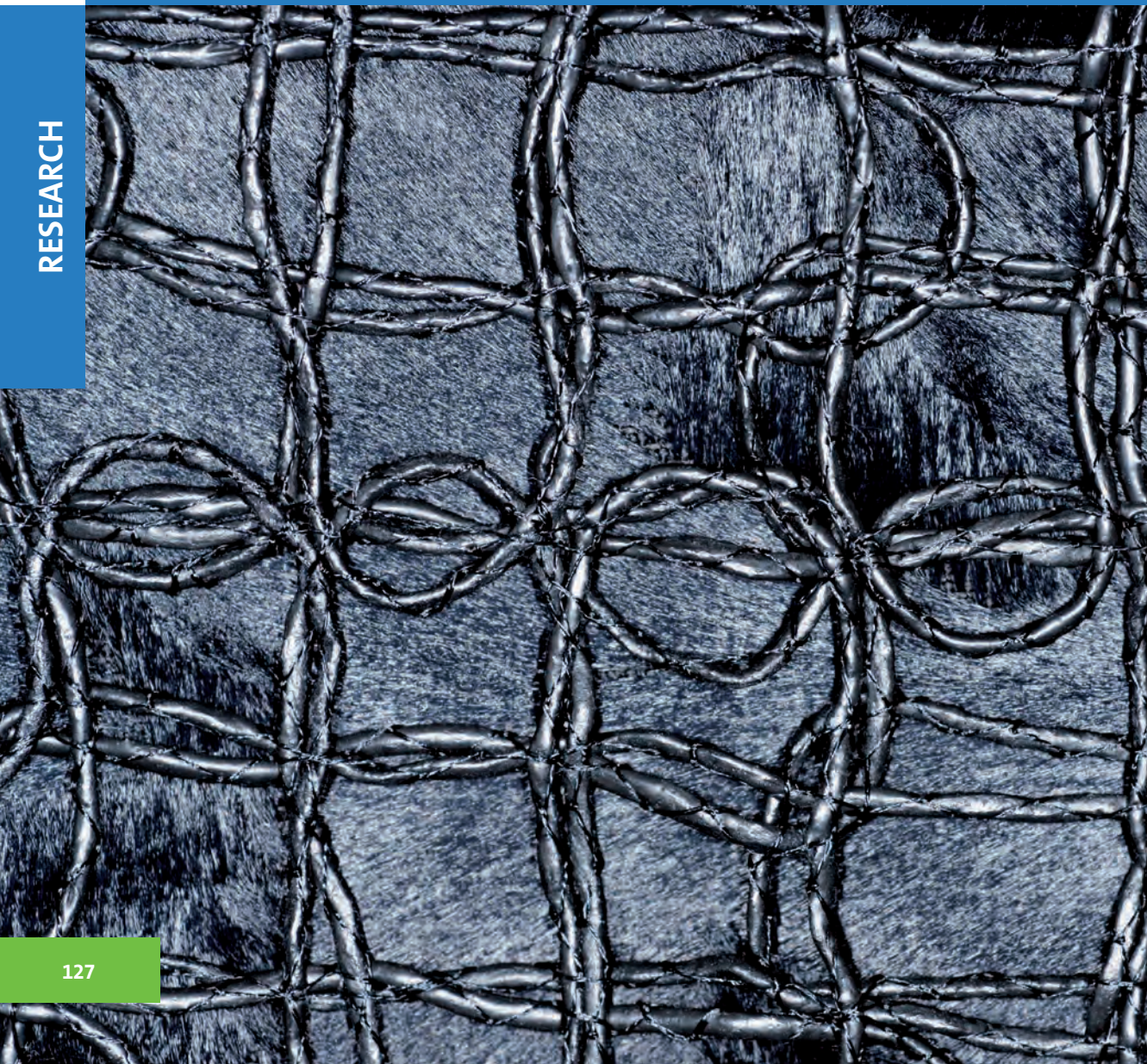


Olavi Lindfors

Personality functioning and psychotherapy outcome

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Olavi Lindfors

Personality functioning and psychotherapy outcome

ACADEMIC DISSERTATION

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Abstract

Olavi Lindfors, Personality functioning and psychotherapy outcome. National Institute for Health and Welfare. Research 127. 137 pages. Helsinki, Finland 2014. ISBN 978-952-302-180-8 (printed); ISBN 978-952-302-181-5 (online publication)

Personality dysfunction is manifested in interpersonal interactions and self-concept. It generates vulnerability to psychopathology and increases the risk of recurring symptoms and impaired work ability. Change in personality functioning is considered a major goal of psychotherapy, but published studies comparing different psychotherapeutic treatments on the subject are scarce. Likewise, the suitability of short-term and long-term therapy has been suggested to be partly determined by the patient's personality functioning but only limited research evidence on the issue is available. Accordingly, assessment of these personality factors with reliable and valid instruments and knowledge on their prediction on outcome are needed for selecting the most optimal treatment for patients.

The aims of this study were to study the effectiveness of short-term and long-term psychotherapy on personality functioning for patients with anxiety or mood disorder, and to study the respective prediction of personality functioning on outcomes, during a 3-year follow-up.

The subjects consisted of 326 outpatients with anxiety or mood disorder, randomized to short-term or long-term psychotherapy in the Helsinki Psychotherapy Study (HPS). Altogether 97 patients were randomly assigned to solution-focused therapy (SFT), 101 patients to short-term psychodynamic psychotherapy (SPP) and 128 patients to long-term psychodynamic psychotherapy (LPP). The patients' psychological status was monitored by questionnaires and interviews before randomization and at 3, 7, 9, 12, 18, 24 and 36 months after the baseline during the 3-year follow-up. Key personality factors in the study were the quality of object relations and self-concept, measured by the Quality of Object Relations Scale (QORS), assessed at baseline with interview, and the Structural Analysis of Social Behavior self-concept questionnaire (SASB). The QORS was used as a predictor variable and as an effect modifying factor. The SASB was used both as a predictor and an outcome variable, the main dimensions measured being affiliation (AF) and autonomy (AU), as well as the secondary sub-scores: self-free, self-affirm, self-love, self-protect, self-control, self-blame, self-attack, and self-neglect. Outcomes in psychiatric symptoms were assessed by the Global Severity Index and the Anxiety Scale of the self-report Symptom Check List 90 (SCL-90-GSI, SCL-90-ANX), and by the Beck Depression Inventory (BDI). Outcomes in work ability were assessed by three self-report questionnaires, the Work Ability Index (WAI), the work subscale of the Social Adjustment Scale (SAS-work), and with the Perceived Psychological Functioning (PPF) scale.

In study I, a methodological cross-sectional study, the concurrent validity of the QORS was examined in a subgroup of 263 patients, and found to be adequate, showing discontinuity and devaluation in relationships to be its main determinants, in line with the theoretical scale constituents.

Study II was a randomized clinical trial which compared the effectiveness of the two short-term psychotherapies (SFT and SPP) and LPP on self-concept during the 3-year follow-up. Self-concept improved faster during the first year of follow-up in the short-term therapies than in LPP in most of the self-concept scores, whereas at the 3-year follow-up LPP was more effective than SFT in AF, self-affirm, self-blame and self-neglect. No difference between the short-term and long-term psychodynamic therapies was noted at any measurement point. Long duration and psychodynamic orientation of therapy may thus benefit self-concept improvement in comparison to a short-term, supportive therapy like SFT.

Support for the relevance of personality functioning also in the selection of treatment was received from Study III, which was based on the previous study and evaluated the effect modification of the quality of object relations on changes in self-concept, in the two short-term therapies and in LPP. The effectiveness of SFT, but not SPP, was significantly poorer in AF, AU, self-attack, self-love and self-free, for patients with less mature relational patterns (low QORS) than for patients with high QORS, mostly in several follow-up points. Contrary, low QORS predicted better outcome in LPP, albeit to a lesser degree, during the first follow-up year in AF, self-attack and self-love.

Finally, in Study IV, the prediction of the QORS and the SASB self-concept scores (AF, AU) on psychiatric symptoms and work ability in short-term and long-term therapy was studied in a cohort study design. As no differences were found between the short-term therapies, a short-term therapy group was formed by combining SFT and SPP, to increase statistical power in the analyses. Negative self-concept (low AF) strongly and overly controlling self-concept (low AU) modestly predicted greater early gains in psychiatric symptoms and work ability in short-term therapy than in LPP. However, at the 3-year follow-up low AF predicted better outcomes in LPP, by a greater reduction in psychiatric symptoms. More limited long-term benefits in LPP vs. short-term therapy were found in symptoms and work ability among the patients with low AU and low QORS. Patients with relatively good personality functioning (high AF, high AU, high QORS) experienced consistently more extensive benefits in work ability and mostly also in psychiatric symptoms, after LPP than after short-term therapy.

In conclusion, patients with anxiety or mood disorders, with mild to moderate personality pathology, benefited more in terms of psychiatric symptoms from LPP than from short-term psychotherapy in the long run. This was most evident in the reduction of depressive symptoms among the LPP patients with negative self-concept. Further, the findings showed that favorable aspects of self-concept improved and unfavorable aspects decreased to a greater extent after LPP than after

SFT during the 3-year follow-up. The fact that higher QORS was associated with more extensive benefits in self-concept in SFT, suggests that SFT is applicable especially for patients with relatively good personality functioning. Instead, patients with low QORS experienced additional benefits in some areas of self-concept, during the first year in LPP. This indicates that LPP gave them a beneficial start for continuing to work out their problems in self-concept. Thus negative self-concept and low QORS may indicate the need for a more intensive or lengthier psychotherapeutic treatment. Another important issue concerns the finding that short-term therapy generally gave faster benefits in symptoms, work ability and self-concept than LPP, but was more frequently insufficient in providing sustained benefits. Accordingly, careful pre-treatment evaluation is needed to screen those patients for whom short-term therapy or LPP should be considered. The finding that patients with relatively good personality functioning also experienced more extensive benefits after LPP in symptoms and work ability, suggests that patients' capacities and motivation for LPP, along with their dysfunction, need to be acknowledged when considering treatment options.

More research is needed to confirm the findings and to help in the development of more effective psychotherapies and therapist training. Further research on the relative importance of different personality functioning dimensions on the outcome of short-term and long-term psychotherapies, in comparison with other patient-related factors, will deepen understanding on the most essential predictors of outcome. Further effectiveness research during a longer follow-up is also needed to explore differences in sustained benefits of the therapies, by a more extensive battery of personality functioning factors and in comparison to other outcome dimensions.

Keywords: anxiety disorder, mood disorder, object relations, outcome, prediction, psychodynamic, psychotherapy, self-concept, solution-focused

Tiivistelmä

Olavi Lindfors, Personality functioning and psychotherapy outcome [Persoonallisuuden toiminta ja psykoterapian tuloksellisuus]. Terveiden ja hyvinvoinnin laitos. Tutkimus 127. 137 sivua. Helsinki, Suomi 2014. ISBN 978-952-302-180-8 (painettu); ISBN 978-952-302-181-5 (verkkojulkaisu)

Persoonallisuuden toiminnan ongelmat ilmentyvät vuorovaikutuksessa ja minäkuvassa, mikä altistaa psyykkisille häiriöille ja lisää oireilun toistumisen ja alentuneen työkyvyn riskiä. Persoonallisuuden toimivuuden lisääntymistä pidetään keskeisenä psykoterapian tavoitteena, mutta tähän liittyviä eri hoitomuotoja vertailevia tutkimuksia on niukasti. Vastaavasti potilaan persoonallisuuden toiminnan on katsottu olevan yhteydessä lyhyen tai pitkän psykoterapian soveltuvuuteen, mutta tutkimusnäyttöä tästä on vähän. Tarvitaan siten luotettaviin arviointimenetelmiin perustuvaa tutkimustietoa siitä, miten persoonallisuuden toiminta on yhteydessä psykoterapian tuloksellisuuden eri ulottuvuuksiin, jotta tietoa voitaisiin käyttää yksilöllisen hoidontarpeen selvittämiseksi ja optimaalisen hoitomuodon valitsemiseksi.

Tämän tutkimuksen tavoitteena oli verrata lyhyen ja pitkän psykoterapian vaikuttavuutta persoonallisuuden toimintaan ja tutkia, miten persoonallisuuden toiminta ennustaa näiden hoitomuotojen tuloksellisuutta ahdistuneisuus- tai mielialahäiriöiden hoidossa kolmen vuoden seurannassa.

Tutkimusaineisto koostui 326 avohoitopotilaasta, jotka oli ohjattu Helsingin Psykoterapiatutkimukseen (HPS) ahdistuneisuus- tai mielialahäiriön vuoksi. Kaikkiaan 97 potilasta satunnaistettiin lyhyeen voimavarasuuntautuneeseen, ratkaisukeskeiseen terapiaan (SFT), 101 potilasta lyhyeen psykodynaamiseen psykoterapiaan (SPP) ja 128 potilasta pitkään psykodynaamiseen psykoterapiaan (LPP). Potilaiden psyykkistä tilaa arvioitiin kyselyin ja haastatteluin ennen satunnaistamista ja 3, 7, 9, 12, 18, 24 ja 36 kuukautta alkuarvion jälkeen. Persoonallisuuden toimintaa kuvastavia tekijöitä olivat tutkimuksessa objekti-suhteiden laatu ja minäkuva, joita mitattiin Quality of Object Relations Scale (QORS) -haastatteluasteikolla ja Structural Analysis of Social Behavior (SASB) -minäkuvakyselyllä. QORS-asteikkoa käytettiin ennustemuuttujana ja vaikutusta muokkaavana tekijänä. SASB-minäkuvakyselyyn perustuvia muuttujia käytettiin sekä ennuste- että tulosmuuttujina. Tuloksellisuuden pääindikaattoreina olivat minäkuvan myönteisyyttä mittaava AF-asteikko ja autonomisuutta mittaava AU-asteikko ja toissijaisina indikaattoreina ala-asteikot: itselleen vapauden antaminen, itsensä kannustaminen, rakastaminen, suojelu, kontrollointi, syyttäminen, laiminlyönti ja itsen kohdistuva hyökkäävyys. Yleisen oireilevuuden ja ahdistuneisuusoireiden muutosten arviointiin käytettiin Symptom Check List 90 -kyselyn vastaavia asteikkoja (SCL-90-GSI, SCL-90-ANX) ja muutoksia masennusoireilussa arvioitiin Beckin masennusoirekyselyllä (BDI). Työkykymuutoksia arvioitiin Työkyky-

indeksillä (WAI), Social Adjustment Scale -kyselyn työasteikolla (SAS-work) ja koetun psykologisen toimintakyvyn asteikolla (PPF).

Ensimmäisessä osatutkimuksessa, joka perustui poikkileikkaukselliseen asetelmaan, tutkittiin QORS-asteikon rinnakkaisvaliditeettia 263 potilaan otoksessa, käyttämällä kriteerimuuttujina teoriaan perustuvia kliinisiä haastatteluarvioita ja kyselyitä. Mittarin validiteetti osoittautui hyväksyttäväksi: alhaista objektisuhteiden laatua ennustivat, teoreettisesti johdonmukaisesti, parhaiten ihmissuhteiden epä-jatkuvuus ja mitätöivän suhtautumisen esiintyminen vuorovaikutuksessa.

Toisessa osatutkimuksessa verrattiin satunnaistetussa kliinisessä kokeessa kahden lyhyen psykoterapian (SFT, SPP) ja LPP:n vaikuttavuutta minäkäsitukseen kolmen vuoden seurannassa. Myönteisiä muutoksia valtaosassa minäkuva-asteikoista ilmeni nopeammin ensimmäisen seurantavuoden aikana lyhyissä terapioissa kuin pitkässä terapiassa, kun taas kolmen vuoden seurannassa LPP:n ryhmässä havaittiin enemmän myönteisiä muutoksia kuin SFT:n ryhmässä asteikoilla AF, itsensä kannustaminen, syyttäminen ja laiminlyönti. Eroja lyhyen ja pitkän psykodynaamisen psykoterapian välillä ei havaittu missään seuranta-vaiheessa. Siten psykoterapian psykodynaaminen suuntaus ja mahdollisesti pidempi kesto näyttivät olevan enemmän hyödyksi minäkuvamuutoksille kuin lyhyt, tuen antamiseen painottunut ratkaisukeskeisen terapian SFT-sovellus.

Persoonallisuuden toiminnan merkitys hoitomuodon valinnalle sai lisätukea kolmannessa osatutkimuksessa, jossa edelliseen tutkimukseen perustuen arvioitiin, muokkaako alhainen vs. korkea objektisuhteiden laatu (QORS) minäkuvassa tapahtuvia muutoksia eri tavoin kahdessa lyhyessä terapiassa ja pitkässä terapiassa. SFT:ssä minäkuvamuutokset olivat merkittävästi vähäisempiä alhaisen kuin korkean QORS:n ryhmässä ja ilmenivät enimmäkseen useissa mittauspisteissä asteikoilla AF, AU, itsen kohdistuva hyökkäävyys, itsensä rakastaminen ja itselleen vapauden antaminen. LPP:ssä ilmeni puolestaan ensimmäisenä seurantavuotena vastakkaisia, mutta vähäisempiä yhdysvaikutuksia: potilaat, joilla oli alhainen QORS, hyötyivät enemmän kuin potilaat joilla se oli korkea, asteikoilla AF, itsen kohdistuva hyökkäävyys ja itsensä rakastaminen. SPP-ryhmässä QORS-kategorialla ei ollut yhteyttä vaikuttavuuteen.

Lopuksi, neljännessä osatutkimuksessa tutkittiin kohorttitutkimuksen asetelmassa sitä, ennustavatko objektisuhteiden laatu (QORS) ja minäkuva (AF, AU) muutoksia psykiatrisessa oireilussa ja työkyvyssä kolmen vuoden seurannan aikana lyhyessä ja pitkässä terapiassa. Koska SPP:n ja SFT:n välillä ei havaittu vaikuttavuuseroja, muodostettiin ne yhdistämällä yksi lyhyen terapian ryhmä, tilastollisen voiman lisäämiseksi. Kielteinen minäkuva (alhainen AF) ennusti voimakkaasti ja kontrolloiva suhtautuminen itseensä (alhainen AU) kohtalaisesti, suurempia varhaisia muutoksia psykiatrisessa oireilussa ja työkyvyssä lyhyessä terapiassa kuin LPP:ssä. Kolmen vuoden seurannassa sitä vastoin kielteinen minäkuva ennusti suurempaa oireiden vähenemistä pitkässä kuin lyhyessä terapiassa. Vastaava, suurempi pitkän kuin lyhyen terapian hyöty, ilmeni rajallisempana

potilailla jotka kuuluivat alhaisen AU:n tai QORS:n ryhmään. Potilailla, joiden persoonallisuuden toiminta oli kohtalaisen hyvä (korkea AF, korkea AU, tai korkea QORS), työkyvyn paraneminen oli kauttaaltaan ja oireilun väheneminen valtaosin suurempaa LPP:n kuin lyhyen terapian ryhmässä.

Yhteenvetona, potilaat jotka kärsivät ahdistuneisuus- tai mielialahäiriöstä ja joiden persoonallisuuden toiminta oli heikentynyt lievää tai kohtalaista persoonallisuuspatoologiaa vastaavasti, kokivat pitkällä tähtäimellä suurempaa oireiden vähenemistä pitkän terapian kuin lyhyen terapian jälkeen. Tämä ilmeni selvimmin masennusoireiden vähenemisenä potilailla, joilla oli kielteinen minäkuva. Lisäksi tutkimus osoitti, että kolmen vuoden seurannan aikana minäkuvan kielteisyyttä väheni ja myönteisyys lisääntyi enemmän LPP:n kuin SFT:n jälkeen. Se että korkea QORS oli yhteydessä suurempiin minäkuvamuutoksiin SFT:ssä, viittaa siihen että kohtalaisen hyvä persoonallisuuden toimivuus kuvastaa soveltuvuutta tämäläntyyppiseen lyhyeen terapiaan. LPP:n ensimmäisen vuoden keston aikana puolestaan havaittiin alhaisen QORS:n olevan yhteydessä suurempaan hyötymiseen pitkästä terapiasta muutamilla minäkuvan osa-alueilla. Tämä viittaa siihen, että nämä potilaat saivat hyvän alun pitkäkestoiseen työskentelyyn ongelmallisen minäkuvan muuttamiseksi LPP:ssä. Siten kielteinen minäkuva ja alhainen objektisuhteiden laatu näyttävät liittyvän tiiviimmän tai pitkäaikaisemman psykoterapian tarpeeseen. Merkittävä havainto oli myös se, että lyhyt terapia yleisesti tuotti nopeammin myönteisiä muutoksia oireilussa, työkyvyssä ja minäkuvassa kuin LPP, mutta oli useammin riittämätön pidemmässä seurannassa. Tarvitaan siis perusteellista, hoitomuodon valintaa edeltävää yksilöllistä arviointia siitä, milloin lyhyt terapia näyttäisi riittävän ja milloin potilas on tarpeen ohjata pitkään terapiaan. Löydös siitä, että persoonallisuudeltaan myös suhteellisen hyvin toimivat potilaat hyöttyivät enemmän pitkästä kuin lyhyestä terapiasta oireilun ja työkyvyn alueilla, korostaa tarvetta arvioida potilaan ongelmien ohella hänen kykyjään ja motivaatiotaan pitkään psykoterapiaan, harkittaessa vaihtoehtoisia hoitomuotoja.

Jatkotutkimusta tarvitaan näiden tulosten varmentamiseksi ja avuksi kehitettäessä toimivampia psykoterapian muotoja ja psykoterapeuttikoulutusta. Jatkotutkimus persoonallisuuden toiminnan eri osa-alueiden suhteellisesta merkityksestä hyötymiselle lyhyestä ja pitkästä psykoterapiasta, verrattuna muihin potilastehtijöihin, voi syventää ymmärrystä terapioiden soveltuvuustekijöistä. Pitkäaikaisempaan seurantaan perustuvaa vaikuttavuustutkimusta puolestaan tarvitaan sen selvittämiseksi, kuinka pysyviä muutokset persoonallisuuden toiminnassa ovat ja miten ne ovat yhteydessä muihin tuloksellisuuden osa-alueisiin.

Avainsanat: ahdistuneisuushäiriö, ennuste, mielialahäiriö, minäkuva, objektisuhteet, psykodynaaminen, psykoterapia, vaikuttavuus, voimavarasuuntautunut

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Abbreviations

AF	Affiliation score (SASB)
APA	American Psychological Association
AT	‘As treated’ study
AU	Autonomy score (SASB)
CFAQ	Childhood Family Atmosphere Questionnaire
CI	Confidence interval
DSM	Diagnostic and Statistical Manual on mental disorders
HPS	Helsinki Psychotherapy Study
ITT	‘Intention to treat’ study
LPP	Long-term psychodynamic psychotherapy
N.S.	Non-significant
OR	Odds ratio
PPF	Perceived Psychological Functioning scale
QORS	Quality of Object Relations Scale
SAS	Social Adjustment Scale
SASB	Structural Analysis of Social Behavior questionnaire
SCL-90-Anx	Symptom Check List 90, Anxiety scale
SCL-90-GSI	Symptom Check List 90, Global Severity Index
SFT	Solution-focused therapy
SPP	Short-term psychodynamic psychotherapy
WAI	Work Ability Index

1 INTRODUCTION

Patients with anxiety or mood disorders are a prominent group of patients for whom psychotherapy is an indicated and effective treatment option (Roth & Fonagy, 2005). However, the evidence-base of the effectiveness of different therapies for these patients is far from conclusive, as it is biased by a shortage of studies covering long-term therapies and lack of comprehensive assessment of outcome, rarely acknowledging patients' personality functioning (Shedler, 2010) or long-term follow-up (Knekt, Lindfors, Sares-Jäske, & Laaksonen, 2012). Moreover, the criteria for determining and grading empirical evidence of specific therapies for specific patient groups are controversial (APA, 2006). The challenge of selecting the most appropriate, personalized treatment, for an individual patient with anxiety and/or mood disorder is further complicated by the lack of research comparing the prediction of patient characteristics on outcome in different psychiatric treatments (Cuijpers et al., 2012).

