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CHANGE AFTER LONG-TERM PSYCHOANALYTIC PSYCHOTHERAPY

Psychoanalytic psychotherapy in clinical practice is traditionally a long-term treatment conducted by well-trained psychotherapists. However, very few studies have been published that evaluate the effects of such treatment. To redress this lack of studies, 55 individuals selected for long-term psychoanalytic psychotherapy (average, 3 years) were invited to participate in a naturalistic study. The psychotherapists had a mean of 15 years of professional experience. The 36 patients who completed psychotherapy manifested a substantial reduction in symptomatic suffering and decreased levels of character pathology, as measured by the Karolinska Psychodynamic Profile (KAPP) and the Karolinska Scales of Personality. Generally, such changes were not found in the individuals who did not engage in treatment. In the therapy group, improvements were found on eight KAPP subscales defining different aspects of character: Intimacy and Reciprocity, Frustration Tolerance, Regression in the Service of the Ego, Coping with Aggressive Affects, Conceptions of Bodily Appearance and their Significance for Self-esteem, Sexual Function, Sexual Satisfaction, and Personality Organization. The results indicate that individuals who engaged in psychotherapy improved their capacity to handle crucial aspects of life and reduced their symptomatic suffering.

In Sweden, as in many other Western countries, different forms of psychotherapy are a large part of everyday psychiatric practice. Only in the last two decades has psychotherapy become the focus of systematic research. Modern psychotherapy research has followed the model of efficacy research; that is, it has focused on specified manualized therapy studied in randomized controlled trials in which patients with

Alexander Wilczek, Department of Clinical Neuroscience, Psychotherapy Section, Karolinska Institutet, Stockholm. Jacques P. Barber, Department of Psychiatry, University of Pennsylvania. J. Petter Gustavsson, Department of Nursing, Karolinska Institutet. Marie Åsberg, Department of Clinical Neuroscience, Psychiatry

specific problems are selected for therapy. Most of these studies have assessed the efficacy of various short-term treatments. Although psychoanalytic psychotherapy in clinical practice is traditionally a long-term treatment conducted by well-trained psychotherapists, very few studies are reported in the literature in which the effects of such treatments are evaluated (Crits-Christoph and Barber 2000; Monsen et al. 1995). Moreover, Seligman (1995) pointed out the difference between "efficacy" and "effectiveness" studies, and questioned whether efficacy studies are the best way to empirically validate psychotherapy, since these studies omit many crucial elements of actual everyday practice. Effectiveness research, by contrast, focuses on psychotherapy conducted in usual clinical settings under usual conditions (i.e., treatment is not of fixed duration, technique is modified according to patients' needs, and patients typically have multiple problems). Thus, generalizations based on results from efficacy studies might be of limited value for clinicians interested in knowing which treatment will be most effective for a given patient seen in a regular clinical setting. The present longitudinal naturalistic study was designed to examine the effectiveness of long-term psychoanalytic psychotherapy delivered by experienced psychotherapists.

Individuals seek psychotherapy because they experience some kind of psychological suffering. This suffering can be expressed as symptoms, as problems in close relationships, or as various forms of inhibition. According to traditional, "mainstream" psychoanalytic theory, these difficulties are expressions of underlying character pathology (Baudry 1995). Character is regarded as an organization formed to handle conflicts, either between inner impulses or between inner impulses and the experienced demands of the outer world. This organization is conceptualized as a set of stable characteristic patterns that are expressed as traits that either permit the partial, socially accepted gratification of impulses or necessitate a suppression of these impulses that might result in inhibitions in work or play (Fenichel 1946). The former case is illustrated by someone who turns his or her sadomasochistic impulses into pedantic

Section, Karolinska Institutet. Robert M. Weinryb, Department of Clinical Neuroscience, Psychotherapy Section, Karolinska Institutet.

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and controlling traits; the latter, by someone with poor frustration tolerance who systematically avoids challenges in life, resulting in a suboptimal use of personal resources. According to psychoanalytic theory, symptoms appear when external or internal pressure is too strong to be handled by the individual's characteristic patterns (Baudry 1995; Moore and Fine 1990). Because lasting reduction of symptoms is understood as a reflection of change in character structure, psychoanalytic treatment aims to initiate that change. Working through and resolving unconscious conflicts that have been obstructing the more adaptive maturation of a patient's character structure is believed to be an important curative process. As a result of this effort, a patient's character might develop toward greater maturity, and thus the patient no longer "needs" symptoms to handle conflicts (Etchegoyen 1991).

