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The scales of psychological capacities: Measuring change in psychic structure

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Abstract
To evaluate long-term psychotherapy with mode-specific measures, the Scales of Psychological Capacities (SPC) have been applied to measure psychic structure and, by repeated measurements, the psychoanalytic construct structural change. This study focuses on stability and sensitivity to change as crucial psychometric qualities of an outcome measure. Stability was studied using the test–retest reliability method with a sample of 20 depressed patients. Sensitivity to change was investigated with a sample of 42 depressive patients by means of a pre–post comparison of the effects of psychoanalytic long-term psychotherapy, an intervention known to bring about structural change. The test–retest study showed no significant change, thus demonstrating stability of the test. The sensitivity to change of the SPC was very satisfactory, yielding an effect size of 1.84 for the SPC total score; this result was also clinically significant (using the Reliable Change Index) when the sample was compared with 60 healthy controls.

"The measurement of outcome is in a state of chaos, with little agreement among researchers about the specific measures to be used. . . . We are convinced that most of the necessary measures to be included in such (minimal core outcome) batteries already exist," Hill and Lambert (2004) stated in their summary on the state-of-the-art of outcome measurement in psychotherapy research. Should we really add a new measure to the existing chaos, the authors already lamented? A legitimate reason to do so is the development of new measures in areas not yet gauged by already existing measures (e.g., to evaluate the "mode-specific effects"; Imber, 1990) of a therapeutic modality. It is a well-known problem in comparative psychotherapy research that one of the difficulties in proving existing differences between therapeutic modalities might be the absence of such measures, thus leading to one of the notorious "uniformity myths," as Kiesler (1966) called it in his seminal article. Luborsky et al. discussed unsuitable outcome measures as one reason for not finding differences between dynamic psychotherapies and other treatments that do exist. "The usual outcome measures also do not make an adequate distinction between . . . the parallel related changes referred to as non-structural and structural change" (Luborsky et al., 1993).

Psychoanalysis and, to a lesser degree, psychodynamic psychotherapy claim to achieve structural change as their mode-specific effect. In psychoanalytic theory, structural change is conceived as a complex change in the intrapsychic matrix that underlies symptoms and maladaptive behavior. Wallerstein and the Psychotherapy Research Project (PRP)-II group, based on the experiences of the PRP of the Menninger Foundation, tried to more precisely conceptualize the hitherto vague notion of this type of change when developing an empirically founded measure. They stated that the different components of a structural change have to be assessed along parameters of frequency and pervasiveness or intensity of a given trait and its accompaniment of dysphoric affect; the latter can be roughly equated with life satisfaction. These different components should render structural changes more stable than mere symptomatic changes have. The basic therapeutic assumption is that specific therapeutic interventions, aiming to increase emotionally supported insight into up to now unconscious problems, will cause this specific type of change, which, therefore, should be more than just an unspecific therapeutic benefit to be expected by any effective psychotherapeutic modality. Although the concept of structural change is crucial in

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psychoanalytic theorizing, psychoanalytically oriented researchers have as yet been very reluctant to operationalize the concept and to investigate it empirically. Therefore, currently, the concept of structural change as a mode-specific effect of psychoanalysis and psychodynamic psychotherapies is but an assumption that is not empirically proven. Furthermore, there are other theoretical concepts to measure the alleged mode-specific effects of psychoanalytic psychotherapy, and during the last decade psychoanalytically oriented researchers created new measures to explore the realm beyond symptoms when investigating the effectiveness of long-term psychotherapies. In different research sites, outcome measures are being developed to gauge this specific area of psychotherapeutic change. The most elaborated attempts are Fonagy, Target, Steele, and Steele's (1998) Reflective Functioning Scale, the Differentiation-Relatedness Scale (Blatt, Zuroff, Bond, & Sanislow, 2000; Diamond, Blatt, Stayner, & Kaslow, 1991; Diamond, Kaslow, Coonerty, & Blatt, 1990), and the Social Cognition and Object Relations scale Q-sort (Westen, 1996). Two measures based on the concept of structural change are (a) Focus List of the Operationalized Psychodynamic Diagnostics (Rudolf, Oberbracht, & Grande, 1998), together with the Heidelberg Structural Change Scale (Rudolf, Grande, & Oberbracht, 2000; Grande, Rudolf, Oberbracht, & Pauli-Magnus, 2003), which has been applied until now to evaluate the effects of inpatient psychotherapy, and (b) Scales of Psychological Capacities (SPC) developed by Wallerstein et al. (Wallerstein, 1991). We have chosen the latter instrument for our study to evaluate the effects of long-term psychotherapy.

The SPC are the first attempt to measure the psychoanalytic construct of structural change on an empirical basis. The authors tried to develop theoretically independent, consensually agreed-on and reliable indexes of intrapsychic structure that will necessarily shift if there is an underlying change in intrapsychic structures. These indexes are the psychological capacities; their sum constitutes the degree of adaptive or maladaptive overall personality integration and functioning that will necessarily change if underlying psychic structure changes, irrespective of how it is conceived theoretically.

The SPC are an expert rating measure that evaluates psychic structure on a general theoretical basis. Thus, they are an attempt to operationalize the concept psychic structure as independently as possible of the differing theoretical perspectives in psychoanalysis, so that they can be used to obtain reliable assessments of specific changes after psychoanalytic psychotherapy irrespective of the therapist's theoretical adherence. Based on an empirical research strategy, these psychological capacities are constructs designed to be theoretically as low-level and experience-near as possible and readily inferable from observable behavior and conscious states of mind, so that the underlying intrapsychic structures and changes in them after treatment can be reliably identified.