From the perspective of evidence-based practice, the importance of psychotherapy research is to help in advocating more effective health policy, building up-to-date treatment guidelines, improved patient care and more effective professional training (Parry, Roth, & Fonagy, 2005). Ideally, practice guidelines in the form of generalizable clinical principles would comprise research evidence on patient and therapist characteristics, therapy type, techniques used by the therapist, and other predictors of positive change or suitability for treatment (Castonguay & Beutler, 2006). In addition to systematic meta-analyses of published research, large-scale studies and research-practice co-operation are needed to accomplish this goal. The Helsinki Psychotherapy Study (HPS) (Knekt, Lindfors, & Laaksonen, 2010; Knekt, Laaksonen et al., 2012; Knekt & Lindfors, 2004) is the first randomized clinical trial comparing the effectiveness and sufficiency of short-term and long-term psychotherapy for patients with anxiety or mood disorder. The study also has the ongoing, ambitious and methodologically challenging task of studying the relative importance of patient-related, therapist-related and therapy-related predictors of outcome, accompanied by methodological study and development of reliable and valid instruments needed to accomplish these goals.

Personality functioning encompasses a broad array of dispositions or patterns of individual experiencing and behavior which mostly become evident in interpersonal interaction (Dahlbender, Rudolf, & the OPD Task Group, 2006). These are largely reflected as dysfunctional patterns of self-concept and object relations, which are considered to generate vulnerability to overall psychopathology and to increase the risk of recurring symptoms and problems in personality and work ability (Evans et al., 2005; Piper & Duncan, 1999). Change in personality functioning is considered a major goal in a variety of psychotherapies (Busch, Rudden, & Shapiro, 2004; Mayer,

2004), reflected in improved interpersonal relations, decreased maladaptive behavior patterns and development of a more benign, more mature and less rigid self-concept (Arnold, Farber, & Geller, 2000; Granberg & Armelius, 2003; Svartberg, Seltzer, & Stiles, 1996). However, only few studies have used personality functioning variables as outcome indicators, even though a more comprehensive outcome measurement, encompassing major treatment targets such as personality functioning, would give a more reliable picture of overall effectiveness (Lambert, 1994).

Personality functioning is also highly important from the perspective of suitability for a specific treatment approach, as different types of patients may be responsive to different types of therapies and therapeutic processes; in other words, they benefit variably from the treatment, depending on the match of specific pre-treatment patient characteristics and the treatment intervention (Blatt, Zuroff, Hawley, & Auerbach, 2010; Hersoug, Høglend, Gabbard, & Lorentzen, 2013). Therefore an in-depth pre-treatment assessment of patient characteristics is needed. According to standards of good clinical practice, an adequate clinical evaluation would need to cover diagnostic assessment and evaluation of the patient's expectations, motivation, personal history and personality and interpersonal functioning through reliable and valid interview and self-report measures (Bohart & Wade, 2013; Critchfield, 2012; Joyce & Piper, 1998; Norcross & Wampold, 2011a). Cumulative research evidence from short-term therapies suggests that the level of object relations (Koelen et al., 2012; Valbak, 2004) and self-concept (Halvorsen & Monsen, 2007) might be important predictors of outcome for specific forms of individual psychotherapies of different type and length. Recent findings on other aspects of patient's personality characteristics and interpersonal dispositions as predictors of outcome in short-term vs. long-term therapy further indicate the need to extend the research involving personality functioning (Laaksonen, Knekt, & Lindfors, 2013).

In this thesis, based on the HPS data, the effectiveness of short- and long-term psychotherapy on self-concept and the prediction of personality functioning on outcomes in psychiatric symptoms and work ability were studied using the patients' quality of object relations and self-concept as the key variables.

2 REVIEW OF THE LITERATURE

2.1 Theoretical review of the quality of object relations and self-concept as constructs of personality functioning

2.1.1 Relational basis of personality functioning

The concept of the quality of object relations, grounded in psychoanalytic personality theory (Greenberg & Mitchell, 1983) and that of self-concept, associated with interpersonal and introject theory (Benjamin, 1974; Henry, Schacht, & Strupp, 1990), are intimately connected models of personality functioning. Both refer to relatively enduring characteristics, hypothesized to develop simultaneously in relation to significant others, and to result in internalized mental models that are central in guiding interpersonal expectations, behavior, affects and cognitions (Altwood & Stolorow, 1980; Benjamin, 1996a; Horowitz & Vitkus, 1986). Similar propositions are given in another empirically anchored comprehensive relational theory, attachment theory (Bowlby, 1973). It suggests that the models of self and others are built from early experiences with primary caretakers, and that they relatively persistently influence current relationships as generalized expectations. Furthermore, the importance of relational experiences on personality structure and functioning is also reflected in certain cognitive-behavioral and emotion-focused approaches through their focus on interpersonal, cognitive-affective schemas as belief systems concerning oneself and others (Dozois, 2007; Safran & Segal, 1996). Here the theoretical basis of psychodynamic object relations theory and interpersonal introject models are reviewed from the perspective of normal and pathological personality development, and their implications for psychotherapy research.

2.1.2 The development and pathology of internalized object relations

The origins of the concept of object representations derive from the early versions of the drive theory of Freud (1905) in which they were considered vicissitudes of the drives. In other words, the role of objects – significant persons in one's life, and their representations in one's mind – was seen important in relation to the discharge of libidinal or aggressive drives, by being their object. Thus, the internal object in Freud's thinking was essentially a mentally elaborated image based on experiences of drive satisfaction and frustration (Greenberg & Mitchell, 1983). Freud himself made numerous theoretical changes (Freud, 1917, 1921, 1923) regarding the role of the object, giving more weight to the importance of developmentally important processes of identification with the object and to the role of introjection as elements in structuring the ego and determining its functioning. These revisions were outlined

for instance by describing how the relation to the lost object is continued as an intrapsychic relation between the ego and the unconsciously internalized aspects of the lost object, the object representation. It was not suggested until later that the initially secondary role of the internal objects was considered to need more thorough revision. Fairbairn (1952) was apparently the first theorist using the term ‘object relations’ in his model which was antithetical to Freud’s, in replacing the drive theory model with an object relations model as the basic organizing principle motivating human behavior. Kernberg (1976) is one of the many theorists who further constructed models of personality development and pathology which integrate the drive and the object relational perspectives.

In modern psychodynamic theories, object relations are conceptualized as developmentally organized, intrapsychic and dynamic structures involving self- and object-representations, which are based on the process of internalization of emotionally significant relationship experiences (Greenberg & Mitchell, 1983; Hamilton, 1989; Horner, 1984). An object relations model thus places the individual’s need to relate to others at the center of human development (Scharff & Scharff, 1998). The term ‘object’ refers simultaneously to a real person in the external world and to the comprehensive set of internal images of that person (Greenberg & Mitchell, 1983). The internal objects are considered to be experientially real to the person, even though in reality the external object would not fit the internal image. From the perspective of personality functioning, internalized object relations serve as a complex of anticipatory images of what to expect from others, on the basis of emotionally charged interactions and meanings given to them (Caligor, Kernberg, & Clarkin, 2007). The person is conscious of one’s object relations structures only to a limited degree, but they manifest themselves as characteristic patterns of experiencing and behaving.

The development of the intrapsychic structures based on object relational interactions and their internalization is a long process. The growth of relatively mature object relations is built on experiences within a mostly benign, relatively stable environment, in which the age-appropriate emotional needs are adequately met, and where gradual mastery to overcome frustrations is encouraged and autonomy fostered (Piper, McCallum, & Joyce, 1996). Accordingly, the person grows up to value oneself and to be able to utilize implicitly the internalized ‘self’- and ‘other’ representations to modulate affects (Kealy, Ogrodniczuk, & Howell-Jones, 2011) and to find adaptive ways to solve life problems. The formation of new internal objects and modification of earlier object relational constructions continues throughout life (Scharff & Scharff, 1998). In pathological development, however, distorted forms of interaction and self-perception emerge and are not overcome by new corrective experiences. Instead, rigid patterns of behaving, feeling and thinking become fixed and hinder the development of more mature and flexible relational patterns (Horner, 1984). Adult object relations pathology is typically preceded by childhood developmental trauma, e.g. parental abuse, neglect or rejection (Twomey,

Kaslow, & Croft, 2000). The result is the risk of needing to resort frequently to primitive defenses such as splitting to protect the self. This in turn limits the person's possibilities to construct a positive sense of self and others, besides creating emotional difficulties due to unmet needs and internalized feelings of being rejected and neglected (Kealy et al., 2011; Piper et al., 1996). Accordingly, persons with a low level of object relations are prone to develop affective and personality disorders (Huprich, Porcerelli, Binienda, Karana, & Kamoo, 2007; Tramantano, Javier, & Colon, 2003; Van et al., 2008).

2.1.3 The development and pathology of self-concept

The concept of the 'introject' in the interpersonal model of Benjamin, initially based on Sullivan's (1953) interpersonal theory, is essentially embedded within object-relations theory (Greenberg & Mitchell, 1983). However, the model is more focused on describing interpersonal and behavioral actions than the theoretically presumed intrapsychic elements, as in object relations theories. The term 'introject' refers to an individual's typical self-directed actions (cognitive-affective self-evaluation and verbal and physical behavior), which are seen as reflections of an early caregiver's actions. Hence, the patterns of self-directed behavior are set by early social learning, as 'copy processes', i.e., internalized relationship patterns (Benjamin, 1996a). Accordingly, the person becomes oneself in relation to his/her objects, and is disposed to behave in a way which corresponds to the self-concept. Being relatively stable across the life span, the characteristic behavior patterns directed at oneself can be conceptually understood as the self-concept in introject theory (Pincus, Gurtman, & Ruiz, 1998).

For a normal development of self-concept there should be a dominance of positive interactions between the caregivers and the developing child, indicating successful satisfaction of basic needs and growth of secure attachment and affiliation (Benjamin, 1993). Thus, children whose caretakers are high in affiliation and moderate in control dimensions of behavior, are expected to develop a balanced, positive and self-accepting view of themselves. In contrast, children subjected to disproportionate levels of control or lack of it, or lack of affiliation (indicating higher levels of blame, attack and abandonment), are expected to direct similar disruptive behavior toward themselves. This gives rise to pathological development – cyclical maladaptive patterns of self and object relations (Henry, 1996). As an example, a person who during childhood was frequently a target of either parent's attacking behavior, frequently develops a malfunctioning tendency of attacking oneself, for instance through excessive criticism, guilt and devaluation. Like deep-seated object relational patterns, self-concept is relatively pervasive and associated with different types of psychopathology (Benjamin, 1994). The most consistent associations with psychopathology in psychiatric outpatients, based on measures of symptoms, personality diagnosis and interpersonal problems, have been found in the

affiliation and self-attack dimensions of self-concept, and to a lesser degree in the interdependence dimension (too much or too little autonomy) (Monsen et al., 2007). Lower levels of positive self-concept and increased levels of self-criticism, self-blame, self-neglect, and self-attack are known risk factors for vulnerability to anxiety and mood disorders and for maintaining these disorders (Benjamin, 1986; Cox et al., 2000; Erickson & Pincus, 2005; Evans et al., 2005; Glashouwer, de Jonghe, & Penninx, 2012).

2.1.4 The role of patients' quality of object relations and self-concept in psychotherapy

Self-concept pathology and dysfunctional internalized object relations may affect psychotherapy process and outcome besides being treatment targets. Being sources of psychological suffering, they motivate help seeking and give focus and direction to the therapy, especially when the core problems involve personality pathology (Bedics, Atkins, Comtois, & Linehan, 2012; Gurtman, 2004). These maladaptive patterns and characteristics potentially initiate specific challenges both within and outside the therapeutic relationship. In psychotherapy the patient's internalized object relations and self-concept become manifested as strengths or deficits in the development of the therapeutic alliance (Piper et al., 1991). The psychotherapeutic relationship in itself offers the possibility to foster new development and to modify internalized self- and object representations. Therefore, the patient's characteristic patterns of relating to oneself, to the therapist and to others, deserve careful therapeutic attention throughout the treatment. Accordingly, the interpersonal process and the specific techniques of therapy are theoretically considered to contribute to changes in the patient's sense of self and to lead to more mature interpersonal relatedness and to improved functioning (Blatt et al., 2010).

In all psychotherapeutic orientations, using different techniques, the patient is suggested to become more familiar with her/his intrapsychic and interpersonal behavior patterns, to potentially learn what they are for and to learn new patterns of functioning (Benjamin, 1994). Changes in the structural organization of personality, including self-concept and object relations, as well as sustained improvement in symptoms and functioning, are frequently outlined as major goals especially in long-term, psychodynamic psychotherapy (Blatt et al. 2010; Gabbard, 2004). Depending on the therapeutic interventions, the duration of therapy and the nature of collaboration within the therapy, these personality functioning factors can be processed and changed, and they may predict treatment outcome and modify its effectiveness (Halvorsen & Monsen, 2007; Høglend & Piper, 1997).

2.2 Review of measures for assessing quality of object relations and self-concept

2.2.1 Measurement of the quality of object relations

As object relations can be conceptualized from various theoretical perspectives, using different concepts and strategies, several measures for assessing object relations have been developed. All are based on the general psychodynamic conception of object relations being dynamic psychological structures which involve self- and object representations (Greenberg & Mitchell, 1983). Thus, the measures assessing external, interpersonal problems (e.g., Inventory of Interpersonal Problems, IIP; Horowitz, Alden, Wiggins, & Pincus, 2000), interpersonal behavior patterns based on the Structural Analysis of Social Behavior methodology (SASB; Benjamin, 1974), and the more than 20 published measures on adult attachment patterns (Ravitz, Maunder, Hunter, Sthankiya, & Lancee, 2010) are beyond the scope of the present review.

Two reviews listed altogether 12 published measures for assessing object relations, mostly reported to have sufficient reliability and to be at least promising in terms of validity (Huprich & Greenberg, 2003; Smith, 1993). During the last decade several more measures have appeared. The measures are based on psychological test or narrative material (Arvidsson, Sikström, & Werbart, 2011; Blatt, Breinneis, Schimek, & Glick, 1976; Blatt, Chevron, Quinlan, Schaffer, & Wein, 1992; Diamond, Kaslow, Coonerty, & Blatt, 1990; Urist, 1977; Westen, 1991, 1995), self-report questionnaires (Bell, Billington, & Becker, 1986; Blatt & Auerbach, 2001; Buelow, McClain, & McIntosh, 1996), and interviews (Azim, Piper, Segal, Nixon, & Duncan, 1991; Dymetryszyn, Bouchard, Bienvenue, de Carufel, & Gaston, 1997; Høglend, 1993a; Ribeiro et al., 2010). In addition, scores based on audio or video recorded therapy sessions have been used to score the level of object relational enactments during psychotherapy process (Diguer, Gamache, & Laverdière, 2012). The methods differ in their scope of the stimuli presented to the person, the nature of responses given, and the degree of inference required to score the responses (Piper & Duncan, 1999). Most but not all research (Mullin & Hilsenroth, 2012) using test and narrative material address severe personality disorders or psychoses, while the interview and self-report measures mainly focus on neurotic, depressive and anxiety disorder patients with milder personality pathology (Huprich & Greenberg, 2003).

Instruments based on psychological tests and narratives – such as the Rorschach method, the Thematic Apperception Test (TAT) cards, dreams and unstructured descriptions of self and others – emphasize the assessment of preconscious or unconscious aspects of object relations (Blatt et al., 1976, 1992; Diamond et al., 1990; Dymetryszyn et al., 1997; Urist, 1977). Accordingly, the stimuli and the responses scored are in line with assessing projected mental images, i.e., performance-based phenomena beyond the person's conscious recognisance. The

Concept of the Object Rating scale (COR; Blatt et al., 1976a) and the Mutuality of Autonomy scale (MOA; Urist, 1977) are based on the Rorschach response content, scored by trained raters, on the dimension of the developmental level of object relations. The COR theoretically combines elements from psychoanalytic ego psychology and from the developmental psychology theories of Piaget (1954) and Werner (1948). The relatively complex COR rating encompasses the differentiation, articulation and integration of the responses, while the MOA rating is based on assessing the Rorschach human responses in one dimension, from mutuality to malevolent engulfment and destruction (Urist, 1977). Both the MOA and the COR have shown moderate to good reliability and validity (association with the degree of psychopathology and prediction of treatment outcome) within a patient population consisting mostly of patients with severe personality pathology and psychosis (Cook, Blatt, & Ford, 1995; Smith, 1993; Spear & Sugarman, 1984).

A good example of the various narrative-based methods is the Social Cognition and Object Relations Scale (SCORS; Hilsenroth, Stein, & Pinsker-Aspen, 2007; Westen, 1991, 1995) which uses clinician-rated narrative descriptions of relationships to provide a score on the overall maturity of interpersonal representations. The SCORS integrates psychodynamic and social cognition theories in operationalizing the level of object relations, rated on a scale from primitive to well-developed. In addition sub-scores can be scored on eight dimensions (complexity, affect tone, emotional investment, moral standards, understanding of social causality, experience and management of aggressive impulses, self-esteem, and identity and cohesiveness of the self). The SCORS has shown high internal consistency and interrater reliability (.80-.98). Validity has been indicated for instance by associations with developmental trauma and abusive adult relationships and with other measures on personality functioning and psychopathology (Cogan & Porcerelli, 1996; Nigg et al., 1991; Stein, Slavin-Mulford, Sinclair, Siefert, & Blais, 2012). Two other narrative-based measures to note are the Object Relations Inventory (ORI; Blatt, 1974) and the Assessment of Qualitative and Structural Dimensions of Object Representations Scale (Blatt et al., 1992). Fair to high interrater reliability (.45-.93) and suggested predictive validity of the various scores derived from these scales have been reported (Huprich & Greenberg, 2003).

Questionnaires, such as the 45-item Bell Object Relations Inventory (BORI; Bell et al., 1986) and the revised 90-item Bell Object Relations Reality Testing Inventory (BORRTI; Bell, 1995), are more straightforward in operationalizing and structuring the nature of internal object relations than the test and narrative measures. The BORRTI measures object relational impairment in four dimensions – alienation, insecure attachment, egocentricity and social incompetence – and on three reality-testing subscales. The reliability of the total score has been reported to vary from .78 to .90 (internal consistency) and from .58 to .85 (repeatability, at a 6-month interval) (Bell, 1995; Huprich & Greenberg, 2003). Validity has been indicated for instance by associations between the respondent's poor level of object relations on the

BORRTI and other measures of severity of psychopathology. Other questionnaire measures such as the 75-item Attachment and Object Relations Inventory (AORI; Buelow et al., 1996) have been used infrequently.

One of the most widely used interview measures of object relations is the Quality of Object Relations Scale (QORS; Azim et al., 1991) (Table 1). Theoretically, the scale is based on an integrative conceptualization of internal object relations, encompassing psychoanalytic drive theory and ego psychological aspects proposed by Freud, Abraham, Fairbairn, Klein and Ogden. The target of the evaluation is the person's enduring tendency to establish certain types of relationships, on a continuum from primitive to mature. A semi-structured clinical interview, focused on exploring the person's significant relationships, is carried out in at least two sessions. There is a detailed manual outlining the training needed to qualify for carrying out the interview and giving an explicit structure for the interview and rating criteria (Piper et al., 1996). The criteria consist of phenomena, observable during the interview, which characterize the person's internal object relations in various contexts. These are typical behaviors in relationships, characteristic patterns of affect regulation and self-esteem regulation related to wished-for and realized interpersonal relations, and the person's recollections of his/her past relationship experiences which are considered to be predisposing to different types of relational patterns (primitive, searching, triangular, controlling, and mature). The interrater reliability of the QORS (intraclass correlation) has ranged from .50 to .72 in different patient populations (Piper & Duncan, 1999). The validity of the QORS has been determined by moderate associations with the DSM axis II personality diagnosis and with different aspects of social dysfunction, and maladaptive defenses.

A variation of the Canadian version of the QORS (Azim et al., 1991; Piper et al., 1996) has been used in a large set of studies by a Norwegian research group (Høgland, 1993a). The measure is based on a largely similar interview structure and scale dimensions, ranging from mature to primitive, but on a somewhat different rating of the overall quality of interpersonal/object relations score. Persons with a low level of object relations (low QORS) are described as having mostly unstable and less gratifying and emotionally invested relationships and either having a need for dependency or being overly controlling. Instead, those with high QORS have a history of relationships characterized by stability, gratifications, and mutuality. The assessment may also be based on three separate scales: evidence of at least one stable and mutual interpersonal relationship, the nature of the history of adult sexual relationships and non-sexual relationships (Høgland, 1994). The interrater reliability of the measure has been reported to be in the range between .77 and .84 across several studies, and has appeared to be consistently related to criterion measures (Høgland, 1993a; Høgland et al., 2006). One further interview scale to note is the McGill Object Relations Scale (MORS; Dymetriszyn et al., 1997), in which three dimensions of object relations (investment of object, affect within relationship, representation of self and object) are scored in 14 dimensions of relational scenarios,

Table 1. Description of the key instruments for measuring object relations (QORS) and self-concept (SASB)

Instrument, references	Format, procedure	Theoretical basis, construct	Main scores, sub-scores	Reliability	Validity
<i>Object relations</i>					
Quality of Object Relations Scale (QORS); Azim et al., 1991; Piper et al., 1996; Piper & Duncan, 1999.	Interview by trained interviewers, 2-3 once weekly sessions; manualized procedure with four domains of criteria (behavioural, affect regulation, self-esteem regulation, antecedents) and prototypic descriptions of different levels of object relations.	Psychodynamic, object relational; maturity of personality functioning based on assessing typical patterns of relational behavior.	Total score, often dichotomized (low vs. high), based on the relative prevalence of five levels of object relations: primitive, searching, controlling, triangular, and mature.	Reliability coefficients .50-.82 (continuous variable); kappa range .46-.76 (low vs. high QORS).	Concurrent validity based on significant associations with interpersonal functioning variables; predictive validity based on significant associations with alliance and treatment outcome.
<i>Self-concept</i>					
Structural Analysis of Social Behavior (SASB) self-concept scale; Benjamin, 1996b, 2000a; Benjamin et al., 2006.	Questionnaire, 36-items on typical ways to behave toward oneself (introject); items arranged in circumplex order, based on the horizontal axis (hate-love) and vertical axis (control-emancipate) items, with 8 clusters of variables (octant model) oriented around these axes (Figure 1).	Interpersonal theory, embedded in object-relational and attachment models, internalized patterns; dimensional model of self-concept.	Main score self-directed Affiliation (AF) and Autonomy (AU); cluster sub-scores self-free, self-affirm, self-love, self-protect, self-control, self-blame, self-attack, self-neglect.	Internal consistencies of the scores .70-.90.	Construct validity established by factorial procedure; concurrent validity established by significant and theoretically consistent association with dimensional personality measures and symptoms.

to assess psychosexual maturity (from ‘oral-narcissistic’ to ‘genital’). In this measure, preconscious and unconscious aspects of object relations are emphasized, in contrast to the more readily observed manifestations in the QORS ratings. As mostly low to moderate reliability has been shown (.21 to .71 on the subscales), Huprich and Greenberg (2003) discourage its use.