Most forms of psychotherapy aim at reducing symptomatic suffering, and several therapeutic methods have been proved efficacious (Bergin and Garfield 1994). However, psychoanalytic therapy, one of the oldest and more widely applied forms of therapy, has not been studied as extensively as other therapies (Crits-Christoph and Barber 2000). Since it is assumed that character change requires time, psychoanalytic therapy is most often a long-term treatment (Greenson 1978; Mertens 1995). Recent studies provide empirical evidence that indicates the benefit of long-term treatments (Freedman et al. 1999; Sandell et al. 2000; Seligman 1995). Whether character can change at all in adults and, consequently, whether an individual's character can change during psychotherapy are empirical questions (Heatherton and Weinberger 1997; Weinberger 1997). Modern personality researchers, such as Costa and McCrae (1997), have concluded that personality traits remain strikingly stable over long periods (3–30 years).

The general aim of the study reported here was to examine whether long-term psychoanalytic therapy, delivered by experienced psychotherapists, had an effect on patients' character and symptoms. A more specific aim was to study if improvement in character pathology would be accompanied by a reduction in symptoms.

METHODS AND PROCEDURE

Subjects

The Institute of Psychotherapy in Stockholm, where this study was conducted, is part of the City Council health care program, and provides

long-term psychoanalytic psychotherapy at a low fee (approximately $120 per year of treatment). Patients applied for psychotherapy by calling the institute. After a brief interview over the phone, one-third of the patients who called were admitted for three exploratory sessions. One-third of these patients were considered suitable for long-term psychoanalytic therapy according to traditional psychoanalytic selection criteria, and were put on a waiting list for treatment at the institute. The selection criteria include a good global level of functioning, good ego strength, good reality testing, good object relations in the outer world, and a capacity to tolerate frustration without impaired object constancy. In addition, patients should present "psychological-mindedness," including character traits such as a capacity to regress in the service of the ego and curiosity regarding inner life (Crits-Christoph and Connolly 1993).

Of the 58 consecutive individuals from the waiting list who were invited to participate in the study, 55 (95%) agreed to participate. Forty-four patients (80%) were women (mean age 33 years, range 21–54), and 11 (20%) were men (mean age 37 years, range 27–53). Forty-four percent of the patients were single, 38% were married, and 18% were divorced. Forty-nine percent of the patients worked in health care professions or studied in the field; 27% were professionally engaged in cultural work (e.g., as artists, journalists, photographers). Other professions were represented in only 13 patients (24%). For a more detailed description of the patients' characteristics at intake, see Wilczek et al. (1998).

Prior to treatment, approximately three sessions of assessment and contract formulation took place. For various reasons, 13 of the 55 individuals selected never started treatment. Seven of these did not agree on a treatment contract after up to eight contract-formulating sessions. Two did not enter therapy due to psychosocial changes in their lives. Two were considered suitable for psychoanalysis after a few assessment sessions (no such treatment had, however, been initiated prior to the follow-up interview). Finally, one individual moved to another city, and one individual decided to begin short-term behavioral therapy. Thus, 42 of the 55 individuals who originally agreed to participate actually engaged in psychotherapy at the institute, and of these 39 (93%) came to the follow-up interview. We were interested in patients who received long-term therapy, defined as lasting one year or more according to Crits-Christoph and Barber (2000). Three patients, all women, who ended their psychotherapy in less than 12 months (2, 6,

and 7 months, respectively) were therefore excluded. Thus, the therapy group at follow-up comprised 36 patients.

Ten of the 13 "nontherapy" individuals agreed to participate in a follow-up interview conducted three years after the initial interview. Results for this nontherapy group will also be reported.

Chi-square and Student *t* test analyses revealed no significant differences regarding sex or age between the therapy and the nontherapy groups. Family status and professions in the nontherapy group resembled those of the total group. Six were single, 3 were married, and 1 was divorced. Four worked or studied in health care professions, 4 in cultural professions, and 2 in other fields. Of the 3 in the nontherapy group who declined participation in the follow-up interview (mean age 39 years), 2 were women; 1 individual was married, and 2 were divorced; 1 worked in a cultural profession, 1 in health care, and 1 in an "other" profession. Of the 3 individuals in the therapy group who declined to participate in the follow-up interview (mean age 35 years), 2 were women; 2 individuals were married, 1 was single, 2 worked in a cultural profession, and 1 worked in an "other" profession.

The Psychotherapists

Since the 1970s, the Institute of Psychotherapy has been the leading center for the practice and teaching of psychoanalytic psychotherapy in Sweden. All psychotherapists at the institute are well trained, have extensive professional experience, and are board certified. Twenty therapists (15 social workers, 3 psychiatrists, and 2 psychologists) were engaged in the treatment of the 36 patients. The psychiatrists and psychologists were also psychoanalysts. To become a board certified psychotherapist in Sweden, therapists must have completed either standard psychoanalytic training or a five-year program of psychodynamic training. The latter program includes didactic courses in psychodynamic theory, practicing dynamic psychotherapy with three supervised cases, and a personal psychotherapy or psychoanalysis. Psychoanalysts had trained practically all of the social workers engaged in this study, and their training, too, included personal psychoanalysis. The mean professional experience of the therapists at the beginning of treatment was 14.6 years, (median 14, range 8–30). The five psychoanalysts who participated as therapists in the present study treated only one patient each. This group of five patients was too small to make any statistical comparisons with patients treated by other psychotherapists.

