

**Gender differences in response to
transference interpretations in
dynamic psychotherapy**

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1 Overview

1.1 Summary

Object: The effect of patient gender in response to psychotherapy has been the object of profound theoretical discussions. In clinical theory, analysts recognize that patient gender contributes to the relationship between the therapist and the patient and the patients thoughts about the therapist. However, the empirical research on whether women or men improve most from psychotherapy has revealed that women and men respond equally well to psychotherapy, i.e. on average, respond similarly across different types of psychotherapy. The empirical explorations of what works for women and what works for men have, however, only sparsely been studied.

Transference interpretation has remained a core ingredient in the psychodynamic tradition, despite limited empirical evidence for its effectiveness. The main aim in the First Experimental Study of Transference-interpretations (FEST) is to explore the long-term effects of transference interpretations in dynamic psychotherapy in the sub groups of patients with high and low Quality of Object Relations (QOR).

The aim in the present thesis is to investigate the effects of transference interpretation in women and men with different levels of relational functioning (high, average and low QOR) during therapy and during follow-up.

The synopsis of this dissertation presents an introduction to dynamic psychotherapy with transference interpretations, research on process and outcome in psychotherapy with a focus on research on transference interpretation, and the effect of patient gender and relational function on outcome. Also the statistical methods used in the studies are described and possible advantages are discussed. A short summary of the individual studies with comments and limitations precedes a further discussion of the main findings, and clinical implications, and some suggestions for future research.

Material and method: Data from the First Experimental Study of Transference-interpretations (FEST) are used. Patients (N=100) were randomized to receive 2 different dynamic psychotherapies during 1 year, with either a moderate level of transference interpretations or no transference interpretations. Follow-ups were at 1 year and 3 years after treatment termination. The outcome measures used were the Psychodynamic Functioning Scales (PFS), Inventory of Interpersonal Problems –

Circumplex version (IIP-C), Global Assessment of Functioning (GAF), and Symptom Checklist-90-R (GSI).

In Paper I – IV change is assessed using Linear – Mixed Models (SPSS). Treatment effect means the effect of transference interpretations. In the statistical analyses in Paper V SABS-works, the SASB-statistical program is also used.

Results: In Paper I the long-term (during the 4 year study period) effects of transference interpretations are explored. Both treatments demonstrate significant improvement during the whole study period. However, patients with a lifelong pattern of poor object relations have a sustained positive treatment effect of transference interpretations (PFS; $P < 0.026$).

Paper II reports that measured with GSI and GAF (symptomatic, functional change), women respond better than men to dynamic therapy with transference interpretations during therapy. Measured with GAF, patient gender shows moderator effects over and above the moderator effects of QOR ($P < 0.03$). Women with low QOR show a large positive effect of transference interpretations, but in contrast men with high QOR show a large negative effect.

In Paper III sustained differences in treatment response to transference interpretations between women and men with average relational functioning (QOR) is revealed, measured with PFS (dynamic, interpersonal change). Women and men differ significantly in their response to transference interpretation ($P < 0.059$). The women with average relational functioning show a long-term positive effect after dynamic psychotherapy with transference interpretations compared to dynamic psychotherapy without transference interpretations ($P < 0.037$), while the men with average scores on QOR do not.

Paper IV reports sustained differences in treatment response between the two contrasting sub groups of women with poor relational functioning (low QOR) and men with good relational functioning (high QOR) during the whole 4 year study period. Low QOR female patients have a strong positive treatment effect of transference interpretations (PFS, $P < 0.005$) while the high QOR male patients show a negative, but not significant treatment effect of transference interpretations.

In Paper V a highly successful therapy from the sub group of women with poor relational functioning is explored. Qualitative and quantitative data are used. Changes in therapist-patient interaction coincide well with the patient's sequential improvement.

Conclusions: Both the psychodynamic treatments with and without transference interpretations demonstrate significant improvement during the whole study period. However, the protocol analysis shows, contrary to the hypothesis, that transference interpretation are more beneficial and have a sustained positive treatment effect for patients with a history of less mature object relations. The post-hoc analyses of gender as moderator show that women responded better than men during therapy with transference interpretations. The difference in treatment effects sustains during follow-up. Female patients, who have difficult relationships to other people is the sub group of patients in FEST showing the best treatment effects from dynamic psychotherapy with transference interpretations.

1.2 List of papers

Paper I

Høglend P, Bøgwald K-P, Amlo S, Marble A, Ulberg R, Sjaastad MC, Sørbye Ø, Heyerdahl O, Johansson P. Transference interpretations in dynamic psychotherapy: do they really yield sustained effects? *Am J Psychiatry* 2008;165:763-771.

Paper II

Ulberg R, Johansson P, Marble A, Høglend P. Patient sex as moderator of effects of transference interpretation in a randomized controlled study of dynamic psychotherapy. *Can J Psychiatr* 2009;54:78-86. Erratum in: *Can J Psychiatry* 2009;54:350.

Paper III

Ulberg R, Høglend P, Marble A, Johansson P. Women respond favourably to transference interpretation, men do not: a randomized controlled study of long-term effects of dynamic psychotherapy. (Submitted for publication)

Paper IV

Ulberg R, Marble A, Høglend P. Do gender and level of relational functioning influence the long-term treatment response in dynamic psychotherapy? *Nordic J Psychiatr* 2009;63:412-419.

Paper V

Ulberg R, Høglend P, Marble A, Sørbye Ø. From submission to autonomy: approaching independent decision making. *American J Psychother* 2009;63:227-243.

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I am indebted to my supervisor, professor Per Høglend. He has offered me the opportunity to work with the solid data in FEST. With great generosity he introduced me to important *objects* in psychotherapy research. Framed by a *good relational pattern*, his advice and support have been crucial for me when *working through* data; *what* statistical models to perform and speculate on for *whom* the results *yield sustained effects* and *how*. He has performed profound *levels of transference* of knowledge and with *insight* helped me turning *unconscious* research questions into statistical models; enhancing *autonomy*.

In the FEST research group Alice Marble has been of great importance for me during the *whole study period*. We have been working closely together especially on the SASB-scorings. Paul Johansson has been an excellent fellow researcher and co-author. We have been sharing many “doctoral ups and downs”. I thank Svein Amlo, Kjell-Petter Bøgwald and Øystein Sørbye for vivid *high quality* discussions in *interpreting* the results, and the whole FEST research group including Oscar Heyerdahl and Mary Cosgrove Sjaastad for their contribution in peer supervision and providing treatment data to the study.

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2 Introduction

2.1 Dynamic psychotherapy – some basic principles

Dynamic psychotherapy can be defined as a treatment that focuses on thoughtful timed interpretations of transference and resistance and a sensitive appreciation of how the therapist contributes to the interaction with the patient (Gabbard, 2004). After Sigmund Freud described his theory about drive, different theoretical models have become useful and fundamental in dynamic psychotherapy; e.g. object-relation theory, self psychology, and attachment theory. Dynamic therapeutic work is based on some key assumptions:

- a) Much of a person's mental life is unconscious.
- b) Early childhood experiences in combination with genetic factors both contributes to the development of the person and her or his patterns of object relations (Klein, 1952).
- c) The patient's transference of emotional patterns (representations in the inner world) to the therapist (outer world) is a primary source of understanding.
- d) The therapist's countertransference feelings are a process that might facilitate the understanding of the patient's inner life (Heiman, 1950; Sandler, 1976).
- e) The therapist's focus on the patient's resistance to the therapy process is helping, in the working through (Freud, 1914; Rössberg et al., 2003) of emotions and personal patterns.
- f) Transference interpretations helps to alleviate psychiatric symptoms.
- g) The goal of psychodynamic psychotherapy is sustained structural or psychodynamic change, which means improvement in areas such as tolerance of affects, interpersonal functioning and insight (Gabbard, 2004; Ulberg, 2008).

The concepts dynamic psychotherapy, psychodynamic psychotherapy and psychoanalytically oriented psychotherapy are often used synonymously. Dynamic psychotherapy may be of short or long duration. What is long-term and what is short-term or brief psychodynamic psychotherapy can be defined differentially. The tradition in Europe seems to have been that psychotherapy less than 1 year has been defined as

short-term. However, Gabbard (2004) writes that ”..... the definition of long-term is a duration greater than 24 sessions or 6 months.”

The key assumptions in dynamic psychotherapy mentioned above, are applicable independent of treatment length. Some technical innovations in psychodynamic psychotherapy of short to moderate length are:

- a) A focus should be negotiated.
- b) Greater therapist activity.
- c) The therapist should encourage problem-solving strategies during and after therapy.
- d) Patients should be instructed about the principles and procedures of dynamic psychotherapy (Høglend, 1996).

2.2 Transference and transference interpretations

Transference interpretations are commonly understood to refer to the therapist making an explicit reference to the patient’s reaction to her or him. The patient’s reaction to the therapist is to some extent determined by the patient’s previous relationships (Piper et al., 1991). Emphasis on transference interpretation is a hallmark of dynamic psychotherapy. This technique distinguishes this treatment modality from other forms of psychotherapy.

Sigmund Freud first described clinical transference enactments and the interpretations of them more than one hundred years ago. The first detailed clinical case describing transference in treatment was the case study called Dora (Freud, 1905). Freud discovered that feelings in psychotherapy were transferred from early childhood relationships and experiences (*übertragung*). According to Rosenbluth (1961) Freud described that children relate to the mother’s breast (i.e. the child relates to an object). This thinking seems to precede the understanding of the relational structure of the inner world. Later theorists have further developed the relational understanding (e.g. object relation theory [Klein, 1952]). The internalization of relational experiences occurs through three mechanisms: incorporation, introjection, and identification (Piper and Duncan, 1999). The child uses different mechanisms at different development levels:

- a) Incorporation occurs during the early stages of development. I.e. during the symbiotic/preverbal age when there is confusion about what is oneself and what is the other.
- b) Introjective processes require greater differentiation between self and object.
- c) Identification is the process where aspects of the other are assimilated and transformed, wholly or partially (Laplanche and Pontalis, 1973/2006).