In addition, assessment of object relations can be included as a separate scale within various comprehensive measures tapping different dimensions of the level of personality organization (Kernberg, 1981). Thus, in the 100-item Structured Interview of Personality Organization (STIPO; Clarkin, Levy, Lenzenweger, & Kernberg, 2007; Doering et al., 2013) the subscore of object relations is rated based on the assessment of interpersonal relationships, intimate relationships and sexuality, and internal working model on relationships. Other similar scales include the Personality Organization Diagnostic Form (PODF), in which interview-based information is used to rate the maturity of object relations dimension on the continuum from symbiotic to mature, triadic relationships (Gamache, Laverdière, Diguier, Hébert, & Larochelle, 2009), the Karolinska Psychodynamic Profile (KAPP), which includes a sub-score on intimacy and reciprocity (Weinryb, Rössell, & Åsberg, 1991), and the Total Object-Relational Functioning (TORF) score which assesses object relational maturity on the basis of the Developmental Profile interview (Abraham et al., 2001; Van et al., 2008). A new promising measure, the Problematic Object Representation Scale (PORS), has recently been developed for scoring the level of object relations on the basis of the Adult Attachment Interview (AAI) protocol (Ribeiro et al., 2010).

In summary, due to the widely different ways of conceptualizing and operationalizing the quality of object relations, comparing research findings based on these measures is challenging. Further study of the construct and criterion validity of the scales is needed. The measures based on coding test and narrative products suffer from inferential ratings and a somewhat arbitrary construction of the dimensions scored. Questionnaires aim to provide more reliable information based on the person’s self-observation of his/her relational behavior. However, the assessment of an internal personality structure such as object relations is susceptible to limitations due to subjective bias (Ganellen, 2007). Furthermore, the external validity of questionnaire measures is restricted by the fact that questionnaires only poorly capture other than conscious elements of relational behavior, which does not correspond to the theoretical basis of the concept (Smith, 1993). Interview measures, based on a manualized, thorough clinical assessment by trained interviewers, are suggested to be more suitable for assessing object relational maturity, in accordance with other dimensional and categorical assessments of the severity of personality pathology (PDM Task Force, 2006). In line with this, the widely used, interview-based QORS score has been found to assess reliably the dimension of personality pathology, based on object relational models. A further benefit is that the measure has been used in several previous studies on patients with anxiety and depressive disorders.

2.2.2 Measurement of self-concept

Self-concept is most usually assessed by self-report instruments, in line with the target of evaluation being highly subjective. Benjamin's Structural Analysis of Social Behavior (SASB) methodology and the SASB introject questionnaire belong to the family of relational measures, which provide insight into the person's interpersonally organized self-concept and its typical patterns (Benjamin, 1996b; Halvorsen, Hagtvet, & Monsen, 2006) (Table 1). The SASB model is theoretically largely based on Sullivan's (1953) interpersonal psychiatry. Methodologically it owes much to the developments of the interpersonal circumplex measures, initially formulated by Leary (1957). The basic idea of the circumplex assessment is the systematic arrangement of relational behaviors in a circle model, defined by two underlying dimensions (Figure 1). At the most general level, the SASB model implies that self-directed behavior can be mapped in a circumplex order exemplified by a horizontal hate–love (affiliation, AF) axis and a vertical control–emancipation (interdependence/autonomy, AU) axis (Benjamin, 1996b).

The AF axis reflects the person's degree of self-esteem, sense of agency and self-acceptance and the ability to relatively confidently engage, adapt and take personal responsibility in the social world (Pincus et al., 1998). The AU axis is the continuum from being restrained by extreme self-control to the tendency to confidently let oneself be autonomous and free-spirited. There are short and long forms of the SASB self-concept questionnaire (8 and 36 items). Both can be rated in several ways to present the different aspects of self-concept and can be focused on rating the person at his/her best, at his/her worst or as usual (Benjamin, 2000a). The primary indices are the AF and AU vector scores which are formed on the basis of weighing each of the item scores relative to the affiliative pole or the autonomy pole. A more detailed view of the self-concept is made possible by using the eight cluster scores, which can further be used to create subscores for well functioning and poorly functioning self-concept, as described by Denhag, Ybrandt, & Armelius (2011). In addition, the person can be assigned a single prototypic pattern score (attack/love, control/emancipate, conflict) that best describes his/her self-concept (Benjamin 2000a; Halvorsen & Monsen, 2007). The internal consistency of the measure has been found to be good (.76) and also its reliability based on repeatability at a one-month interval (.87) (Benjamin, 2000a). Validity has been determined on the basis of consistent associations between the self-concept scores and different ratings of psychopathology, attachment profiles and several factor analytic studies showing good construct validity for the circumplex model (Benjamin, 2000a; Erickson & Pincus, 2005).

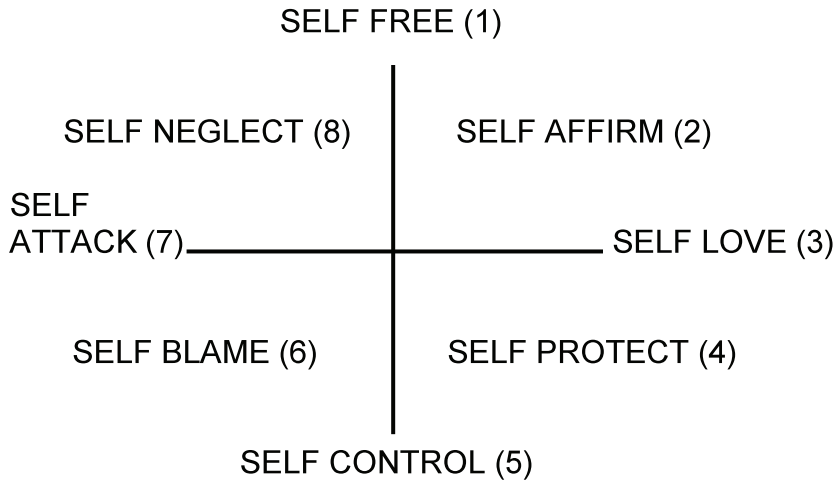


Figure 1. The Structural Analysis of Social Behavior (SASB) model of self-concept dimensions and clusters (1-8) (Benjamin 1996a).

The Frankfurter Selbstkonzeptskalen (FSKN, apparently only available in German), has also been used to assess different aspects of self-concept (Deusinger, 1986; Doering et al., 2013). This 78-item scale has an integrative orientation focusing on the person's attitudes, cognitions, emotions and behavior toward himself/herself. There are 10 subscales providing information on different aspects of self-concept (general fitness, ability to solve problems, confidence concerning conduct and decisions, self-esteem, sensitivity and mood, firmness against others, contact and ability to communicate, esteem by others, irritability by others, feelings and relations to others). Satisfactory internal consistency and repeatability over 4 to 5 months ($>.80$) have been shown.

The assessment of the developmental level of self-concept, based on the Self-concept Rating Scale of Horowitz (1979), is one of the few interview-scales in this domain. This measure might also be considered a rating of the level of object relations, as it covers the evaluation of coherence and stability of experiences of both the self and interpersonal relations. Reliability of the measure has been shown to be adequate (.74), but as far as known, it has been used only in one published study.

Limited aspects of self-concept can also be assessed by specific self-report measures, such as the widely used 10-item Rosenberg Self-Esteem Scale (Rosenberg, 1979), the 5-item Self-Regard Questionnaire (Horowitz et al., 1996) and the factor score on self-criticism of the 66-item Depressive Experiences

Questionnaire (DEQ; Blatt, D’Affiniti, & Quinlan, 1976). Some of the measures based on narrative material, reviewed above, include subscales focused on self-concept. Thus, the ORI (Blatt et al., 1992), for instance, may be used to focus on assessing the person’s self-descriptions, scored in the dimension of negative to positive self-representation. Likewise, global interview scales of psychological structure and functioning and scales on suitability for psychotherapy often assess some dimensions of self-concept: the Scales for Psychological Capacities (SPC; de Witt, Hartley, Rosenberg, Zilberg, & Wallerstein, 1991) include the subscales ‘self-assertion’, ‘reliance on self and others’, and ‘self-esteem’; the Operationalized Psychodynamic Diagnostics system (OPD; Dahlbender et al., 2006) covers the dimensions ‘self-perception’ and ‘self-regulation’; and the item ‘self-concept in relation to ego ideal’, in the Suitability for Psychotherapy Scale (SPS; Laaksonen, Lindfors, Knekt, 2012) measures a specific characteristic of self-concept, related to the dimension from healthy to pathological narcissism.

In summary, the introject dimension of the SASB questionnaire is the most widely used instrument of self-concept in clinical research, and its reliability and validity are widely substantiated. The measure is based on a comprehensive theoretical model within the domain of interpersonal psychiatry and allows various constellations of self-concept to be measured. However, additional instruments on specific aspects of self-concept, not covered by the SASB self-concept scale, are also needed to complement the scope of strengths and vulnerabilities of self-concept.

2.3 Review of studies on self-concept as outcome

Although a more benign self-concept is an essential outcome of psychotherapy in depressive and anxiety disorders, only two randomized clinical trials are known to have been carried out on the effectiveness of psychotherapy from this perspective. In a study carried out in USA by Vittengl, Clark, & Jarrett (2004) 156 outpatients with recurrent major depressive disorder were first treated with a 20-session acute phase cognitive therapy (A-CT) over 4 months. Altogether 84 of the 87 A-CT responders were then randomized either to 10 sessions of continuation phase cognitive therapy (C-CT) or evaluation only over 8 months. Outcome assessments were made 8 months and 2 years after the end of the A-CT phase. The C-CT group showed a greater increase in the SASB AF and AU self-concept domains at both follow-up points in comparison to the A-CT group. In a Canadian study, 40 mildly distressed outpatients, considered suitable for short-term therapy, were randomized to receive, over 3 months, either 12 to 14 sessions of individual short-term experiential therapy or three 2-hour group sessions of psychoeducation

(Paivio & Greenberg, 1995). More beneficial outcomes in AF, sustained for up to one year, were found in the more intensive individual therapy group.

Studies on self-concept changes after short-term and long-term psychodynamic psychotherapy are also available in a few naturalistic studies, using the SASB introject questionnaire as the outcome measure. A small Norwegian study of 13 patients with depressive and anxiety disorder, treated with 20 sessions of short-term psychodynamic psychotherapy, reported a relatively strong and enduring effect up to 2 years after the end of treatment, on the growth of self-freeing (Svartberg et al., 1996). Another follow-up study on short-term psychodynamic psychotherapy with 25 sessions, carried out in Germany, compared the outcomes of 75 patients completing treatment, categorized as patients with somatoform, neurotic and personality disorders (Junkert-Tress, Schnierda, Hartkamp, Schmitz, & Tress, 2001). In the group of patients with depressive and anxiety disorders (the 'neurotic' group), moderate to strong effects on improvement in AF occurred during therapy, with somewhat smaller effects at the 6-month and 12-month follow-ups after the end of therapy. Unlike the previous studies, Horowitz et al. (Horowitz, Marmat, Weiss, Kaltreider, & Wilner, 1986) used an interview assessment of self-concept as an outcome indicator in a study carried out in USA on 35 patients with grief reactions. No significant changes in the patients' self-esteem were found at the end of the 5-month short-term psychodynamic psychotherapy. Another study from USA, based on a heterogeneous sample of 50 patients with mostly depressive disorders, studied the effectiveness of psychodynamic therapies of various lengths (mean number of sessions 45, range 3-193) on changes in self-representations, from pre-treatment to end of therapy (Arnold et al., 2000). Significant improvement was found in the subscales 'negative-positive self' and 'self-critical', indicating more benign self-concept after treatment. Interaction analyses in that study showed that longer treatment duration was associated with greater gains in both scores, but only in female patients. Likewise, in a heterogeneous patient population of 134 young adults with mainly depressive and anxiety symptoms, the outcomes of psychodynamic psychotherapies (individual and group formats, medium length 1.5 years) was studied within the Swedish public health service (Lindgren, Werbart, & Phillips, 2010; Phillips, Wennberg, Werbart, & Schubert, 2006). All self-concept variables (positive and negative clusters of the SASB self-concept questionnaire and the ORI ratings) were moderately to strongly improved at termination and at the 1.5-year follow-up after it. Using the database of the above study, Arvidsson et al. (2011) further studied changes in self-representations in a subgroup of 41 patients most of whom were treated with individual long-term therapy. The findings based on ORI self-descriptions, analysed with Latent Semantic Analysis, showed sustained changes in self-concept at the 1.5 year follow-up.

Only preliminary conclusions on the effectiveness of psychotherapies on self-concept can be drawn based on existing research. Evidence from clinical trials is

limited; there is one on cognitive therapy and another on experiential therapy. The former showed that more positive self-concept (higher AF) was attained by a longer duration of treatment, and the latter showed that greater intensity was more beneficial. The fact that these findings have not been replicated in other trials offers only tentative support for considering that there might be a dose-response relationship (Kopta, 2003). Further research on self-concept as an outcome domain is needed regarding psychodynamic therapies and long-term treatments, as there are no trials covering these psychotherapy modalities. The five naturalistic studies on self-concept changes (Arnold et al., 2000; Horowitz et al., 1986; Junkert-Tress et al., 2001; Lindgren et al., 2010; Svarthberg et al., 1996), however, were all based on psychodynamic psychotherapies, three on short-term therapies (mean number of sessions 20 to 25) and two on therapies with varying length, mostly medium-term and long-term, the mean number of sessions and duration being 45 and 1.5 years, respectively. With one exception (Horowitz et al., 1986), the studies showed moderate to strong improvement in the patient's self-concept after therapy. In two studies, post-hoc analyses suggested that treatment length has a positive effect on the outcome (Arnold et al., 2000; Arvidsson et al., 2011). Thus, these tentative findings may also be used as hypotheses for new research. In addition, the lack of comprehensive assessment of different facets of self-concept in the previous research offers only a partial view of the potential effects of short-term and long-term therapies on self-concept, suggesting that a deeper investigation is needed.

Although all the studies reviewed were clinically feasible, being based on outpatients treated by trained psychotherapists, there are some methodological issues which need to be noted. All the studies used either heterogeneous or small samples or analysed only subgroups of eligible patients. There was only one trial which included a clinically relevant comparison between a shorter and lengthier version of a therapy representing the same orientation (A-CT and C-CT; Vittengl et al., 2004). In that study only patients who benefited from the acute treatment were randomly assigned to the continuation phase, offering thus only partial evidence on the potential benefits of treatment duration. The question of whether longer therapy would be more effective in general and able also to help patients for whom short-term therapy would not be sufficient requires a different kind of design and inclusion of all patients in an intention-to-treat analysis.

2.4 Review of studies on quality of object relations and self-concept as predictors of psychotherapy outcome

2.4.1 Quality of object relations as a predictor of outcome

In several studies on individual short-term psychodynamic psychotherapy (SPP, <30 sessions, frequency one session per week), the level of patients' object relations, based on the QORS, has been shown to directly predict or to modify the reduction of psychiatric symptoms and psychosocial dysfunction (Table 2). Most of the relevant studies have been carried out by one research group in Canada and another in Norway, focusing mostly on individual therapy of outpatients with depressive or anxiety disorders. In a Canadian study by Piper et al. (Piper, Azim, McCallum, & Joyce, 1990), out of 144 outpatients randomized to immediate treatment or a waiting list, the patients with high QORS achieved the best results after a 20-session SPP, and patients with low QORS on the waiting list achieved the poorest results, on a comprehensive set of outcomes. Further results based on the 64 treatment completers of the previous study showed that low QORS predicted significantly poorer outcomes at the end of treatment and at the 5-month follow-up after the end of treatment in psychiatric symptoms and functioning (Piper et al., 1991a). Similar results were reported by a Norwegian study, initially based on a cohort of 43 outpatients, treated with open-ended short-term to medium-term explorative psychodynamic psychotherapy (mean number of sessions 28, range 9-53) (Høglend, 1993a, 1993b; Høglend, Heyerdahl et al., 1993). The study showed that the patients' quality of object relations significantly predicted better long-term (2 and 4 years after therapy) effectiveness on symptoms and personality functioning. Further support for the prediction of object relations on outcome in depressive symptoms was recently given in a Dutch cohort study on 103 outpatients with major depressive disorder (Van et al., 2008), treated with a 16-session supportive SPP in which the prediction of object relations was based on the Object Relational Functioning scale (ORF) of the Developmental Profile (Abraham et al., 2001). In that study, patients with a more mature ORF had a more favorable treatment response in remission from depressive symptoms.

The QORS level has also been shown to modify the impact of therapy techniques on the outcome in therapies of equal length (Høglend et al., 2006; Høglend, Bogwald et al., 2008; Høglend, Hersoug et al., 2011; Johansson et al., 2010; Piper, Azim, Joyce, & McCallum, 1991; Piper, Joyce, McCallum, & Azim, 1998; Piper, McCallum, Joyce, Azim, & Ogrodniczuk, 1999; Piper, Ogrodniczuk, & Joyce, 2004). In the previously described Canadian study, high QORS was inversely associated with symptomatic and functional outcomes when the therapists used a higher level of transference interpretations (Piper et al., 1991b). However, in a later study by the same research group, based on 144 treatment

completers of the altogether 171 patients randomized to interpretative or supportive 20-session SPP, QORS was related to better outcomes in the respective outcome dimensions. These effects appeared, up to 1 year after therapy in the interpretative SPP but not in the supportive therapy (Piper et al., 1998, 1999, 2004). Furthermore, in the Norwegian First Experimental Study of Transference-interpretations (FEST), based on 100 outpatients randomized to explorative psychodynamic psychotherapy with or without transference interpretations, for one year (mean number of sessions 34), the patients with low QORS benefited more up to a 4-year follow-up, than those with high QORS in the group with moderate to high level of transference interpretations, on personality functioning (Høglend et al., 2006, 2008; Høglend, Johansson, Marble, Bogwald, & Amlo, 2007). Contrary, in one study on a subgroup of 40 patients from the study by Piper et al. (1991a), a higher frequency of transference interpretations (albeit lesser than in the previous study), was negatively associated with outcome in psychiatric symptoms for patients with low QORS (Ogrodniczuk, Piper, Joyce, McCallum, 1999).

Investigation of the mechanisms explaining interaction of transference interpretations and QORS have suggested that patients with low QORS may need more intensive exploration of the therapeutic relationship and transference interpretations for increasing their insight and to overcome potential alliance ruptures, in order to gain sustained benefits in personality functioning (Høglend, Hersoug et al. 2011; Johansson et al., 2010). In line with this, a recent naturalistic study further suggested that even at an early phase of therapy psychodynamic therapists tend to employ a higher frequency of techniques intensifying the process among patients with a lower level of object relations, for instance by focusing on in-session changes in affects and on patients' avoidance of important topics (Mullin & Hilsenroth, 2012). However, only limited attention has been given to analyzing the importance of QORS on treatment length. Based on studies from short-term to medium-term therapies, patients with low QORS tend to achieve better long-term results when the length of therapy exceeds 30 sessions, whereas achievement of stable changes in functioning after short-term therapy (10-25 sessions) are rare (Høglend, 2003; Høglend & Piper, 1997; Høglend, Sørbye, Heyerdahl, Sørbye, & Amlo, 1993).

2.4.2 Self-concept as a predictor of outcome

Only a few studies have been carried out on the prediction of self-concept on psychotherapy outcome in patients with anxiety or depressive disorders (Table 2). In the Norwegian Multisite Study on Process and Outcome in Psychotherapy (NMSPOP), the prediction of patients' pre-treatment self-concept, based on the categorical SASB self-concept pattern variables, was studied in a cohort of 233 outpatients with mainly these disorders, treated with various types of

psychotherapy within the public health system (Halvorsen & Monsen, 2007). The mean number of therapy sessions in the study was 34, and the majority of the therapies were psychodynamic. The study showed that the patients with a more negative self-concept experienced a greater reduction of symptoms during therapy than those with a less negative self-concept. Similar results were found in a Swedish study based on 235 outpatients, treated by supervised trainee psychotherapists with short-term (on average 18 sessions), mostly psychodynamic therapies (Dennhag et al., 2011). In addition, this study also found that a patient's higher level of self-control predicted better improvement in symptoms and personality functioning from the beginning to the end of therapy than a lower level of self-control.

Contrary, one study on short-term acute phase cognitive therapy (A-CT) for 156 patients with major depressive disorder found no prediction of self-concept (AF, AU) on changes in psychiatric symptoms from the beginning to the end of the 20-sessions of a therapy over 4 months (Vittengl et al., 2004). However, in that study higher pre-treatment AF and lower AU predicted increased time to recurrence of symptoms at 8 and 24 months after the A-CT. Also, in a study by Horowitz, Marmar, Weiss, DeWitt, & Rosenbaum (1984), involving 52 patients with bereavement reactions, a higher developmental level of self-concept was shown to be associated with a better outcome in work ability, but not in symptomatic improvement, after a 12-session SPP. Furthermore, a conceptually related measure, a higher level of self-criticism based on the Depressive Experiences Questionnaire (DEQ; Blatt, D'Affiniti et al., 1976), was used to compare its prediction on treatment response in two short-term, 16-session psychotherapies for depression: high self-criticism predicted poorer symptomatic outcome after treatment in interpersonal therapy but not in cognitive-behavioral therapy (CBT) (Marshall, Zuroff, McBride, & Bagby, 2008). In another study on 109 depressed patients, comparing the respective prediction between a 20-session cognitive therapy and pharmacotherapy, the negative effect was also found for CBT (Rector, Bagby, Segal, Joffe, & Levitt, 2000).

Table 2. Studies on the prediction of the quality of object relations and self-concept on psychotherapy outcome¹

Predictor domain/Reference	Patients Diagnosis	N	% female	Treatment groups	Number of sessions, (range)	Therapist training	Predictor measure	Outcome measure	Follow-up (months) ²	Main findings
<i>Object relations</i>										
Piper et al., 1990	DEP 31%, ANX 7%, PD 32%	144	50	SPP WL	20	Trained	QORS	BDI, IBS, IDS, SAS, SES, SCL-90	10	Patients in SPP with high QORS achieved better outcome in symptoms and personality functioning than WL patients with low QORS.
Piper et al., 1991a, b	DEP 27%, ANX 6%, PD 27%	64 ³	62	SPP	20	Trained	QORS	BDI, IBS, IDS, SAS, SES, SCL-90	10	Low QORS predicted poorer outcomes in symptoms and functioning; high QORS was negatively associated with outcome in symptoms and psychosocial functioning.
Piper et al., 1998, 1999	MIXED 73%, PD 60%	144	61	SPP-I SPP-S	20	Trained	QORS	BDI, DSQ, IIP, SAS, SCL-90-R, SES, TAS	18	QORS was associated with greater overall outcome; high QORS was associated with more benefits in symptoms after therapy and in personality functioning at follow-up in SPP-I but not in SPP-S.
Ogrodniczuk et al., 1999	MIXED 68%, PD 63%	40 ³	60	SPP	20	Trained	QORS	BDI, IBS, IDS, SAS, SES, SCL-90	0	Low QORS was negatively associated with overall outcome in therapy with higher level of transference interpretations.
Høglend, 1993a, b; Høglend et al., 1992, 1993b, c	DEP 11%, ANX 23%, MIXED 31%, PD 33%	43	67	PDP-OE	28 (9-53)	Trained	QORS	GAS, PDF	48	High QORS predicted greater benefits in symptoms and personality functioning at 2 and 4 years follow-up, respectively; patients with high QORS benefited less and those with low QORS more in personality functioning from lengthier, transference-focused treatment at 4 years.
Van et al., 2008	DEP 100%	103	79	SPP	16	Trained, trainees	ORF-DP	HDRS	0	Mature ORF predicted better remission from depressive symptoms.
Høglend et al., 2006, 2007, 2008	DEP 64%, ANX 27%, PD 46%	100	56	PDP-T PDP-W	34	Trained	QORS	GAF, IIP, PDF, SCL-90-R	48	Patients with low QORS benefited more in personality and psychosocial functioning from PDP-T than from PDP-W.