Table 1. The Karolinska Psychodynamic Profile (KAPP) subscales

Quality of interpersonal relations

1. *Intimacy and reciprocity.* Assesses different ways of relating to others—from relations characterized by intimacy and reciprocity to unilateral relations based on the subject's needs.
2. *Dependency and separation.* Assesses different types of dependency—from relative independence, as a more mature form of dependency, to infantile dependency.
3. *Controlling personality traits.* Assesses different ways in which the need for power and control is expressed—ranging from mature and flexible attitudes, via hidden and indirect bids for power or control, to immature, more compulsively rigid forms expressed in relation to both people and things.

Specific aspects of personality functioning

4. *Frustration tolerance.* Assesses the capacity to endure the tension and displeasure arising from conflict between wishes felt to be essential and the internal or external limitations involved. The subscale describes different ways of responding to frustration—ranging from tolerance and coming to terms with it, via defensive modes of functioning (e.g., ego-restrictions), to manifest difficulty in enduring the disagreeable feelings it engenders.

5. *Impulse control.* Assesses different ways of containing urgent affects, wishes, and needs of different kinds, and the way these are expressed in action—ranging from a mature balance between wishes and reality, via undue emphasis on the dictates of reality at the cost of wishes, to manifest difficulty in taking reality into consideration in the pursuit of gratification.
6. *Regression in the service of the ego.* Assesses the capacity to regress in the service of the ego—ranging from a satisfactory capacity to leave the reality principle temporarily (playfully, voluntarily, and under control) to pronounced difficulty in doing so.
7. *Coping with aggressive affects.* The subscale ranges from adaptive and goal-directed attitudes and behavior, via nonadaptive inhibition of aggression, to impulsive and destructive expression.

Affect differentiation

8. *Alexithymic traits.* The subscale ranges from good ability to identify, experience, and articulate variation in feelings and emotional states in a subtle and differentiated manner, to great difficulty in

distinguishing between different feelings and sensations and in verbalizing them.

9. *Normopathic traits.* The subscale ranges from good ability to give active expression to personal and individualized needs and wishes, to an incapacity for such personal fantasies and instead clinging to social conventions or customs.

The importance attached to the body as a factor of self-esteem

10. *Conceptions of bodily appearance and their significance for self-esteem*. Assesses the individual's stable conscious and unconscious conceptions of the appearance of the body and its significance for self-esteem.

11. *Conceptions of bodily function and their significance for self-esteem.* Assesses the individual s stable conscious and unconscious conceptions of the function of the body and its significance for self-esteem.

12. *Current body image*. Assesses the individual's current conceptions, conscious and unconscious, of his or her physical appearance and function, and their effect on the individual's self-esteem.

Sexuality

13. *Sexual functioning.* Assesses the individual's capacity to function sexually, with regard to sexual activity with a partner.

14. *Sexual satisfaction.* Assesses sexual interest, desire, and satisfaction in relation to a partner. The subscale is graded from an active attitude toward sex to greater inhibition and passivity.

Sense of social significance

15. *Sense of belonging; 16. Feeling of being needed; 17. Access to advice and help*.These three subscales assess the individual's own experience of his or her capacity to relate socially.

Character as organization

18. *Personality organization.* Assesses the degree of differentiation and integration of internalized object relations, as well as habitual defense strategies. Personality organization is graded from neurotic to psychotic.

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The Psychotherapy

The psychotherapy conducted at the institute is firmly based on psychoanalytic theory and technique, reinforced by regular theoretical seminars and supervision. All therapists in the study were teachers or supervisors of psychotherapists in training. As this was a naturalistic study, no formal treatment manual or adherence check was used. The frequency of sessions was once weekly (16 patients) or twice weekly (20 patients), with a mean of 159 sessions (range 46–318). All therapies were conducted face to face. The patients and therapists agreed on when to terminate treatment. The average length of treatment was 36 months (range 12–66).

Assessment Instruments

Psychodynamic character assessment. The Karolinska Psychodynamic Profile (KAPP), an interview-based instrument, was used for psychodynamic character assessment (Weinryb and Rössel 1991; Weinryb, Rössel et al. 1997). Based on psychoanalytic theory, the KAPP is designed to assess relatively stable character traits and modes of mental functioning as they appear in self-perception and interpersonal relationships. The instrument consists of 18 subscales, 17 of which measure specific character traits; the last subscale evaluates character organization. Each subscale contains an explanation of the subscale and three defined levels, with level 1 representing "most normal" and level 3 "least normal." Two additional intermediate levels may be used on each subscale, resulting in a five-point scale (1, 1.5, 2, 2.5, and 3). The KAPP subscales are presented in Table 1.