As shown in Table I, the SPC consist of 17 dimensions, of which 14 are divided into two subdimensions and two are divided into three subdimensions; one dimension is not divided. The assessment of all 35 subdimensions is based on a 1-hr tape-recorded clinical intake interview recorded together with a 1- to 2-hr semistructured SPC interview with probe questions developed by the test authors. This painstaking procedure had to be applied in order not to explore and consequently score symptoms (e.g., in the dimension Hope with its subdimensions Optimism and Pessimism) instead of stable traits. The material is rated for each

Table I. The scales of psychological capacities.

Dimension	Subdimension
1. Hope	a. Excessive Optimism
	b. Excessive Pessimism
2. Zest for Life	a. Overexcitement
	b. Apathy
3. Attribution of Responsibility	a. Overexternalizing
	b. Overinternalizing
4. Flexibility	a. Closed-Mindedness
	b. Confusion and Self-Doubt
5. Persistence	a. Drivenness
	b. Giving Up
6. Commitment to Standards and Values	a. Moralism
	b. Absence of Principles
7. Commitment in Relationships	a. Compulsive Overinvolvement
	b. Limited, Tenuous Commitment
8. Reciprocity	a. Exploitation of Others
	b. Surrender of Self
9. Trust	a. Extreme Suspiciousness
	b. Extreme Gullibility
10. Empathy	a. Emotional Absorption
	b. Emotional Blunting
	c. Egocentricity
11. Affect Regulation	a. Out of Control "Affect Storms"
	b. Hypercontrol
12. Impulse Regulation	a. Overindulgence
	b. Overinhibition
13. Regulation of Sexual Experience	a. Impulsive or Driven Expression
	b. Inhibition
14. Self-Assertion	a. Bullying
	b. Timidity
15. Reliance on Self and Others	a. Rarely Able to Rely on Others
	b. Rarely Able to Rely on Self
	c. Rarely Able to Be Person Relied Upon
16. Self-Esteem	a. Grandiosity
	b. Self-Depreciation
17. Self-Coherence	a. Inconsistency

subdimension on a 7-point scale ranging from 0 (*normal or fully adaptive functioning*) to 3 (*seriously and obviously disturbed functioning*), with half-points in between. The dimensions are constructed such that one subdimension covers various degrees of inhibited functioning and the other covers various degrees of exaggerated functioning. Both directions (i.e., both subdimensions) have to be assessed simultaneously. For the rating procedure, an extensive manual is available with a detailed description of each subdimension together with one or more clinical vignettes to anchor each scale point.

Prior studies of the PRP-II group have already demonstrated the robustness of their psychometric qualities like interrater reliability (mean intraclass correlation coefficient [ICC] = 0.69, range = 0.42–0.90), content validity, and convergent validity (DeWitt, Hartley, Rosenberg, Zilberg, & Wallerstein, 1991; DeWitt, Milbrath, & Wallerstein, 1999).

Psychometric qualities such as interrater reliability and construct validity of the German version (Huber, Klug, & Wallerstein, 2005) are published in this journal in a prior article (Huber, Brandl, & Klug, 2004), summarized here briefly as follows:

1. The interrater reliabilities calculated with the ICC show a mean ICC of 0.82 (range = 0.54–0.89). They are thus very satisfactory.
2. The Construct Validation I was accomplished through the comparison of the SPC with construct-distant (discriminant validation) and construct-near (convergent validation) tests. This replication study showed again that the SPC are not correlated with instruments measuring symptoms and are, to some extent, correlated with instruments measuring interpersonal problems, life satisfaction, defense mechanisms, and global rating of structure.
3. In Construct Validation II (known-groups approach), three different diagnostic groups have been compared (36 depressives, 33 borderline patients, and 36 healthy controls). Univariate (analysis of variance) as well as multivariate (discriminant analysis) methods were able to separate these three groups. With stepwise discriminant analysis, the three groups have been classified correctly on the basis of the SPC scores to 94%, and the discriminant functions have been interpreted meaningfully.
4. The intercorrelation matrix showed a total of 19 intercorrelations above 0.40 and only three correlations above 0.50 out of 595 possible intercorrelations, thus demonstrating the relative independence of the scales (subdimensions) from each other.

In addition to these psychometric proofs, stability and sensitivity to change still need to be demonstrated.

Stability study (Test–retest reliability)

When an instrument is assumed to measure change, it has to prove the stability of test scores over time. Stability is determined in a test–retest design by the correlation of scores from one measurement point with scores on the same instrument after a particular time interval has elapsed. If there has been no therapeutic intervention in between, correlations should be highly significant (Kazdin, 1998).

Method

Procedure. An interviewer experienced with the administration and assessment of the SPC performed a clinical intake interview and a semistructured SPC interview. Two to three months later, another comparably experienced interviewer repeated the semistructured SPC interview. We decided in favor of a more authentic interview situation and of an elimination of memory effects on the interviewer's side, to change interviewers, thus accepting an increase in error variance on the interviewer variable. We considered a 2- to 3-month time span to be adequate to control for patients' memory effects without running the risk that any intervention may have led to a structural change in the meantime. Between the first and second measurement points, patients were on the waiting list for psychotherapy without any treatment.

Two raters rated each interview independently, not knowing whether it was the first or the second measurement point. If they disagreed by more than 1 scale point, a senior rater (Dorothea Huber or Guenther Klug) rerated the scale following a method recommended by Jones, Cumming, and Horowitz (1988). This is our standard procedure, used for all psychometric studies of the SPC. To control for symptomatic change during the waiting time, we applied also the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) at both measurement points.