Self-concept

Halvorsen & Monsen, 2007	DEP 44%, ANX 61 % ^a , PD 40%	233	74	PT-OE ⁴	34 (5-100)	Trained, trainees	SASB	IIP, SCL-90-R, sum of Axis II criteria	0	Negative self-concept was associated with greater reduction of symptoms and number of personality disorder criteria.
Demnhag et al., 2011	DEP 31%, ANX 33%, PD% NR	235	69	SPP ⁴ , CBT	18	Student trainees	SASB	SCL-90-GSI, SCL-90-PSI	0	Dysfunctional self-concept and low AU predicted more reduction of symptoms and personality functioning.
Vittengl et al., 2004	DEP 100%, ANX >20%	156	75	A-CT C-CT	20 10	Trained	SASB	BDI, HDRS, LIFE, SASB	24	AF and AU did not predict change in symptoms after A-CT; high AF and low AU predicted increased of time to recurrence of symptoms.
Horowitz et al., 1984	DEP 13%, ANX 29%, MIXED 58%	52	96	SPP	12	Trained	SCRS	BPRS, IES, PICS, SCL-90, SRRS	0	Higher developmental level of self-concept predicted better improvement of work ability, but not greater reduction of symptoms.
Marshall et al., 2008	DEP 100%, ANX 13%, PD 12%	102	69	CBT IPT MED +CM	16 16	Trained, trainees	DEQ	HDRS	0	High self-criticism predicted lesser reduction of symptoms in IPT but not in CBT.
Rector et al., 2000	DEP 100%	109	33	CT MED	20	Trained	DEQ	BDI	0	High self-criticism predicted lesser reduction of symptoms in CT.

^aAbbreviations by column:

Diagnoses: ANX % = Proportion of anxiety disorders, PD II % = Proportion of personality disorders, DEP % = Proportion of depressive disorders, MIXED% = Proportion of various Axis I disorders
Treatment: A-CT = Acute-phase cognitive therapy, C-CT = Continuation-phase cognitive therapy, CBT = Cognitive-behavioral therapy, CM = Clinical Management, CT = Cognitive therapy, IPT = Interpersonal psychotherapy, MED = Medication, PT-OE = Psychotherapy, open-ended, different orientations, PDF = Psychodynamic psychotherapy, PDP-OE = Psychodynamic psychotherapy, open-ended, PDP-T = Psychodynamic psychotherapy, with transference interpretations, PDP-W = Psychodynamic psychotherapy, without transference interpretations, SPP = Short-term psychodynamic psychotherapy, SPP-I = Interpretative SPP, SPP-S = Supportive SPP, WL = Waiting list

Predictor measures: DEQ = Depressive Experiences Questionnaire, self-criticism scale; SASB = Structural Analysis of Social Behaviour self-concept questionnaire, AF = Affiliation scale (SASB), AU = Autonomy scale (SASB), QORS = Quality of Object Relations Scale, ORF-DP = Object Relational Functioning scale of the Developmental Profile, SCRS = Self-Concept Rating Scale
Outcome measures: BDI = Beck Depression Inventory, BPRS = Brief Psychiatric Rating Scale, DSQ = Defense Style Questionnaire, GAF = Global Assessment of Functioning, GAS = Global Assessment Scale, HDRS = Hamilton Depression Rating Scale, IBS = Interpersonal Behavior Scale, IDS = Interpersonal Dependency Scale, IES = Impact of Events Scale, IIP = Inventory of Interpersonal Problems, LIFE = Longitudinal Interval Follow-Up Evaluation (symptoms and functioning), PDF = Psychodynamic Functioning Scale, PICS = Patterns of Individual Change Scales, SAS = Social Adjustment Scale, SASB = Structural Analysis of Social Behaviour self-concept questionnaire, SCL-90-R = Symptom Check List, SCL-90-GSI = SCL, General Symptom Index, SCL-90-PSI = SCL, Personality Symptom Index, SES = Rosenberg Self-Esteem Scale, SRRS = Stress Response Rating Scale, TAS = Trait Anxiety Scale

⁴From the beginning of treatment, 0 = at the end of treatment

⁵Subgroup of the previous study

2.4.3 Summary of the research on prediction of quality of object relations and self-concept on psychotherapy outcome

Results from studies investigating the prediction of patient factors on outcome are often more useful for clinical practice than results from efficacy and effectiveness studies, and may generate interesting and clinically relevant hypotheses for future studies (Kraemer, Frank, & Kupfer, 2006). The reviewed research on the quality of object relations and self-concept as predictors of psychotherapy outcome offers a limited and concise exploration of the potential implications of these factors as determinants of suitability for a specific type and length of psychotherapy.

Based on studies focusing on the QORS as a predictor of outcome in short-term to medium-term psychotherapy, the following tentative conclusions may be drawn, reflecting needs for further inquiry. Firstly, in general, a patient's more mature object relations seem to favour a better long-term outcome after short-term therapy in symptoms and personality functioning. This finding is in line with the theoretical and clinical views on short-term, focal psychodynamic psychotherapy (Malan, 1976) and with research findings on the importance of a patient's benign psychological characteristics as suitability factors also for non-psychodynamic short-term therapies (Laaksonen, Knekt, Sares-Jäske, & Lindfors, 2012). Accordingly, a higher level of object relations can be seen as an indicator of a capacity which facilitates participation in time-limited psychotherapy, by helping to establish and maintain a relational and task-related focus (Valbak, 2004). Whether this capacity might also be beneficial for more extensive and sustained gains in long-term therapy and whether it could be used as a criterion for treatment selection between short-term and long-term therapy, requires further study.

Secondly, although the evidence base is limited, it appears that the patient's QORS level makes a difference on outcome, depending on the techniques used in therapy: the previous findings suggest that acknowledging the QORS level may not be essential when using a supportive technique, but seems to be relevant for explorative therapy. Patients with low QORS have usually been shown to benefit from a moderate level of transference interpretations. This corresponds with the treatment frames and techniques recommended and found useful for patients with non-severe (mainly cluster C) personality disorders, treated with medium-term psychodynamic psychotherapy (Høglend, Dahl, Hersoug, Lorentzen, & Perry, 2011), as well as with recommendations for patients with severe personality disorders, treated with long-term psychodynamic psychotherapy (Clarkin et al., 2007). However, as the findings on QORS are limited mostly to psychodynamic therapies of equal length, this issue deserves further exploration in comparative designs including therapies with different techniques as well as of different lengths.

Thirdly, although studies on the prediction of QORS have not included true comparisons between short-term and long-term therapies, the available studies based

on secondary analyses of trials covering short-term to medium-term therapies help to formulate hypotheses for further studies (Høglend, 2003). These preliminary findings indicate that the greater challenges posed by patient's low QORS may require a lengthy and relatively intensive therapy process.

A distinctive limitation of the existing research is its focus exclusively on psychodynamic therapy, the mean number of therapy sessions varying between 16 and 34. Although most of the studies reviewed represent methodologically high quality being based on adequate study designs, using standard measures, having study populations based on psychiatric outpatients, involving treatment by trained therapists with clearly defined therapies, and covering long-term follow-up – repeated measurements during and after treatment are rare. A more detailed pattern of changes during long-term follow-up would be needed to assess the issue of sufficiency and suitability of short-term vs. long-term therapy for patients with high and low QORS. Furthermore, most of the previous studies used specific training of study therapists and manualized treatment protocols, and this does not generalize well into ordinary clinical practice.

In contrast to studies investigating the prediction of QORS on outcome, the existing respective research on self-concept is more sparse and scattered, including only one or two studies of a few short-term psychotherapy modalities, and only one study comparing the prediction of self-concept on different types of therapies. Because of a higher level of inconsistency in the findings, the conclusions that can be drawn are more tentative. However, the two studies on SPP, based on a population of patients with anxiety or depressive disorders (Dennhag et al., 2011; Halvorsen & Monsen, 2007), consistently indicated that a negative self-concept predicted better outcomes in symptoms and/or personality functioning than a positive self-concept. Contrary, poorer outcomes or no prediction of negative self-concept on symptoms was found in IPT or CBT (Marshall et al., 2008; Rector et al., 2000; Vittengl et al., 2004). Thus, it seems a plausible hypothesis that the nature of self-concept may predict different outcomes in psychodynamic vs. other psychotherapy modalities, in the domain of psychiatric symptoms and personality functioning. As only one study suggested higher self-control to predict more benefits in SPP, replication by other studies is needed.

Several limitations of previous research on self-concept as a predictor of treatment effects are worth noting. Here also, the major issue is that no studies are available comparing the effect of short-term and long-term therapies at different levels of self-concept. The mean number of therapy sessions in the studies on self-concept varied between 12 and 34. Only one study included a follow-up measurement (Vittengl et al., 2004). In that study, the length of follow-up appeared to be important, as the prediction on outcome was different depending on the time of the follow-up assessment – an issue which is highly relevant when comparing therapies of varying lengths. Methodologically problematic issues were present in at least half of the studies. These issues covered the study sample, as several types of

therapies of varying lengths were combined; the lack of specific diagnostic inclusion criteria (Dennhag et al., 2011; Halvorsen & Monsen, 2007) and the use of only a completer sample in one study (Vittengl et al., 2004); the quality of treatment, indicated by a partial or exclusive use of trainees or semi-trained therapists (Dennhag et al., 2011; Halvorsen & Monsen 2007; Marshall et al., 2008; Rector et al., 2000) and differences in manualization, as all the non-psychodynamic therapies were manualized, unlike the psychodynamic therapies.

In summary, no previous published research is available comparing whether the prediction of self-concept and QORS on symptoms and work ability would be relevant for treatment selection between psychodynamic psychotherapy and another type of short-term psychotherapy, or between short-term and long-term psychotherapy.

3 AIMS OF THE STUDY

The aims of this study were to explore the prediction and effectiveness of short-term and long-term psychotherapy for patients with anxiety or mood disorder, from the perspective of the patients' personality functioning.

More specifically, the study was intended to examine:

- 1) the concurrent validity of the Quality of Object Relations Scale (QORS), i.e., to what extent the assignment of a high vs. low category of the QORS is consistent with the theoretical rationale of the scale (Study I),
- 2) the difference in effectiveness between two short-term psychotherapies (solution-focused and psychodynamic) and long-term psychodynamic psychotherapy in helping patients to change malfunctioning aspects of their self-concept, during a 3-year follow-up after beginning psychotherapy (Study II),
- 3) the potential effect modification of the quality of object relations on the outcome of solution-focused therapy, short-term psychodynamic and long-term psychodynamic psychotherapy on self-concept, during the 3-year follow-up (Study III), and
- 4) the prediction of the quality of object relations and self-concept on psychiatric symptoms and work ability during the 3-year follow-up after beginning short-term therapy (solution-focused and psychodynamic combined) and long-term psychodynamic psychotherapy (Study IV).

4 PATIENTS AND METHODS

4.1 Data

4.1.1 Patients and settings

Altogether 459 outpatients from the Helsinki region were referred to the study from June 1994 to June 2000 (Knekt & Lindfors, 2004). Eligible patients were 20-45 years of age and had a long-standing (>1 year) disorder causing dysfunction in work ability. Inclusion criteria further consisted of a diagnosis of anxiety or mood disorder (American Psychiatric Association, 1994) and a level of personality organization between neurosis and higher level borderline personality (Kernberg, 1996). Patients with too severe psychiatric disorders to be treated by all the psychotherapies available in the study – those with psychotic disorder or severe personality disorder, bipolar type I disorder, substance-related disorder, or severe organic disorder – were excluded. Likewise, patients with a milder adjustment disorder, as well as those having received psychotherapy within the previous 2 years, and working within psychiatric health care, were excluded, in order to avoid potential bias. The 326 patients satisfying the eligibility criteria were randomly assigned, according to a central computerized randomization schedule in a 1:1:1.3 ratio to solution-focused therapy (SFT, 97 patients), short-term psychodynamic psychotherapy (SPP, 101 patients) and to long-term psychodynamic psychotherapy (LPP, 128 patients) (Figure 2). The patients were monitored at baseline and at 3, 7, 9, 12, 18, 24 and 36 months after the baseline during the 3-year follow-up.

The patients were relatively young adults (Table 3, studies II-IV). Three quarters were female, more than half were living alone, and a quarter had an academic education. Most of the patients had mood disorder (86%), mainly major depressive disorder. Altogether 46% had an anxiety disorder, most usually panic disorder or generalized anxiety disorder. A non-severe personality disorder was diagnosed in 19% of the patients. About one patient in five had previously received either psychotherapy or used psychotropic medication. Onset of primary psychiatric disorder occurred relatively early, before the age of 21, for most of the patients. The patients were characterized by moderate levels of psychiatric symptoms and dysfunction of work ability. About 40% of the patients were categorized as low QORS cases, based on the cut-off score of ≤ 5 . The patients' self-concept was relatively low on affiliation (AF) and autonomy (AU). No statistically significant differences were found between the study groups. In Study I, the subgroup of the first 263 eligible patients referred to the study appeared largely similar to what comprised the randomized trial population (Table 3). The patients with low QORS were somewhat younger, more likely to live alone, less likely to have an academic

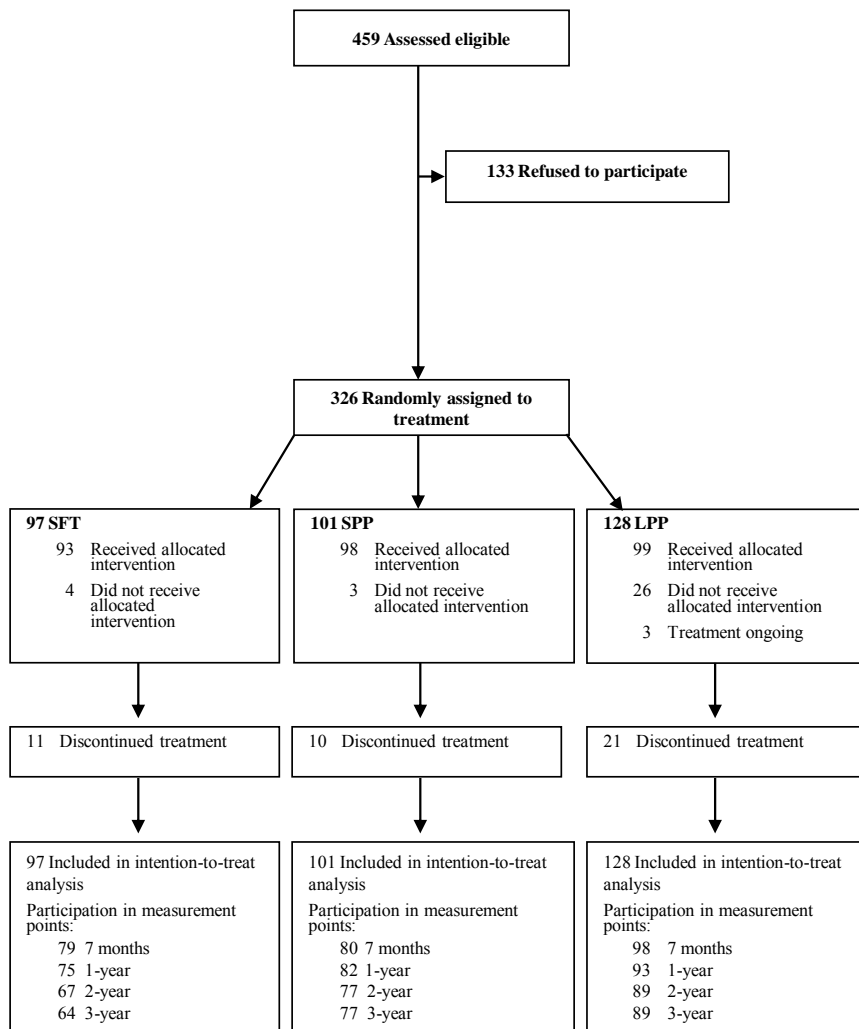


Figure 2. Number of patients assessed for eligibility, assigned to study group, and completed the protocol (Study II-IV).

Table 3. Baseline characteristics of the 326 patients by treatment group and the 263 patients by QORS category

Characteristic	Study II-IV by treatment group					Study I by QORS category ¹		
	All (n=326)	SPP (n=101)	SFT (n=97)	LPP (n=128)	P-value for difference ²	low (n=121)	high (n=142)	P-value for difference ²
Socio-economic variables								
Age (years) ⁴	33.6 (7.2)	32.1 (7.0)	33.6 (7.2)	31.6 (6.6)	0.08	30.6 (7.0)	33.6 (6.4)	0.001
Males (%)	25.8	25.7	25.8	21.1	0.63	28.9	26.8	0.70
Living alone (%)	56.7	48.5	56.7	49.2	0.44	62.8	40.8	<0.001
Academic education (%)	28.1	19.8	28.9	28.1	0.26	21.5	31.7	0.06
Psychiatric diagnosis and symptoms								
Mood disorder (%)	86.6	78.2	86.6	88.3	0.09	88.4	74.6	0.004
Anxiety disorder (%)	46.4	49.5	46.4	36.7	0.12	43.0	50.0	0.26
Personality disorder (%)	18.6	24.8	18.6	12.5	0.06	33.9	12.7	<0.001
Psychiatric co-morbidity (%)	45.4	48.5	45.4	36.7	0.17	53.7	36.6	0.005
SCL, Global Severity Index (SCL-90-GSI) ³	1.28 (0.5)	1.26 (0.5)	1.31 (0.5)	1.27 (0.6)	0.84	1.37 (0.5)	1.17 (0.5)	0.001
SCL, Anxiety scale (SCL-90-Anx) ³	1.24 (0.7)	1.25 (0.7)	1.27 (0.7)	1.19 (0.7)	0.65	1.33 (0.7)	1.15 (0.6)	0.03
Beck Depression Inventory (BDI) ³	18.3 (7.9)	17.9 (7.5)	18.1 (7.8)	18.8 (8.3)	0.67	19.4 (8.4)	16.6 (7.2)	0.003
Work Ability								
Work Ability Index (WAI) ³	33.7 (6.9)	34.1 (7.0)	33.5 (7.0)	33.4 (6.8)	0.75	32.8 (6.9)	34.5 (6.3)	0.04
Social Adjustment Scale, work subscale (SAS-work) ³	2.19 (0.4)	2.13 (0.4)	2.21 (0.4)	2.23 (0.4)	0.34	2.30 (0.6)	2.05 (0.5)	<0.001
Perceived Psychological Functioning (PPF) ³	25.4 (5.3)	24.7 (5.3)	25.5 (5.4)	25.5 (5.3)	0.53	25.4 (5.6)	24.7 (5.0)	0.36
Psychiatric history								
Previous psychotherapy (%)	19.3	18.8	20.0	19.0	0.98	25.8	21.3	0.39
Previous medication (%)	22.0	21.8	27.8	17.6	0.19	21.2	21.2	0.96
Primary psychiatric disorder at 21 years of less (%)	61.0	57.6	66.0	63.0	0.48	80.1	54.3	0.006
Personality functions								
Quality of Object Relations Scale (QORS) ³	5.13 (0.6)	5.16 (0.6)	5.03 (0.6)	5.18 (0.6)	0.15	4.53	5.52	<0.001
Quality of Object Relations Scale (QORS) (% low) ¹	40.8	38.6	46.4	38.3	0.41	-	-	-
SASB, Affiliation self-concept scale (AF) ³	5.91 (60)	2.28 (64)	6.60 (64)	8.25 (55)	0.76	-4.83 (65)	14.6 (57)	0.01
SASB, Autonomy self-concept scale (AU) ³	-26.8 (36)	-24.7 (38)	-25.4 (36)	-29.5 (36)	0.56	-25.8 (32)	-34.2 (39)	0.06

¹low ≤ 5.00, high >5, ²test for heterogeneity (categorical variables) and test for trend (continuous variables), ³Mean (SD)

education, to have more frequently a mood disorder and a personality disorder than patients with high QORS. Patients with low QORS also exhibited more disturbed work ability, more psychiatric symptoms and poorer self-concept.

4.1.2 Ethical considerations

All the patients gave written informed consent and the study was approved by the Helsinki University Central Hospital ethics council.

4.1.3 Treatments

Solution-focused therapy (SFT) is a resource-oriented and goal-focused short-term therapeutic approach which helps clients change by constructing solutions (Johnson & Miller 1994). The technique is based on an approach developed by de Shazer et al. (1986). Essential elements of the technique are the search for pre-session change, miracle and scaling questions, exploration of exceptions, use of a one-way mirror and consulting break, positive feedback and home assignments. The aims of SFT are closely linked to reformulating the way the person constructs meanings to one's actions, by enhancing a more positive and resource-oriented concept of oneself in relation to the challenges of life (de Shazer, 1991; de Shazer et al., 1986). The frequency of sessions in SFT was flexible, usually one session every second or third week, up to a maximum of 12 sessions, over no more than 8 months.

Short-term psychodynamic psychotherapy (SPP) is a transference-based short-term therapeutic approach which helps patients by exploring and working through specific intrapsychic and interpersonal conflicts. SPP is characterized by the exploration of a focus, which can be identified by both the therapist and the patient, and upon which the techniques of confrontation, clarification and interpretation are applied in a process where the therapist is active in creating the alliance and ensuring the time-limited focus. Benefits beyond symptomatic changes, represented by conflict resolution and at least limited reformulation of self-structure are among the most prominent long-term treatment goals specified by the proponents of SPP (Malan, 1976; Sifneos, 1978), according to whose technique the therapies were carried out. SPP was scheduled for 20 weekly treatment sessions over 5-6 months.

Long-term psychodynamic psychotherapy (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. LPP is characterized by the exploration of unconscious conflicts, developmental deficits and distortions of intrapsychic structures. Confrontation, clarification and interpretation are major techniques, as well as the therapist's actions in ensuring the alliance and applying elements of the therapeutic relationship to facilitate conflict resolution and greater self-awareness. Therapy includes both expressive and supportive elements, the use of which depends on patient needs. LPP aims to initiate a developmental, curative process for working through maladaptive internalized

representations of the self and others in order to enhance sustained improvement in personality functioning (Busch et al., 2004). The orientation follows the clinical principles of long-term psychodynamic psychotherapy (Gabbard, 2004). LPP was scheduled for 2 to 3 times a week, for about 3 years.

After randomization, 4 patients assigned to SFT, 3 assigned to SPP, and 26 assigned to LPP refused to participate (Knekt et al., 2008a). In the outcome domain of psychiatric symptoms and work ability the mean drop-out rates in SFT, SPP and LPP during the 3-year follow-up were 15%, 13%, and 18% (Knekt et al., 2008a, 2008b), and in the self-concept outcome domain 22%, 18%, and 23%, respectively. The average number of therapy sessions among the patients completing the study therapy was 9.8 (SD = 3.3) in SFT, 18.5 (SD = 3.4) in SPP, and 232 (SD = 105) in LPP.

4.1.4 Therapists

The therapies were carried out by a total of 55 qualified therapists, of whom 6 provided SFT, 12 SPP and 41 LPP (Knekt et al., 2008a; Heinonen, Lindfors, Laaksonen, & Knekt, 2012). Therapists providing SFT had received their qualification after being trained in a local accredited SFT institute. The therapists providing SPP and LPP had completed a standard training of 3-6 years in psychodynamically oriented psychotherapy in one of the accredited psychodynamic or psychoanalytic training institutes in Finland. Those giving SPP had received additional short-term, focal psychodynamic therapy training for at least one year.

To be eligible to provide psychotherapy in the HPS, the therapists were required to have at least two years of experience after completed training in the specific therapy form. The mean number of years of experience in SFT was 9 (range 3 to 15). The mean number of years of experience in LPP was 18 (range 6 to 30) for therapists providing LPP, and 16 (range 10 to 21) years for those providing SPP. To this, the therapists providing SPP had added an average of 9 (range 2 to 20) years of experience in SPP.

