, 1988; Zilberg et al., 1991) had a twofold aim, to design a concept that

would be useful for psychodynamic clinicians and researchers, no matter how mental structures and processes are defined, and to define the concept in 'middle-language' terms. The Scales of Psychological Capacities (the SPC) has been put to usage by two different research groups within the United States and a number of clinical workers and researchers in Sweden, Germany, and France, all of whom represent different theoretical directions. Additional support for the content validity of the measure was provided by (DeWitt et al., 1991), who received favorable ratings with respect to the SPC's importance, comprehensiveness, clarity and vividness from 62 representatives for major psychoanalytic directions in seven different countries. In the present study, some support was yielded for the criterion-related validity of the PSYCAP. In line with Kernberg (1990), the PSYCAP subscales placed the PPO patients on the lowest level of psychological functioning, NPO patients on the highest level, and BPO in-between (1990). Further studies of the relationship between the PSYCAP model and other constructs may help to decide whether this model is useful.

An interesting implication of this study is that Wallerstein's conceptualization of the seventeen psychological capacities offers a framework for the diverse and sometimes incongruent findings of associations between personality traits and adjustment. For example, in the third factor, v1 Incoherent self clustered together with item loadings that measure difficulties to engage in safe and stable relations with others. This provides a potentially meaningful context for the widely used concept of sense of coherence (Antonovsky, 1987), which is defined similarly to Wallerstein's concept of self-coherence. The first factor dealt with capacity to handle negative affects, mirroring the importance of what has been called 'dispositional optimism', defined as a general expectancy of positive outcomes. The proximity between this concept and the first PSYCAP subscale is well illustrated with a study by Norem and Cantor (1986) where more optimistic people were found to have higher expectations and perceptions of control before a performance, and, if they failed, they used self-serving attributions to cope with the failure. Thus, Wallerstein's concept may contribute a useful theoretical setting which can improve our understanding of single personality traits, and, it may help in creating hypotheses on relations among individual traits and their predictive strength.

In sum, this study provided some support for the PSYCAP as a valid measure of personality structures and processes. An important task for further study is to examine the relationship between the three PSYCAP subscales and level of adjustment, psychiatric symptoms, and psychiatric disorder.

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Table 1. The Scales of Psychological Capacities. The Swedish version.

I. Self-scale	*v14. From resourceful mastery to under-achievement, inhibition of success*	III. Relationship-scale
Self-coherence		Empathy
v1. From coherence to inconsistency of behavior and experiences	Commitment to standards and values	*v26. From appropriate distance to egocentricity*
	v15. From tolerance to excessive opposition to rules	*v27. From emotional responsiveness to emotional blunting*
Self-esteem	*v16. From accepting of norms and values to moralism*	*v28. From taking the perspective of others to emotional absorption*
v2. From modesty to self-depreciation		
V3. From self-respect to grandiosity	*v17. From adapting to other people's rules to replacing them with one's own rules*	Trust
		v29. From evaluating others trustworthiness to extreme suspiciousness
Zest for life	II. Selfregulation-scale	
v4. From enjoyment of life to over-excitement	Affect control	*v30. From believing others to extreme gullibility*
v5. *From appropriate enthusiasm to drudgery*	*v18. From tolerance of affects to out of control "affect storms"*	*v31. From trustworthy to untrustworthy*
v6. From accepting of "downs" and set backs to apathy		Reliance on self and others
	v19. From modulated affects to hypercontrol	*v32. From secure reliance on others to rarely able to rely on others*
Hope		
v7. From hopefulness to extreme optimism	Impulse control	*v33. From secure reliance on self to rarely able to rely on self*
v8. From hesitancy to extreme pessimism	*V20. From ability to indulge impulses to compulsive over-indulgence*	*v34. From security in having others rely on self to rarely able to be person relied upon*
Flexibility	*v21. From ability to inhibit impulses to constricted over-inhibition*	
v9. From open to closed-mindedness		
v10. From weighing up of alternatives to self-doubt and confusion	Sexual regulation	Commitment in relations
	v22. From volitional sexual expression to impulsive or driven expression.	*v35. From engagement in relations to compulsive over-involvement*
Attribution of responsibility	*v23. From active sexual interest and expression to inhibition*	*v36. From self-delimitation to limited, tenuous commitment*
v11. From taking responsibility to over-internalizing		
v12. From disclaiming of responsibility to over-externalizing	Self-assertion	Reciprocity
	v24. From assertion of own interests to bullying	*v37. From comfortable taking from others to exploitation of others*
Effectance and mastery	*v25. From ability to yield to timidity, self-abandonment*	*v38. From comfortable giving to others to surrender of self*
v13. From pursuit of meaningful goals to drivenness and over-achievement		

Table 2. Comparison of the three different AMOS models (n=207).

