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Intelligence as a predictor of outcome in short- and long-term psychotherapy

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A B S T R A C T

Intelligence has been suggested as a suitability factor for short-term therapy whereas its possible effect on short-term versus long-term therapy still is unknown. The aim of this study was to compare the prediction of intelligence on the level of psychiatric symptoms and psychosocial functioning in psychotherapies of different lengths. A total of 251 outpatients from the Helsinki Psychotherapy Study, aged 20–46 years, and suffering from mood or anxiety disorders were allocated to two long-term and two short-term therapies. Intelligence was assessed at baseline with the Wechsler Adult Intelligence Scale (WAIS-R). Psychiatric symptoms and psychosocial functioning were assessed 5–10 times during a 5-year follow-up using two primary symptom measures (HDRS and HARS) and one primary measure of psychosocial functioning (GAF). Short-term therapy was more effective than long-term therapy during the first year of follow-up. During the second to fourth follow-up year no differences between short- and long-term therapies or the intelligence groups were found. At the fifth follow-up year, however, long-term psychotherapy showed a statistically significantly larger change in all three primary measures compared to short-term therapy among those with higher intelligence. No differences between therapy groups were noted in those with lower intelligence. People with higher intelligence may benefit more from long-term than from short-term psychotherapy. These findings should be confirmed.

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1. Introduction

It has been suggested that short- and long-term psychotherapies apparently demand different attributes from the patient (Laaksonen et al., 2013a). In short-term psychotherapy the aims of the therapy are relatively clearly defined and the therapist has an active role in facilitating fast development of the time-limited treatment process. In contrast, in open-ended psychoanalysis and long-term psycho-dynamic psychotherapy there is less focus on predefined goals and therapist guidance and more weight is given to improvements in self-awareness and insight (Gunderson and Gabbard, 1999) and to implicit learning processes (Wong and Haywood, 2012). These require that the patient, besides having the ability to commit to the long treatment, is also able to form a fruitful alliance with the therapist, has tolerance for anxiety, and has the motivation and capacity to explore his/her internal world actively and thoroughly (Gabbard, 2004). Likewise, patient's good cognitive capacities and ego functions, such as an adequate level of reflective ability (Fonagy,

2010; Watzke et al., 2010), the ability for abstract thinking and mastery of interaction with the environment (Allen et al., 1986; Gabbard, 2004), all suggest greater potential for a more sustained recovery in long-term explorative psychotherapy.

As far as these authors are aware, intelligence as a predictor of psychotherapy outcome has been studied exclusively in short-term therapies and after the 1980s covering only cognitive-behavioral therapies (Haaga et al., 1991; Luborsky et al., 1996; Fournier et al., 2009; Rizvi et al., 2009; D'Alcante et al., 2012) and non-directive supportive counseling (Doubleday et al., 2002). The results of these studies are contradictory. Intelligence did not predict the outcome of cognitive-behavioral therapies in out-patients suffering from depressive or anxiety disorders (Haaga et al., 1991; Doubleday et al., 2002). However, higher intelligence predicted more reduced anxiety in older adult patients treated with non-directive counseling, thus suggesting its potentially greater demands on abstract thinking than what is needed in cognitive-behavioral therapy (Doubleday et al., 2002). In one study, lower intelligence predicted poor response after cognitive therapy in patients with depression (Fournier et al., 2009). Also, in patients with obsessive–compulsive disorder, especially higher verbal intelligence predicted a greater reduction of symptoms in cognitive-behavioral therapy (D'Alcante et al., 2012). However,

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among women with posttraumatic stress disorder, treated with cognitive processing therapy, no prediction of intelligence on outcome in symptoms was found (Rizvi et al., 2009).

Davanloo (1978) developed a comprehensive set of essential suitability selection criteria for short-term psychodynamic psychotherapy considering different aspects of ego functions, including intelligence. Greater level of intellectual resources has also been suggested beneficial for long-term psychodynamic psychotherapy and psychoanalysis (Bacharach and Leaff, 1978; American Psychiatric Association, (APA) (1985)). Since it is reasonable to hypothesize that individuals with higher intelligence may be able to benefit more in the long run from long-term psychotherapy and since this hypothesis has not been studied previously, the present study investigates the prediction of intelligence on changes in psychiatric symptoms and psychosocial functioning among patients receiving short- versus long-term psychotherapy during a 5-year follow-up from the start of treatment. Since long-term therapy is less effective during the first year of follow-up and more effective at the end of follow-up (Knekt et al., 2013), the comparisons are carried out separately for short and long follow-up.