4.2 Assessment methods

4.2.1 Assessment of the predictors of outcome

4.2.1.1 *The Quality of Object Relations Scale (QORS) (Studies I, III, IV)*

The quality of object relations, defined as a person's enduring tendency to establish typical relational patterns along a dimension from primitive to mature, was assessed at baseline by interview, using the Quality of Object Relations Scale (QORS; Azim et al., 1991; Piper et al., 2004). The interview procedure was a modification of Kernberg's structural interview (Kernberg, 1981; Valkonen, Lindfors, & Knekt, 2012), and met the requirements of the QORS manual (Piper et al., 1996). It

consisted of three interview sessions, carried out before randomization to treatment. In the first two 45-60 minute interview sessions, the focus was on obtaining a comprehensive view on the presenting problems, personal and family history, self-experience and interpersonal relations (Knekt & Lindfors, 2004). The interviewer presented specific opening questions, clarifying comments and requests for elaboration (Kernberg, 1981; Piper et al., 1996). In the third interview session, additional, targeted questions related to relational issues were included in case of insufficient coverage in the previous sessions. The interviews were carried out by seven interviewers (two psychiatrists and five psychologists), who had relatively extensive clinical experience (range 9 to 20 years). A separate training (60-100 hours, over a period of 4-6 months), covering theoretical issues, assessment strategy and practical case work, was arranged for achieving competence to reliably carry out the QORS ratings. The reliability of the interview procedures, based on agreement between interviewers was found to be adequate for research purposes: the median of reliability coefficients of the continuous QORS was .82 and the kappa median between low and high QORS was .46. Also, the stability of the ratings over time was monitored and assessed in a quality assurance study, based on 39 videotaped interviews from two time points, baseline and the 3-year follow-up (Knekt & Lindfors, 2004; Knekt, Laaksonen, et al., 2012).

The QORS scale consists of five levels of object relational patterns (primitive, searching, controlling, triangular, mature), each organized as a typical constellation of predominant characteristics within four domains: behavioral manifestations, affect regulation, self-esteem regulation, and antecedents (i.e., relational history) (Azim et al., 1991; Table 1). For each of the five levels of object relations the manual gives explicit criteria and descriptions of theoretically ideal, 'prototypical' cases. At the primitive level, a person has predominant characteristics of reacting with intense anxiety and affect to perceived loss or separation, instability of self-structure, immature defense mechanisms, inordinate dependence as a form of self-regulation, and a childhood typically involving severe interpersonal trauma and failure in developing a balanced self-esteem. At the searching level, there is more craving and incessant searching for substitutes for an early, longed-for lost object, typically followed by the oscillation of short-lived excitement and heightened self-worth with the threat of loss, disillusionment and inflated self-esteem. At the controlling level the enduring mode of relating is organized around a well-intentioned need to possess and control the object, being frequently a repetition of a pattern from the person's past, to avoid the anxiety of abandonment if the controlling relationship is lost. The triangular level refers to an essentially neurotic mode of relating, reflecting potential for mutuality and the ability for concern in relationships, but affected by unresolved oedipal object relations, i.e., tendencies to anxiously compete or compare oneself to others, to feel inferior and not entitled to enjoy success without guilt. Finally, at the mature end of the continuum, a person can enjoy equitable relationships, characterized by love, concern, continuity, and the

capacity to mourn – indications of more mature defenses and a good capacity for affect regulation. Accordingly, the childhood experiences of persons with a mature level of object relations comprise adequate caring, realistic valuing of self and others, and fostering mature autonomy and interdependence (Piper et al., 1996, 2004).

In the scoring of the QORS, a total of 100 points was distributed to the five object relational levels so that the largest number of points was assigned to the level which was considered to best represent the prototypical description of the patient's object relations (Azim et al., 1991). The remaining levels were given points relative to how the criteria for the specific level were fulfilled. The value of each level was then multiplied by its ordinal weight (primitive = 1, searching = 3, controlling = 5, triangular = 7, mature = 9), the results of all the levels summed, and divided by 100. The QORS score thus varied from 1 to 9. A dichotomized score (≤ 5.0 , >5.0) was used to categorize the patients into low and high QORS cases, indicating that high QORS represents mostly the relatively healthy triangular and mature levels of object relatedness (Piper & Duncan, 1999).

4.2.1.2 The Structural Analysis of Social Behavior (SASB) self-concept scale – Affiliation (AF) and Autonomy (AU) scores (Study IV)

Self-concept was measured with the 36-item Structural Analysis of Social Behavior (SASB) introject questionnaire (Benjamin, 1996b, 2000a). Each item measures the degree of agreement with a statement along an ordinal continuum ranging from no agreement (score 0) to total agreement (score 100), with 10-point intervals. The patients were asked to rate themselves according to the way they typically behaved towards themselves, e.g. "I punish myself by blaming myself and putting myself down". The items covered eight clusters of behavior directed at oneself: self-free, self-affirm, self-love, self-protect, self-control, self-blame, self-attack, and self-neglect, each of these represented by 4 to 5 items (Figure 1, Table 1). The cluster scores were calculated as a mean of the 4 to 5 items belonging to the specific cluster. The score values varied from 0 to 100, indicating the extent of the respective self-concept characteristic. The predictor variables used consisted of the two principal vector scores, the self-directed affiliation (AF) score on the horizontal (hate–love) axis and the self-directed autonomy (AU) score on the vertical (control–emancipate) axis, calculated with the SASB Intrex program (Benjamin, 2000b). The AF and AU scores (range -200 to +200) measured the degree to which all the eight cluster scores were oriented around these two, theoretically and empirically derived, main axes of self-directed behavior. Thus, a greater AF value indicates a more positive self-concept, characterized mainly by love, and a greater AU value indicates a self-concept characterized by a higher level of perceived autonomy. A dichotomized score, based on median values were used to categorize the patients into low and high AF and AU cases.

4.2.2 Assessment of outcome

4.2.2.1 *The SASB self-concept scale – comprehensive evaluation (Studies II, III)*

Outcome in self-concept was assessed with the SASB introject scores of AF and AU which were the primary outcome indicators, and with the secondary indicators, the eight cluster scores described above. The measurements were carried out at baseline and at 7, 12, 24, and 36 months from baseline, during the 3-year follow-up.

4.2.2.2 *Psychiatric symptoms and work ability (Study IV)*

Psychiatric symptoms were assessed at baseline and altogether 7 times (at 3, 7, 9, 12, 18, 24, 36 months from baseline), during the 3-year follow-up (Knekt et al., 2008a). General psychiatric symptoms were assessed by the 90-item self-report Global Severity Index of the Symptom Check List 90 (SCL-90-GSI; Derogatis, Lipman, & Covi, 1973). Each item consists of a statement describing the severity of a specific symptom during the past month, on a continuum from absent (score 0) to extreme (score 4). The SCL-90-GSI was the mean of all the 90 items. Likewise, anxiety symptoms were assessed with the SCL-90 anxiety scale (SCL-90-Anx), based on the mean value of the 10 items covering the anxiety symptoms. Depressive symptoms were assessed with the 21-item Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). Each BDI item consists of a series of statements describing symptom severity along a continuum from absent (score 0) to severe (score 3). A score describing depression severity during the past month was calculated by summing the scores of the items, ranging from 0 to 63.

Work ability was assessed by three self-report questionnaires at baseline and at 7, 12, 24, and 36 months from baseline, during the 3-year follow-up (Knekt et al., 2008b). The Work Ability Index (WAI; Ilmarinen, Tuomi, & Klockars, 1997; Tuomi, Ilmarinen, Jahkola, Katajarinne, & Tulkki, 1998) contains 10 items, which measure different domains of self-estimated work ability ranging from very poor (score 0 or 1) to very good (scores 4 to 10, depending on the item). The items are further combined to produce 7 subscales on perceived work ability. The total score (range 7 to 49), describing current work ability, was calculated by summing the scores of the subscales. Performance at work during the past month was measured using the 18-item work subscale of the Social Adjustment Scale (SAS; Weissman & Bothwell, 1976). Each item consists of a statement describing performance as an employee, student or while performing housework along a continuum ranging from very good (score 1) to very poor (score 5). An overall score was calculated as the mean of the items. A further aspect of work ability, perceived psychological functioning was measured with the 10-item Perceived Psychological Functioning (PPF) scale (Lehtinen et al., 1991) which includes items describing cognitive functioning (4 items), coping with stress (3 items), and energy level (3 items), scored from 1 (high level of functioning) to 4 (except 5 for one item) (poor level of

functioning). A total score describing psychological functioning was calculated by summing the items. The total score thus varied from 10 to 41.

4.2.3 Other methods

Information of the patients' psychiatric diagnoses, based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994), and psychiatric history (age at onset of primary psychiatric disorder, duration of primary psychiatric disorder, previous episodes of depression, previous psychiatric treatment (i.e., psychotherapy, psychotropic medication, and hospitalization) were determined at baseline by interview (Knekt & Lindfors, 2004). Baseline information on socio-demographic factors (age, sex, education and marital status) were collected with interviews and questionnaires.

During the 3-year follow-up information on the use of auxiliary psychiatric treatment (psychotherapy, psychotropic medication, and hospitalization) was collected using questionnaires, interviews and data from nationwide public health registers (Knekt, Lindfors, Renlund et al., 2011) (Studies II-IV).

Further, in study I, variables considered to measure theoretically-based aspects of object-relational pathology, organized along the four domains of the QORS (behavioral manifestations, affect regulation, self-esteem regulation, antecedents), were chosen as criterion variables for the validation study, based on baseline data. The majority of these were based on interview assessment, rated along an ordinal continuum from 1 to 7 (discontinuity of relationships, devaluation in relationships, modulation of dysphoric affects, modulation of aggressive impulses, self-confidence) and from 1 to 5 (separations during childhood). Two variables were based on questionnaires, the AF score of the SASB self-concept questionnaire (Benjamin, 1996b) and the item 'family atmosphere before age 8' of the Childhood Family Atmosphere Questionnaire (CFAQ; Kurki, 2009).

4.3 Statistical methods

4.3.1 Cross-sectional study on the validity of the QORS (Study I)

The associations between QORS and the criterion variables considered were determined in a cross-sectional study design using logistic regression (Cox, 1971). Dichotomized QORS was used as the dependent variable and the criterion variables were the independent variables. The continuous criterion variables were categorized into quartiles and the relative odds between the categories were used as measure of the strength of association between the QORS and the criterion variables. Tests for significance were based on the likelihood ratio test. Besides the additive criterion variables, some models included socio-demographic confounding factors and

interaction terms between the criterion variables and between the criterion variables and psychiatric status.

4.3.2 Longitudinal study with repeated measurements on effectiveness and prediction (Studies II-IV)

The effectiveness of the three therapies on self-concept during follow-up and the prediction of pre-treatment self-concept on psychiatric symptoms and work ability during follow-up were studied in a longitudinal design with repeated measurements. Primarily ‘intention-to-treat’ (ITT) analyses were carried out and ignorable dropouts (Härkänen, Knekt, Virtala, & Lindfors, 2005; Knekt et al. 2008a) were assumed. In secondary analyses missing values were replaced by multiple imputation using Markov chain Monte Carlo methods (Rubin, 1987). Besides the ITT analyses, complementary ‘as-treated’ (AT) analyses were performed. The statistical analyses were based on linear mixed models (Verbeke & Molenberghs, 1997). Model-adjusted outcome means and mean differences using predictive margins were calculated for the different measurement points (Graubard & Korn, 1999; Lee, 1981). The delta method was used for calculating confidence intervals (Migon & Gamerman, 1999) and the statistical significance of the associations considered was tested with the Wald test.

4.3.2.1 Effectiveness of psychotherapy on self-concept (Studies II, III)

The SASB self-concept variables were used as dependent variables in the analyses. Two additive models, a basic and a complete model, were used in the ITT analyses. The basic model included the main effects of therapy group, time (i.e., measurement point), the interaction between therapy group and time, and a correction term (i.e., the interaction of the difference between the theoretical and the realized date of measurement, therapy group, and time). The complete model further included the baseline variables (i.e., age, sex, marital status, education, age at onset of first psychiatric disorder, separation experiences, and DSM-IV Axis I and II diagnoses) satisfying the criteria for confounding (Rothman, Greenland, & Lash, 2008). In a third model the interaction between treatment group and dichotomized (low vs. high) QORS was included in the basic and complete models. The baseline level of the SASB measures was adjusted in each model. In the AT models variables describing compliance at baseline (i.e., waiting time from randomization to initiation of treatment and withdrawal before start of treatment), discontinuation of the study treatment and use of auxiliary treatment (i.e., psychotherapy, psychotropic medication or psychiatric hospitalization) during follow-up as time-dependent covariates were added to the ITT models. The complete ITT models and the AT model, were carried out based on both the original data and imputed data. Since the complete model differed from the basic model but no major differences between the ITT and the AT model were observed, and because imputation did not noticeably alter the results, the results from the complete ITT model as based on the original data were selected.

4.3.2.2 *The prediction of SASB and QORS on psychiatric symptoms and work ability (Study IV)*

The dependent variable in the analyses on the prediction of self-concept (SASB) and quality of object relations (QORS) was each of the outcome measures (BDI, SCL-90-Anx, SCL-90-GSI, WAI, SAS-work, PPF) at a time. In the ITT analyses, two models were used: a basic model and a complete model. The basic ITT model included the main effects of the SASB variables and QORS measured at baseline, therapy group, and time (i.e., measurement points), their first-order and second-order interactions, a correction term (i.e., the first-order interaction of the difference between theoretical and realized date of measurement, time and the predictor variable), and outcome measure at baseline. The complete model further included sociodemographic variables (age, sex), and psychiatric history data (previous depressive states, previous psychotherapy, age at the onset of primary psychiatric disorder, duration of primary psychiatric disorder), all measured at baseline and satisfying the criteria for confounding (Rothman et al., 2008). In addition, the complete ITT model included the baseline measure of the dependent variable considered. The AT model further included similar variables as described previously regarding studies II and III. Since the complete model differed from the basic model but no major differences between the ITT and the AT model were observed, the results from the complete ITT model were selected. Similarly, because imputation did not noticeably alter the results, the results based on the original data are presented.

The independent variable of main interest was the interaction term between the predictor variable, therapy group, and time. The significance of the SASB variables and QORS in predicting the outcome of short-term versus long-term therapy was thus evaluated by testing the statistical significance of this interaction term. For more detailed interpretation of the results, the statistical significance of the change in outcome from baseline to the different measurement points was assessed for each therapy group and category of the predictor variable. Therapy was considered beneficial for the patients who experienced and maintained a statistically significant reduction in symptoms or improvement in work ability compared with those at baseline during the 3-year follow-up. To compare the benefits of the two therapy groups the statistical significance of the model-adjusted difference in the outcome between the therapy groups in the categories of the independent variables was measured at the measurement points. Short-term therapy was considered to be equally or more beneficial than long-term therapy for the patients for whom there were no statistically significant differences between the therapy groups or who benefited more from short-term therapy whereas patients who in the long run benefited more from long-term therapy were considered to benefit more from long-term therapy.

4.3.3 Statistical programs

The analyses were carried out with SAS software, version 9.1 (SAS Institute Inc., 2007).

5 RESULTS

5.1 Concurrent validity of the QORS (Study I)

The findings of the study showed that the theoretically based proxy criterion variables of the QORS were consistently associated with low vs. high QORS category among patients seeking psychotherapy due to mood or anxiety disorder. Of all the eight criterion variables, representing four domains of manual-based criteria (behavioral manifestations, affect regulation, self-esteem regulation, and antecedents), 7/8 were statistically significantly associated with the QORS, poor values being more common in patients with low QORS. Only poor family atmosphere of the antecedents domain was not associated with QORS. Moderate correlations were found between most of the variables in the behavioral manifestations and affect regulation domains and also with self-confidence in the self-esteem regulation domain (Table 4), whereas childhood family atmosphere appeared to be only weakly associated with the other criterion variables.

The analysis of the associations between the two proxy measures within each separate predictor domains, and the QORS, indicated mostly statistically significant associations (Table 5). In the *behavioral manifestations* domain (submodel A) the prevalence of patients with a pattern of discontinuous relationships was five-fold (Odds ratio (OR) = 0.19, 95% Confidence interval (CI) = 0.08, 0.42) in the group of patients with low QORS in comparison to those with high QORS. Similarly, a four-fold prevalence was found among those patients whose behavior in relationships was marked with the presence of devaluation. In the three other domains – *affect regulation*, *self-esteem regulation*, and *antecedents* – one of the two variables in each domain retained significance as a predictor of the QORS category: poor modulation of aggressive impulses, poor self-confidence and major separations during childhood (respectively in the submodels B, C and D, Table 5). The final model included simultaneously all the five variables with statistically significant association to QORS. The analysis showed that the QORS category was most notably associated with discontinuity in relationships (OR = 0.27, CI 0.11, 0.63) and devaluation in relationships (OR = 0.33, CI 0.17, 0.65), indicating a four-fold and a three-fold risk, respectively, for patients with poor values in these variables to be assessed as low a QORS case. For the patients with poor self-confidence and major separations during childhood the respective risk was twice as high.

Major separations during childhood appeared to modify the association between devaluation and the QORS category, with an inverse association (i.e., higher prevalence of low QORS) for those using devaluation but not having reported major separations versus those with major separations during childhood. No other significant interactions, covering severity of psychiatric symptoms and axis I diagnosis, were found between the criterion variables and the QORS category.

Table 4. Correlation matrix for criterion variables and the QORS¹

	1.	2.	3.	4.	5.	6.	7.	8.
<i>Behavioral manifestations</i>								
1. Discontinuity in relationships	–							
2. Devaluation in relationships	0.35***	–						
<i>Affect regulation</i>								
3. Poor modulation of affects	0.16 **	0.23***	–					
4. Poor modulation of aggressive impulses	0.38***	0.31 ***	0.28***	–				
<i>Self-esteem regulation</i>								
5. SASB introject, AF score	-0.22***	-0.11	-0.08	-0.16*	–			
6. Poor self-confidence	0.45***	0.28***	0.22 ***	0.39***	-0.21***	–		
<i>Antecedents</i>								
7. Major separations during childhood	0.07	0.12*	0.10	0.08	-0.05	0.01	–	
8. Poor childhood family atmosphere	0.00	0.10	-0.14*	0.00	-0.03	0.00	0.25***	–
QORS	-0.45***	-0.39***	-0.19**	-0.30***	0.17**	-0.39***	-0.19**	-0.10

*P-value < 0.05, **P-value < 0.01, ***P-value < 0.001.
¹ QORS and SASB introject scores continuous and other variables dichotomous.

Table 5. Relative odds (OR) and its 95% confidence interval (CI) between high (>5.0) and low (≤ 5.0) QORS in the four criterion domain submodels¹: behavioral manifestations (A), affect regulation (B), self-esteem regulation (C) and antecedents (D), and the final model²

Variable	Number of high values	Number of cases	Submodel A OR (95% CI)	Submodel B OR (95% CI)	Submodel C OR (95% CI)	Submodel D OR (95% CI)	Final model OR (95% CI)
Discontinuity of relationships							
No	131	205	1.00				1.00
Yes	11	58	0.19 (0.08, 0.42)				0.27 (0.11, 0.63)
Devaluation in relationships							
No	119	183	1.00				1.00
Yes	23	80	0.27 (0.14, 0.52)				0.33 (0.17, 0.65)
Poor modulation of affects							
No	109	186		1.00			
Yes	33	77		0.71 (0.39, 1.28)			
Poor modulation of aggressive impulses							
No	104	164		1.00			1.00
Yes	38	99		0.38 (0.22, 0.65)			0.83 (0.43, 1.61)
SASB introject, AF score (quartiles)							
-155, -43.3	26	64			1.00		
42.0, 6.07	36	64			1.82 (0.83, 4.00)		
6.98, 54.3	39	64			1.80 (0.80, 3.97)		
54.5, 143	38	65			1.74 (0.80, 3.76)		
Poor self-confidence							
No	109	163			1.00		1.00
Yes	33	100			0.26 (0.15, 0.46)		0.52 (0.27, 1.01)
Poor childhood family atmosphere							
No	91	162				1.00	
Yes	51	100				0.93 (0.54, 1.62)	
Major separations during childhood							
No	90	143				1.00	1.00
Yes	52	120				0.47 (0.28, 0.82)	0.48 (0.26, 0.85)

¹ Each four domain-specific (A, B, C or D) submodels consisted of the two variables within the same domain (dichotomized), except quartiles in the SASB AF score), adjusted for age (continuous), and sex, living alone, and academic education (all dichotomized).

² Final model consisted of the variables which retained significance in the submodels, discontinuity of relationships, devaluation in relationships, poor modulation of aggressive impulses, poor self-confidence, and major separations during childhood (all dichotomized), adjusted for age (continuous), and sex, living alone, and academic education (all dichotomized).

5.2 Effectiveness of solution-focused therapy and short- and long-term psychodynamic psychotherapy on self-concept (Study II)

This study showed a statistically significant improvement during the 3-year follow-up in all therapy groups for the primary indicators, the affiliation (AF) and the autonomy (AU) self-concept scores, and for all the secondary indicators, the eight SASB cluster scores: self-free, self-affirm, self-love, self-protect, self-control, self-blame, self-attack and self-neglect (Table 6). Significant improvement occurred during the first follow-up year from the beginning of treatment in both short-term therapy groups (in 8/10 scores) and in the LPP group (in 6/10 scores). Thereafter, a continued significant improvement was noted only in LPP (in 8/10 scores), with a single exception of continued decrease of self-blame in SPP after 2 years of follow-up.

During the first year of follow-up, both SFT and SPP had a more beneficial effect on the AF and AU dimensions of self-concept than LPP (Table 6). The mean AF and AU score differences between the SFT and the LPP groups at the 1-year follow-up were 23 (CI 6.3, 40) and 17 (CI 8.2, 26) while between SPP and LPP the differences were 21 (CI 4.4, 37) and 11 (CI 2.6, 19), indicating greater improvement of an overall more positive self-concept and more increased autonomy in SFT and SPP than in LPP. In the secondary indicators, a similar pattern was noted, indicating faster improvement in short-term therapies, especially SFT, toward a more affectionate and accepting self-concept. During the second year of follow-up, no significant differences were found between any of the groups.

At the 3-year follow-up point, the initial advantage of SFT in comparison with LPP regarding the AF score was reversed, with the SFT group showing statistically significantly less improved values than the LPP group, the score difference being /21 (CI -40, -2.6), whereas no difference between the short-term and long-term psychodynamic treatments was noted (Table 6, Figure 3). The more extensive positive change in self-concept after LPP at the 3-year follow-up in comparison to SFT was further confirmed by similar findings in the secondary indicators of self-affirm, self-blame, and self-neglect, showing thus more self-acceptance and less of a tendency to punish and ignore oneself in the LPP group than in the SFT group. Likewise, in comparison with SFT, the SPP group also showed significantly more long-term improvement in self-attack and non-significantly in self-blame. No statistically significant differences between LPP and SPP were found at the 3-year follow-up.

Table 6. Mean (s.e.) SASB self-concept scores in treatment groups and mean score differences (95% confidence interval) between the treatment groups.