The sample consisted of 20 depressed patients (age range = 25–45 years; Table II). Two psychiatrists–psychotherapists consensually diagnosed all patients using the International Classification of Diseases (ICD-10) and *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; DSM–IV; American Psychiatric Association, 1994) checklist to exclude bipolar disorder or depression based on an organic disorder or drug abuse (Hiller, Zaudig, & Mombour, 1995).

Table II. Description of the samples (sensitivity to change: $N = 42$; stability: $N = 20$).

Variable	$N = 42$	$N = 20$
Age		
M	32.9	32.2
SD	6.7	5.4
Gender (%)		
Female	62	85
Male	38	15
Marital status (%)		
Single	69	80
Married	17	20
Divorced	14	0
Romantic relationship (%)	57	60
Children (%)	31	25
Employment (%)		
Full time	41	50
Part time	10	15
Unemployed	7	0
Education (%)	24	25
Other (%)	19	10
First diagnosis (ICD-10) (%)		
F32.1 depressive episode, moderate	50	25
F32.2 depressive episode, severe	14	35
F33.1 recurrent depressive disorder, moderate	24	25
F33.2 recurrent depressive disorder, severe	12	15
Second diagnosis (ICD-10) (%)		
F34.1 dysthymia	38	70
Other	2	0
No	60	30
Duration of first diagnosis in month		
M	63.7	59.1
SD	75.4	76.9

Note. ICD-10 = International Classification of Diseases, 10th edition.

Table III. Stability coefficients for the scales of psychological capacities ($N = 20$).

Dimension	Subdimension	r_{tt}	95% CI
1. Hope	a. Optimism	.77	.50–.90
	b. Pessimism	.77	.50–.90
2. Zest for Life	a. Overexcitement	.85	.65–.94
	b. Apathy	.89	.74–.96
3. Responsibility	a. Overexternalizing	.67	.32–.86
	b. Overinternalizing	.82	.59–.93
4. Flexibility	a. Closed-Mindedness	.56	.16–.80
	b. Self-Doubt	.91	.78–.96
5. Persistence	a. Drivenness	.81	.57–.92
	b. Giving Up	.71	.39–.88
6. Standards	a. Moralism	.77	.50–.90
	b. Unprincipled	.74	.44–.89
7. Commitment	a. Overinvolvement	.85	.65–.94
	b. Tenuousness	.87	.70–.95
8. Reciprocity	a. Exploitation	.96	.90–.98
	b. Surrender	.87	.70–.95
9. Trust	a. Suspiciousness	.76	.48–.90
	b. Gullibility	.65	.29–.85
10. Empathy	a. Absorption	.76	.48–.90
	b. Blunting	.82	.59–.93
	c. Egocentricity	.90	.76–.96
11. Affect	a. Out of Control	.56	.16–.80
	b. Hypercontrol	.81	.57–.92
12. Impulse	a. Indulgence	.92	.81–.97
	b. Inhibition	.84	.63–.93
13. Sexual	a. Impulsive	.76	.48–.90
	b. Inhibition	.70	.37–.87
14. Assertion	a. Bullying	.91	.78–.96
	b. Timidity	.83	.61–.93
15. Reliance	a. Not on Others	.74	.44–.89
	b. Not on Self	.77	.50–.90
	c. Not Relied Upon	.71	.39–.88
16. Self-Esteem	a. Grandiosity	.65	.29–.85
	b. Self-Depreciation	.88	.72–.95
17. Coherence	a. Inconsistency	.80	.55–.92
SPC total score		.88	.72–.95

Note. r_{tt} = Pearson's correlation coefficient.

Statistics. The coefficients for stability were calculated with the Pearson's correlation coefficient (Kazdin, 1998). The comparisons of means between test and retest were calculated with *t* tests for each SPC subdimension and the SPC total score. Because of multiple testing (36 comparisons), we adjusted the alpha level with Bonferroni correction, requiring a nominal significance level of 0.0014 to reach a conventional .05 significance level for any single correlation or any single *t* value, respectively.

Results

Table III shows the coefficients for stability. No coefficient is below 0.50; two are below 0.60; only six of 36 are below 0.70. The stability of the SPC total score (0.88) is very satisfying. Table IV shows the comparison of means between the test and retest measurement points. There are two significant (but not significant after Bonferroni correction) deteriorations (Unprincipled Behavior, Timidity) and two significant (but not significant after Bonferroni correction) improvements (Optimism, Inconsistency); the total score slightly deteriorates.

The BDI scores at test and retest measurement points differ significantly. The BDI score at retest was highly significantly lower, $t(19) = 3.3$, $p = .004$, two-tailed.

Sensitivity to change study

The SPC are conceptualized especially for the measurement of psychotherapeutic change. Therefore, we considered the proof of sensitivity to change to be a very important psychometric property. Sensitivity to change in outcome measurement is, according to Hill and Lambert (2004), "the degree to which a measure is likely to reflect changes that actually occur following participation in therapy" (p. 116).

Table IV. Comparisons of means between test and retest for the scales of psychological capacities ($N = 20$).