When integrated with parts of the self, the internalized aspects contribute directly to the establishment of a core sense of identity and inner object relations. Thus, the inner patterns are at least partly based on experiences of the early important persons and relations in the patient's life. The person transfers her or his object relational patterns, to other persons outside therapy, and in therapy, to the therapist. One should remember, however, that the real relationship between the patient and the therapist, and the therapist's behavior also contributes to the patient's reactions to the therapist.

Interpretation of the patient's maladaptive relational patterns (relational interpretations) is the primary technique used to increase self-understanding and relieve psychiatric symptoms. However, there are largely varied definitions of what exactly interpretations are and how they may be classified. In the psychodynamic tradition there seems to be a general agreement that interpretations include interventions that aim to establish connections (by use or analogy) between different internal dynamic components (e.g. wishes, needs, motives, affects, defense, and anxiety) and past or present objects (i.e. persons and therapists). Transference interpretation is a subtype of relational interpretations that emphasize to help the patient understand her or his relational reactions and behavior within the therapeutic relationship (Gibbons et al., 2004). Those interventions explicitly address the dynamics of the patient's behavior toward and experience of the therapist in the here and now (Stone, 1981; Gabbard, 2004; Høglend, 1990). A focus on the conflicts and themes that arise in the therapeutic relationship will have immediate affective resonance and illuminate the "true" nature of problems in the patient's relationships outside therapy. Transference interpretations are thought to set in motion a chain of events that bring about insight and change that will protect against future stressful events, and also enable the patient to make better plans for the future (Gill, 1979; Høglend, 2004; Paper V). Exploration of the patient's

transferential reactions to the therapist, are unique opportunities for insight and psychic change.

Various definitions of transference interpretations have been proposed. It is imperative when using this term, both in research and in clinical case conferences, to identify which definition of transference interpretation is employed. The most clear cut difference across authors is that for some authors any discussion of the therapeutic relationship qualifies as transference interpretations, while others classify interventions as transference interpretations only if there is a historical/genetic link made as well. The genetic interpretations seem to be infrequently used (Piper, 1991; Høglend, 1993).

A narrow definition linking genetic interpretations of unconscious material to transferred aspects of the patient's perception of the patient-therapist interaction, can probably not be used by researchers. The distinction between unconscious and conscious and between what is transferential and what is a realistic perception of the therapist is very difficult to draw.

In FEST (Høglend et al., 2006) the transference work was categorized in different levels. The levels represent degrees of comprehension from superficial and preparatory (Level 1-3) to profound (Level 4-5) analysis of the emotions and behavioral patterns:

Level 1: the therapist addressed transactions in the patient-therapist relationship.

Level 2: the therapist encouraged exploration of thoughts and feelings about the therapy and the therapist, including repercussions to the transference by high therapist activity.

Level 3: the therapist encouraged the patient to discuss how the patient believed the therapist might feel or think about the patient.

Level 4: the therapist included herself or himself explicitly in interpretive linking of dynamic elements (conflicts), direct manifestations of transference, and allusions to the transference.

Level 5: the therapist interpreted repetitive interpersonal patterns and linked these patterns to transactions between the patient and the therapist.

For examples of transference interpretations and work in the transference, see the clinical vignettes in Paper I and Paper IV and the case study in Paper V.

2.3 Research on process and outcome in psychotherapy

The field of psychotherapy research has made great advances in the last decades. It supplements the theory-based activities of therapists and provides a foundation for practice (Lambert et al., 2004). The aim of psychotherapy research is to advance our knowledge about the process as well as the course and the outcome of psychotherapy. Process refers to what happens in psychotherapy sessions (e.g. therapist interpretations). Outcome refers to short- or long-term changes that occur as results of therapy (e.g. symptom relief, dynamic change) (Hill and Lambert, 2004). The ultimate goal is to identify the best treatment options possible for patients with a given problem, disorder, or set of problems and study through which mechanisms the therapy works; what works for whom and how (Roth and Fonagy, 2004)

2.3.1 Common versus specific factors

Reviews of the literature have provided support for the effectiveness of psychotherapy approaches to the treatment of mental disorders, (Leichsenring et al., 2004; Joyce et al., 2006). When comparing the efficacy between different psychotherapy modes, no psychotherapy type seems to be more helpful than the others. Possible reasons for this have been discussed. It might be that the effect of therapy depends on common factors similar across treatment types (Lambert, 2004). Some elements are regarded as being common to effective therapies (e.g. patient expectations, identification with the therapist, therapist empathy, a good working relationship between the patient and the therapist, and corrective emotional experiences). However, it might be that studies have lacked precision to detect differences. Different treatments might achieve on average, similar outcomes through different processes for different patients. Some researchers emphasize the need for mode-specific outcome scales (Høglend et al, 2000) measuring the expected specific change for different therapy modes. The specific factors perspective advocates the need for knowledge about specific techniques that cause patient improvement, and for whom and how it works.

2.3.2 Study designs

A variety of methodology approaches (e.g. single-case studies, naturalistic/observational studies, randomized controlled studies, and dismantling

designs) might be used when investigating the process and outcome in psychological treatments. The methods can be ranged hierarchically depending on their capacity to detect causal association between therapy process and outcome.

Case studies

Single case studies represent a method with low capacity in testing causal relationships between process and outcome. Development in psychodynamic psychotherapy has for a long time, been based on the use of case reports and case studies. Traditional case studies have been criticized for relying too heavily on narratives (Lorentzen and Høglend, 2002; Paper V). The data from one patient are not compared with results from other patients and significance tests can not be computed. Thus a single case study can not make basis for causal conclusions. To improve the case study design, Hillard (1993) described three basic types of single-case research: A) Single-case experiments that involve quantitative data, manipulation of treatment variables, and hypothesis testing. B) Single-case quantitative analyses that might be used for generation of hypotheses. C) Single-case studies using qualitative data. By mixing quantitative and qualitative designs, one might to some extent, compensate for the subjectivity in traditional case studies.

Naturalistic/observational studies

Naturalistic studies (often imprecisely referred to as effectiveness studies) are one group studies of the natural course of therapies. As no randomization or experimental control is performed, internal validity might be compromised. Naturalistic studies focuses on external validity and the generalizability to “real-world” conditions. This design emphasizes implementation of the therapeutic procedure to general practice (Johansson, 2008; Kendall et al., 2004). Change might be studied, but only correlational analyses can be performed. Significant correlations, however, are not proof of causal effects.

Randomized controlled trials

In a randomized controlled study the included patients are randomized to a study treatment condition or to a different treatment condition/placebo. The response in a

treatment group is compared to the response in a control condition. The efficacy of a treatment might thus be determined. Patients and evaluators should be blind to treatment group. Efficacy studies emphasize the internal validity:

- a) Controlling the types of patients included in the study.
- b) Using manuals to standardize the treatment.
- c) Training the therapists prior to the study.
- d) Supervising the therapist during treatment.
- e) Monitoring the technique adherence and the “dose” of the therapy.
- f) Random assignment to treatments.
- g) Prior selection of the primary outcome measure(s).

To determine whether a treatment is efficacious or not, simply involves a demonstration of the treatment being significantly superior to the effects of a placebo condition, some minimal treatment or waitlist. Trying to use placebo conditions in psychotherapy research is associated with numerous methodological and ethical problems (Borcovec and Sibrava, 2005). Placebo is thought to contain no ingredients that target the problem being treated. The placebo effect is psychological. In psychotherapy all changes are due to psychological factors. Therefore, it is hardly possible to create a psychological control procedure that is inactive. Minimal treatment is usually less credible to the patients. Waitlists may cause demoralization.

Dismantling design

Borcovec and Sibrava (2005) discuss that even the RCT method applied in psychotherapy research might ignore to study what specific therapist behavior causes the change in the patient during and after therapy. They maintain that psychotherapy studies are mostly comparing therapy modes that differ in a number of ways. Therefore RCTs often do not generate significant basic knowledge.

Borcovec and Sibrava’s advice is to focus on identification of putative specific techniques that cause patient improvement. Studies should investigate treatment conditions that differ in only one component. Dismantling or component control designs contrast the complete therapy (e.g. dynamic psychotherapy with transference interpretations) with the same therapy with experimentally manipulated differences solely in one single dimension (e.g. dynamic psychotherapy without transference

interpretations). If also the quality of the patient-therapist relationship in both conditions is equal, therapist effects are minimized, and the quality with which interventions are given is equal in both groups, then the study offers the best possibility to detect causal relationships between the specific technique and outcome.

2.3.3 Validity

To know definitely and beyond doubt whether a psychotherapeutic method works, the validity of the measures used also needs to be considered. Validity is the ability of a measure to estimate or describe the phenomenon or construct it purports to do. Shadish and colleagues (2002; Lund, 1996) developed a validation system based on three suppositions: cause comes prior to effect, there is a relation between cause and effect, and other explanations for the effect are excluded. Shadish and colleagues (2002) described four types of validity:

1. *Statistical validity* refers to the question of whether there is a statistically significant relationship between the independent and dependent variable, i.e. treatment and outcome (e.g. transference interpretations and therapy outcome). Significance level balances between Type I errors and Type II errors. Type I error is the probability of rejecting a true null hypotheses (false positive, finding differences (effects) that are not true in the population). Type II errors is the error of failing to reject false null hypotheses (false negative) (Cohen and Cohen, 1983).
E.g.: In FEST the significance level of 0.10 was decided à priori for the moderator analyses and the sub group analyses in order to balance the risk of Type I and Type II errors.
2. *Internal validity* refers to the causal inference between treatment and outcome. Threats to internal validity especially in naturalistic studies with no control group, might be:
 - a) Maturation or spontaneous remission. Naturally occurring changes over time could be confused with a treatment effect. E.g. the patient becomes wiser, older and stronger (Lorentzen, 2002).
 - b) History. Other factors than treatment have led to the observed change.

- c) Testing. Repeatedly use of a measurement instrument influence the patients' response.
- d) Instrumentation. When the raters use an instrument repeatedly, the raters get more experienced and rate in a new way.
- e) Selection of the patients to the study.
- f) Regression to the mean. A statistical phenomenon due to measurement error which may create the illusion of improvement in a treatment study. A precondition of the phenomenon is that the patients are selected on one pre-treatment variable.