Factor analysis of the KAPP in 65 patients with ulcerative colitis yielded five factors, suggesting that the KAPP measures more than one dimension of psychic health or psychiatric severity (Weinryb, Rössel, and Åsberg 1991a). Convergent validity of the KAPP was examined by comparing independent KAPP ratings based on data obtained by projective testing (Rorschach) and ratings obtained by interview. The correlations between results obtained by the two methods were satisfactory (Weinryb, Rössel, and Åsberg 1991a). Further, the KAPP has been found to discriminate between patients with and without a DSM diagnosis (Weinryb et al. 1992a). Stability over time has been examined by comparing KAPP scores before a major life event (abdominal surgery) to scores an average of 22 months later. Scores on 14 of the 18 subscales were similar before and after surgery (Weinryb

et al. 1992b). By examining the ability of the KAPP to predict long-term outcome after surgery, predictive validity was evaluated. The results suggested that preoperative character traits could predict the patients' postoperative quality of life beyond what could be predicted by surgical outcome alone. Poor frustration tolerance and the absence of alexithymic traits were found to predict poor postoperative quality of life, indicating that alexithymic traits might actually be adaptive (Weinryb, Gustavsson, and Barber 1997; Weinryb, Gustavsson et al. 1997). In addition, perfectionist body ideals and long-standing preoperative problems in sexual functioning also predicted poorer postoperative long-term psychosocial adjustment in specific areas (Weinryb, Gustavsson, and Barber 1997, 2003).

The reliability of the KAPP scores in the present study was examined by comparing the ratings made by the first author (AW) with ratings made by a psychologist who independently rated 15 audiotaped KAPP interviews made by the first author. The mean intraclass correlation, or ICC (Shrout and Fleiss 1979), was 0.53 (median 0.57, range 0.23–0.76). The relatively low reliability is likely due to a restricted range of character pathology in the present sample. Only the ratings made by the first author, shown to be a reliable judge in other studies (ICC of 0.69 while rating interviews conducted by one of the developers of the KAPP), were used in the analyses of this study. The KAPP has been shown to be reliable in other studies; Wienryb, Rössel, and Åsberg (1991b), for example, found ICCs ranging from 0.73 to 0.88 when five independent judges rated the same interviews.

Personality assessment. The Karolinska Scales of Personality, or KSP (Schalling et al. 1987), is a self-report personality inventory comprising 135 items (with a four-point Likert scale) summarized in 15 scales. The instrument was constructed within a biologically oriented frame of reference, and has been widely used in studies in Scandinavia and elsewhere. The KSP was designed to assess dimensions of temperament, especially those believed to be markers of vulnerability to psychopathology.

The 15 KSP scales have been classified into three categories: anxiety-proneness scales (Psychic Anxiety, Somatic Anxiety, Muscular Tension, Psychasthenia, and Inhibition of Aggression), extraversion-related scales (Impulsiveness, Monotony Avoidance, Detachment, Socialization, and Social Desirability), and aggression-hostility scales (Indirect Aggression, Verbal Aggression, Irritability, Suspicion, and

Guilt). Most KSP scales comprise 10 items, except for the Socialization scale (20 items) and the 5 aggression-hostility scales (5 items each). Reliability of the KSP scales in the present study was evaluated in terms of internal consistency (Cronbach's alpha). Reliability coefficients ranged between 0.24 and 0.83. Ten of the 15 KSP scales had coefficients over 0.71. Four of the 5 scales with low internal consistency (below 0.70) were those consisting of only five items. The reliablity estimates in this particular study resemble the internal consistency commonly found in other KSP studies (Gustavsson 1997). The KSP measures personality traits that are stable over time (Gustavsson et al. 1997) and has been validated in healthy subjects through comparison with other commonly used questionnaires (Curtin et al. 1995; Schalling et al. 1987). The KSP scales are presented in af Klinteberg, Schalling, and Magnusson (1990).

Psychiatric diagnosis. The DSM-III-R was used to diagnose clinical syndromes (Axis I), personality disorders (Axis II), and Global Assessment of Function (GAF, Axis V). DSM-III-R diagnoses were made by the first author (AW), a senior psychiatrist and psychoanalyst with extensive experience in conducting psychiatric interviews and teaching the methods of such interviews. No formal reliability test for the DSM-III-R diagnosis was made. Of the 55 patients included, 29 fulfilled criteria for an Axis I diagnosis, 17 of whom suffered from an affective disorder. Six patients fulfilled criteria for an Axis II diagnosis, 1 had a borderline personality disorder, 1 had a narcissistic personality disorder, and 4 had an NOS personality disorder. Mean GAF was 70, range 50–85. (GAF scores range from 0 to 100, where 0 indicates death and 100 extremely good functioning regarding mental health and social functioning.)