Model	χ^2	df	ρ	χ^2 / df	RMSEA	ρ CLOSE	90% CI		CFI
							LO	HI	
A. Null	9636.28	666	.001	14.47	.26	.001	.25	.26	.00
B. Original	2400.38	592	.001	4.06	.12	.001	.12	.13	.80
C. Null	5221.17	171	.001	14.47	.36	.001	.37	.39	.00
D. EFA	325.24	132	.001	2.46	.08	.001	.07	.10	.96

χ^2 = chi square; df = degrees of freedom as the difference between the number of distinct sample moments (sample variances and covariances) and the number of distinct parameters to be estimated; ρ = a nonsignificant value (p > .05) indicates good fit; χ^2 / df = chi square divided with df; RMSEA = root mean square error of approximation; Values below .8 indicates good fit. ρ CLOSE = a significant value (<.05) is informative for the evaluation of the fit of a model; 90% CI = 90% confidence interval: CFI = comparative fit index. Values close to 1 indicates good fit.

Table 3. The three largest factors based on PSYCAP ratings for the two psychiatric inpatients samples (n=207).

PSYCAP items	Factor 1	Factor 2	Factor 3
v6 Apathy	.84		
v8 Pessimism	.78		
v5 Drudgery	.77		
v14 Under-achievement	.71		
v33 Difficulties to rely on self	.61		.53
v31 Untrustfulness		.78	
v17 Rules of one's own		.72	
v24 Bullying others		.71	
v34 Unreliability		.63	.54
v20 Uncontrolled impulses		.57	
v15 Externalization of responsibility		.55	
v1 Incoherent self			.73
v27 Emotional blunting			.69
v26 Egocentricity			.66
v36 Limited investment in relations			.61
v32 Difficulties to rely on others			.62
v37 Exploitation of others			.59
v9 Rigidity			.51

Table 4. Internal consistency for PSYCAP1 Capacity to handle negative affects based on PSYCAP ratings for the two psychiatric inpatients samples (n=207).

	Number of items	α
PSYCAP1 Capacity to handle negative affects	5	.84
	Variable-total *r*	α when variable is deleted
v5 Drudgery	.68	.80
v6 Apathy	.73	.78
v8 Pessimism	.68	.79
v14 Underachievement	.63	.81
v33 Difficulties to rely on self	.49	.84

Table 5. Internal consistency for PSYCAP2 Capacity to abide by standards and rules based on PSYCAP ratings for the two psychiatric inpatients samples (n=207).

	Number of items	α
PSYCAP2 Capacity to abide by standards and rules	6	.81
	Variable-total *r*	α when variable is deleted
v12 Externalizing responsibility	.51	.81
v17 Rules of one's own	.59	.78
v20 Difficulties to control impulses	.55	.80
v24 Bullying others	.59	.79
v31 Difficulties to be trustful	.72	.76
v34 Difficulties to be reliable	.58	.79

Table 6. Internal consistency for PSYCAP3 Capacity to relate to others based on PSYCAP ratings for the two psychiatric inpatients samples (n=207).

	Number of items	α
PSYCAP3 Capacity to relate to others	9	.85
	Variable-total *r*	α when variable is deleted
v1 Incoherent self	.51	.84
v9 Rigidity	.53	.84
v26 Egocentricity	.63	.83
v27 Emotional blunting	.69	.82
v32 Difficulties to rely on others	.65	.83
v33 Difficulties rely on self	.51	.84
v34 Difficulties to be a reliable person	.52	.84
v34 Limited investment in relations	.59	.84
v37 Exploiting others	.50	.85

Table 7. Bivariate correlations between the three PSYCAP subscales based on PSYCAP ratings for the two psychiatric inpatients samples (n=207).

	PSYCAP1	PSYCAP2
PSYCAP1	1.00	
PSYCAP2	.26*	1.00
PSYCAP3	.54*	.61*

*** = p<.01

Table 8. Average scores and standard deviations on the three PSYCAP subscales by Kernberg's PO (n=202).

PSYCAP subscales	PSYCAP1 Capacity to handle negative affects	PSYCAP 2 Capacity to abide by standards and rules	PSYCAP3 Capacity to relate to others
PPO (n=112)	1.82[1] (.59)	1.68[2] (.76)	.99[3] (.65)
BPO (n=62)	1.35 (.61)	1.37 (.64)	1.00[4] (.69)
NPO (n=27)	1.04 (.61)	1.34 (.64)	.55 (.48)

1) PPO > NPO, BPO, p <.001
2) PPO > BPO, p <.01
3) PPO > NPO, p < .005
4) BPO > NPO, p < 007