In a randomized controlled study threats to internal validity could be:

- a) Drop-out. The drop-out could differ between the treatment group and the control group. In FEST the drop-outs were included in the intention-to-treat outcome analyses. There was no drop-out at 3 year follow-up evaluation in FEST.
- b) Atypical behavior in the control group. In long-term follow-up studies differences in positive and negative life events and additional treatment might occur. In FEST the patients were advised not to receive additional therapy in the first year after therapy. Within the sub-samples of low QOR patients 15% in the transference group but 55% in the comparison group consulted mental health professionals during the 2 last years of the follow-up (Johansson et al., In Press).

3. *External validity* concerns the generalizability across different patient samples and settings. Naturalistic studies may emphasize external validity, while in a randomized controlled trial with high internal validity; the external validity might be threatened. The patients may have been selected from a narrow specter of diagnoses, and a strictly manualized treatment will no longer represent treatments as it is carried out in clinical practice. Thus, FEST differs from ordinary practice. However, trying to compensate, the patients included in the study sought psychotherapy for a broad specter of psychiatric symptoms, and were referred from general practice, outpatient clinics and private practice.
4. *Construct validity* refers to the degree to which the operationalized independent and dependent variables represent the construct of interest. If a beneficial

outcome is defined as symptom reduction or improved interpersonal functioning, the instrument used to assess outcome should measure just that.

Threats to construct validity might occur:

- a) True changes in the construct of interest are not detected.
E.g.: Self-report scales may fail in differentiating people who are healthy from those who are defensive deniers of distress (Shedler et al., 1993) and may be less sensitive in detecting change than clinician-rated scales. To counteract the possible effect when using self-rating scales (IIP-C, GSI) in FEST, two clinician rated-scales (PFS, GAF) were applied. These scales were rated with high precision using three expert raters on each occasion.
- b) Other irrelevant constructs are being measured.
- c) The patients guess the hypothesis and report improvement accordingly (demand characteristics).
- d) Experimenter expectations (researcher allegiance). The experimenter can influence participant responses by conveying expectations about desirable responses, and those expectations are part of the treatment construct tested (i.g. treatment format may favour one treatment, outcome measures may be more sensitive to one treatment, etc.).

2.3.4 Reliability

Conclusions of high validity are dependent on reliable measures. Reliability estimates describe the consistency of a measure. The reliability can be estimated in different ways:

- a) *Test-retest reliability* of an instrument: the instrument is applied repeatedly at different time points. Stable traits (e.g. intelligence) will show high test-retest reliability while state-like conditions (e.g. depression) will show lower test-retest reliability.
- b) *Interrater reliability* can be used to measure the degree of agreement between two or more raters. Estimation of interrater reliability can be performed in different ways. For categories (e.g. SASB-clusters), Kappa might be computed. Kappa is the number of agreements divided by total

number of observations, corrected for differences in agreement. If including degree of disagreement (e.g. whether the ratings were one or more clusters apart in SASB, Appendix 8.1), weighted Kappa is obtained. For continuous data, Person correlations has often been used to establish the extent of consensus between two observers (Lorentzedn, 2002).

For continuous scales (e.g. PFS) *Intraclass Correlations* (ICC) are more accurate. They are computed by comparing variance components across patients and raters:

$$\text{Reliability (ICC)} = \frac{\text{Patient variance}}{\text{Patient variance} + \text{Rater variance} + \text{Residual variance}}$$

- c) *Internal consistency reliability*, usually called Cronbach's alpha, estimates the consistency across items on the same test, and is used with measures that have several items. Split-half correlations are performed where the sample is split in two in all possible ways, and the sub-samples are correlated. The coefficient is the average of all these coefficients.

2.4 Measurement of change

Measurement of change comprises a variety of methods. With post-treatment measures (e.g. post-treatment benefit rating) the patient and/or the therapist evaluate the degree of improvement based on subjective and/or clinical impression. Different statistical models can be used. Independent sample t-test and One-Way ANOVA test differences between treatment groups at post-treatment. Ordinary Least Squares-regression (e.g. ANCOVA, Multiple regression) are used to estimate pre-to post-treatment change. Repeated measures General Linear Models (GLM) and Growth Curve estimations (e.g. Multi Level Models) are used to estimate change over time. Clinically significant change should also be considered to decide whether a therapy or treatment is not only statistically effective, but also clinically effective. Effect Size estimates are standardized differences, within or between groups, in order to have benchmarks for the "magnitude" of effects (Cohen, 1988).

2.4.1 Clinically significant change

Some authors argue that psychotherapy researchers should use Jacobson and Truax's (1991) method as a standard method to estimate clinically significant change (Lambert and Ogles, 2009). Clinically significant change has to do with; a) the patients' change need to be larger than measurement error (i.e. treated clients have made statistically reliable improvements from pre- to post-treatment) b) return to normal functioning. A cutoff point between a patient (dysfunctional) and a non patient (functional) population is estimated. Patients who meet both criteria are classified as changed to a clinically significant degree (Jacobson and Truax, 1991). For significant change in outcome measures used in FEST, see Appendix 8.1 on outcome measures.

2.4.2 Statistical Models

Statistical models are mathematical representations of population behavior. They describe features of the hypothesized process of interest among individuals in the targeted population. When using a statistical model to analyze a particular set of data (sample), one aims to find the "true" estimates in the background population. Ideally the sample should be randomly drawn from the population of interest.

A variety of modern statistical models can be helpful to study the complex relations between the patient, the therapist, the process in therapy, external events in the life of the patient, in-session progress, post-session progress, and therapy outcome at the end of treatment as well as during the follow-up period. Recent developments in statistical models have improved psychotherapy research. For a long time research was limited to demonstrate the average difference between two groups using only pre-post change (Lutz and Hill 2009; Pallant, 2001; Norusis, 2004).

2.4.3 General Linear Models

The t-test, analysis of variance and covariance, and regression analysis are all special cases of General Linear Model (Norusis, 2004). In GLM a normally distributed dependent variable is predicted from a linear combination of independent variables. When using GLM it is assumed that all observations are independent and have a constant variance. However, this assumption of independence might often be violated. When multiple measurements over time on the same subject are performed (e.g. in

FEST repeated measurements on different time points for each patient), observations from the same subject are not independent.

Variance is a measure of the amount of variation within the observed values of a variable. Analysis of variance is used to test the hypothesis that several means are equal (H_0). Regression or analysis-of variance-techniques are commonly used to test hypotheses about the relationship between the dependent and one or more independent variables. Analysis of variance techniques, including One-Way ANOVA, repeated measures ANOVA, and analysis of covariance (ANCOVA) have been the mostly used methods. ANCOVA is commonly used to assess post-treatment differences while controlling for pre-treatment levels. ANCOVA fits a single regression line to the relationship between pre- and post-treatment scores for all participants. This regression line is used to test H_0 -hypothesis; i.e. whether the average regression lines run parallel.

There are different problems for psychotherapy researchers with ANOVA and ANCOVA (Singer and Willett, 2003; Norusis, 2004; Tasca and Gallop, 2009). Both methods emphasize group means and variances, and each individual must have complete data at all time points.

Some difficulties when using ANOVA and ANCOVA:

- a) Non linear true change across time may yield inaccurate estimates of the effect of initial levels.
- b) Because of multiple tests of the data, accumulating Type I error requires correction.
- c) The methods comprise a relatively simple covariance structure and assume constant variability on individuals across time. This assumption is almost always violated.

2.4.4 Linear-Mixed Models

Multilevel models are more sophisticated quantitative methods than General Linear Models and allow longitudinal analysis with the possibility to integrate several levels of changes (e.g., individual trajectories, treatment groups). The multilevel models provide the flexibility of modeling not only the means of the data but the variances and a larger number of covariance structures as well (SPSS 16, 2007; Singer and Willett 2003; Norusis, 2004). Examples of software are Linear-Mixed Models (LMM),

Hierarchical Models, and Mixed Linear Models. Multilevel models expand the GLM so that the data are permitted to exhibit correlated and non constant variability. However, multilevel models also assume normality of data distribution. Despite multilevel models allow for missing data and nonparallel waves of data across individuals, the design must make sense for the study objectives. Ex.: If in a psychotherapy study the control group received 10 and the treatment group received 40 therapy sessions over one year it would not be appropriate to compare the two groups.

Satisfying models for Effect Size estimates are still not developed. However, Confidence Interval (CI) provides a measure for the precision of the effects found when using multilevel models.

Linear-Mixed Models which are the multilevel models used in FEST, allow researchers to model individual change and variance as well as group change models. LMM allow the researchers to assess the trajectory (shape) of within-person growth, or change over time, and also between-person differences in growth or change over time, and explain or predict between-person differences in growth or change over time. LMM provide new opportunities for handling missing data in longitudinal designs as well as in nested designs. One can model change even if some individuals have incomplete data without resorting to listwise deletion or imputation of data, as well as non constant times at which data values are obtained. The assumption is that data are missing at random. The LMM allow assessment of whether important estimates (i.e. change in outcome over time per condition) are dependent on missing data patterns (i.e. informative). Separate treatment effects are estimated for specified missing data patterns, and then an overall treatment effect is calculated as a weighted average of the treatment difference over the patterns (Norusis, 2004; Singer and Willett, 2003; Gallop and Tasca, 2009). With LMM also nonlinear change in individuals can be modeled. LMM provide an opportunity to model dynamic fluctuation in individual data across time.

Some terms frequently used in Linear-Mixed Models

Subject is variables that define the cluster of observations. For example in the LMM-analyses in FEST, the patient is defined as the subject.

Independent variables are defined as factors (categorical variables dividing the observations into groups) or covariates (ordinal measures) Factors/covariates can be further classified as fixed or random. A study can have both fixed and random factors. The statistical model for the data is then called a *mixed model*.

Fixed effects have a single constant value for all units of the sample or individuals. For fixed effects, the hypothesis about means of the dependent variable for the various levels of the effect is tested. In FEST treatment, QOR and gender were treated as fixed effects only. Intercept and time were treated as fixed effects and as random factors. The fixed effects were the test of the average intercepts and slopes between the two treatments, *random factors* allow each participant to vary around those averages. Thus the variance of the effects and fixed factor parameters are estimated and tested. For example in FEST, initial scores on PFS (intercept) and PFS growth rate across the whole treatment period (slope) of the dependent variable are assumed to vary randomly between individuals (subjects) and the randomly distributed intercepts and slopes were fitted for each patient. So individuals' intercepts and slopes each have variance associated with them. To determine which random effects should be used in the analysis, it is necessary to describe, the variance/covariance structure of the data. For example, since the variance between therapists in FEST was almost zero, therapist was not included as a random effect.