2. Methods

2.1. Patients

This study is part of the Helsinki Psychotherapy Study, in which 506 eligible outpatients (459 for short- and long-term psychotherapy and 47 for psychoanalysis) were recruited from psychiatric services between June 1994 and June 2000 and followed for 5 years (Knekt and Lindfors, 2004). The protocol was approved by the Helsinki University Central Hospital's ethics council. Written informed consent was obtained from each patient. The patients and settings, therapies and therapists, and assessment methods and statistical methods have been presented in more detail elsewhere (Knekt and Lindfors, 2004; Knekt et al., 2008), and are summarized briefly here.

Patients considered eligible were 20–45 years of age and had a long-standing (>1 year) disorder causing dysfunction in work ability. They had to meet the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (American Psychiatric Association, 1994) criteria for depressive or anxiety disorder. Patients were excluded from the study if they were suffering from psychotic disorder or severe personality disorder, bipolar I disorder, adjustment disorder, substance abuse, organic brain disease or other severe organic disease, or mental retardation. Individuals treated with psychotherapy within the previous 2 years, psychiatric health employees, and persons known to the research team members were also excluded.

Of the eligible patients, 139 refused to participate, and 326 of the remaining 367 patients were randomly assigned to solution-focused therapy (SFT), short-term psychodynamic psychotherapy (SPP) and long-term psychodynamic psychotherapy (LPP). In addition, 41 patients were selected for psychoanalysis (PA). The present study was conducted on a randomly selected subpopulation of 251 patients who had been assessed using the abbreviated Wechsler Adult Intelligence Scale-Revised (WAIS-R) (Wechsler, 1981). Of these patients, 73 were in the SFT group, 71 in the SPP group, 66 in the LPP group, and 41 in the PA group.

2.2. Therapies and therapists

SFT is a brief, resource-oriented, goal-focused therapeutic approach, which helps clients change by constructing solutions (Johnson and Miller, 1994). The orientation was based on an approach developed by De Shazer et al. (1986). The frequency of sessions in SFT was flexible: usually one session every 2 or 3 weeks, up to a maximum of 12 sessions, over a period of no more than 8 months.

SPP is a brief, focal, transference-based therapeutic approach which helps patients by exploring and working through specific intrapsychic and interpersonal conflicts. The orientation was based on approaches described by Malan (1976) and Sifneos (1978). SPP was scheduled for 20 treatment sessions, with one session per week.

LPP is an open-ended, intensive, transference-based therapeutic approach which helps patients by exploring and working through a broad area of intrapsychic and interpersonal conflicts. Therapy includes both expressive and supportive elements, depending on the patient's needs. The orientation followed the clinical principles of LPP (Gabbard, 2004). The frequency of sessions in LPP was 2–3 times a week during a period of approximately 3 years.

PA is an open-ended, highly intensive, transference-based psychodynamic therapeutic approach which helps patients by analyzing and working through a broad area of intrapsychic and interpersonal conflicts. The therapeutic setting and technique are characterized by facilitating maximum development of transference by the use of a couch and free association for exploring unconscious conflicts, developmental deficits, and distortions of intrapsychic structures (Greenson, 1985). The frequency of sessions in PA was four times a week during a period of approximately 5 years.

Altogether 60 therapists participated in the study. A total of five therapists gave solution-focused therapy, 11 short-term psychodynamic psychotherapy, 29 long-term psychodynamic psychotherapy, and 25 psychoanalysis. The therapists had practiced for at least 2 years after training in the specific form of psychotherapy. The mean number of years of experience in the therapy provided was 9 in SFT and SPP, 18 in LPP, and 15 in PA.

The therapists giving psychodynamic psychotherapy or psychoanalysis had received standard training in psychoanalytically oriented psychotherapy (Knekt et al., 2008). During their training the therapists received a minimum of 3–6 years of analytical (psychoanalysis or psychotherapy) training, and those giving short-term therapy received 1–2 years of additional short-term focal psychodynamic psychotherapy training. Also therapists giving SFT had been trained to use the method and received a qualification for the method from a local institute. None of the therapists had received any training in psychodynamic psychotherapy and vice versa.