		Mean scores ^{1,5} (s.e)			Mean score difference ^{2,6} (95% confidence interval)			
Outcome variable	Time (month)	SPP (n=101)	LPP (n=128)	SFT (n=97)	SPP vs. LPP	SFT vs. LPP	SPP vs. SFT	
VECTOR SCORES								
AF score	0	2.78 (6.01)	9.35 (5.35)	6.62 (6.13)	0	0	0	
	7	<u>29.9</u> (7.05)	<u>24.3</u> (6.46)	<u>41.9</u> (7.18)	+10.9 (-4.1, +26)	+20.5 (+5.2, +36)	-9.56 (-25, +6.2)	
	12	42.2 (7.50)	27.0 (6.96)	46.5 (7.89)	+20.7 (+4.4, +37)	+23.2 (+6.3, +40)	-2.49 (-20, +15)	
	24	41.4 (8.18)	<u>55.0</u> (7.50)	42.4 (8.95)	-8.30 (-27, +10)	-10.3 (-31, +10)	+1.96 (-19, +23)	
	36	56.4 (7.69)	68.9 (7.17)	45.5 (8.18)	-7.38 (-25, +11)	-21.5 (-40, -2.6)	+14.1 (-5.4, +34)	
<i>P-value (time)^{1,3}</i>								
<i>P-value (group)^{2,4}</i>								
AU score	0	-23.8 (3.67)	-29.4 (3.26)	-24.6 (3.74)	0	0	0	
	7	<u>-10.3</u> (3.90)	-24.8 (3.57)	<u>-10.8</u> (3.96)	+10.6 (+2.2, +19)	+9.88 (+1.3, +18)	+0.73 (-8.1, +9.6)	
	12	-7.18 (3.75)	-22.5 (3.48)	<u>-2.15</u> (3.96)	+11.0 (+2.6, +19)	+16.9 (+8.2, +26)	-5.95 (-15, +2.9)	
	24	-4.89 (4.22)	-10.8 (3.82)	1.08 (4.65)	+2.54 (-7.2, +12)	+9.08 (-1.4, +20)	-6.54 (-17, +4.3)	
	36	-1.03 (3.38)	<u>-2.11</u> (4.08)	-5.15 (4.69)	-2.31 (-13, +8.5)	-5.56 (-17, +5.8)	+3.25 (-8.5, +15)	
<i>P-value (time)^{1,3}</i>								
<i>P-value (group)^{2,4}</i>								
CLUSTER SCORES								
Self-attack score	0	33.0 (1.91)	29.8 (1.70)	31.9 (1.95)	0	0	0	
	7	<u>25.9</u> (1.96)	28.0 (1.80)	<u>24.6</u> (2.00)	-4.00 (-8.3, +0.3)	-4.61 (-9.0, -0.2)	+0.61 (-3.9, +5.1)	
	12	23.2 (2.06)	27.6 (1.91)	22.4 (2.17)	-6.38 (-11, -1.8)	-6.78 (-12, -2.1)	+0.40 (-4.4, +5.2)	
	24	23.4 (2.07)	<u>20.8</u> (1.88)	24.9 (2.28)	+0.79 (-4.0, +5.5)	+3.01 (-2.1, +8.1)	-2.22 (-7.5, +3.1)	
	36	19.4 (1.93)	19.4 (1.79)	25.3 (2.06)	-1.93 (-6.5, +2.7)	+4.80 (+0.0, +9.6)	-6.73 (-12, -1.8)	
<i>P-value (time)^{1,3}</i>								
<i>P-value (group)^{2,4}</i>								

Self-free score	0	36.4	(1.26)	33.9	(1.12)	36.4	(1.28)	0	+4.13	(+0.7, +7.6)	0	+3.15	(-0.3, +6.6)	0	
	7	<u>41.5</u>	(1.43)	36.0	(1.31)	<u>40.8</u>	(1.45)		+2.70	(-0.6, +6.0)		+2.81	(-0.6, +6.2)	+0.99	(-2.6, +4.6)
	12	41.2	(1.29)	37.2	(1.21)	41.5	(1.38)		+0.40	(-3.3, +4.1)		+2.33	(-1.6, +6.3)	-0.10	(-3.6, +3.4)
	24	41.2	(1.51)	39.5	(1.37)	43.0	(1.68)		-2.37	(-6.2, +1.4)		-1.96	(-6.0, +2.0)	-1.93	(-6.1, +2.2)
	36	40.2	(1.43)	41.3	(1.34)	40.8	(1.55)							-0.40	(-4.5, +3.7)
<i>P</i> -value (time) ^{1,3}							< 0.001								
<i>P</i> -value (group) ^{2,4}							0.06								
Self-affirm score	0	34.9	(1.98)	34.7	(1.76)	36.9	(2.02)	0			0			0	
	7	<u>43.2</u>	(2.22)	<u>39.3</u>	(2.05)	<u>50.0</u>	(2.26)		+3.95	(-1.2, +9.1)		+9.47	(+4.2, +15)	-5.51	(-11, -0.1)
	12	47.3	(2.34)	41.4	(2.18)	51.1	(2.48)		+5.78	(+0.4, +11)		+8.80	(+3.2, +14)	-3.02	(-8.7, +2.7)
	24	50.4	(2.75)	<u>50.1</u>	(2.52)	51.4	(3.04)		+0.01	(-6.6, +6.6)		+0.36	(-6.7, +7.4)	-0.35	(-7.7, +7.0)
	36	51.6	(2.70)	<u>57.4</u>	(2.53)	50.6	(2.88)		-6.12	(-13, +0.7)		-8.10	(-15, -1.0)	+1.98	(-5.3, +9.3)
<i>P</i> -value (time) ^{1,3}							< 0.001								
<i>P</i> -value (group) ^{2,4}							< 0.001								
Self-love score	0	39.4	(1.76)	40.3	(1.56)	40.1	(1.79)	0			0			0	
	7	<u>46.9</u>	(2.11)	<u>44.0</u>	(1.94)	<u>48.7</u>	(2.15)		+3.60	(-1.0, +8.2)		+5.31	(+0.6, +10)	-1.71	(-6.5, 3.1)
	12	49.5	(2.16)	43.6	(2.01)	49.7	(2.28)		+6.57	(+1.7, +11)		+6.65	(+1.6, +12)	-0.08	(-5.3, +5.1)
	24	47.8	(2.43)	<u>51.2</u>	(2.22)	49.2	(2.68)		-2.48	(-8.4, +3.5)		-2.08	(-8.4, +4.3)	-0.41	(-7.0, +6.2)
	36	51.6	(2.32)	55.3	(2.16)	51.2	(2.48)		-2.86	(-8.6, +2.8)		-4.08	(-10, +1.9)	+1.23	(-4.9, +7.4)
<i>P</i> -value (time) ^{1,3}							< 0.001								
<i>P</i> -value (group) ^{2,4}							< 0.001								
Self-protect score	0	45.9	(1.60)	47.7	(1.43)	46.3	(1.64)	0			0			0	
	7	48.4	(1.66)	<u>51.6</u>	(1.52)	<u>52.3</u>	(1.69)		-2.18	(-5.8, +1.5)		+1.79	(-1.9, +5.5)	-3.97	(-7.8, -0.1)
	12	49.6	(1.79)	51.0	(1.66)	49.4	(1.89)		-0.11	(-4.2, +4.0)		-0.36	(-4.6, +3.9)	+0.25	(-4.1, +4.6)
	24	48.3	(1.99)	54.1	(1.79)	50.5	(2.21)		-4.62	(-9.5, +0.2)		-2.70	(-7.9, +2.5)	-1.92	(-7.4, +3.5)
	36	50.4	(1.81)	54.9	(1.68)	50.6	(1.93)		-3.46	(-7.8, +0.9)		-3.16	(-7.7, +1.4)	-0.30	(-5.0, +4.4)
<i>P</i> -value (time) ^{1,3}							< 0.001								
<i>P</i> -value (group) ^{2,4}							0.19								

Self-control score	0	51.0	(1.94)	52.4	(1.72)	52.6	(1.97)	0	0	-1.41	(-5.6, +2.8)	0	0	-1.33	(-5.7, +3.0)
	7	47.3	(1.95)	51.1	(1.79)	49.3	(1.99)	-2.74	(-6.9, +1.4)	-7.70	(-12, -3.0)	-7.70	(-12, -3.0)	+3.57	(-1.3, +8.4)
	12	46.1	(2.00)	51.7	(1.86)	43.9	(2.11)	-4.13	(-8.7, +0.4)	-4.65	(-9.9, +0.6)	-4.65	(-9.9, +0.6)	+5.29	(-0.2, +11)
	24	46.8	(2.20)	<u>47.0</u>	(1.99)	42.6	(2.42)	+0.65	(4.3, +5.6)	+0.66	(-5.0, +6.3)	+0.66	(-5.0, +6.3)	-1.52	(-7.4, +4.3)
	36	43.1	(2.28)	44.7	(2.14)	46.0	(2.44)	-0.86	(-6.2, +4.5)						
<i>P-value (time)</i> ^{1,3}							<0.001								
<i>P-value (group)</i> ^{2,4}							0.006								
Self-blame score	0	46.6	(1.87)	45.5	(1.66)	46.1	(1.91)	0	0	0		0	0	0	
	7	<u>39.1</u>	(2.30)	<u>40.6</u>	(2.11)	<u>35.6</u>	(2.33)	-2.39	(-7.6, +2.8)	-5.56	(-11, -0.3)	-5.56	(-11, -0.3)	+3.16	(-2.3, +8.6)
	12	34.7	(2.29)	38.9	(2.13)	33.0	(2.42)	-5.12	(-10.3, +0.1)	-6.82	(-12, -1.4)	-6.82	(-12, -1.4)	+1.70	(-3.8, +7.2)
	24	34.2	(2.45)	<u>30.8</u>	(2.23)	33.9	(2.71)	+2.53	(-3.2, +8.4)	+2.63	(-3.6, +8.9)	+2.63	(-3.6, +8.9)	-0.10	(-6.6, +6.4)
	36	<u>27.9</u>	(2.26)	<u>26.3</u>	(2.11)	32.8	(2.42)	+0.71	(-4.8, +6.2)	+6.02	(+0.3, +12)	+6.02	(+0.3, +12)	-5.31	(-11, +0.6)
<i>P-value (time)</i> ^{1,3}							<0.001								
<i>P-value (group)</i> ^{2,4}							<0.001								
Self-neglect score	0	40.3	(1.78)	38.3	(1.58)	39.6	(1.81)	0	0	0		0	0	0	
	7	<u>35.4</u>	(1.89)	<u>35.1</u>	(1.73)	<u>33.4</u>	(1.93)	-1.40	(-5.5, +2.7)	-3.10	(-7.3, +1.1)	-3.10	(-7.3, +1.1)	+1.71	(-2.6, +6.0)
	12	32.6	(2.06)	33.5	(1.91)	31.2	(2.17)	-2.75	(-7.4, +1.9)	-3.62	(-8.5, +1.2)	-3.62	(-8.5, +1.2)	+0.87	(-4.1, +5.8)
	24	33.3	(2.16)	<u>28.9</u>	(1.96)	33.7	(2.39)	+2.80	(-2.3, +7.9)	+3.75	(-1.7, +9.2)	+3.75	(-1.7, +9.2)	-0.95	(-6.6, +4.7)
	36	29.6	(1.98)	25.6	(1.84)	31.6	(2.11)	+2.50	(-2.3, +7.3)	+5.28	(+0.3, +10)	+5.28	(+0.3, +10)	-2.78	(-7.9, +2.4)
<i>P-value (time)</i> ^{1,3}							<0.001								
<i>P-value (group)</i> ^{2,4}							0.01								

¹ Basic model (1A) consisted of main effects of time, treatment group, the difference between theoretical and realized date of measurement, and an interaction of time and treatment group

² Basic model¹ (1B) consisted of the model 1A variables and was adjusted for the baseline level of the outcome measure considered.

³ P-value for the time difference for the treatment groups combined.

⁴ P-value for group difference over time.

⁵ Underlined values have changed statistically significantly in comparison with the respective baseline SASB self-concept variable level.

⁶ Values in bold indicate P-values < 0.05 for comparison between treatment groups

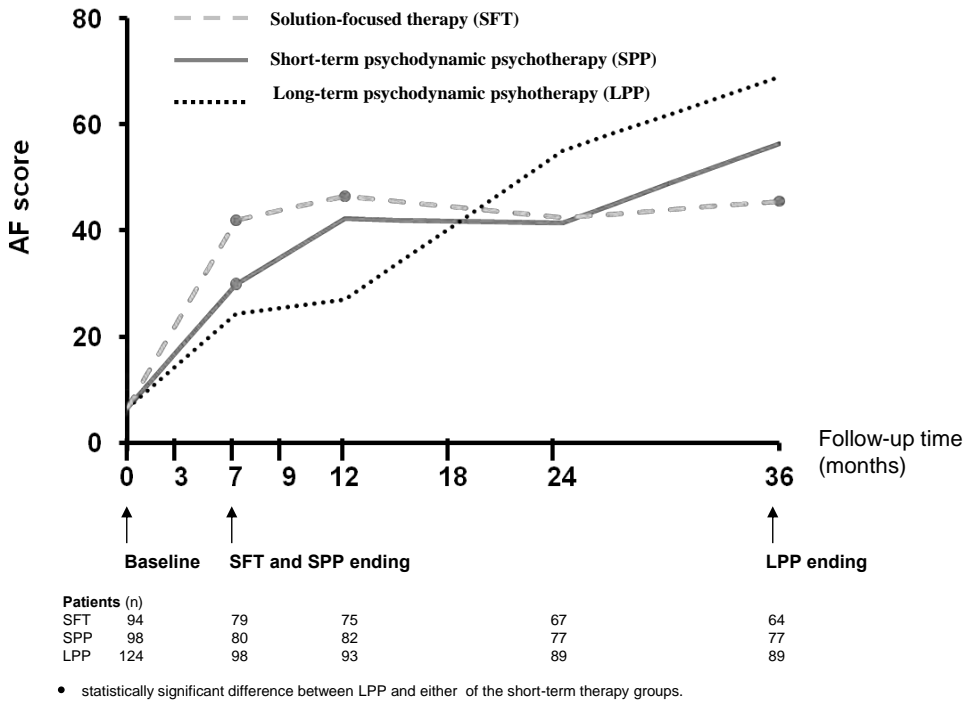


Figure 3. Change in the SASB Affiliation (AF) score during the 3-year follow-up, adjusted for the baseline level of AF.

5.3 QORS modifying the effectiveness of short-term and long-term psychotherapy on self-concept (Study III)

In this study, the modifying effect of low vs. high QORS on the effectiveness of SFT, SPP and LPP during the 3-year follow-up was determined using the SASB self-concept scores as outcome indicators. The QORS statistically significantly modified the outcome in AF and AU, as well as in four secondary indicators of self-concept in either SFT or LPP, but not in SPP (Table 7). SFT appeared to be more beneficial for patients with high QORS, as patients with low QORS had significantly poorer values in half (5/10) of the self-concept scores (AU, self-attack, self-free, self-love, self-blame) during the course of the first follow-up year. In the self-attack and the self-love scores, the difference between patients with low vs. high QORS were significant in SFT also at the 2-year follow-up, and in self-free throughout the follow-up, indicated by a mean difference of -8.15 (CI $-14.3, -2.04$) at the 3-year follow-up (Figure 4). In LPP a reversed phenomenon was noted in the scores AF, self-attack, and self-love, which indicated better outcomes for patients with low than high QORS, for instance, the AF score difference being 23.8 (CI $1.32,$

46.3) at the 12 month follow-up. However, after these greater early changes in patients with low QORS, no further effect modification was found.

TABLE 7. Modification of low versus high QORS¹ on self-concept change scores in SFT and LPP from baseline to 36 months of follow-up².

Outcome variable (score)	Time (month)	Mean level (low QORS) and score difference (95% confidence interval)			
		SFT		LPP	
		mean (SE)	Difference (low-high QORS)	mean (SE)	Difference (low-high QORS)
AF	12	35.5 (9.8)	n.s.	38.4 (9.1)	+23.8 (+1.32, +46.3)
AU	7	-22.0 (4.9)	-14.8 (-27.6, -2.11)	-23.4 (4.7)	n.s.
Self-attack	7	28.8 (2.5)	+7.17 (+0.75, +13.6)	24.7 (2.5)	n.s.
	12	25.9 (2.7)	n.s.	24.7 (2.5)	-6.68 (-12.9, -0.46)
	24	30.1 (3.1)	+8.48 (+0.52, +16.4)	22.4 (2.7)	n.s.
Self-free	12	37.2 (2.0)	-6.03 (-11.2, -0.90)	38.4 (1.9)	n.s.
	24	37.7 (2.4)	-7.62 (-13.8, -1.49)	37.5 (2.0)	n.s.
	36	35.2 (2.4)	-8.15 (-14.3, -2.04)	39.5 (2.1)	n.s.
Self-love	12	43.7 (3.0)	-10.1 (-17.7, -2.49)	48.3 (2.7)	+8.46 (+1.72, +15.2)
	24	42.6 (3.9)	-10.1 (-20.0, -0.16)	49.3 (3.3)	n.s.
Self-blame	7	40.7 (3.0)	+8.42 (+0.57, +16.3)	42.6 (2.9)	n.s.

¹ low ≤ 5.00 , high >5 , ² The model consisted of main effects of time, treatment group (SFT, SPP, LPP), the difference between theoretical and realized date of measurement, and an interaction of time, treatment group and dichotomized QORS (low, high) group, adjusted for baseline level of the outcome variable. No significant modification of QORS was noted in SPP in any self-concept domains, and neither in SFT and LPP in the self-affirm, self-protect, self-control and self-neglect scores, at any measurement point.

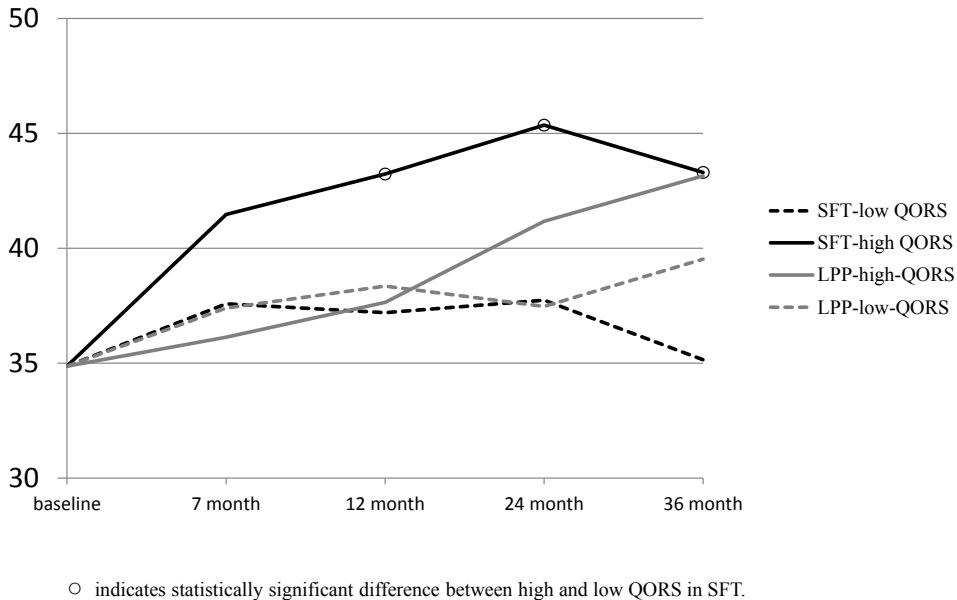


Figure 4. Prediction of the interaction of therapy group (SFT and LPP) and QORS (low vs. high) on the SASB self-free score, adjusted for baseline level of the self-free score.

5.4 Self-concept and QORS as predictors of outcome in short-term and long-term psychotherapy (Study IV)

This study was focused on the prediction of patients' personality functioning, i.e., the QORS and the SASB self-concept scores AF and AU, on the patients' psychiatric symptoms and work ability, during a 3-year follow-up after beginning short-term (SFT and SPP, combined) or long-term psychodynamic psychotherapy (Tables 8-10). A statistically significant reduction in psychiatric symptoms and improvement in work ability was found in all the six outcome measures in both therapy groups, and among patients with low and high pre-treatment QORS, AF and AU values.

There was no statistically significant overall interaction covering the whole follow-up time, between therapy group and the AF and AU self-concept scores in the prediction of psychiatric symptoms (Tables 8-9). In the domain of work ability, the interaction reached significance in one score in either AF or AU, partially supporting greater overall improvement after long-term therapy for patients with high AF and high AU vs. faster benefits in short-term therapy for patients with low

AF and low AU. Several differences in the reduction of symptoms and improvement of work ability between short-term and long-term therapy groups were noted at specific points of the follow-up. Patients with negative self-concept (low AF) consistently experienced a greater reduction in symptoms and improvement in work ability during the first 7 months of follow-up in short-term than in long-term therapy (Table 8). At the 3-year follow-up the reverse occurred, but only in the three symptom measures, exemplified by a reduction in the BDI mean scores of 48% and 69%, to a level of 11.1 and 6.9, in short-term and long-term therapy, respectively.

Among the patients with high level of affiliation (high AF), no difference was found between the therapy groups in symptom reduction at any measurement point, whereas at the 3-year follow-up their work ability improved more (range in WAI, SAS-work and PPF 21–27%) in long-term therapy than in short-term therapy (range 14–15%). Somewhat smaller differences between short-term and long-term therapy were found in patients with low level of autonomy (low AU), who consistently gained faster benefits in symptom reduction and improvement of work ability in short-term therapy but more benefits after long-term therapy only in PPF (Table 9). A different change profile emerged among those with high AU, as the only statistically significant differences found were a greater symptom reduction in long-term therapy (range 40–65%) than in short-term therapy (range 25–41%) at the end of the follow-up and greater improvement in WAI and PPF at either the 2-year or 3-year follow-up.

Unlike in the self-concept scores, there was a significant interaction between the QORS and therapy group in the domain of symptoms, but not in work ability (Table 10). In the ITT analyses, no significant differences between therapy groups were found among those with low QORS, although non-significantly symptoms were on a lower level at the end of the follow-up in long-term therapy. This suggestive finding was further supported by the AT analyses, where the difference reached statistical significance in BDI (data not shown). Among those with high QORS, faster benefits appeared during the 1-year follow-up in short-term therapy in all the three symptom measures and the three work ability measures, whereas long-term therapy was eventually and consistently more beneficial at the 3-year follow-up, the range of symptom reduction being 31–42% and 49–63% in short-term and long-term therapy, respectively. Similarly, improvement in work ability scores (11–19% and 18–28%) indicated less improvement in patients with high QORS when treated with short-term vs. long-term therapy.