Symptom assessment. The CPRS Self-Rating Scale for Affective Syndromes, or CPRS-S-A (Svanborg and Åsberg 1994), was developed from the Comprehensive Psychopathological Rating Scale, or CPRS (Åsberg et al. 1978). The CPRS-S-A consists of 19 items that cover core symptoms of depressive, anxiety, and obsessive-compulsive syndromes. The original CPRS is interview-based and consists of 40 reported and 25 observed items, covering the full range of psychopathology. Several subscales for different syndromes have been constructed from the CPRS, such as the Montgomery-Åsberg Depression Rating Scale (MADRS), the Brief Scale for Anxiety (BSA) (Montgomery and Åsberg 1979; Tyrer, Owen, and Cicchetti 1984), and the CPRS-

OCD scale (Thorén et al. 1980). The concordance between interview and self-report ratings has been found to be high: for the depression scale, ranging between 0.80 and 0.94, and for the anxiety scale, 0.76–0.91 (Mattila-Evenden et al. 1996; Svanborg and Åsberg 1994). Discriminant validity has also been found satisfactory (Svanborg and Åsberg 2001).

Each of the 19 CPRS-S-A items contains a description of the symptom and four defined levels of severity. Three additional intermediate levels may be used, resulting in a seven-point scale graded in half steps from 0 to 3, where level 0 represents "no symptoms" and level 3 represents "extreme symptoms." The patients are instructed to assess the severity of the symptom during the past three days.

Procedures

The first author (AW) conducted all research interviews. Each interview lasted two to three hours. The follow-up interviews were conducted approximately six months after termination of treatment. During the course of the study, all therapists were asked twice a year whether therapy had ended. For the 10 individuals who did not enter treatment, the follow-up interview was completed three years after the first interview. All interviews were audiotaped. The interviewer completed the KAPP scoring and determined the DSM-III-R diagnoses (Axis I, Axis II, and GAF) immediately after the interview. Finally, the patients filled out the CPRS-S-A and the KSP questionnaires at the end of the interview. None of the authors treated any patient who participated in the study.

Data Analysis

A paired two-tailed t test was used to compare scores before and after therapy. The unpaired two-tailed t test, analyses of covariance, and chi-square were used to compare groups. The Pearson correlation coefficient was used in all the correlation analyses. The significance level < 0.05 was used in all computations. Because significance levels are strongly impacted by sample size (the larger the sample, the easier it is to find a significant difference), we used within-group effect size (*ES*) as a measure of the magnitude of change. Between-groups *ES* is defined as small if it ranges between 0.2 and 0.5, medium between 0.5 and 0.8, and large above 0.8 (Cohen 1988). For within-group *ES,* there are no actual conventions to describe in words the magnitude of change. Another advantage of using effect sizes is that they

allow us to compare treatment effects or between-group effects from different studies.

RESULTS

Comparison between Therapy and Nontherapy Subgroups at Intake

At intake no significant differences were found between the therapy and nontherapy subgroups on the CPRS-S-A anxiety, depression, or obsessive compulsive subscales (t values = −0.32, −1.09, and −0.14, respectively), on the 18 KAPP subscales (t values ranged between −1.15 and 1.99), or on the 15 KSP subscales (t values ranged between −1.62 and 1.35). All six patients with an Axis II diagnosis were members of the therapy group. Mean GAF was 69 in the therapy group and 74 in the nontherapy group ($t = 1.97$, *ns*).

Change in Character Pathology

In order to study change in character traits, we compared the KAPP scores before psychotherapy to those from the follow-up interviews (see Table 2). A significant reduction in pathology was found in eight of the KAPP subscales: Intimacy and Reciprocity, Frustration Tolerance, Regression in the Service of the Ego, Coping with Aggressive Affects, Conceptions of Bodily Appearance and Their Significance for Self-esteem, Sexual Function, Sexual Satisfaction, and Personality Organization.

Because there were patients who did not demonstrate any pathology on some of the KAPP subscales at intake, they could not improve their KAPP scores during the course of treatment. Thus, the same analysis was performed, excluding the patients who had normal scores (i.e., scored 1) on a specific KAPP subscale at intake, to test for improvement among only those who could improve. Significant differences between intake and outcome scores were found on eleven subscales. In addition to the eight subscales mentioned above, Dependency and Separation, Controlling Personality Traits, and Sense of Belonging also improved (see Table 3).

The ten individuals in the nontherapy group demonstrated more pathology three years after the first interview on the subscale Dependency and Separation ($t = -2.71$, $p < 0.05$), and less pathology on the subscale Regression in the Service of the Ego ($t = 2.69$, $p < 0.05$). No other significant changes were found.