2-log likelihood is one of the measures that can be used to compare the goodness of fit of different statistical models. Models with smaller goodness of fit are better. For example, in Paper I, III, and IV log transformation of time was chosen because it fitted the data better than did a linear time slope.

Multilevel models for change address within-person and between-person questions about change simultaneously. Level-1 of the model is associated with intraindividual change (Singer and Willett, 2003). Level-2 of the model is associated with interindividual change. One might specify the multilevel model for change by postulating a pair of subsidiary models (Figure 1): 1. A level-1 submodel that describes how each person changes over time; in the level-1 submodel within-person changes are calculated. 2. A level-2 submodel that describes how these changes differs across subjects; in the level-2 submodel between-person changes are calculated. There might be more than two levels. E.g. in FEST there is a level-1 within-patient change, could

have been a level-2 between-therapist change and a level-3 between-therapy change. However, the variance between therapists where almost zero so the model used in the analyses where the level-1 within patient and the level-2 submodel between therapies (Figure 1).

Level-1 submodel

In the level-1 submodel for individual change, the within-person or individual change, is tested with two unconditional models. These unconditional models decompose the total variation in two different ways. First across people without regard to time (the unconditional means model) and second, across both people and time (the unconditional growth model). The results of these calculations, establish whether there is a systematic variation in the outcome that is worth exploring, and how much variation is found within or between people.

The unconditional means model: In Paper I the main hypothesis was that the transference group would have a more favorable course over the entire study period (4 years) than would the comparison group, as reflected in scores on for instance PFS. When the research question is articulated it might be tempting to begin by fitting models that include the substantive predictors (e.g. treatment mode). However, one should first fit the two simpler (unconditional) models. The first step is the unconditional means model. Instead of describing change in the outcome over time, it describes outcome variation *across* all time points and subjects:

$$Y_{ij} = \pi_{oi} + \epsilon_{ij}$$

$$\pi_{oi} = \gamma_{oo} + \zeta_{oi}$$

π_{oi} is the true mean for Y_i (the intercept as a fixed effect), i.e. π_{oi} is the person specific mean.

Y_{ij} deviates from individual i 's true mean π_{oi} by ϵ_{ij} . The level-1 residual is thus a “within-person” deviation that assesses the “distance” between Y_{ij} and π_{oi} . γ_{oo} is the true mean (the grand mean) across everyone in the population. For person i the true mean (π_{oi}) deviates from the population average true mean (γ_{oo}) by ζ_{oi} . ϵ_{ij} and ζ_{oi} are

the residuals (random effects). Since time is not a variable in this unconditional level-1 analysis all time points are included in this model.

An example from FEST of the unconditional means model with PFS as the outcome variable:

The estimated grand mean (γ_{00}) is 68.9. The residual variance (ζ_{0i}) is 26.8. The variance of person specific true mean (π_{0i}) is 13.7 ($P < 0.00$, CI 90%; 9.5 – 19.8). Thus half the variance is person specific variance.

The unconditional growth model: The unconditional growth model represents the expected change (slope) each member of the population will experience during the time period under the study.

$$Y_{ij} = \pi_{0i} + \pi_{1i} \text{TIME}_{ij} + \varepsilon_{ij}$$

$$\pi_{0i} = \gamma_{00} + \zeta_{0i}$$

$$\pi_{1i} = \gamma_{10} + \zeta_{1i}$$

π_{0i} represents individual i 's true initial status, the value of the outcome when $\text{TIME}_{ij} = 0$ (intercept).

π_{1i} represents individual i 's true rate of change during the period under the study (coefficient for slope)

ε_{ij} represents that portion of individual i 's outcome that is unpredicted on occasion j .

Ex.: In Paper I, the level-1 growth model represent the individual change on PFS that is hypothesized would occur during each patient's therapy and during the follow up period:

The PFS estimated grand mean (γ_{00}) is 64.0 (CI 90 %; 63.2 - 64.8).

How much of the total variance is explained by time variance might be calculated:

$$\frac{\pi_{1i}}{\varepsilon_{ij} + \pi_{0i} + \pi_{1i}} = \frac{\text{Time Variance}}{\text{Residual Variance} + \text{Intercept Variance} + \text{Time Variance}} = \frac{1.55}{11.0 + 15.45 + 1.55} = 0.06$$

6% of the total variance is explained by time. The variance between slopes is significantly different from zero, which means that slope can be used as outcome variable. This is level-1 variation. The residual variance means that there is considerable variance left to be predicted at level-2, for example by the fixed factors treatment (treatment group), or QOR, or gender.

Level-2 submodel

The individual growth parameters of the level-1 submodel are the outcomes (dependent variables) of the level-2 submodel. The level-2 submodel is a model for interindividual change. Treatment is a level-2 fixed effect.

$$\pi_{oi} = \gamma_{oo} + \gamma_{o1} \text{TREATMENT}_i + \zeta_{oi}$$

$$\pi_{li} = \gamma_{lo} + \gamma_{l1} \text{TREATMENT}_i + \zeta_{li}$$

- π_{oi} is the person specific mean of intercept at time 0 (level-2 specification for the level-1 intercept).

- π_{li} is the true person specific rate of change (level-2 specification for the level-1 slope).

- γ_{oo} represent the initial status (grand mean).

- γ_{lo} represent the population average rate of change.

- γ_{o1} represent the effect of treatment on level of outcome.

- γ_{l1} represent the difference in average slope from treatment 0 to treatment 1.

- ζ_{oi} is a residual that assess the distance between the person specific mean (π_{oi}) and the grand mean (γ_{oo}).

- ζ_{li} is a residual that assess the distance between the true individual rate of change (π_{li}) and the population average rate of change (γ_{lo}).

Composite multilevel model

SPSS software program collapse the level-1 and level-2 submodels together algebraically into a single composite multilevel model.

$$Y_{ij} = \pi_{oi} + \pi_{1i} \text{TIME}_{ij} + \varepsilon_{ij} =$$

$$(\gamma_{0o} + \gamma_{01} \text{TREATMENT}_i + \zeta_{oi}) + (\gamma_{1o} + \gamma_{11} \text{TREATMENT}_i + \zeta_{1i}) \text{TIME}_{ij} + \varepsilon_{ij}$$

The first parenthesis contains the level-2 specification for the level-1 intercept, π_{oi} ; the second parenthesis contains the level-2 specification for the level-1 slope, π_{1i} .

Multiplying out and rearranging terms then yields the composite multilevel model for change:

$$Y_{ij} = [\gamma_{0o} + \gamma_{10} \text{TIME}_{ij} + \gamma_{01} \text{TREATMENT}_i + \gamma_{11} (\text{TIME}_{ij} \times \text{TREATMENT}_i)] \\ + [\zeta_{oi} + \zeta_{1i} \text{TIME}_{ij} + \varepsilon_{ij}]$$

In FEST (Paper I, Table 3) the term $(\gamma_{01} \text{TREATMENT}_i)$ is not used in the statistical analyzes. If $\gamma_{01} \text{TREATMENT}_i$ is removed from the model with the interaction still in, we force both treatment to have a common intercept. (Fitzmaurice, 2004). In randomized controlled trials this is advisable because we can assume that both treatments starts at the same intercept value – which they do in FEST. This model is more powerful and should be routinely used:

$$Y_{ij} = [\gamma_{0o} + \gamma_{10} \text{TIME}_{ij} + \gamma_{11} (\text{TIME}_{ij} \times \text{TREATMENT}_i)] + [\zeta_{oi} + \zeta_{1i} \text{TIME}_{ij} + \varepsilon_{ij}]$$

Ex.: PFS = intercept + time + time x treatment + residuals

To explore the effects of moderators (i.e. QOR, gender) in FEST, this model was used:

$$Y_{ij} = [\gamma_{0o} + \gamma_{10} \text{TIME}_{ij} + \gamma_{11} (\text{TIME}_{ij} \times \text{TREATMENT}_i) + \gamma_{02} \text{MODERATOR}_i + \\ \gamma_{12} (\text{TIME}_{ij} \times \text{TREATMENT}_i \times \text{MODERATOR}_i)] + [\zeta_{oi} + \zeta_{1i} \text{TIME}_{ij} + \varepsilon_{ij}].$$

Ex.: PFS = intercept + time + time x treatment + QOR + time x treatment x QOR + residuals

Nesting: Comparing PFS from different patients in level-1 means comparing independent data. However, comparing PFS from the same patient at different time points, means comparing dependent data. I.e. time is nested in one single patient and again the patients (within person change in level-1) are nested in the two treatment modes in level-2 (Figure 1). Each patient's level of independence differs throughout the study period.

Degrees of freedom in LMM are the estimations of the subject's level of independence on each time point. E.g. In FEST 99 patients are measured with PFS at 4 time points; $N \approx 400$. When analyzing measures from each patient at different time points (within person change), the estimates are nested within each patient and then the data are dependent. When comparing and analyzing data from different patients at one time point, the data are independent. When comparing data from different patients over time (between person change), the data will be dependent within person, but independent between person. In FEST the data are also nested within therapy mode. Thus the degrees of freedom must be estimated and explains the relatively unusual df – calculations; e.g. 130.537, 116.299 etc. (Paper I, Table 3)

In LMM *centering* might provide stability in the estimation of the chosen statistical model. Centering also improve the interpretations of predictors and moderators. The primary rationale for centering is that it simplifies interpretation. To center the moderators before analysis, provides possibilities to do direct interpretations of parameters. Moderators can be centered at overall means or predefined cut off scores (i.e QOR 5 in FEST, Paper III, Table 3) or centered at the mean within sub groups (i.e. average QOR in high (5.6) or low (4.4) QOR subgroups in FEST, Paper I, Table 4; Paper IV, Table 2). When centering the moderator QOR at the average level in the low QOR sub group, the model used is:

$$\text{PFS} = \text{intercept} + \text{time} + \text{time} \times \text{treatment} + (\text{QOR} - 4.4) + \text{time} \times \text{treatment} \times (\text{QOR} - 4.4)$$

Thus centering is used to provide an interpretable or meaningful zero point. Time x treatment can be interpreted directly as treatment effects for the typical (average) low QOR patient, because the terms including QOR are zero for patients with QOR scale scores=4.4.