Table 8. Mean values of the six individual outcome measures (SCL-90-GSI, BDI, SCL-90-Anx, WAI, SAS-work, PPF) in short-term and long-term therapy and mean value differences (95 % confidence intervals) between short-term and long-term therapy at baseline and at 7, 12, 24 and 36 month follow-up according to the low (< median score) and high (\geq median score) values of the affiliation (AF) score measured with the SASB self-concept questionnaire.¹

Measure	Therapy	Low AF (< MD) ²					High AF (\geq MD) ²					P-value ³
		0	7	12	24	36	0	7	12	24	36	
SCL-90-GSI	Short	1.51	0.89	0.87	0.87	0.84	1.08	0.94	0.83	0.91	0.85	0.84
	Long	1.48	1.14	1.01	0.89	0.66	1.04	0.97	0.90	0.78	0.70	
	S-L ⁴		-0.26 (-0.42,-0.09)	-0.15 (-0.31,0.01)	-0.02 (-0.21,0.17)	0.18 (0.01,0.36)		-0.03 (-0.20,0.14)	-0.08 (-0.24,0.09)	-0.12 (-0.07,0.31)	0.15 (-0.04,0.34)	
BDI	Short	21.5	10.8	11.7	10.6	11.1	14.8	10.1	8.6	8.91	8.88	0.58
	Long	22.5	16.0	13.8	11.1	6.93	14.6	12.2	11.1	8.00	6.84	
	S-L ⁴		-5.19 (-7.79,-2.59)	-2.10 (-4.95,0.75)	-0.52 (-3.63,2.58)	4.13 (1.24,7.02)		-2.11 (-4.77,0.55)	-2.46 (-5.37,0.44)	0.91 (-2.31,4.12)	2.04 (-0.98,5.06)	
SCL-90-Anx	Short	1.45	0.90	0.94	0.88	0.87	1.10	0.90	0.79	0.86	0.78	0.14
	Long	1.44	1.19	0.98	0.87	0.57	0.92	0.87	0.88	0.71	0.64	
	S-L ⁴		-0.29 (-0.50,-0.09)	-0.04 (-0.24,0.16)	0.01 (-0.21,0.23)	0.31 (0.09,0.52)		0.02 (-0.19,0.24)	-0.09 (-0.30,0.12)	0.15 (-0.08,0.38)	0.13 (0.09,0.24)	
WAI	Short	33.1	38.1	37.0	38.1	37.6	34.4	37.8	38.3	38.4	38.0	0.06
	Long	31.7	34.0	35.5	38.3	38.5	35.3	38.4	38.9	41.1	41.7	
	S-L ⁴		4.08 (2.10,6.06)	1.53 (-0.73,3.78)	-0.18 (-2.46,2.10)	-0.83 (-3.32,1.66)		-0.57 (-2.58,1.43)	-0.58 (-2.88,1.72)	-2.67 (-5.01,-0.32)	-3.69 (-6.27,-1.12)	
SAS-work	Short	2.37	1.98	1.99	1.92	1.90	1.96	1.96	1.87	1.87	1.86	0.34
	Long	2.41	2.30	2.17	1.95	1.81	2.06	1.92	1.84	1.75	1.64	
	S-L ⁴		-0.32 (-0.49,-0.15)	-0.18 (-0.36,-0.01)	-0.03 (-0.21,0.15)	0.10 (-0.09,0.29)		0.04 (-0.14,0.22)	0.03 (-0.15,0.22)	0.13 (-0.06,0.32)	0.22 (0.03,0.42)	

PPF	Short	26.6	<u>20.9</u>	<u>21.8</u>	<u>21.5</u>	<u>21.2</u>	23.7	<u>20.6</u>	<u>19.8</u>	<u>21.0</u>	<u>20.2</u>	0.03
	Long	27.8	<u>25.4</u>	<u>23.5</u>	<u>21.3</u>	<u>19.5</u>	22.9	<u>20.5</u>	<u>20.4</u>	<u>18.6</u>	<u>18.1</u>	
	S-L ⁴		-4.45	-1.73	0.23	1.68		0.14	-0.58	2.46	2.04	
			(-6.32,-2.58)	(-3.64,0.18)	(-1.79,2.24)	(-0.11,3.48)		(-1.76,2.05)	(-2.53,1.36)	(0.38,4.53)	(0.18,3.89)	

Underlined values have changed statistically significantly in comparison with respective baseline symptom or work-ability variable level

¹ Complete “intention-to-treat” (ITT) model: outcome measure consisted of interaction of AF score (low, high), therapy group (short, long) and time (in months) adjusted for time, the AF score according to the therapy group, the difference between planned and realized date of measurement, first-order interaction of the difference between planned and realized date of measurement, time and AF score according to the therapy group, age, sex, previous depressive states, previous psychotherapy, age at the onset of primary psychiatric disorder, and duration of primary psychiatric disorder.

² Low AF score was categorized as values below the median (-0.38) and high AF score as values equal to or above the median.

³ P-value for interaction between the AF score, the therapy group and time throughout the follow-up.

⁴ Mean baseline-adjusted value difference of outcome measure between short-term and long-term psychotherapy. Values in bold indicate P-values < 0.05 for comparison between short-term and long-term therapy.

Table 9. Mean values of the six individual outcome measures (SCL-90-GSI, BDI, SCL-90-Anx, WAI, SAS-work, PPF) in short-term and long-term therapy and mean value differences (95 % confidence intervals) between short-term and long-term therapy at baseline and at 7, 12, 24 and 36 month follow-up according to the low (< median score) and high (\geq median score) values of the autonomy (AU) score measured with the SASB self-concept questionnaire.¹

Measure	Therapy	Low AU (< MD) ²					High AU (\geq MD) ²					P-value ³
		0	7	12	24	36	0	7	12	24	36	
SCL-90-GSI	Short	1.37	<u>0.83</u>	<u>0.80</u>	<u>0.81</u>	<u>0.78</u>	1.22	<u>0.99</u>	<u>0.88</u>	<u>0.96</u>	<u>0.91</u>	0.58
	Long	1.39	<u>1.03</u>	<u>0.99</u>	<u>0.87</u>	<u>0.70</u>	1.11	1.08	<u>0.93</u>	<u>0.80</u>	<u>0.67</u>	
	S-L ⁴		-0.20 (-0.36,-0.01)	-0.19 (-0.35,-0.03)	-0.06 (-0.24,0.13)	0.08 (-0.09,0.26)		-0.09 (-0.26,0.08)	-0.05 (-0.22,0.12)	0.16 (-0.04,0.35)	0.24 (0.05,0.43)	
BDI	Short	18.4	<u>9.9</u>	<u>9.5</u>	<u>9.1</u>	<u>9.5</u>	17.8	<u>11.0</u>	<u>10.6</u>	<u>10.3</u>	<u>10.5</u>	0.20
	Long	20.1	<u>14.6</u>	<u>13.1</u>	<u>10.6</u>	<u>7.7</u>	17.1	<u>13.5</u>	<u>11.7</u>	<u>8.33</u>	<u>5.96</u>	
	S-L ⁴		-4.71 (-7.26,-2.15)	-3.65 (-6.46,-0.83)	-1.57 (-4.63,1.50)	1.87 (-0.96,4.70)		-2.45 (-5.14,0.24)	-1.08 (-4.07,1.92)	2.00 (-1.30,5.29)	4.52 (1.43,7.62)	
SCL-90-Anx	Short	1.35	<u>0.87</u>	<u>0.86</u>	<u>0.83</u>	<u>0.80</u>	1.20	<u>0.93</u>	<u>0.85</u>	<u>0.90</u>	<u>0.83</u>	0.74
	Long	1.33	<u>1.00</u>	<u>0.98</u>	<u>0.81</u>	<u>0.64</u>	1.02	1.07	<u>0.88</u>	<u>0.77</u>	<u>0.57</u>	
	S-L ⁴		-0.13 (-0.33,0.08)	-0.21 (-0.32,0.08)	0.02 (-0.20,0.24)	0.17 (-0.04,0.37)		-0.14 (-0.36,0.08)	-0.03 (-0.24,0.18)	0.13 (-0.10,0.36)	0.26 (0.04,0.49)	
WAI	Short	34.1	<u>38.6</u>	<u>38.6</u>	<u>38.5</u>	<u>37.2</u>	33.4	<u>37.2</u>	<u>36.9</u>	<u>38.0</u>	<u>38.3</u>	0.04
	Long	33.4	<u>36.7</u>	<u>36.2</u>	<u>38.8</u>	<u>39.5</u>	33.4	<u>35.6</u>	<u>38.4</u>	<u>40.7</u>	<u>40.4</u>	
	S-L ⁴		1.94 (-0.01,3.88)	2.44 (0.22,4.66)	-0.25 (-2.48,1.99)	-2.32 (-4.76,0.13)		1.62 (-0.46,3.69)	-1.54 (-3.91,0.82)	-2.70 (-5.11,-0.29)	-2.11 (-4.78,0.57)	
SAS-work	Short	2.16	<u>1.95</u>	<u>1.92</u>	<u>1.85</u>	<u>1.87</u>	2.17	2.00	<u>1.93</u>	<u>1.94</u>	<u>1.90</u>	0.56
	Long	2.23	2.06	<u>2.04</u>	<u>1.83</u>	<u>1.73</u>	2.25	<u>2.16</u>	<u>1.95</u>	<u>1.88</u>	<u>1.73</u>	
	S-L ⁴		-0.11 (-0.29,0.06)	-0.12 (-0.30,0.06)	0.02 (-0.16,0.20)	0.13 (-0.05,0.32)		-0.17 (-0.35,0.02)	-0.03 (-0.21,0.16)	0.06 (-0.14,0.25)	0.18 (-0.03,0.38)	

PPF	Short	24.8	<u>19.9</u>	<u>20.3</u>	<u>21.1</u>	<u>21.0</u>	<u>25.5</u>	<u>21.8</u>	<u>21.3</u>	<u>21.5</u>	<u>20.5</u>	0.36
	Long	26.1	<u>23.0</u>	<u>22.6</u>	<u>20.4</u>	<u>19.0</u>	<u>24.7</u>	<u>23.0</u>	<u>21.2</u>	<u>19.5</u>	<u>18.7</u>	
	S-L ⁴		-3.14	-2.36	0.73	1.97		0.14	-0.58	2.46	2.04	
			(-5.00,-1.28)	(-4.25,-0.46)	(-1.26,2.72)	(0.20,3.73)		(-1.76,2.05)	(-2.53,1.36)	(0.38,4.53)	(0.18,3.89)	

Underlined values have changed statistically significantly in comparison with respective baseline symptom or work-ability variable level.

¹ Complete "intention-to-treat" (ITT) model: outcome measure consisted of interaction of AU score (low, high), therapy group (short, long) and time (in months) adjusted for time, the AU score according to the therapy group, the difference between planned and realized date of measurement, first-order interaction of the difference between planned and realized date of measurement, time and AU score according to the therapy group, age, sex, previous depressive states, previous psychotherapy, age at the onset of primary psychiatric disorder, and duration of primary psychiatric disorder.

² Low AU score was categorized as values below the median (-26.6) and high AU score as values equal to or above the median.

³ P-value for interaction between the AU score, the therapy group and time throughout the follow-up.

⁴ Mean baseline-adjusted value difference of outcome measure between short-term and long-term psychotherapy. Values in bold indicate P-values < 0.05 for comparison between short-term and long-term therapy.

Table 10. Mean values of the six individual outcome measures (SCL-90-GSI, BDI, SCL-90-Anx, WAI, SAS-work, PPF) in short-term and long-term therapy and mean value differences (95 % confidence intervals) between short-term and long-term therapy at baseline and at 7, 12, 24 and 36 month follow-up according to the QORS category.¹

Measure	Therapy	Low QORS ²					High QORS ²					P-value ³
		0	7	12	24	36	0	7	12	24	36	
SCL-90-GSI	Short	1.40	<u>1.02</u>	<u>0.95</u>	<u>0.99</u>	<u>0.87</u>	1.21	<u>0.83</u>	<u>0.76</u>	<u>0.80</u>	<u>0.82</u>	0.04
	Long	1.27	<u>1.01</u>	<u>0.93</u>	<u>0.93</u>	<u>0.74</u>	1.26	1.08	0.98	0.79	0.64	
	S-L ⁴		0.01 (-0.17,0.25)	0.02 (-0.16,0.20)	0.06 (-0.15,0.27)	0.12 (-0.08,0.33)		-0.25 (-0.40,-0.10)	-0.22 (-0.37,-0.07)	0.02 (-0.15,0.19)	0.17 (0.01,0.34)	
BDI	Short	19.8	<u>12.0</u>	<u>12.2</u>	<u>11.0</u>	<u>10.5</u>	16.8	<u>9.4</u>	<u>8.5</u>	<u>8.8</u>	<u>9.7</u>	0.01
	Long	20.2	<u>13.3</u>	<u>10.7</u>	<u>11.1</u>	<u>7.4</u>	17.7	<u>14.5</u>	<u>13.4</u>	<u>8.7</u>	<u>6.5</u>	
	S-L ⁴		-1.29 (-4.19,1.62)	1.52 (-1.69,4.72)	-0.12 (-3.67,3.44)	3.12 (-0.22,6.47)		-5.10 (-7.45,-2.75)	-4.88 (-7.45,-2.31)	-0.05 (-2.80,2.91)	3.21 (0.58,5.83)	
SCL-90-Anx	Short	1.33	<u>1.02</u>	<u>1.02</u>	<u>1.01</u>	<u>0.84</u>	1.23	<u>0.80</u>	<u>0.74</u>	<u>0.76</u>	<u>0.79</u>	0.009
	Long	1.19	<u>0.89</u>	<u>0.84</u>	<u>0.90</u>	<u>0.63</u>	1.18	1.11	<u>0.98</u>	<u>0.73</u>	<u>0.59</u>	
	S-L ⁴		0.13 (-0.11,0.36)	0.17 (-0.00,0.42)	0.11 (-0.14,0.35)	0.20 (-0.04,0.45)		-0.31 (-0.50,-0.12)	-0.25 (-0.43,-0.07)	0.03 (-0.17,0.23)	0.20 (0.01,0.40)	
WAI	Short	33.0	<u>36.8</u>	<u>36.8</u>	<u>37.1</u>	<u>37.3</u>	34.4	<u>38.6</u>	<u>38.4</u>	<u>39.0</u>	<u>38.1</u>	0.42
	Long	32.2	<u>36.2</u>	<u>37.1</u>	<u>39.7</u>	<u>38.8</u>	34.2	<u>36.2</u>	<u>37.2</u>	<u>39.6</u>	<u>40.5</u>	
	S-L ⁴		0.55 (-1.74,2.83)	-0.23 (-2.85,2.38)	-2.57 (-5.25,0.11)	-1.43 (-4.37,1.50)		2.47 (0.65,4.29)	1.14 (-0.92,3.21)	1.06 (-2.61,1.53)	-2.40 (-4.64,-0.16)	
SAS-work	Short	2.26	<u>2.05</u>	<u>2.03</u>	<u>2.02</u>	<u>1.99</u>	2.09	<u>1.92</u>	<u>1.86</u>	<u>1.82</u>	<u>1.83</u>	0.47
	Long	2.28	<u>2.04</u>	<u>2.02</u>	<u>1.94</u>	<u>1.78</u>	2.22	2.15	<u>2.00</u>	<u>1.80</u>	<u>1.70</u>	
	S-L ⁴		-0.01 (-0.19,0.21)	0.01 (-0.20,0.21)	0.08 (-0.13,0.30)	0.20 (-0.02,0.42)		-0.23 (-0.39,-0.07)	-0.14 (-0.30,0.03)	0.02 (-0.15,0.18)	0.13 (-0.04,0.30)	

PPF	Short Long S-L ⁴	25.5	<u>21.6</u>	<u>21.6</u>	21.6	<u>22.9</u>	<u>21.4</u>	24.9	<u>20.2</u>	<u>20.0</u>	<u>20.2</u>	<u>20.2</u>	0.36
		25.5	<u>22.5</u>	<u>21.6</u>	<u>21.6</u>	<u>20.6</u>	<u>19.9</u>	25.4	<u>23.3</u>	<u>22.1</u>	<u>19.6</u>	<u>18.3</u>	
		-0.90	(-3.04,1.23)	0.02	(-2.18,2.23)	2.22	1.43		-3.11	-2.17	0.59	1.92	
						(-0.12,4.56)	(-0.69,3.55)		(-4.83,-1.40)	(-3.92,-0.43)	(-1.22,2.40)	(0.31,3.53)	

Underlined values have changed statistically significantly in comparison with respective baseline symptom or work-ability variable level.

¹ Complete "intention-to-treat" (ITT) model: outcome measure consisted of interaction of the QORS score, therapy group (short, long) and time (in months) adjusted for time, the QORS score according to the therapy group, the difference between planned and realized date of measurement, first-order interaction of the difference between planned and realized date of measurement, time and QORS score according to the therapy group, age, sex, previous depressive states, previous psychotherapy, age at the onset of primary psychiatric disorder, and duration of primary psychiatric disorder.

² The QORS score was dichotomized to low (≤ 5) and high (> 5) categories.

³ P-value for interaction between the QORS category, the therapy group and time throughout the follow-up.

⁴ Mean baseline-adjusted value difference of outcome measure between short-term and long-term psychotherapy. Values in bold indicate P-values < 0.05 for comparison between short-term and long-term therapy.

6 DISCUSSION

6.1 Concurrent validity of the QORS (Study I)

In this cross-sectional study, the concurrent validity of the dichotomized QORS was assessed in relation to its manual-based constructs, represented by proxy variables of the criterion domains. The QORS was associated with all except one of the eight criterion variables. The simultaneous analysis of the criterion variables showed that the most important predictors of low versus high QORS category were the two variables in the behavioral manifestations domain, assessing discontinuity of relationships and a pattern of using devaluation in relationships. Poor self-confidence and major separations during childhood also emerged as significant, albeit weaker, predictors of the QORS.

The results emphasized the impact of relational behavior as the most important determinant of the QORS, being in accordance with the QORS rationale (Azim et al., 1991). Also findings from a previous validity study revealed a strong association between the initial level of interpersonal functioning with a partner and the QORS (Piper et al., 1991b). Associations in this study were weak along the DSM axis I and moderate along axis II and the QORS, as well as with socio-demographic variables (especially living single) and with the work ability, personality functioning and psychiatric variables, being mostly in line with previous studies (Joyce et al., 1999; Piper et al., 1990; Piper, Rosie, Azim, & Joyce, 1993).

Of all the potential interactions only major separations during childhood modified the association between devaluation and the QORS, in an unexpected direction, indicating higher prevalence of low QORS for those using devaluation but not having reported major separations. One explanation for this might be that the reported explicit major separations, although modestly associated with low QORS, did not measure accurately enough the intricate relational aspects of early traumatization and loss experiences.

The reliability of the dichotomized QORS appeared to be adequate for research purposes and comparable with the initial level achieved by the Canadian research group in a highly similar patient population (Piper et al., 1991b, 1993). Using the dichotomized, rather than the continuous QORS score gave a conservative estimate of the potential of the instrument. As the categorical assessment of poor personality functioning corresponds with standard clinical practice, this estimate is informative for its clinical applicability. However, although the assessment of the QORS was based on a detailed manual and the criterion variables were based on anchored item descriptions, conceptual ambiguity cannot be altogether excluded. The potential bias related to clinical inference was reduced by the ratings being largely based on

observable phenomena, reflected in the interview and in the patient's narrative, rather than inferred from preconscious or unconscious aspects of personality functioning. Interviewer-dependent association between the criterion assessments and the QORS were unavoidable, since the assessments were carried out by the same interviewers.

In conclusion, the results indicate that object relational maturity can fairly reliably be assessed by appropriately instructed interviewers and that the dichotomized QORS assessment indicates adequate concurrent validity in relation to its sub-constructs. The findings extend previous evaluations of the QORS as one potential measure of a construct relevant for psychotherapy suitability and personality assessment. The scale appears to be clinically usable by psychodynamically oriented, trained interviewers. Further specifications on scoring of the various sub-constructs of the QORS and the use of other validated criterion assessment, e.g. the Social Cognition and Object Relations Scale (SCORS; Hilsenroth et al., 2007) or the Object Relations Inventory (ORI; Blatt & Auerbach, 2001), would allow further research to attain a more precise estimate of its concurrent validity.

6.2 Study of the effectiveness of the therapies and modification of QORS on changes in self-concept (Studies II, III)

6.2.1 Effectiveness of short-term and long-term psychotherapy on self-concept (Study II)

In this randomized clinical trial the effectiveness of SFT, SPP, and LPP on self-concept was evaluated during a 3-year follow-up. The findings suggest that both the length and the type of therapy may affect self-concept change, as measured by the SASB self-concept scores. Both of the primary indicators, the AF and the AU scores of the SASB introject questionnaire, and most of the eight cluster scores, improved in all three treatment groups. As hypothesized, the changes were more extensive in the AF than in the AU dimension. The improvement was, expectedly, faster during and shortly after the end of the treatment in the two short-term therapy groups than in LPP. However, the positive self-concept changes continued throughout the follow-up in LPP. As hypothesized, LPP outperformed SFT in several self-concept scores at the last 3-year follow-up point. Contrary to expectancy, no differences between LPP and SPP were seen in any of the self-concept domains.

The results are in line with previous results of the HPS on psychiatric symptoms, work ability and functional capacity, in showing faster changes in short-term therapies than in LPP during the first follow-up year after beginning treatment (Knekt et al., 2008a, 2008b). The early benefits of both short-term treatments are in

accordance with the more active and focused technique used in SPP (Malan, 1976; Sifneos, 1978) and the more resource-oriented and goal-oriented technique in SFT (de Shazer et al., 1986) than the technique used in LPP.

However, whereas LPP has previously been found to outperform both the short-term therapies in the long run in more reduced symptoms and improved work functioning (Knekt et al., 2008a, 2008b) the present study indicated more limited effects on self-concept only in SFT at the 3-year follow-up point. One possible explanation for this might be that the technique of SFT – an empowering, positive focus, including ‘complimenting’ the patient for any achievements and enhancing a resourceful self-concept (de Shazer et al., 1986) – does not include working through past conflicts and relational issues within the therapeutic relationship, which is suggested to be beneficial especially for patients with poor relational capacities (Høglend et al., 2008; Høglend, Hersoug et al., 2011). In contrast to SFT, the exploratory, transference-based technique used in SPP and LPP might be more favorable for the resolution of intrapsychic conflicts by promoting continued self-scrutiny, indicated in a more benign self-concept in the long run (Gabbard, 2004; Malan, 1976). The tendency of SPP to produce relatively well-maintained effects on the outcome domain of personality functioning among patients with affective and personality dysfunction has been suggested in some previous studies (Abbass, Town, & Driessen, 2011; Anderson & Lambert, 1995; Leichsenring, Rabung, & Leibing, 2004), although contradictory findings also exist (Junkert-Tress et al., 2001). The lack of significant long-term differences between SPP and LPP is a new and unexpected finding. More research is needed to examine the importance of potential patient, therapist and therapy factors related to it.

The findings of this study suggested that psychodynamic technique and potentially long duration may be advantageous when the goals of treatment are extended beyond symptomatic relief, on personality functioning. The findings are in line with meta-analyses on the effectiveness of LPP in heterogeneous DSM-IV axis I and axis II disorders (de Maat, de Jonghe, Schoevers, & Dekker, 2009; Leichsenring & Rabung, 2008, 2011). The results of this study are also consistent with cohort studies, which have shown that patients with a relatively problematic self-concept may benefit from a medium-term to long-term treatment (Halvorsen & Monsen, 2007) and that treatment duration is associated with greater gains in self-concept improvement in psychodynamic psychotherapies of varying length (Arnold et al., 2000; Arvidsson et al., 2011). Likewise, beyond the psychodynamic orientation, continuation phase cognitive therapy has been shown to further increase self-directed AF and, unlike in the present study, also AU of patients with depression, in comparison with a shorter variation of the respective therapy (Vittengl et al., 2004), indicating that longer duration of the treatment per se may be essential for greater gains.

The fact that better long-term results were found in LPP than SFT may be due to several treatment characteristics. The intensiveness and long duration of LPP allows

more time and opportunities for exploration of problematic self-experience and relational issues and thus promotes a deeper internalization-externalization process, which is considered to be essential for initiating personality change in psychodynamic therapies, short-term or long-term (Busch et al., 2004; Gabbard, 2004; Henry, 1996). A more thorough internalization of the beneficial dispositions transmitted by the therapist's actions and attitudes would then be possible (Quintana & Meara, 1990). Besides the patient's malfunctioning internalizations, these new experiences can be explored within the therapeutic relationship as externalizations of the patient's dispositions, actions, and attitudes toward oneself and others. Thus, enhancing understanding of self-directed behavior as a repetition of past interpersonal interactions, enacting, processing and modifying these patterns within a transference-based treatment, would help to adopt new ways of behaving toward oneself (Benjamin, Rothweiler, & Critsfield, 2006; Blatt et al., 2010; Caligor et al., 2007). Replication of the findings and further research on the potential predictors and process factors are needed to confirm these hypotheses.