Table 2. Mean KAPP scores before and after psychoanalytic psychotherapy (n = 36)

	Intake		Follow-up				
KAPP subscales	*Mean*	*SD*	*Mean*	*SD*	*t*	*p*	*Effect size*
Intimacy and reciprocity	1.29	0.37	1.14	0.23	2.53	0.02	0.49
Dependency and separation	1.63	0.42	1.49	0.37	1.71	*ns*	0.35
Controlling personality traits	1.24	0.35	1.25	0.33	−0.19	*ns*	−0.03
Frustration tolerance	1.56	0.39	1.33	0.41	2.41	0.02	0.57
Impulse control	1.51	0.39	1.54	0.36	−0.68	*ns*	−0.08
Regression in the service of the ego	1.36	0.41	1.20	0.33	2.23	0.03	0.43
Coping with aggressive affects	1.74	0.30	1.44	0.35	4.34	0.0001	0.92
Alexithymia	1.06	0.16	1.04	0.14	0.37	*ns*	0.13
Normopathy	1.01	0.08	1.10	0.23	−1.97	*ns*	−0.52
Bodily appearance[a]	1.41	0.49	1.29	0.40	2.17	0.04	0.27
Bodily functioning[b]	1.13	0.30	1.18	0.27	−0.94	*ns*	−0.18
Current body image	1.17	0.34	1.17	0.29	0.00	*ns*	0.00
Sexual functioning	1.26	0.49	1.10	0.27	2.15	0.04	0.40
Sexual satisfaction	1.31	0.47	1.16	0.29	2.34	0.03	0.38
Sense of belonging	1.28	0.47	1.21	0.33	1.04	*ns*	0.17
Feeling of being needed	1.11	0.27	1.06	0.23	1.00	*ns*	0.20
Access to advice and help	1.15	0.33	1.13	0.25	0.47	*ns*	0.05
Personality organization	1.19	0.32	1.04	0.14	2.58	0.01	0.61

[a]Bodily appearance = Conceptions of bodily appearance and their significance for self-esteem

[b]Bodily functioning = Conceptions of bodily function and their significance for self-esteem

Change in Self-report Measure of Personality

Scores on the KSP subscales before therapy were compared to posttherapy scores. In the therapy group significant improvements were found on 9 of the 15 subscales: Psychic Anxiety, Somatic Anxiety, Muscular Tension, Psychasthenia (proneness for fatigue, lowered mood, irritability, and somatic complaints), Inhibition of Aggression, Detachment, Irritability, Suspicion, and Guilt (see Table 4).

In the nontherapy group there was a significant change on one KSP subscale only, namely Guilt, which improved (t = 2.79, $p < 0.05$).

Table 3. KAPP scores before and after psychoanalytic psychotherapy, for patients with character pathology at intake (i.e., scored >1 at intake)

		Intake		Follow-up				
KAPP subscales	*n*	*Mean*	*SD*	*Mean*	*SD*	*t*	*p*	*Effect size*
Intimacy and reciprocity	15	1.67	0.24	1.20	0.25	14.00	0.0001	1.92
Dependency and separation	28	1.80	0.28	1.54	0.33	3.38	0.002	0.85
Controlling personality traits	13	1.65	0.24	1.31	0.33	3.32	0.006	1.18
Frustration tolerance	28	1.71	0.29	1.36	0.45	3.49	0.002	0.92
Impulse control	26	1.71	0.25	1.62	0.36	1.31	*ns*	0.29
Regression in the service of the ego	18	1.72	0.26	1.33	0.38	3.76	0.002	1.20
Coping with aggressive affects	34	1.78	0.25	1.47	0.35	4.41	0.0001	1.02
Alexithymia	4							
Normopathy	1							
Bodily appearance[a]	18	1.83	0.34	1.53	0.44	3.33	0.004	0.76
Bodily functioning[b]	6							
Current body image	8	1.75	0.27	1.31	0.37	2.97	0.02	1.36
Sexual functioning	9	2.00	0.43	1.33	0.43	3.27	0.01	1.56
Sexual satisfaction	13	1.85	0.38	1.35	0.38	3.95	0.002	1.32
Sense of belonging	11	1.91	0.38	1.41	0.36	5.24	0.0004	1.35
Feeling of being needed	6							
Access to advice and help	8	1.69	0.37	1.31	0.37	1.82	*ns*	1.04
Personality organization	11	1.64	0.23	1.05	0.15	6.50	0.0001	3.04

[a]Bodily appearance = Conceptions of bodily appearance and their significance for self-esteem

[b]Bodily functioning = Conceptions of bodily function and their significance for self-esteem

Change in Psychiatric Diagnoses and Symptoms

Before therapy, 22 of the 36 patients in the therapy group met criteria for an Axis I or Axis II diagnosis, whereas only 5 patients fulfilled criteria for such diagnosis after therapy (chi-square = 3.70, $p = 0.055$). GAF scores improved significantly following therapy, from a mean of 68.75 to 75.22 ($t = -4.46$, $p < 0.001$, $ES = -0.87$). Therapy patients improved significantly on the CPRS-S-A subscales of anxiety ($t = 5.25$, $p < 0.001$, $ES = 0.99$), depressive symptoms ($t = 6.13$, $p < 0.001$, $ES = 1.23$), and obsessive compulsive symptoms ($t = 6.09$, $p < 0.001$, $ES = 1.10$). In the nontherapy group ($n = 10$), there were no significant changes in DSM-III-R Axis I and II diagnoses, GAF scores ($ES = 0.08$), or CPRS-S-A scores ($ES = 0.27$, 0.05, and 0.30).