Dimension	Subdimension	Test		Retest		
		M	*SD*	*M*	*SD*	*p*
1. Hope	a. Optimism	0.84	0.69	0.59	0.52	.041
	b. Pessimism	1.63	0.58	1.64	0.61	.879
2. Zest for Life	a. Overexcitement	1.08	0.81	1.03	0.69	.662
	b. Apathy	1.27	0.72	1.17	0.59	.270
3. Responsibility	a. Overexternalizing	0.53	0.71	0.55	0.43	.907
	b. Overinternalizing	1.25	0.86	1.20	0.75	.709
4. Flexibility	a. Closed-Mindedness	1.05	0.69	1.16	0.60	.486
	b. Self-Doubt	1.64	0.90	1.55	0.74	.333
5. Persistence	a. Drivenness	1.28	0.70	1.06	0.67	.058
	b. Giving Up	1.47	0.81	1.56	0.61	.520
6. Standards	a. Moralism	0.42	0.60	0.58	0.55	.136
	b. Unprincipled	0.23	0.41	0.56	0.54	.002
7. Commitment	a. Overinvolvement	1.53	0.82	1.52	0.60	.889
	b. Tenuousness	0.95	0.98	1.05	0.78	.456
8. Reciprocity	a. Exploitation	0.39	0.65	0.47	0.69	.136
	b. Surrender	1.09	0.79	1.11	0.80	.879
9. Trust	a. Suspiciousness	1.02	0.81	1.08	0.69	.648
	b. Gullibility	0.66	0.71	0.88	0.52	.125
10. Empathy	a. Absorption	0.80	1.04	1.14	0.90	.062
	b. Blunting	0.91	0.72	0.91	0.72	1.000
	c. Egocentricity	0.83	0.81	0.84	0.75	.864
11. Affect	a. Out of Control	1.11	0.80	1.08	0.66	.860
	b. Hypercontrol	1.34	0.88	1.41	0.66	.638
12. Impulse	a. Indulgence	0.70	0.67	0.78	0.69	.264
	b. Inhibition	0.64	0.58	0.80	0.56	.076
13. Sexual	a. Impulsive	0.17	0.35	0.17	0.35	1.000
	b. Inhibition	1.30	0.74	1.08	0.68	.135
14. Assertion	a. Bullying	0.78	0.80	0.80	0.68	.855
	b. Timidity	1.02	0.69	1.28	0.76	.027
15. Reliance	a. Not on Others	1.25	0.90	1.30	0.53	.769
	b. Not on Self	0.88	0.87	0.95	0.78	.585
	c. Not Relied Upon	0.80	0.77	0.81	0.64	.911
16. Self-Esteem	a. Grandiosity	0.42	0.52	0.36	0.46	.554
	b. Self-Depreciation	1.78	0.66	1.86	0.70	.370
17. Coherence	a. Inconsistency	1.05	0.59	0.70	0.41	.002
SPC total score		0.97	0.25	1.00	0.21	.397

Note. Adjusted $\alpha = 0.0014$.

It is the logical counterpart to the stability of an outcome measure indicating that the instrument will reflect change only when a specific intervention has been applied. Hill and Lambert, in their contribution on this topic in the *Handbook of Psychotherapy Research and Behaviour Change* (2004), stated that it still is a neglected validity issue. Therefore, in comparative psychotherapy research, there is some empirical evidence that differences in the sensitivity of outcome measures may be so pronounced that it is rather difficult to evaluate whether a given difference is attributable to the treatment applied or to the instability of the outcome measure. On the basis of the assumption that psychoanalytic psychotherapy is the intervention to achieve structural change, we used the SPC in a pre–post design to evaluate their sensitivity to change in long-term psychotherapy.

Method

The interviewers at pre- and posttreatment were not identical in order to exclude memory effects, but the interviewers at posttreatment could not remain unaware of pretreatment or posttreatment status.

Therapy. The therapy was a psychoanalytical long-term therapy. The frequency of sessions ranged from one to three per week. Twenty-one therapies took place once a week, eight therapies twice a week, and 13 therapies three times a week (mean length = 26 months; median length = 29 months; range = six months to five years). The effectiveness of these psychoanalytic long-term therapies has been proven by some construct-near, frequently used, and standardized self-rating questionnaires.

Measures. Measures used in this study include the Inventory of Interpersonal Problems, short version (IIP; Horowitz, Rosenberg, Bauer, Ureño, & Villaseñor, 1988), an internationally established instrument for the assessment of interpersonal problems (standardized effect size [SES] = 1.63); Questions on Life Satisfaction (FLZ; Huber, Henrich, & Herschbach, 1988; Henrich & Herschbach, 2000), using the subscales General Life Satisfaction (SES = 0.89) and Satisfaction With Health (SES = 1.07); and Questionnaire for Coping Strategies (FKBS; Hentschel, Kiessling, & Wiemers, 1998), measuring five frequently used defense mechanisms/coping strategies with the depression-specific defense mechanism Turning Against Self (SES = 0.93).

Participants. The therapists were very experienced psychoanalytically oriented therapists who had finished training at an approved psychoanalytic institute. All had at least five years experience as analytical psychotherapists in private practice.

The sample consisted of 42 depressive patients who had finished their psychoanalytic psychotherapy (see Table II). Again, two psychiatrists–psychotherapists had consensually diagnosed all patients with an ICD-10 and *DSM–IV* checklist to exclude bipolar disorder and depression based on organic disorder or drug abuse (Hiller et al., 1995). The healthy control group ($N = 60$), 36 women and 24 men (mean age = 28 years), was recruited among employees of the civil services and of the banking system as well as among medical students. All controls have been screened with a clinical interview, with the Symptom Checklist-90-Revised (Derogatis, 1992) and the IIP to exclude those who have a relevant mental disorder or who have already been in psychotherapy. In both questionnaires the controls did not differ from the norm mean values stated in the test manuals.

Statistics. We evaluated therapeutic change not only with the usual comparisons of means (t tests) but also with standardized effect sizes. As a third proof of change, we calculated clinical significance (Jacobson & Truax, 1991; Kazdin, 1999). The latter method does not simply rely on pre–post differences of the measure but compares the values of a specific dysfunctional population (42 depressives) with those of a functional population (60 healthy controls). For the interpretation of the t tests, we again used an adjusted α of 0.0014 (Bonferroni correction).