In conclusion, more improvement in self-concept occurred in both short-term therapies than in LPP during the first year of follow-up. However, by the end of the 3-year follow-up, LPP was more effective than SFT, whereas no statistically significant differences were noted between the two psychodynamic therapies. The results suggest that the psychodynamic orientation of treatment may be useful for promoting self-concept changes.

6.2.2 QORS modifying the effectiveness of short-term and long-term psychotherapy on self-concept (Study III)

In this study how QORS modifies outcomes in self-concept was determined on the basis of the randomized clinical trial comparing the effectiveness of two short-term psychotherapies and LPP during a 3-year follow-up. The study provided further evidence on the importance of the patient's personality functioning, indicated by high vs. low QORS, when assessing the need for a specific type of short-term (SPP or SFT) or long-term (LPP) psychotherapy. The findings demonstrated that among the short-term therapies QORS modified effectiveness only in SFT, being more effective for patients with high QORS than for those with low QORS. This difference was notable in several self-concept scores, encompassing both the AF and the AU dimensions and highlighted in long-term differences in the domains of self-attack, self-love and self-free. It further emerged that an altogether different type of modification, albeit to a lesser degree, occurred in LPP where patients with low QORS benefitted more than those with high QORS during the early phase of therapy in the AF and in the self-concept clusters of self-attack and self-love.

The above findings on the modifying effect of QORS on outcome in self-concept in SFT may be explained by the treatment being a highly supportive, resource-

oriented short-term therapy (de Shazer et al., 1986), which might be more suitable for patients with high QORS, due to their having a more benign developmental history, more mature relational functioning and accordingly more readily available psychological resources. In line with the results of this study, it has been suggested that SFT may successfully be used like empowering coaching in facing the need to reconstruct the self in more positive terms (Kärkkäinen, 2001). Instead, the patients with low QORS, i.e., those who are more vulnerable due to more previous disappointments, ruptures and primitive defenses in relationships, might not be able to benefit equally from the highly supportive technique, which does not include exploration of pathological self and object representations within the therapeutic relationship.

The finding that patients with low QORS fared somewhat better than those with high QORS in LPP during the first year of treatment in a few self-concept domains can be understood as a reflection of them being more prone to repeat openly their problematic internal relationships and thus being more able to benefit from confrontations and interpretations on these patterns in the transference, than patients with high QORS (Høglend et al., 2007; Piper et al., 2004). This may lead to faster increase in self-esteem, possibly mediated by a stronger alliance (Hersoug et al., 2013; Høglend, Hersoug et al., 2011). In this study, the prototypic twice-weekly frequency of LPP sessions made possible the intensive focusing on alliance issues and on the exploration of maladjusted relational patterns, and seems to have given a beneficial start for therapy for these patients. In contrast, no additional benefits were noted for patients with high QORS. However, in the long run, they also were able to benefit significantly from LPP by improved self-concept.

Contrary to the results on SFT and LPP, no modifying effect of QORS was found in SPP. Previous studies have mainly focused on comparing the modifying effect of QORS on different types of SPP (e.g., Høglend et al., 2008; Piper et al., 1998). Findings from these studies have indicated that patients with low QORS benefit, by improved personality functioning, more from explorative SPP with a pronounced transference-focus than from a technique without it. In contrast, the therapists in this study were not instructed to use transference-based interpretations exclusively, since the therapies were carried out along the general guidelines presented by Malan (1976) and Sifneos (1978). Accordingly, the lack of interaction between QORS and effects on self-concept changes in SPP may signify therapists' successful modification of the technique in relation to the patient's characteristics.

In conclusion, the modifying effect of QORS was studied for the first time in both psychodynamic and non-psychodynamic short-term therapies and in LPP. QORS modified the outcome on self-concept in different ways in LPP and SFT, but no effect modification was found in SPP. In SFT, smaller short-term and long-term treatment effects on several aspects of self-concept were noted in patients with low QORS than in patients with high QORS. In LPP patients with low QORS benefited more than patients with high QORS at early phases of the treatment on a few self-

concept aspects. The results suggest that QORS has significance for treatment selection in therapies of different modes and lengths.

6.3 Self-concept and QORS as predictors of outcome in short-term and long-term psychotherapy (Study IV)

In this cohort study, based on the 3-year follow-up data of the HPS, the prediction of personality functioning, i.e., the two SASB self-concept variables AF and AU, and the QORS, on outcomes in psychiatric symptoms and work ability was studied by comparing the prediction in short-term therapy (SFT and SPP, combined) and LPP. The main finding was that the prediction of all the personality functioning variables on symptoms and on improvement in work ability differed in short-term and long-term therapy.

In the group of short-term therapy patients with more negative self-concept (low AF) and lesser autonomy given to oneself (low AU) there was a faster reduction of symptoms and improvement in work ability during the first year of follow-up. However, this was not sustained thereafter. Instead, as hypothesized, LPP gave these patients more long-term benefits, either in more sustained reduction in depressive, anxiety and general psychiatric symptoms, or in more improved work ability at the 3-year follow-up. The findings were the most pronounced in LPP patients with low AF, in changes in depressive symptoms: the BDI mean values were well below the standard clinical cut-off point of 10, in comparison to significantly greater, clinically significant mean values above it in short-term therapy. The findings correspond to previous studies on various forms of short-term therapy, which showed a negative self-concept to be a risk factor for recurrence of depression after the end of short-term psychotherapy (Blatt et al., 2010; Vittengl et al., 2004). Additionally, this study thus, for the first time, provided evidence on the importance of negative self-concept as a moderator of outcome in symptoms and work ability in patients with depressive or anxiety disorder treated with short-term vs. long-term psychotherapy. The finding that patients with low AU also benefited more from long-term therapy in terms of greater improvement in work-related functioning, has likewise not been shown previously, whereas findings on the poorer prediction of low AU in short-term therapies have been inconsistent (Marshall et al., 2008; Rector et al., 2000).

The benefits of long-term vs. short-term psychotherapy for patients with low AF might be explained by these patients having a greater need and motivation to work through their issues than patients with a less critical self-concept (Dennhag et al., 2011). Similarly, patients with more rigid ways of relating to themselves (low AU), might show more persistent resistance to change. These characteristics can be worked out during intensive, long-term therapy, by focusing more on changing maladaptive, character-related intrapsychic and interpersonal relational patterns.

More sustained benefits in recovery from symptoms and psychosocial functioning would thus be possible in longer therapy (Halvorsen & Monsen, 2007; Monsen, Odland, Faugli, Daae, & Eilertsen, 1995; Solbakken, Hansen, Havik, & Monsen, 2012). The initially faster – even though ultimately smaller – reduction in symptoms and improvement in work ability, in short-term therapy as compared to long-term therapy, also needs to be acknowledged. The greater level of distress that induces more potential for change for patients with a negative self-concept (Halvorsen & Monsen, 2007) may partly explain these early benefits. Likewise, the focused active collaboration within short-term therapy may benefit persons with a hostile or rigid self-concept while the therapy lasts and shortly after it, but appears not to help in further examination and working through of deeply-seated patterns of thinking, feeling and behaving (Benjamin, 1996a).

Contrary to the hypothesis, low QORS did not consistently predict a better outcome in symptoms and work ability in LPP than in short-term therapy during the 3-year follow-up. An exception was found in the statistically significantly greater reduction of depressive symptoms in LPP than in short-term therapy when the greater use of auxiliary treatment in short-term therapy was adjusted in the AT model. However, the lack of faster gains in patients with low QORS in short-term vs. long-term therapy was expected, as their greater attachment-related problems may complicate the formation of working alliance and thus negatively affect outcome in short-term therapy (Diener & Monroe, 2011; Goldman & Anderson, 2007; Piper et al., 1991a). One explanation for the lack of more pronounced differences between short-term and long-term therapy in patients with low QORS in this study might be that a more structured therapy would have been more useful for these patients, as indicated by clinical guidelines and findings based on manualized treatment protocols for patients with a low level of personality organization and personality disorders (Caligor et al., 2007; Høglend, Hersoug et al., 2011; Koelen et al., 2012; Nelson & Schultz, 2012).

Also, unlike hypothesized, short-term therapy did not produce faster benefits in symptoms and work ability for patients with initially more favorable self-concept characteristics (high AF, high AU), whereas for patients with high QORS it did, in line with previous research on time-limited, focal therapy (Piper et al., 2004). However, all these personality functioning predictors predicted consistently better outcome on at least some aspect of work ability at the 3-year follow-up in LPP. High AU and high QORS were also more beneficial for greater reduction in symptoms in LPP than in short-term therapy. The differences were the most prominent in symptoms of depression, indicated by BDI mean scores being clearly at non-clinical levels (< 7), while they were above the clinically significant level of 10 in short-term therapy. Accordingly, patients with high QORS, AF and AU had more potential for working out their problematic issues in long-term therapy, after the relatively slow development during the first year after beginning treatment.

To conclude, the prediction of self-concept and QORS on outcome in symptoms and work ability differed in short-term and long-term psychotherapy for patients with depressive or anxiety disorders. LPP was in the long run more beneficial for patients with initially more favorable psychological functioning (high AF, high AU, high QORS). Although these patients were symptomatically and functionally better off at the time of the end of short-term therapy, additional gains were provided by LPP by the 3-year follow-up. Furthermore, a poor self-concept – low AF strongly in reducing psychiatric symptoms and low AU modestly in improving work ability – predicted better 3-year outcomes in LPP than in short-term therapy, after faster early gains in short-term therapy. The findings are clinically relevant in showing that patients with mild to moderate personality pathology, characterized especially by poor self-concept, seem to benefit more from long-term than short-term psychotherapy in reducing the risk of depression and in improving work ability.

6.4 Methodological considerations

All the studies are based on the Helsinki Psychotherapy Study (HPS) which is the first randomized clinical trial comparing the effectiveness of short-term and long-term psychotherapies. Methodologically, the study has several strengths, described in more detail in previous publications of the HPS (Knekt & Lindfors, 2004; Knekt et al., 2008a, 2008b, 2010; Knekt, Laaksonen et al., 2012). Here these issues are discussed separately regarding the cross-sectional validation study of QORS, and the studies based on the randomized clinical trial.

6.4.1 Concurrent validity of the QORS (Study I)

The study was aimed to provide information on the concurrent validity of the QORS, a manualized interview assessment scale of personality functioning. Several strengths of this study are worth noting. The population consisted of a relatively large, representative subsample of the HPS patients with anxiety and/or depressive disorders whose level of personality organization ranged between neurotic to higher level borderline personality organization (Knekt & Lindfors, 2004). The patients were highly motivated for the in-depth interview due to seeking psychotherapy, and thus detailed information on their personality functioning and characteristics could be gained. As the assessment of QORS requires a certain degree of competence due to the conceptual complexity related to the scale, only experienced interviewers familiar with psychodynamic personality diagnostics were included in this study. A thorough training, based on the QORS manual and lasting 60-100 hours, for carrying out the interviews needed to score the QORS, was implemented, according to the manualized procedure of the method (Piper et al., 1996). Reliability analyses covering both QORS and each of the criterion variables by means of a separate

quality control design were carried out. The selection of the criterion variables was based on their relevancy as indicators of different aspects of object relational pathology, organized along the QORS manual guidelines but not being represented as specific elements in the QORS measure, to avoid a possible criterion contamination.

Issues related to the generalizability of the findings are also worth noting. Firstly, since no comprehensive, standard instrument for assessing all the theoretically relevant criteria of the QORS was available, variables with clearly defined operational criteria and without previous external validation were used as approximations for the criterion domains. Secondly, a more accurate examination of the hierarchic sub-constructs (McGrath, 2005) of the QORS was not possible, since ratings were given only for the five levels of object relations, and not for all the four domain-specific criteria of the QORS on each of the five levels. However, as this study was focused on attaining a global assessment of the concurrent validity, a detailed investigation of the construct validity of the QORS was not aimed for. Thirdly, although the criterion variables were moderately interrelated, they also measured specific areas of object-relational pathology. Fourthly, the QORS score, based on interview assessment, expectedly showed a stronger association with the criterion variables also assessed by interview rather than with the variables assessed by questionnaire. Fifthly, the fact that only outpatients with mood or anxiety disorders, and mild to moderate personality pathology were included in the study, may have contributed to the relatively modest kappa values. The strength of concurrent validity of the QORS and the structure of the validation criteria may thus be different in patient populations also covering severe personality pathology.

6.4.2 Effectiveness, modification and prediction of outcome (Studies II-IV)

The patient population in studies II-IV is based on the relatively large sample of 326 outpatients, ensuring that relevant effects can be detected (Knekt & Lindfors, 2004; Knekt et al., 2008a). The patients were treated by 55 psychotherapists who were qualified and specifically trained for the therapy they were providing (Heinonen et al., 2012). Additional general strengths and limits of the study have been outlined in detail previously (Knekt et al., 2008a, 2010; Knekt, Laaksonen et al., 2012), and are reviewed and extended below. The strengths comprise a comprehensive baseline assessment; a long follow-up time; use of repeated measurements by standard outcome indicators of self-concept, psychiatric symptoms and work ability, non-specific for any one psychotherapy type; thorough training of interviewers; quality assurance of data collection throughout the follow-up which reduced drop-out and secured adequate assessment procedures; use of national health registers in the collection of auxiliary treatment data; and collection of data on compliance within the study therapy, all acknowledged in the carefully designed statistical analyses.

Furthermore, the predictor variables in this study were chosen to assess conceptually related yet non-overlapping aspects of personality functioning considered to be essential for suitability to short-term vs. long-term psychotherapy. As there were no statistically significant differences between the prediction of QORS and self-concept on outcome in psychiatric symptoms and work ability between the two short-term therapies, these treatment groups could be combined in study IV, increasing the power of the statistical analysis.

There are also certain general issues complicating the interpretation and limiting generalization of the results. Firstly, because of the long follow-up, no non-treatment control group could be included for ethical reasons. Thus, it is not possible to know to what extent the specific study therapies were responsible for the changes observed, although comparisons between the treatment modalities can reliably be made. Secondly, in line with the primary aim of studying the effectiveness of a treatment given in normal clinical practice, conducted in a sample of outpatients, no treatment manuals and adherence recordings were used in the psychodynamic treatments. However, the therapists were personally committed to the form of therapy they provided and utilized clinical supervision as in normal clinical practice, according to their needs. Likewise, in SFT clinical monitoring and a standard, manual-based technique were used. Thirdly, the fact that more than 20% of the patients in the LPP group withdrew from treatment after randomization, may have caused bias in the data. Adjustments for withdrawal and discontinuation in the AT analyses did not, however, notably alter the results from those of the presented ITT analyses. Fourthly, although there were a few non-significant differences in some diagnostic variables (e.g., greater prevalence of personality disorder in SPP vs. LPP), the fact that no differences at baseline in personality functions were noted, nor in symptoms, work ability or psychiatric history, seems to indicate that the difference did not bias the results. Still, as the technique of SPP has most clearly, of all the therapies involved in the study, been suggested to work best among patients evaluated as suitable for the modality (Malan, 1976), this issue needs to be further studied. Fifthly, the more frequent use of auxiliary treatment in short-term therapy – which indicated its more frequent insufficiency to provide sustained benefits – had no more than marginal effects on outcome when the results based on the AT and ITT analyses were compared. Sixthly, although the rate of dropout of the patients from the measurements during the follow-up was relatively low, it may have biased the results in the basic ITT analyses. The analyses based on multiple imputation, taking into account the patient's estimated psychiatric status at the time of dropout, did not, notably alter the results, however. Seventhly, a further comment is warranted on the outcome measures being based on self-report only, covering the patients' perspective on outcome. The advantage of patient-ratings was that they were carried out more frequently. Their use was also supported by the knowledge that self-ratings largely coincide with interview-based ratings of outcome (Knekt et al., 2008a, 2008b). Finally, because no follow-up after the most usual endpoint (3 years) of

long-term psychotherapy is included in the 3-year follow-up, extended follow-up is needed to see whether the noted differences in effectiveness and in the prediction of outcome will prevail or change thereafter.

6.5 Implications for future research

The main findings in this thesis concern personality functioning as an indicator and as a predictor of psychotherapy outcome in the comparison of short-term and long-term psychotherapies. There are a number of implications for future study, some of which are presented here.

Future research will be needed to extend the present findings on self-concept changes, which showed markedly different change profiles between short-term and long-term therapies at different phases of the follow-up. A lengthier follow-up is needed to compare the prediction of therapy duration and dosage on sustained benefits of the reported randomized therapies within the HPS. Also the comparison of the effectiveness of therapies with psychoanalysis, carried out as a quasi-experimental study during a 5-year to 10-year follow-up, with a wider battery of personality-related measures (e.g. defense style, interpersonal problems, level of personality organization), would be both theoretically and clinically interesting and needed. In that research, the relatively common use of auxiliary treatment after the initial study therapy would need to be accounted as a factor indicating inadequate recovery, as exemplified in a previous HPS report on psychiatric symptoms and functional capacity (Knekt, Lindfors, Sares-Jäske, Virtala, & Härkänen, 2013). Another important issue is the relation of self-concept changes to recovery from anxiety and mood disorders, i.e., whether improvement of personality functioning during therapy is beneficial for more sustained benefits.

As the prediction of the QORS and the SASB self-concept variables on outcome in symptoms and work ability and the prediction of QORS on self-concept were not altogether consistent, extended investigation on the prediction of personality functioning on different outcome domains is warranted. The study of the relative importance of different personality functioning variables as predictors of outcome is an issue related to a major task of future study in the HPS, covering comprehensive evaluation of therapeutic alliance, therapist and patient factors as determinants of outcome in short-term and long-term therapies. These findings have further implications for developing more clinically relevant evidence-based treatment guidelines.

The present findings and future possibilities of the HPS quantitative research can also be extended by focusing on detailed analysis based on qualitative data, i.e., follow-up interviews. New studies on other patient samples also need to be initiated

to investigate the importance of process factors on outcome and their interaction with patient's personality functioning.

6.6 Clinical implications

Findings from psychotherapy research can be used for developing more effective and suitable treatments for patients, training of psychotherapists, and for improving and planning of service provision (Parry et al., 2005). However, when implementing the findings of any specific study, the information needs to be carefully scientifically judged and interpreted from the perspective of other relevant research and expertise from clinical practice, balanced with the evaluation from the perspective of the patient's values and preferences and feasibility from the societal perspective (APA, 2006). The findings on the general effectiveness of short-term vs. long-term therapies in this study indicate that estimation of the most beneficial outcome depends on the time when it is assessed. Short-term therapies with a very different orientation seem to produce equal outcomes and faster benefits than long-term psychotherapy during and shortly after the duration of therapy, approximately 6 months. If we are interested only in short-term outcomes, short-term therapy would seem to be sufficient and a more rational treatment choice than long-term therapy. If, on the other hand, the aim of psychotherapy is considered to be that the patient achieves more sustained benefits in the form of a more benign self-concept (Blatt et al., 2010), LPP would seem to be a more secure choice than SFT. As this is the first study to suggest treatment differences on self-concept between these short- and long-term therapies, the conclusions should be considered preliminary and tentative, and to require further validation in future research.

One also needs to be aware of the fact that the average treatment effect does not generalize to individual patients (Kraemer et al., 2006). However, the findings on effectiveness may be used as a reliable reference that LPP is effective in producing significant changes in personality functioning, which may surpass the effects of short-term therapies not developed to treat patients with personality dysfunction. From the patient's perspective the clinician also needs to acknowledge the importance of the patient's preference (Norcross & Wampold, 2011b) and other patients factors, such as motivation and psychological suitability (Laaksonen, Lindfors et al., 2012; Laaksonen et al., 2013) when discussing treatment options and making a referral to a specific type of psychotherapy. From the societal perspective, the issue of cost-effectiveness may be essential in determining the choice of a first-line treatment as well as the consideration of long-term effects and rehabilitation needed in case of impaired personality and work functioning.

The findings on the prediction and modification of QORS and prediction of self-concept on outcome are relevant for providing and developing individually tailored

treatments for patients, by acknowledging the level of their personality functioning (Koelen et al., 2012). The extent and nature of self-concept pathology and information on the level of the quality of object relations can provide the clinician important information on the challenges of the planned therapy. Thus, the patient's poor self-concept and, suggestively, low QORS seem to be characteristics that predict poorer long-term outcomes in short-term therapies as opposed to LPP. The results thus offer a tentative suggestion that in case of mild to moderate personality pathology, even when personality disorder is not diagnosed, a longer, more intensive treatment may be indicated. An interesting finding of the study was that also patients with more benign personality functioning seemed to improve more in the long run in LPP, suggesting a conclusion that its indications should not be limited to patients with more problematic personality issues.

Further, this study also indicated that validated measures for personality functioning, whether questionnaires or clinical interview scales, accompanied with thorough training, may be needed to ensure qualified assessment. Further integration of research and clinical practice would benefit from the joint development of comprehensive and systematic assessment procedures for evaluating patients referred to psychotherapy.

6.7 Conclusions

In conclusion, both the duration and the modality of psychotherapy appeared to be relevant for long-term outcome after short-term and long-term psychotherapy, in the outcome domains covered by the studies – personality functioning, psychiatric symptoms, and work ability. Although the patients' self-concept was improved during the 3-year follow-up in all the therapies, more extensive and sustained effects were found in LPP than in SFT, on average. No difference was observed in effectiveness between the two very different types of short-term therapy, both of which yielded faster benefits during the first year of follow-up than LPP. A continuing, but slower improvement in LPP during the 3-year follow-up was characteristic. Additional support for the importance of personality functioning for treatment selection was provided by the results showing that the level of object relations modified outcome in self-concept. The effectiveness of SFT, but not SPP, was significantly poorer for patients with less mature object relations (low QORS) than for patients with high QORS, while the reversal occurred in a few self-concept aspects in LPP in the early phase of treatment. If replicated in future study, SFT is suggested to be more useful for patients without poor personality functioning, if the treatment goals include change in self-concept or another similar personality-related outcome area, whereas LPP could be considered as one treatment of choice for these patients.

The prediction of personality functioning on psychiatric symptoms and work ability indicated that a negative self-concept strongly and an overly controlling self-concept modestly predicted better 3-year outcomes in LPP than in the group of short-term therapy. This was the most evident in more reduced depressive symptoms, after faster early gains in short-term therapy. Likewise, there was a non-significant trend of low QORS favoring better long-term improvement in depressive symptoms after LPP. However, patients with low QORS did not benefit by faster gains in short-term therapy. Here also, no difference in the prediction of personality functioning was noted between the short-term therapies. The additional finding that patients with better psychological functioning also experienced more extensive benefits after LPP, suggests that patients' capacities and motivation for long-term therapy, need to be acknowledged when considering treatment options, along with their dysfunction.

To summarize, the studies on effectiveness and prediction showed that patients with anxiety or mood disorders, with mild to moderate personality dysfunction, generally benefited more from long-term than from short-term psychotherapy, in the long run. Greater duration and psychodynamic orientation of therapy may benefit self-concept improvement in comparison with a supportive, resource-oriented short-term therapy. Comprehensive pre-treatment assessment is needed to screen on the one hand those patients for whom LPP should be considered and on the other hand those for whom short-term therapy should be recommended. In addition to using research evidence as an aid to optimize treatment selection in clinical assessment, knowledge of the patient's preferences, is needed. Measurement of the quality of object relations, carried out by proxy assessment of relational functioning or by a thorough standardized interview measure, found to have adequate reliability and concurrent validity in this study, is suggested to be implemented as an aid for clinical assessment when considering referring patients to a specific type of psychotherapy. Additional research is needed on the effectiveness of short-term and long-term therapies during a longer follow-up, extending several years beyond the end of treatment and covering a wider battery of outcome assessment within the personality functioning domain. Also, the relative importance of various personality functioning variables as well as other patient and therapist factors as predictors of outcome in short-term and long-term psychotherapy, needs to be further studied to face the challenges of improving psychotherapy practice and therapist training.

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