Character Problems and Symptoms in the Therapy Group

According to psychoanalytic theory, reduced symptomatic suffering is the consequence of improvement in character structure. Therefore, it was of interest to study whether patients who experienced less symptomatic suffering after psychotherapy also demonstrated less character pathology. As a straightforward way to examine this association, we categorized the patients as improvers or nonimprovers, according to their KAPP and CPRS-S-A change scores. Each patient who had improved on any of the eight KAPP subscales where significant change had occurred was categorized as an improver on that particular subscale, while patients who did not change or received a more pathological score at follow-up were categorized as nonimprovers. The same categorization was employed for each patient with regard to the three CPRS-S-A symptom scores. Then, 2 x 2 contingency tables were constructed and chi-square analyses were computed with improvers and nonimprovers on a specific KAPP subscale on one axis and a specific CPRS-S-A symptom subscale on the other. Out of 24 chi-square analyses (8 KAPP x 3 CPRS-S-A improver/nonimprover categorizations), only one yielded a significant relation between character and symptom change: namely between frustration tolerance and depressive symptoms (chi-square = 5.20, $p = 0.02$). Thus, those patients who improved regarding character pathology after psychotherapy were not the same patients who reported reduced symptomatic suffering.

Comparing Change in the Therapy and Nontherapy Groups

First, in order to compare the magnitude of change between the therapy and nontherapy groups, effect sizes for change in the KAPP, the KSP, the CPRS-S-A, and the GAF scores were calculated for both groups. Effect sizes in the therapy group were higher in most cases (26 of 37), and a *t* test comparing the effect sizes of the two groups was highly significant ($t = 4.143$, $df = 36$, $p = 0.0002$).

Second, analyses of covariance were computed to investigate whether there were any significant differences between the two groups in change on the KAPP subscales partialling the initial level. Significant differences were found on the following subscales: Intimacy and Reciprocity ($F[1,43] = 5.66$, $p = 0.02$), Dependency and Separation ($F[1,43] = 6.05$, $p = 0.02$), Frustration Tolerance ($F[1,42] = 4.16$, $p = 0.05$), Coping with Aggressive Affect ($F[1,43] = 6.32$, $p = 0.02$), Bodily Appearance ($F[1,42] = 4.21$, $p = 0.05$), Bodily Function ($F[1,43] = 4.71$,

$p = 0.04$), Access to Advice and Help ($F[1,42] = 5.90$, $p = 0.02$). In all instances there was more change in the therapy group and the change was for the better.

On the KSP there was significant differential change between the two groups on four subscales: Muscular Tension ($F[1,40] = 5.86$, $p = 0.02$), Psychasthenia ($F[1,40] = 4.83$, $p = 0.03$), Verbal Aggression ($F[1,40] = 6.49$, $p = 0.02$), and Inhibition of Aggression ($F[1,41] = 8.64$, $p = 0.005$). Again, for the therapy group there was more change, and the change was for the better.

Table 4. Mean KSP scores before and after psychoanalytic psychotherapy (n = 36)

	Intake		Follow-up				
KSP T- scores	*Mean*	*SD*	*Mean*	*SD*	*t*	*p*	*Effect size*
Psychic anxiety	56.17	9.87	49.32	9.67	4.06	0.0003	0.70
Somatic anxiety	60.74	9.15	52.30	9.22	5.46	0.0001	0.92
Muscular tension	59.80	12.54	52.68	10.69	3.13	0.004	0.61
Psychasthenia	59.23	15.07	52.59	12.71	2.19	0.04	0.48
Inhibition of aggression	52.37	8.06	45.15	9.64	5.63	0.0001	0.81
Impulsiveness	52.77	11.45	51.64	9.28	1.06	ns	0.11
Monotony avoidance	56.57	11.06	57.99	9.09	–0.36	*ns*	–0.14
Detachment	49.26	10.24	44.41	8.71	3.64	0.0009	0.51
Socialization	32.06	9.06	34.51	9.89	–2.00	*ns*	–0.26
Social desirability	39.26	8.30	38.38	10.55	0.67	*ns*	0.09
Indirect aggression	55.20	11.38	55.76	9.18	–0.42	*ns*	–0.05
Verbal aggression	52.74	8.87	52.99	7.97	–0.20	*ns*	–0.03
Irritability	55.77	9.17	50.97	10.56	3.19	0.003	0.49
Suspicion	56.11	10.26	52.99	13.26	2.20	0.03	0.26
Guilt	53.24	10.90	47.05	8.43	3.25	0.003	0.64

DISCUSSION

In the present naturalistic study, we examined 55 patients selected for long-term psychoanalytic psychotherapy (average, 3 years) delivered by experienced psychotherapists. The results indicate that patients who completed treatment manifested a substantial reduction in symptomatic suffering, as well as decreased levels of character and personality pathology as defined by the KAPP and the KSP, respectively. Generally, such changes were not found in the groups who did not engage in treatment.