Results

Figure 1 shows the average SPC profiles at pre- and posttreatment measurement points. To give an impression of what the SPC of healthy people look like, the SPC profile of the healthy control group ($N = 60$) is marked as well. The SPC subdimensions that show high values before the beginning of the treatment have improved very significantly after termination of therapy.

Table V shows means and standard deviations for all 35 SPC subdimensions and for the SPC total score at the pre- and posttreatment measuring times as well as the t values with the respective p values and SES. In 20 subdimensions there is a significant change between pre- and posttreatment measurement. Choosing Cohen's (1988) criterion for high effect sizes (ES > 0.8) as a cutoff point, nine subdimensions fulfil this criterion (in order of their effect size): Overinvolvement in the dimension Commitment, Pessimism in the dimension Hope, Self-Depreciation in the dimension Self-Esteem, Surrender in the dimension Reciprocity, Drivenness in the dimension Persistence, Overinternalizing in the dimension Responsibility, Self-Doubt in the dimension Flexibility, Timidity in the dimension Assertion, and Absorption in the dimension Empathy. Only one subdimension—Grandiosity of the dimension Self-Esteem—deteriorates significantly (although not after Bonferroni correction); but this dimension has had a very low pretreatment score. The SPC total score changed very distinctly (SES = 1.84).

In psychotherapy research, not only statistical but clinical significance is requested. Clinical significance has been proposed as a method to safeguard that differences in psychotherapy outcome signify clinically meaningful improvements in real life. We applied a method suggested by Jacobson and Truax (1991), the Reliable Change Index, to assess clinical significance; 81% of patients fulfilled this criterion of clinical relevant improvement, indicating that these changes are relevant enough to have significance for the patient's life.

Figure 2 shows the comparison of means and standard deviations of the SPC totals of the test–retest study and of the sensitivity to change study. As mentioned, there was no significant change during the 2-month waiting period, but there was a highly significant improvement during therapy of about two years.

Discussion

We consider the stability coefficients of the SPC subdimensions to be extraordinarily good, especially when considering potential sources of error: (a) two different interviewers performing test and retest and (b) the small sample size. An additional source of error when using a retest design as we did is the retest artifact. It is defined by a systematic change of

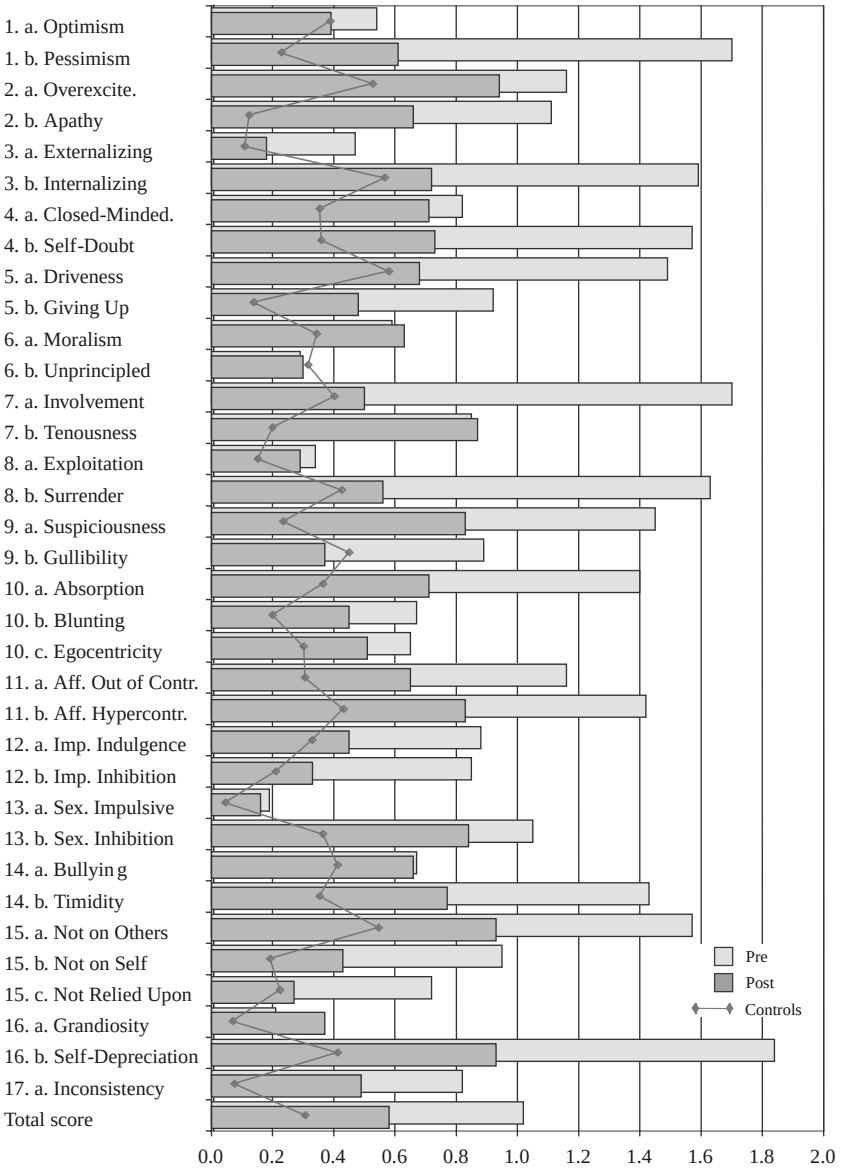

Figure 1. Scales of Psychological Capacities profile of depressive patients ($N = 42$) before and after psychoanalytic long-term therapy. (Healthy controls, $N = 60$.).