The moderator “gender” are coded as women=1 and men=0 or as women=0 and men=1. When women are coded as 0 (Paper III; Table 3 and Table 4) time x treatment can be interpreted as the treatment effect for women.

Ex.: Table 3 in Paper II: QOR is centered at the average level of QOR in the low QOR sub sample. Time is coded 1 for the transference group and 0 for the non-transference group and gender is coded 0 for women and 1 for men. The chosen QOR-level and women are set to be the zero-points. Time x treatment might therefore be interpreted as the treatment effect of transference interpretations for low QOR women.

2.5 Research on transference interpretations

More than 13.000 book chapters and articles have been published on the issue of transference (Search in PsychInfo/Ovid 30/6-09). Several questions have been debated. What is the definition of transference interpretations? Is the transference a new experience or to which degree should the transference be viewed as an enactment of an earlier relationship (Piper et al., 1991; Section 2.2, present synopsis)? Which patients are best suited for these therapist interventions (Valbak et al., 2004)? What recommendation can be proposed on frequency in time-limited psychotherapy? Mainstream clinical thinking has maintained that transference interpretations are anxiety provoking and should therefore be used only for less disturbed and suitable patients in brief dynamic psychotherapy (Høglend, 1993; Piper et al., 1993; Høglend, 1996), although empirical research on this is contradictory (Høglend, 2004).

9 previous empirical studies attempting to shed light on the technical use of transference interpretations in brief dynamic psychotherapy have been published. None of these studies used an experimental design. The associations reported in passive observational studies are open to several causal interpretations, rendering the research base limited and inconclusive (Høglend, 2004). Up till now, the only controlled study using a quasi-experimental methodology, has been a previous study from Høglend and colleagues (1993). The quasi-experimental design was performed by selecting the patients to the different treatment based on suitability. Highly suitable patients (high QOR) received dynamic psychotherapy with a high number of transference interpretations per session (on average 6). Less suitable patients (low QOR) received dynamic psychotherapy with few transference interpretations. The authors reported that

the high QOR patients showed a significant negative effect during follow up compared to the low QOR patients. The study from Høglend and colleagues might have some limitations. Treatment integrity was not measured (Høglend, 1994). The sample size (transference group N=22, non transference group N= 21) was relatively low. Since a quasi-experimental design was used in the study, the two patient groups were unequal and selection maturation effects may have played a role.

2.6 Moderators in psychotherapy

Patient variables that influence treatment outcome are either predictors or moderators of outcome (Kraemer et al., 2002; Johansson and Høglend, 2007). Both predictors and moderators are pre-treatment variables that affect the strength or direction of a treatment response. Predictors do so regardless of treatment condition. Moderators, however, differentially influence outcome depending on treatment condition.

It has been suggested that as much as 40 % of outcome variance in psychotherapy can be attributed to patient variables. This would mean that pre-treatment patient characteristics would account for the largest proportion of variance in psychotherapy outcome (Clarkin and Levy, 2004).

Differences between various psychological treatments have been difficult to detect and studies that have examined moderators of outcome have done so with limited success. That is, different treatments appear to be equally effective when looking at the average response. This could mean that there are no differences. Another possibility is that although treatments are equally effective on average, patients benefit differentially depending on pre-treatment characteristics. Sub groups of patients may respond very differently. Patient characteristics that are relevant to interpersonal processes might interact with different techniques used in treatment. To identify those pre-treatment variables might be helpful in understanding why different patients benefit more than others from different psychotherapy modalities.

2.6.1 Quality of Object Relations (QOR)

Melanie Klein and successors developed object relation theory (Klein, 1952). However, inner personal patterns and past objects are not an easily measurable and

usable concept in psychotherapy research. The Quality of Object Relations scale (QOR) is one dimension supposed to predetermine suitability for dynamic psychotherapy (Høglend et al., 2000; Høglend, 2003; Azim et al., 1991). QOR is probably the best studied predictors in dynamic psychotherapy (Huprich and Greenberg, 2003). In the First Experimental Study of Transference-interpretations QOR was a pre-selected putative moderator in the study protocol.

QOR is measured on three 8-point scales: quality of interpersonal relationship in the patient's life, history of adult sexual relationships, and history of nonsexual adult relationships (Appendix 8.2). QOR measures from primitive to mature the patient's life-long tendency to establish certain kinds of relationships with others (Azim et al., 1991). Four empirical studies have investigated the association between level of QOR and use of transference interpretations. Two studies reported a negative effect of transference interpretations and outcome within the high QOR sub sample (Piper et al., 1991; Høglend et al., 1993). Two other studies reported negative effects of transference interpretations within the low QOR sub sample (Connolly et al., 1999; Ogrodniczuk et al., 1999). Piper et al. (1991) and Høglend et al. (1993) reported high levels of transference interpretations per session (on average 5-6), Ogrodniczuk et al. (1999) reported a moderate level (on average 3.7 per session), and Connolly et al. (1999) reported a low level (on average 1 per session). The somehow contradictory findings may be explained by the frequency or level of interpretations, different patient samples, different therapists, and different measures. E.g. Connolly and associates evaluated the patient's current level of quality of interpersonal relationships, while Piper and associates and Høglend and associates evaluated the life-long history of interpersonal relationships. It may also be the case, that since these studies are non-experimental, some of the correlations may be spurious (Høglend, 2004).

2.6.2 Patient gender in psychotherapy

In clinical theory, analysts recognize that patient gender contributes to the relationship between the therapist and the patient and to the patients' thoughts about the therapist (Notman and Nadelson, 2004; Opdal, 2007; Kirschner et al., 1978; Ogrodniczuk et al., 2004). Some authors (Friedman and Downey, 2008) claim that behavioral gender differences between women and men are core components of

knowledge about psychological development and should therefore be a core component of psychodynamic thinking and research as well. Most empirical studies and several research reviews, however, indicate that, on average, women and men respond similarly across different types of psychotherapy (Clarkin and Levy, 2004; Lam and Sue, 2001). Those studies of individual psychotherapy have explored gender mainly as a general predictor. When the research group in FEST started investigation on patient gender and psychotherapy, only two studies had explored gender as a moderator. That is, they tested whether women and men respond differentially to different psychotherapies (Zlotnick et al., 1996; Ogrodniczuk et al., 2001).

Zlotnick et al. (1996) searched for predictor and moderator effects of gender in the National Institute of Mental Health Collaborative Study on Depression. The patients received short-term interpersonal therapy, cognitive-behavioral therapy, imipramine plus clinical management, or placebo plus clinical management. No significant predictor or moderator effects of patient gender were found at post-treatment. A study by Ogrodniczuk et al. (2001) showed a moderator effect of gender in two forms of individual psychotherapy at post-treatment. They reported that male patients had better outcomes in interpretive therapy than in supportive therapy, while female patients had better outcomes in supportive therapy compared to interpretive therapy. They did not find a moderator effect of gender at 1 year follow-up.

A recent study (Frank et al., 2008) compared the effect of combined interpersonal and social rhythm therapy to clinical management. The authors reported that patients with Bipolar I Disorder made rapid gains in occupational functioning during and after combined interpersonal and social rhythm therapy compared to clinical management. The treatment effect was significantly larger in women than in men.

3 The present studies

3.1 The First Experimental Study of Transference-interpretations (FEST)

In the present dissertation data from The First Experimental Study of Transference-interpretations (FEST) were used. FEST is a dismantling randomized clinical trial, designed to explore specific long-term effects of transference interpretations in dynamic psychotherapy. The study was initiated in March 1993, by a

research group led by professor Per Høglend. By December 2001 all hundred patients were included in the study. All follow-up evaluations were completed by December 2005. The patients were randomized to one of the two treatment groups. Both treatments employed use of general psychodynamic principles. One treatment (N=48) avoided an interpretive focus on the ongoing patient-therapist interaction (comparison group). The other treatment (N=52) used material from the patient-therapist interaction as the most important vehicle for clarifications, confrontations and interpretations (transference group). The design of the study is a RCT dismantling design, in which a single component (analysis of transference) is added or subtracted to an existent treatment package. Thus, the efficiency of a specific technique can be identified.

3.1.1 Main hypotheses

In FEST the primary hypothesis was that the transference group would have a more favorable course over the whole study period of 4 years compared to the comparison group. The second hypothesis was that patients with mature object relations and/or absence of personality disorders would benefit more from therapy with transference interpretations than from therapy without.

3.1.2 Post-hoc hypotheses

After reviewing the literature on gender and psychotherapy we found that no more than two empirical studies had explored the interaction effect of gender and treatment mode. Only one single study had found a moderator effect of patient gender and only during therapy, not at follow-up (Ogrodniczuk et al., 2001). The following was predicted: patient gender will not predict outcome across treatments, but women and men may respond differently during dynamic therapy with or without transference interpretations. Further exploratory analyses were made on gender differences during the whole study period controlled for the moderator effect of QOR.

3.2. Method

3.2.1 Patients

Patients from general practice, private specialist practices and psychiatric out-patient departments were referred to the study therapists and assessed for eligibility (N=122). Inclusion criteria were liberal. The patients sought psychotherapy for depressive disorders, anxiety disorders, personality disorders and interpersonal problems not caused by a mental disorder. Patients with psychosis, bipolar illness, organic mental disorder or substance abuse were excluded. One hundred patients were included and randomized to the two different dynamic psychotherapies (Figure 1, Paper I). The patients were unaware of the randomization and the technique studied. They were told that the aim of the study was long-term effects of dynamic psychotherapy.