In the therapy group, improvements were found on eight KAPP subscales, which defined eight different aspects of character: Intimacy and Reciprocity, Frustration Tolerance, Regression in the Service of the Ego, Coping with Aggressive Affects, Conceptions of Bodily Appearance and Their Significance for Self-esteem, Sexual Function, Sexual Satisfaction, and Personality Organization. Since the KAPP subscales define levels of pathology, the character pathology of a "prototype" patient can be formulated. Thus, before therapy, a typical patient would be someone with a tendency for "part-object" relationships—that is, someone who tends to use objects to satisfy his or her own needs, whereas those of the object are of minor importance. Frustration is often handled through ego restriction (i.e., a stable pattern of avoiding challenges and other potentially frustrating situations, often resulting in a suboptimal social and professional life). Overt expressions of aggression are avoided, while instead proneness to self-criticism, feelings of being misunderstood, suppression of anger, and avoidance of conflicts and self-assertion are present. Self-esteem is fragile and dependent on conceptions of one's own looks, resulting in anxious preoccupation with appearance. Sexual life is inhibited, only occasionally satisfying, and sometimes functionally disturbed. Finally, there is a lack of stability regarding self- and object constancy in one's inner world, resulting in difficulties experiencing ambivalence and inner conflict. These character problems were reduced in the patients who engaged in long-term psychoanalytic psychotherapy. Only the capacity to regress in the service of the ego improved in both groups. The reason behind this improvement in individuals who did not enter therapy is unclear. It could, of course, be a random variation. Another possibility may be that the first clinical interviews, the research intake interview, and in some cases the contract-formulating interviews had some effect regarding the capacity to regress in the service of the ego.

Although the nontherapy group did not constitute a formal, randomly assigned control group, we chose to compare the nontherapy group to the treated group, hoping to obtain preliminary and exploratory information on the change rate differences between individuals who received long-term psychoanalytic therapy and those who did not. Because patients were not randomly assigned to the two groups and the nontherapy group was so small, conclusions should be drawn with caution. We found significant change rate differences on seven KAPP and four KSP subscales between the groups, suggesting that the changes in character traits were associated with treatment. Another reason to be

cautious is the possibility that the rater was biased in favor of the treatment group. However, this could explain only results based on clinician-rated scales like the KAPP, not those based on self-reports like the KSP.

In psychoanalytic theory, relief of symptomatic suffering is conceptualized as a consequence of changes in character structure (Etchegoyen 1991). However, our results provide very little support for the theory of a relation between character and symptom change. Moreover, the magnitude of the change (i.e., effect size) was higher on the symptom measures (CPRS-S-A and GAF) than on the character pathology measure (KAPP), suggesting that psychotherapy in the present study primarily reduced symptoms.

There are several limitations to the present study. The assessment interviewer of all patients both at the beginning of treatment and at follow-up could not be made blind as to whether patients engaged in therapy or not, since patient and interviewer had to discuss the patient's current situation in depth, including significant experiences such as a psychotherapy. Thus, there is the risk that the rater, who is a psychoanalyst and the first author of this paper, could have been biased toward finding more positive change in treated patients. In addition, the fact that this same rater conducted all the interviews and rated character and psychiatric pathology, according to the KAPP and DSM-III-R, constitutes another source of rater bias, in the sense that scores using one instrument could influence his scoring of the other. This concern, however, is counterbalanced by the fact that findings from the self-report personality and symptom assessments were consistent with those of the interviewer. Ideally, a second independent interviewer, blind to phases of treatment, with no allegiance to the treatment being studied, should have conducted a second assessment interview with the patients. Having an estimate of the degree of agreement between the interviewers would be helpful in assessing the generalizability of the present findings.

Additional limitations were the use of a naturalistic design and the formed comparison group. Without a formal control group we cannot conclude that the changes we found were due to the treatment, rather than being the result of regression to the mean. However, recruiting patients for a control group is a difficult task for both ethical and logistical reasons when studying long-term treatments. Once again, our findings are strengthened by the fact that improvements did not occur in the nontherapy group.

In conclusion, the results of the present study suggest that the patients who engaged in long-term psychoanalytic psychotherapy improved their ways of handling crucial aspects of their life and reduced their symptomatic suffering. However, given the study's naturalistic design and the lack of process data, it is not possible to determine which aspects of the treatment were effective. Theoretically, long-term psychoanalytic techniques effect character change and result in an increased capacity to handle difficulties in life without symptomatic suffering. Whether this theoretical explanation can be empirically confirmed has yet to be determined in controlled studies. Thus, an important area for future psychotherapy research is the relation between a person's character and symptoms.

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Alexander Wilczek
Karolinska Institutet
Department of Clinical Neuroscience
Psychotherapy Section
Björngårdsgatan 25
S-118 52 Stockholm
SWEDEN
E-mail: alexander.wilczek@pi.ki.se