an individual's test score that is repeatedly assessed with a psychometric instrument without receiving any treatment (Jorm, Duncan-Jones, & Scott, 1989). Although it is a substantial threat to the internal validity of a study, this phenomenon has been investigated but only scarcely. Another source of error in our study might be the treatment expectancy of the patients who were already on a waiting list for psychotherapy. The effect, that treatment expectancy may lead to clear-cut improvements (e.g., Clarke, 2003; Kazdin, 1998; Kendall, Holmbeck, & Verduin, 2004), is a well-known clinical fact that we were able to confirm for the BDI in our own study. However, in keeping with psychoanalytic theory it did not yield an improvement of intrapsychic structure assessed by the SPC. Thus, we were able to confirm the results of a stability study with healthy persons by DeWitt (2004).

We attribute the fairly good results of our test–retest reliability study to the very sound methodology of the SPC, consisting of a standardized interview, a comprehensive manual with detailed operationalizations for each subdimension based on observable behaviors, anchor examples for each scale point, and an intense rater training.

The discussion of the sensitivity to change study is considerably impaired by the fact that there are neither previous studies of the SPC's sensitivity to change nor sensitivity to change studies of comparable instruments with which our data can be compared. Therefore, we discussed only psychotherapy outcome studies that (a) included only patients

Table V. Sensitivity to change: Scales of psychological capacities scores of depressive patients ($N = 42$) before and after psychoanalytic long-term psychotherapy.

		Pre		Post				
Dimension	Subdimension	*M*	*SD*	*M*	*SD*	*t*	*p*	SES
1. Hope	a. Optimism	0.54	0.59	0.39	0.55	1.73	.091	0.25
	b. Pessimism	1.70	0.62	0.61	0.74	8.78	.000	1.76
2. Zest for Life	a. Overexcitement	1.16	0.73	0.94	0.68	1.54	.131	0.30
	b. Apathy	1.11	0.72	0.66	0.73	3.81	.000	0.63
3. Responsibility	a. Overexternalizing	0.47	0.56	0.18	0.43	2.92	.006	0.51
	b. Overinternalizing	1.59	0.81	0.72	0.61	5.95	.000	1.08
4. Flexibility	a. Closed-Mindedness	0.82	0.72	0.71	0.75	0.87	.391	0.16
	b. Self-Doubt	1.57	0.80	0.73	0.74	6.34	.000	1.04
5. Persistence	a. Drivenness	1.49	0.67	0.68	0.71	5.48	.000	1.20
	b. Giving Up	0.92	0.84	0.48	0.78	3.44	.001	0.52
6. Standards	a. Moralism	0.59	0.63	0.63	0.62	−0.37	.712	−0.08
	b. Unprincipled	0.29	0.60	0.30	0.52	−0.15	.884	−0.03
7. Commitment	a. Overinvolvement	1.70	0.64	0.50	0.72	9.49	.000	1.89
	b. Tenuousness	0.85	0.77	0.87	0.96	−0.11	.913	−0.02
8. Reciprocity	a. Exploitation	0.34	0.47	0.29	0.50	0.53	.600	0.11
	b. Surrender	1.63	0.71	0.56	0.66	7.96	.000	1.50
9. Trust	a. Suspiciousness	1.45	0.86	0.83	0.75	4.56	.000	0.72
	b. Gullibility	0.89	0.76	0.37	0.65	3.70	.001	0.68
10. Empathy	a. Absorption	1.40	0.81	0.71	0.74	5.04	.000	0.85
	b. Blunting	0.67	0.65	0.45	0.68	1.72	.093	0.34
	c. Egocentricity	0.65	0.70	0.51	0.67	1.05	.299	0.20
11. Affect	a. Out of Control	1.16	0.77	0.65	0.71	4.26	.000	0.66
	b. Hypercontrol	1.42	0.82	0.83	0.75	4.55	.000	0.71
12. Impulse	a. Indulgence	0.88	0.77	0.45	0.62	3.46	.001	0.55
	b. Inhibition	0.85	0.76	0.33	0.55	4.83	.000	0.69
13. Sexual	a. Impulsive	0.19	0.43	0.16	0.39	0.37	.714	0.07
	b. Inhibition	1.05	0.84	0.84	0.92	1.15	.258	0.25
14. Assertion	a. Bullying	0.67	0.66	0.66	0.72	0.08	.933	0.02
	b. Timidity	1.43	0.73	0.77	0.73	5.26	.000	0.91
15. Reliance	a. Not on Others	1.57	0.86	0.93	0.80	4.22	.000	0.74
	b. Not on Self	0.95	0.73	0.43	0.55	4.20	.000	0.71
	c. Not Relied Upon	0.72	0.69	0.27	0.50	3.64	.001	0.65
16. Self-Esteem	a. Grandiosity	0.21	0.33	0.37	0.54	−2.05	.047	−0.48
	b. Self-Depreciation	1.84	0.57	0.93	0.72	7.27	.000	1.59
17. Coherence	a. Inconsistency	0.82	0.59	0.49	0.66	2.61	.013	0.56
SPC total score		1.02	0.24	0.58	0.24	10.33	.000	1.84

Note. SES = standardized effect size: diff(pre−post)/SD(pre); adjusted $\alpha = 0.0014$.

with depressive disorders and (b) applied similar outcome measures, usually social adjustment measures. It should be kept in mind that a social adjustment measure like the Social Adjustment Scale

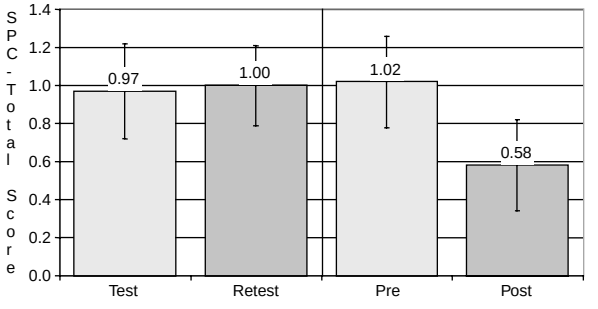

Figure 2. Scales of Psychological Capacities total score at test and retest ($N = 20$) compared with pre- and post-psychoanalytic long-term psychotherapy ($N = 42$).