3.2.2 Treatment

The patients were offered 45-minute weekly sessions for 1 year. All sessions were audio recorded. A treatment manual in Norwegian was published (Høglend, 1990). All the patients in both treatment groups received psychodynamic psychotherapy. For the transference group, specific techniques were prescribed, including: the therapist addressed transactions in the patient–therapist relationship, encouraged exploration of thoughts and feelings about the therapy and the therapist, and interpreted direct manifestations of transference. Repetitive interpersonal patterns were linked to the transactions between the patient and the therapist. In the comparison group, these techniques were proscribed. In this group, the therapist consistently used material about interpersonal relationships outside of therapy as the basis for similar interventions (extra-transference interpretations), without any link to the interaction between the patient and the psychotherapist. Both treatments were mainly exploratory in nature. Patients in both treatment groups were encouraged to explore sensitive topics, which often involved uncomfortable emotions, but the therapist abstained from providing guidance or giving advice, praise, or reassurance.

3.2.3 Therapists and evaluators

Patients were assigned to 1 of 7 therapists, depending on availability. The therapists, who also served as clinical evaluators of other patients, included 6

psychiatrists and 1 clinical psychologist. There were 2 women and 5 men. All had 10 to 25 years of experience in practicing psychodynamic psychotherapy. They were all trained to give either treatment with a moderate frequency of transference interpretations (1 to 3 per session), or treatment without such interpretations, with equal ease and mastery. Only the patient's therapist learned the result of the random assignment procedure. The other clinicians remained blind to the patient's treatment group. All raters were blinded as no therapist ratings of their own patients were included in any of the statistical analyses.

3.2.4 Ethics

Before participating in the study, each patient gave a written consent. The Regional Committee, Health-Region 1, Norway, approved the study protocol.

3.2.5 Assessment and outcome measures

Before randomization each patient had a 2-hour psychodynamic interview, modified after Malan (1976) and Sifneos (1992). The Axis-I diagnoses were based on the clinical history and assessment of background variables by the patient's therapist. The diagnoses were discussed by the therapist and at least one of the other clinicians, according to the DSM-III-R criteria (American Psychiatric Association, 1987), until consensus was reached. Axis-II diagnoses were determined using the Structured Clinical Interview (SCID-II) for the DSM-III-R (Spitzer et al., 1990).

Høglend and colleagues (2000) reviewed the discussion on assessment of change in dynamic psychotherapy. One schism has been between those researchers claiming that symptom and global measures account for almost all of the variance found in specific outcome measures and those researchers claiming the need for mode-specific outcome scales. During dynamic therapy patients might experience higher level of symptom distress while improving in such areas as interpersonal functioning, insight and tolerance for affects. Therefore in FEST 4 main outcome measures were chosen (Appendix I); Psychodynamic Functioning Scales (PFS) (Høglend et al., 2000; Bøgwald and Dahlbrender, 2004; Hagtvet and Høglend, 2008), Inventory of interpersonal Problems – Circumplex version (IIP-C) (Alden et al., 1990), Global Assessment of Functioning (GAF) (Diagnostic and statistical manual of mental disorders, 1987), and

GSI (total mean score of the Symptom Checklist-90-Revised (SCL-90) (Derogatis, 1983). PFS and IIP-C are designed to capture dynamic or interpersonal change. GAF and GSI are designed to measure symptomatic or functional change. In each category of outcome one clinician rated (PFS and GAF) and one patient rated (IIP-C and GSI) were chosen. Hersoug and colleagues (2009) and others claim that patient self-reports and clinician rated measures only show a moderate overlap.

In addition to the main outcome measures, Feeling Word Checklist - 58 (Rössberg et al., 2003), Therapist Representation Inventory (TRI) (Geller and Farber, 1993), and Structural Analysis of Social Behavior (SASB) (Benjamin and Cushing, 2000) has also been used in FEST and as outcome measures in the analyses in the present thesis (Paper V). See Appendix 8.1 on outcome measures.

3.2.6 Statistical analysis

Standard power calculation (end-point analyses) indicated that moderate effects between groups ($ES = 0.55$) could be detected with an alpha level of 0.05 and a power of 0.80. An alpha level of 0.10 was decided a priori for the moderator analyses and the subgroup analyses in this study in order to offset the risk of Type-II errors (Cohen and Cohen, 1983; Lund, 1996). One outlier in the transference group was deleted from analyses of the longitudinal data as it became clear during treatment, that this patient had abused sedatives and painkillers over many years. Longitudinal analyses were performed on a sample of 99 patients (intention to treat analyses).

Linear-Mixed Models were used to analyze longitudinal data (SPSS version, 15.0, 2006). A randomly distributed intercept and slope (over time) was fitted for each patient. Improvement over time was curvilinear. The highest rate of improvement was during therapy, with diminishing returns over time. Time was coded with one step for each half-year. In the study of the effects during therapy (Paper II) 0, 1, and 2, while in the studies of effects during the whole study period (Paper I, III, and IV), the time variable was coded 1, 2, 3, 5, and 9 and transformed to a natural logarithm. In the longitudinal analyses log transformation of time fit the data discernibly better than did a linear time slope (change in 2-log likelihood). Intercept and time were treated as both random and fixed effects, while treatment group (coded 1, 0) was treated as a fixed effect. The fixed effects in the main group analyses were intercept, time, and time x

treatment. The fixed effects in the moderator analyses were intercept, time, moderator, time x treatment, and time x treatment x moderator. We assume that treatment group means are equal at baseline, by design (Fitzmaurice et al, 2004). To explore the effect of transference interpretations for patients with different level of relational functioning, QOR was centered at various levels. QOR was centered at 5 (Paper III), which is the cut – off score between high and low QOR Scale scores. The QOR was also centered at the average level in the subsample with high QOR scores (5.6) and at the average level in the subsample with low QOR scores (4.4) (Paper I, Paper II, Paper IV). To explore the effect of transference interpretations for women and men respectively, gender was coded as 0 = women and 1 = men and also coded as 1 = women and 0 = men. The 2-way interaction term (time x treatment) in the moderator analyses may thus be interpreted as treatment effects of transference interpretations for the typical patient within each of the QOR subsamples or for women or men respectively. Centering makes time x treatment directly interpretable. The 3-way interaction term tests changes in the treatment effect with changes in the moderator. Centering does not inflect on the moderator terms.

In Paper V also the statistical program SASB works (Benjamin and Cushing, 2000) was used.

3.3 Results

3.3.1 Patient characteristics at baseline

The randomization procedure was successful. There could not be detected any significant differences between treatment groups (Transference group N= 52, Comparison group N= 48) in the whole patient sample. For the sub group of women (N = 56) and the sub group of men (N = 44) we found very few differences in a comparison of the mean score on a large number of (101) pre-treatment variables including demographic, diagnostic, initial severity, personality, interpersonal functioning and expectancy (Table 1, Paper I; Table 1, Paper II). The QOR score in women was 5.1 and in men was 5.0. As expected, on average, men had a higher educational level and were more likely to be employed. On IIP-C, men described themselves as significantly more dominant and hostile, compared with women. Before treatment, we did not detect any

significant differences between the 2 treatment groups, in either women or men, on any of the 4 outcome variables (PFS, IIP-C, GAF, and GSI).

3.3.2 Therapist effects

No differences in effectiveness between therapists were detected. Two random factors for therapists, intercepts and slopes gave almost zero variance and were therefore deleted from the analyses. It should be noted that this study did not have the power to detect small-to moderate therapist effects.

3.3.3 Treatment fidelity

Treatment fidelity or treatment integrity was extensively documented with ratings of 4-5 full sessions from each treatment by two raters, blind to treatment group (sessions $n=452$) (Bøgwald et al., 1999; Høglend et al., 2006). Treatment integrity was excellent. Treatment length, without the drop-outs, was equal in the transference and comparison groups 34 (SD=6.1) and 33 (SD=6.6) sessions on average, respectively.

The average score on the Specific Transference Technique Scales (P. Høglend, unpublished manual, 1995) in the transference group was 1.7 (SD=0.7, moderately used) and in the comparison group 0.1 (SD=0.2, nearly not at all used), a significant difference ($t=14.8$, $df=58.2$, $P=0.0005$) between the treatment groups. There were no differences in the use of specific transference techniques between women and men in the transference group. Analysis of interpersonal relationships outside of therapy (extra-transference) was given somewhat more space and emphasis in the comparison group.

4 Summary of the present studies

The present thesis reports findings from the First Experimental Study of Transference-interpretations. Some comments and limitations succeed each of the five summaries. Since the papers in the present thesis are closely linked methodologically and thematically, the papers will be further discussed in section 5.

Paper I: “Transference interpretations in dynamic psychotherapy: do they really yield sustained effects?”

In the first paper the long-term effects of transference interpretations are explored according to the two main protocol hypotheses in FEST. 1) The transference group would have a more favorable course over the whole study period of 4 years compared to the comparison group. 2) The patients with mature object relations and/or lacking personality disorder (PD) might benefit more from therapy with transference interpretations than from therapy without.

Outcome variables are the PFS and the IIP-C. Those are the two primary outcome measures in FEST. Both are supposed to measure dynamic change.

There was no differential treatment efficacy between the two therapies. Both treatments demonstrated significant improvement during treatment and also after treatment termination. However, the QOR was a moderator of the long-term effect of transference interpretations (PFS, $P < 0.026$). No significant moderator effect was detected when using IIP-C as outcome variable. Contrary to mainstream clinical thinking and the second hypothesis, use of transference interpretation was more effective than avoidance of such interpretation with so-called less suitable patients, that is, patients with low scores on the QOR. IIP-C revealed a trend in the same direction as the PFS findings. The proportion of patients recovered (clinically significant change) on both the primary outcome measures at three year follow-up are shown in Figure 2.

The paper includes three brief clinical vignettes from therapies with transference interpretations to illustrate the process when moderate use of transference interpretations was emphasized.

Comments and limitations:

The possible strengths of the paper might be identical with the strengths of FEST. A relatively large group of patients received time-limited though, relatively long-term treatment. The patients were randomized to two treatment groups, component control was a part of the design, assessment of treatment integrity was performed, the assessors were blind to treatment group, non-blind data (i.e. therapist scorings of own patients) were not included in the analyses, a long follow-up period (three year), and use

of multilevel models for longitudinal analyses. Using a RCT dismantling design isolates a possible causal factor. The study design supports the investigation of the treatment effects of transference interpretations which might provide basic knowledge.