In psychodynamic psychotherapies, the treatment was provided in accordance with clinical practice using "manual like general guidelines", i.e., the therapists could modify their interventions according to patients' needs (Knekt et al., 2008). In contrast, the solution-focused therapy was given according to a manual, and adherence control was organized. Since the effectiveness of the two short-term therapies did not differ in this data (Lindfors et al., 2012;Knekt et al., 2013; Laaksonen et al., 2013b) they were combined to one group.

2.3. Assessment methods

Intelligence was assessed at baseline using an abbreviated version of the test Wechsler Adult Intelligence Scale-Revised (WAIS-R) (Wechsler, 1981), covering the full scale intelligence quotient (IQ), the verbal IQ, and the non-verbal performance IQ. The tests Digit Span, Arithmetic, Comprehension, and Similarities were used for the verbal IQ and the tests Picture Completion, Picture Arrangement, Block Design, and Digit Symbol for the performance IQ. In this study, all three quotients were used as predictors and were for the purposes of the analyses divided into two categories by the median: low and high.

Descriptive and potential confounding factors were assessed at baseline using questionnaires and interviews. Psychiatric diagnoses (American Psychiatric Association, 1994) were assessed using a semi-structured interview (Knekt and Lindfors, 2004). Psychiatric history (age at the onset of primary psychiatric disorder, duration of primary psychiatric disorder, and separation experiences at childhood), previous psychiatric treatment (i.e., psychotherapy, psychotropic medication, or psychiatric hospitalization), and socioeconomic factors (age, sex, marital status, education, occupation, and current employment status) were assessed using questionnaires. Personality functioning was assessed by the scales Level of Personality Organization (LPO) (Kernberg, 1996; Valkonen et al., 2012), Quality of Object Relations (QORS) (Azim et al., 1991), Immature Defense Style as per the Defense Style Questionnaire (DSQ) (Andrews et al., 1989), Affiliation Toward Self as per the Structural Analysis of Social Behavior questionnaire (SASB) (Benjamin, 1996), Interpersonal Problems (IIP) (Horowitz et al., 2000), and the Suitability for Psychotherapy Scale (SPS) (Laaksonen et al., 2012) and social functioning by the scales Social Adjustment (SAS-SR) (Weissman and Bothwell, 1976) and Sense of Coherence (SOC) (Antonovsky, 1993).

The outcome measures of this study were psychiatric symptoms and psychosocial functioning assessed during a 5-year follow-up from start of therapy. The primary measures were based on interviews conducted by experienced clinical raters at baseline and four times thereafter (at 7, 12, 36, and 60 months from baseline) and the secondary measures were based on self-report questionnaires filled in at baseline and nine times thereafter (at 3, 7, 9, 12, 18, 24, 36, 48 and 60 months from baseline) (Knekt and Lindfors, 2004).

The three primary measures were the interviewer-assessed Global Assessment of Functioning scale (GAF) (American Psychiatric Association, 1994), the 17-item Hamilton Depression Rating Scale (HDRS) (Hamilton, 1960), and the 14-item Hamilton Anxiety Rating Scale (HARS) (Hamilton, 1959). The secondary measures were the self-report 90-item Symptom Check List, Global Severity Index (SCL-90-GSI) (Derogatis et al., 1973), 13-item Symptom Check List, Depression Scale (SCL-90-DEP) (Derogatis et al., 1973), 21-item Beck Depression Inventory (BDI) (Beck et al., 1961), and 10-item Symptom Check List, Anxiety Scale (SCL-90-Anx) (Derogatis et al., 1973).

The assessment of compliance was based on information regarding waiting time from randomization to the initiation of treatment, the completeness of the treatment (i.e., withdrawal after randomization and discontinuation of treatment), and the use of auxiliary treatment (i.e., additional psychotherapy, psychotropic medication use, and hospitalization) at baseline and the nine measurement points during the 5-year follow-up (Knekt et al., 2011). Auxiliary treatment was assessed by questionnaires, interviews, and based on nationwide health registers.