"not merely measures quantitative trivia of social life and has little to do with internal object relations" (Sandell et al., 2000). Crits-Christoph (1991), in his meta-analysis of effectiveness studies of brief psychodynamic psychotherapy in general, reported an effect size of .81 for social adjustment measures, usually the Social Adjustment Scale. Robinson, Berman, and Neimeyer (1990), focusing on short-term psychodynamic psychotherapy of depressive disorders, reported in their meta-analysis an average effect size of .49 for general verbal therapy, comprising psychodynamic therapy, client-centered approaches, and interpersonal therapy. They differentiated between types of outcome measures and found no reliable ($p = .20$) difference between the effect sizes for measures of depressive symptomatology compared with other measures, not further

specified but probably measures beyond symptoms. However, in the 20 studies that included both types of measures, there was a tendency ($p = .09$) for effect sizes to be larger for measures designed to assess depressive symptoms than for other instruments. Thompson, Gallagher, and Steinmetz-Breckenridge (1987), in their study on the effectiveness of short-term psychodynamic psychotherapy of depressed elders, reported an effect size of .65 for the Social Adjustment Scale. In Shapiro et al.'s (1994) study, short-term psychodynamic psychotherapy yielded an effect size of 1.19 for the Social Adjustment Scale and 1.00 for the IIP.

In all studies mentioned previously, by far smaller effect sizes are reported than we found in our study. Interpretation of this finding is difficult because this difference may be explained either by the different therapeutic modalities applied (short-term psychodynamic psychotherapy vs. long-term psychodynamic psychotherapy) or by the different measures applied (social adjustment measures vs. structural change measure) or by a mixture of both. Of course, we are not able to disentangle these different effects, but by and large these differences in effect size empirically support our hypothesis that the SPC are able to grasp the specific effects of long-term psychotherapy in the realm beyond symptoms. At the moment, we are unable to decide whether it is the privilege of psychoanalysis or psychodynamic psychotherapies to result in structural change. The critical trial of specificity would be to investigate, using a group comparison design that includes, for example, behavior therapy or client-centered psychotherapy, the different outcomes with the SPC.

We argued that the long-term psychotherapies of our comparative psychotherapy study have already proven its effectiveness by three frequently used and standardized self-rating tests that can be regarded as construct-near to the SPC (IIP, FKBS, and FLZ). We want to emphasize that the effect size of the SPC total score (1.84), compared with these standardized instruments, is clearly the highest. The difference between SPC and the next highest effect size in the IIP total score (SES = 1.63) is 0.21, between SPC and FKBS, Turning Against Self (SES = 0.93), 0.91; between SPC and FLZ, total score General Life Satisfaction (SES = 0.89), 0.95; and between SPC and total score Satisfaction with Health (SES = 1.07), 0.77 (Huber & Klug, 2004). These findings confirm that the SPC are able to reflect structural change very sensitively. Alternatively, the large effect sizes of the SPC may be interpreted, on a methodical basis, as a bias of the interviewers and raters because of their lack of awareness the patient's pretherapy or posttherapy status.

We conclude that the SPC add a new, genuine intrapsychic dimension to the array of outcome measures already applied. This new dimension should no longer be neglected in order not to miss the more subtle and enduring effects of psychoanalytic psychotherapy.

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Zusammenfassung

Die Psychologischen Kapazitätsskalen: Veränderungsmessung von psychischer Struktur

Im Rahmen der Evaluation von Langzeitpsychotherapien wurden die Skalen Psychischer Kompetenzen (SPK) eingesetzt, um die psychische Struktur und, anhand

wiederholter Messungen, das psychoanalytische Konstrukt "strukturelle Veränderung" zu messen. Die vorliegende Studie fokussiert auf die Stabilität sowie die Änderungssensitivität als wesentliche Gütekriterien eines Ergebnismessinstruments. Die Stabilität wurde als Test-Retest-Reliabilität an einer Stichprobe von 20 depressiven Patienten untersucht. Die Änderungssensitivität wurde an einer Stichprobe von 42 depressiven Patienten als präpost Vergleich im Rahmen einer psychoanalytischen Langzeitbehandlung durchgeführt, einer Intervention, die erfahrungsgemäß strukturelle Veränderung bewirkt. Die Test-Retest-Studie ergab keine signifikante Veränderung über die Zeit und belegte damit eine gute Stabilität für die Skalen. Die Änderungssensitivität der SPK war insgesamt sehr zufrieden stellend, die Effektstärke für den SPK-Gesamtwert betrug 1,84. Das Ergebnis erfüllte auch das Kriterium einer klinisch signifikanten Veränderung (ermittelt mit dem "Reliable Change Index"); bei dieser Analyse wurden die Daten von 60 gesunden Kontrollpersonen einbezogen.