On the other hand, methodological weaknesses might include the lack of structured diagnostic interviews. Axis I disorders were not rigorously diagnosed (e.g. using SCID I). The participants represent a heterogenic patient population. Thus, the effects on depression, for example, cannot be evaluated with precision. On the other hand, the broad specter of diagnoses in the study might be relatively typical for patients seeking psychotherapy.

The second hypothesis was “that suitable patients – patients with a history of mature object relations/or lacking personality disorders – might benefit more from therapy with transference interpretations than from therapy without”. This might seem contradictory with the previous results reported from FEST (Høgland et al., 2006). Patients with a history of less mature object relations benefited more from therapy with transference interpretations than without transference interpretation. The rationale for the continued direction of hypothesis two in Paper I on follow-up results, is based on mainstream clinical theory. The statistical analyses in Paper I were performed according to the description in the study protocol. The design and the predefined hypotheses have been followed thoroughly.

The LMM analyses are performed assuming that the patients that dropped out from the study (5 in the comparison group) represented “missing data” by random. Analyses with the outlier were also performed. The time x treatment was still significant. However, all drop-outs were in the comparison group. Thus, the missing data might not any longer be considered as missing at random. Therefore, the missing data could have been imputed by LOCF (Last Observation Carried Forward), or studied by pattern mixture approaches.

The FEST-study was not large enough for precise estimates of Effect Size. Confidence Interval can, however, support the interpretation of the LMM analyses. The LMM offer no model suited for Effect Size calculations.

No analyses with the variable “personality disorder” (PD) are reported. PD showed no moderator effect. However, since PD was part of the study protocol, it is mentioned that the analyses were performed.

The therapists had all long training in performing dynamic psychotherapy. Specifically trained psychotherapists are good for internal validity but less than optimal for generalizing to standard practice.

The experienced therapists used in the study may have been biased in favor of transference work and secretly felt that the patients deprived of it were getting less than optimal treatment (Gabbard, 2006). In the sub group of high QOR patients the therapists were clearly in favor of dynamic psychotherapy with transference interpretations at post-treatment (65 % vs 35 %). After therapies with low QOR patients, the therapists preferred the transference interpretations mode in 50 % of the therapies and the non transference mode in 50 % of the therapies. This seems to be in contradiction with the fact that low QOR patients profited more from transference interpretations than high QOR patients.

FEST comprises good integrity check on treatment fidelity and skills. Everything can, however, not be checked. The therapists may make technical adjustments when forced to use certain techniques. The raters were blind to treatment modality. However, before all follow-up evaluations were completed, some of the sessions had been rated by three raters with regard to treatment fidelity. The raters may have guessed from the content which group the patient belonged to and it might be possible that blinding may have been compromised for some patients.

The term “brief dynamic psychotherapy” is used in Paper I and II. In the literature (Leichsenring et al., 2004) brief dynamic psychotherapy or short-term psychodynamic psychotherapy generally range from 8-40 weekly sessions. In Europe long-term treatment has been understood as more than 1 year of therapy. According to recent discussion on the term “brief dynamic psychotherapy” vs. the term “dynamic psychotherapy”, 40 sessions usually seems to be defined as medium- to long-term psychotherapy. It has been more and more usual calling psychotherapy lasting more than 6 months, long-term therapy. Therefore, the therapies in FEST are not described as brief in Paper III and the succeeding papers.

It is not known whether the findings can be generalized to long-term psychotherapy and psychoanalysis.

Paper II: “Patient sex as moderator of effects of transference interpretation in a randomized controlled study of dynamic psychotherapy”

In the second paper it is examined whether women and men respond differentially to dynamic psychotherapy with or without transference interpretations during treatment.

As expected, on average, women and men responded equally across treatments. Gender did not predict outcome across treatments. The moderator analyses, using the two secondary outcome measures GAF and GSI, showed that female patients responded significantly better than men to transference interpretations, whereas men responded significantly better than women in the comparison condition (GAF, $P < 0.001$; GSI, $P < 0.03$). When the moderator of patient gender was combined with the moderator Quality of Object Relations, a strong effect emerged; women with low QOR showed a large positive effect, and men with high QOR showed a large negative effect of transference interpretations. When including the two pre-treatment differences (dominant and hostile) between women and men as covariates in the model, the moderator findings became somewhat stronger for both outcome measures.

Comments and limitations:

The moderator analyses with patient gender in FEST are hypothesis-generating studies (Kraemer et al., 2002). Patient gender seems to be a strong moderator of the treatment effect of transference interpretation and should be considered as a stratification variable in future RCTs. Then a formal test could be performed to explore an a priori hypothesis of a gender-by-treatment interaction effect.

The statistical gender analyses might be troublesome to interpret. It might be noteworthy remembering that gender was found to be a moderator over and above the moderator effects of QOR. Thus, the moderator effects of gender are controlled for the moderator effects of QOR.

The moderator analyses (Table 2 and Table 3, Paper II) assume normal distribution in the whole sample. The sub group analyses also assume normal distribution in the sub samples, which is often violated. The sub group analysis and the

estimations of the strength of the effects in the figures in Paper II are therefore used only as illustrations of the LMM analyses shown in Table 3.

Stoller (1968) distinguished gender (determined by psychological and cultural conditions) from sex (determined by physical conditions). In Paper II “sex” is used according to my understanding of the Instructions for authors in the Canadian Journal of Psychiatry at the time. In the succeeding three papers the term “gender” is used because it is obvious that the gender-variable not only encloses the patient’s biological sex. The interpretations of the treatment effects of transference interpretation for women and men take into account that the concept “gender” also includes behavioral and emotional reactions influenced by social and cultural expectations.

Paper III: “Women respond favorably to transference interpretation, men do not: a randomized controlled study of long-term effects of dynamic psychotherapy”

In the third paper the topic is whether the average relational functioning women and men respond differently to transference interpretation during the whole study period; and whether there are significant long-term effects of transference interpretation within the sub group of women and within the sub group of men.

In the moderator analyses, using the primary outcome measure PFS, controlling for QOR, women and men differed significantly in their long-term response to transference interpretation ($P=0.059$). Female patients with an average relational functioning showed a significant positive effect of transference interpretation ($P<0.037$). The positive treatment effect for women increased when treated by female therapists. Male patients with average relational functioning did not differ in response to therapy with or without transference interpretations.

Comments and limitations:

The analyses in this paper are also secondary gender analyses in FEST. The female and male genders are coded in two ways (0 and 1). QOR are centered at the cut-off level between high and low QOR. The time x treatment is directly interpretable for average QOR patients and women and men respectively. Neither centering QOR nor

changing the gender coding affect the moderator terms as can be seen in Table 3 in Paper III; e.g the time x treatment x gender are not affected.

Unfortunately, the methods for calculating Effect Size when using LMM, is not satisfying. As mentioned above, sub group analyses assume normal distribution also in the sub groups. Therefore Figure 1, Paper III is an illustration of the statistical findings and includes an attempt to estimate the Effect Size for the model predicted trajectories, controlled for QOR. The between groups effect size (Cohen's d) for women are presented. The calculation is performed using a formula fitting a study with two active treatments; i.e. SD_{pooled} (Smiths et al., 2004):

$$\text{Effect Size} = \frac{\text{mean difference}}{SD_{pooled}} \quad (\text{Cohens'd})$$

$$SD_{pooled} = \frac{\sqrt{SD_{\text{trasference group}}^2 + SD_{\text{comparison group}}^2}}{2}$$

The discussion on the significant longitudinal treatment effect in the sub group of women only after treatment might seem confusing. The LMM analyses revealed no treatment effect measured with PFS when only data from the treatment period were used (Paper II). During the whole study period, a significant treatment effect could be shown when data from the 4-year period from pre-treatment to 3 year follow-up were included in the analyses (Paper III).

Possible differences between self-report scales and clinician-rated scales are considered in the discussion section. The differences in significant results on IIP-C and GSI are not fully understood.

Paper IV: “Do gender and level of relational functioning influence the long-term treatment response in dynamic psychotherapy?”

The fourth paper is an extension of the previous papers. Whether the sub group of women with poor relational functioning (low QOR women) and the sub group of men with good relational functioning (high QOR men) showed different long-term treatment responses to transference interpretations was explored.

All four outcome measures are used. On both PFS and GSI women had a significantly more positive effect of transference interpretations than men (time x treatment x gender: PFS, $P < 0.059$; GSI, $P < 0.040$). A sustained different treatment-response between women with poor relational functioning and men with good relational functioning were found. The study indicates that women with a lifelong pattern of difficult relationships have a long-term positive treatment effect of transference interpretation ($P = 0.005$). No significant difference in slopes for high QOR men was detected.

In the discussion section in this paper a case vignette illustrates a good outcome process in a poor relational functioning woman.

Comments and limitations:

There are small sample sizes in the sub group analyses.

Linear- Mixed Model analyses can be built in different ways. For instance, the terms “treatment” and “QOR x gender” have not been used. The more parsimonious models are chosen in order to estimate the terms precisely. The patterns of the results are however similar with more complex statistical models (Paper I; Johansson et al., In Press). The constraint the statistical model places on the data seems to be justified.

As in Paper I-III the results are illustrated (Figure 1, Paper IV). The figure is based on model predicted results. The between group Effect Size and trajectories in (Figure 1, Paper IV; Figure 3, Present synopsis) can be considered only as illustrations of the moderator analyses. Therefore we also illustrates with descriptive data (Table 3, Paper IV). Model predicted and raw data are quite similar.

As an erratum the term “brief dynamic psychotherapy” is used once.

Paper V: “From submission to autonomy; approaching independent decision making. A single case study in a randomized controlled study of long-term effects of dynamic psychotherapy”

The fifth paper is a single case study. Female patients with poor relational functioning (low QOR) was the sub group of patients in FEST showing the best treatment effects from dynamic psychotherapy with transference interpretations. The aim of this study was to explore a highly successful therapy from this sub group of female patients, who have difficult relationships with other people. This paper explores the long-term change process. Quantitative data as well as qualitative data are used. On the basis of the previous gender findings in FEST, one low QOR woman with positive symptomatic change after psychotherapy with transference interpretations and positive dynamic change at follow-up was selected (i.e. she was recovered on GAF, IIP-C, PFS and GSI at treatment termination and at the follow-ups). The patient was depressed and felt exploitable. Case formulation, transcriptions from sessions, and repeated applications of self-reports and observer rated measures during and after therapy were used. Detailed observer ratings of the therapist–patient interaction, using Structural Analysis of Social Behaviour (Benjamin and Cushing, 2000) (Figure 1, Paper V) showed increasing patient autonomy and high positive complementarity throughout the therapy. The therapist’s countertransference feelings were almost exclusively positive. These findings coincide well with the patient’s sequential improvement; fast recovery from depression, gaining increasing insight, followed by improved interpersonal functioning together with being less exploitable (Table 1, Paper V).