Résumé

Les échelles de capacités psychologiques : mesurer le changement de la structure psychique

Pour évaluer la psychothérapie de longue durée par des mesures spécifiques du mode, les Echelles de Capacités Psychologiques (SPC) ont été appliquées pour mesurer la structure psychique et le changement de la structure psychique, ceci par des mesures répétées. Cette étude focalise sur la stabilité et la sensibilité au changement en tant que qualités psychométriques cruciales d'une mesure du résultat. La stabilité était testée en utilisant la fidélité test-retest avec un échantillon de 20 patients déprimés. La sensibilité au changement a été investiguée avec un échantillon de 42 patients dépressifs à l'aide d'une comparaison pré-post des effets de la psychothérapie psychanalytique de longue durée, une intervention connue pour amener un changement structural. L'étude test-retest n'a montré aucun changement significatif et démontré ainsi la stabilité du test. La sensibilité au changement du SPC était très satisfaisante, avec un score de grandeur d'effet de 1.84 pour le score total des SPC ; ce résultat était aussi significatif du point de vue clinique (sur la base du Reliable Change Index) en comparant l'échantillon avec 60 sujets de contrôle en bonne santé.

Resumen

Escalas de capacidades psicológicas: Medida del cambio en la estructura psÍquica

Para evaluar psicoterapias a largo plazo con mediciones modo-específicas, se han aplicado las Escalas de Capacidades Psicológicas (SPC) que miden la estructura psíquica. Para evaluar el constructo psicoanalítico de cambio estructural se hicieron mediciones repetidas. Este estudio se centra en la estabilidad y sensibilidad al cambio de las cualidades psicométricas cruciales de la medición de resultado. Se estudió la estabilidad usando el método de confiabilidad test-retest con una muestra de veinte pacientes depresivos. Se investigó la sensibilidad al cambio por medio de una muestra de cuarenta y dos pacientes depresivos, por medio de la pre-post comparación de los efectos de la psicoterapia psicoanalítica a largo plazo, intervención conocida por producir cambio estructural. El estudio test-retest no mostró cambio significativo, lo que demostró la estabilidad del test. La sensibilidad al cambio del SPC fue muy satisfactoria pues dio un puntuaje total de 1.84 para el SPC; este estudio resultó también clínicamente significativo cuando se comparó la muestra con sesenta controles sanos utilizando el Índice Confiable de Cambio (Reliable Change Index)

Resumo

As Escalas de Capacidades Psicológicas: Medindo a mudança na Estrutura Psicológica

Para avaliar a psicoterapia de longa duração com medidas específicas, foram aplicadas as Escalas de Capacidades Psicológicas (ECP) para avaliar estruturas psicológicas e, através de medidas repetidas, a mudança estrutural do constructo psicanalítico. Este estudo foca a estabilidade e sensibilidade à mudança como qualidades psicométricas cruciais de uma medida de resultados terapêuticos. A estabilidade foi estudada usando o método de fidelidade teste-reteste com uma amostra de 20 pacientes deprimidos. A sensibilidade à mudança foi analisada com uma amostra de 42 pacientes deprimidos através de métodos de comparação pré-pós das médias dos efeitos da psicoterapia psicodinâmica de longo-termo, um processo conhecido por discriminar a mudança estrutural. O estudo de teste-reteste não demonstrou mudanças significativas, demonstrando assim a estabilidade da escala. A sensibilidade à mudança da ECP foi muito satisfatória, apresentando um valor da magnitude do efeito de 1.84 para o resultado total do ECP; este resultado foi também clinicamente significativo (usando o Índice de Mudança Significativa) quando a amostra foi comparada com uma amostra de 60 controlos sem patologia.

Sommario

Le Scales of Psychological Capacities: misurazione dei cambiamenti nella struttura psichica

Per valutare la psicoterapia a lungo termine con misure metodo-specifiche, le Scales of Psychological Capacities (SPC) (scale delle capacità psicologiche) sono state applicate alla misurazione della struttura psichica e, attraverso misurazioni ripetute, al cambiamento strutturale del costrutto psicoanalitico.

Questo studio si focalizza sulla stabilità e sensibilità del cambiamento come qualità psicometriche cruciali della misurazione dell'esito.

La stabilità è stata studiata usando il metodo di fedeltà *test-retest* con un campione di 12 pazienti depressi.

La sensibilità al cambiamento è stata studiata con un campione di 42 pazienti depressi mediante le medie di un confronto pre-post degli effetti della psicoterapia psicoa-

nalitica a lungo termine, un intervento noto per determinare cambiamento strutturale.

Lo studio *test-retest* non ha mostrato un cambiamento significativo, dimostrando così la stabilità del test.

La sensibilità al cambiamento delle SPC è stata molto soddisfacente, dando un *effect-size* di 1.84 per il punteggio totale SPC; questo risultato era inoltre clinicamente significativo (usando il *Reliable Change Index* (Indice di cambiamento certo)) quando il campione è stato paragonato a 60 controlli sani.

摘要

本研究使用心理能力量表(SPC)，作為測量心理分析治療的心理結構改變的重複測量工具。改變的穩定性與敏感性，是測量治療結果的心理計量工具的重要特性，這也是本研究的關注焦點。在本研究中，SPC 的穩定性，是透過 20 名憂鬱患者的再測信度獲得；SPC 的敏感性，是由 42 名接受長期心理分析治療的憂鬱患者組成實驗組，另有 60 名健康者作為控制組，以 SPC 作為測量工具，進行前測與後測，比較憂鬱患者經過長期心理治療之後的心理結構的改變。研究結果發現，SPC 再測分數的變化，沒有達到顯著差異，顯示量表有好的穩定性。而 SPC 的敏感性結果也證實十分理想，研究結果發現心理治療的效果量為 1.84，達到臨床的顯著性。