Comments and limitations:

Case studies might to some extent, bridge between quantitative research results and clinical practice. To compensate for the subjectivity in traditional case studies (Hillard, 1993), a mixed design is used. Both quantitative and qualitative data are explored. Observer rated measures and patient self-report measures have been used to investigate quantitatively the therapy process and outcome in a single case. Qualitative data comprise the narratives of the patient’s predisposing life events, symptoms, psychological mechanisms, treatment story and impact of therapy.

This case study intends to present the improvement process and thus, illustrate a clinical model for the practitioner. The somehow rigorous approach with numerous outcome measures in FEST can hardly be a usable model for clinicians to investigate her or his clinical cases in everyday practice.

The examples of transference interpretations might not be utterly dramatic and convincing. In the clinical material from the described therapy, no more dramatic interpretations were found. The interpretations were always delivered in a friendly way and the therapy moved on smooth and undramatically.

5 Discussion of the main findings

In a review of manualized dynamic psychotherapy (Leichsenring et al., 2004) the authors concluded that this treatment modality is effective for a range of common mental disorders, but the evidence for long-term effects is limited, and future research needs to identify the active treatment components. FEST is a randomized controlled trial of dynamic psychotherapy designed to determine the long-term impact of a moderate level of transference interpretations (1–3 per session). Despite the absence of differential treatment efficacy, both treatments demonstrated significant improvement during treatment and also after treatment termination. The patients with a lifelong pattern of poor object relations, however, profited more from one year of therapy with transference interpretations than from therapy without transference interpretations. Low QOR patients benefited more from transference interpretations, both in the short (Høglend et al., 2006; Paper II) and long-term (Paper I; Paper III; Paper IV). High QOR patients were also highly responsive to transference interpretations. However, they benefited from therapy without transference interpretations equally well.

The literature (Connolly et al., 1999; Ogrodniczuk et al., 1999; Høglend et al., 1993; Gabbard et al., 1994) is suggesting caution in using transference interpretations early in therapy and especially in relatively short-term treatment. Connolly and colleagues (1999) and Ogrodniczuk and colleagues (1999) reported that low to moderate levels of transference interpretations were negatively correlated with outcome for patients with low QOR scores. Piper's finding from 1991 was that high levels of transference interpretation correlated negatively with outcome for high QOR patients. In a previous study from Høglend and his research group (Høglend et al., 1993) the same

was found. The frequency of transference interpretations in FEST was small to moderate to make sure there would be no harm by over-emphasizing transference work. The patients in FEST actually received very different levels of transference interpretations (but on average moderate levels). It may seem surprising that more disturbed people benefited positively in FEST when transference interpretations were used. The findings in FEST seem inconsistent with previous studies. It should be noted that these previous studies were naturalistic and correlational rather than experimental which means that the studies are not directly comparable with FEST. Correlational studies increase the number of potential explanations for the findings (Piper et al., 1993). However, correlational analyses within the transference group in FEST with low levels of QOR (N=25) also revealed a negative correlation between the level of transference interpretations early in therapy and outcome (Høglend, unpublished results). Correlational findings may lead to erroneous conclusions about the effects of transference interpretations. A dismantling study is the only method available to date, for studying causal effects. Based also on the correlational studies, it seems fair to conclude that high levels of transference interpretations (overzealous use) should be avoided for most patients, regardless of their QOR scale scores.

Transference and countertransference are closely linked concepts. The therapist's countertransference reactions seem important for exploring the psychotherapy relationship and entails understanding of the interpersonal aspects co-created by the therapist and the patient. Both participants in dynamic psychotherapy affect and are affected, by the other's transference material (Gelso, 2004). The therapist's countertransference feelings have been understood as a mostly unconscious phenomenon. The construct itself is extremely complex and unconscious phenomena are difficult to investigate empirically. On the other hand, as showed in Paper V, it is possible to register the therapist's feelings during therapy sessions (Røssberg et al., 2003), be they countertransferential in a strict sense or not.

Why do poor relational functioning patients seem to profit from transference interpretations? One speculation might be that when object relations are severely disturbed, it is necessary to interpret transference reactions within the therapeutic dyad. This allows the patient to experience directly the intensity of the feelings involved.

Other patients are able to integrate useful help with feelings that are handled slightly at a remove, as is the case of extra-analytic interpretations.

Paper II, III, and IV reveal that women responded significantly better than men to transference interpretation during therapy and during long-term follow-up. A possible reason for the good outcome for women when receiving psychotherapy with transference interpretations might be that women find the relationship with the therapist more personal and affectively expressive and therefore profit more from this kind of therapy. Verbalizing negative and positive feelings towards the therapist through transference work, might offer women a possibility for identification. For men, therapy without transference interpretations may fulfill their need for more distance and autonomy (Gabbard and Menninger, 1988). It is possible that male patients may experience a sense of competition with male therapists when focusing on the relationship between the two of them. Women and men seem not to differ in overall maturity (Petraglia et al, 2009), but differ in their defensive levels. Men are found to be more disavowal (projection falls under the disavowal defense category), show minor-image distortion, and are found to be more obsessional. Petraglia and colleagues discuss that it might be that men use more projection than women. They also report that men endorse suppression, isolation, devaluation, splitting, and omnipotence to a higher degree than women. This seems to correspond with the patient scorings in FEST where men described themselves as more hostile (vindictive) and dominant. Two studies (Barber, 2007; Comminos and Grenyer, 2007) have found that patients describing themselves as more dominant were less responsive to supportive–expressive dynamic psychotherapy. With patients characterized by greater dominance and hostility, the therapist (and the patient) may find it difficult to focus on transference. However, our analyses showed that pre-treatment variations between women and men could not explain the outcome differences (Paper II). Friedman and Downey (2008) have described competitive rivalry between males. It might be that since 82 % of the male patients were treated by male therapists in FEST (Ulberg, unpublished data), a possible competitive style between them could be of importance for the effect of transference interpretations.

Paper II describes the fact that there were significant gender differences on the on the GAF and GSI during treatment. On the primary outcome measures PFS and IIP-

C, there were no significant findings. The analyses in Paper IV reveals, however, that gender and relation functioning influence the long-term effect measured with PFS. This might support that symptom change occurs before psychodynamic changes.

The only defense mechanism that Petraglia and colleagues found that females clearly used more than males was affiliation, a defense mechanism comprising the comfort of others to manage conflict. In FEST the average relational functioning women benefited even more from transference interpretations (Paper III) when a woman was treated by a female therapist. If the findings that the alleged immediate affective resonance of transference interpretation is more productive for women compared to men, it might be connected with differences in use of defense mechanisms.

The poor relational functioning women were the sub group of patients in FEST showing the best treatment effects from dynamic psychotherapy with transference interpretations. It is possible that female patients with few or immature relations profit even more because the therapy and the therapist represents a new and positive experience characterized by stability, empathy and affiliation. Another possibility could be that transference interpretations enhance the attachment in low QOR patients. Levy et al. (2006), showed significantly greater improvements in attachment organization and reflective function after one year of transference-focused psychotherapy compared to two other treatment conditions. The patients were mainly female borderline patients (84 women and 6 men). Symptom change was equal between the three treatments. However, in FEST attachment organization and reflective function were not assessed.

One might assume that the patients in the sub group of low QOR-patients presented more preverbal or immature material than the high QOR patients. In psychoanalytical theory it has been suggested (Lester, 1990) that symbiotic (pre-verbal/maternal/immature) transferences are ubiquitous in psychotherapy. Lester discusses the possibility that when the patient with these symbiotic urges is a woman, a male therapist distances himself from the patient in symbiosis anxiety. That means that male therapists might neglect to meet the female patients' demands for basic care and instead focuses selectively on the more verbal/neurotic/mature aspects in the clinical material. According to Lester, the therapists in the non transference group might have avoided to meet the symbiotic and immature needs of the low QOR women. One speculation about the positive effect of transference interpretations for this sub-sample

might be that the transference interpretation bridges over this gap of understanding between the male therapist and the female patient. The transference focus might bring about a positive maternal and containing environment for women with mainly pre-verbal/symbiotic pathology.

There are some challenges when trying to understand the gender differences measured with the four main outcome measures in FEST; two self-rating scales (IIP-C and GSI) and two clinician-rated scales (PFS and GAF); two measuring dynamic, interpersonal change (PFS and IIP-C) and two measuring symptomatic, functioning change (GAF and GSI). During therapy, gender differences were revealed using GAF and GSI; while during the whole study period gender differences were revealed with GSI and PFS. Recovery from symptom distress often precedes dynamic maturation (Paper V). Why PFS and not IIP-C reveals significant improvement up to 3-year follow up might be partly explained by differences between self rating scales and clinician rated scales. PFS which are clinician rated, operationalize clinical inference. These scales were rated with high precision using three expert raters on each occasion. IIP-C which is a patient rated scale, may fail in differentiating people who are healthy from those who are defensive deniers of distress and may be less sensitive in detecting change than clinician-rated scales (Shedler et al., 1993; Cousineau and Shedler, 2006).

The domains of biological research and psychoanalysis have often not communicated with each other. Some authors (Moras, 2006) argue that neuroscientific studies of distinct psychiatric conditions can help identify the correlates of mental problems at the level of neurophysiology or neuronal function. Neuroscientific studies of psychiatric conditions can help identify the factors that underlie the disorders. In turn, this can allow for the revision and further development of therapeutic interventions designed to directly target underlying cortical processes (Joyce, 2006). The findings so far, seem to have little or no value for clinical practice and one should be careful when drawing a connection between neuroscience and other biological findings and response to psychotherapy.

However, one might find support in neuroimaging and endocrinology for speculations on the background for the gender differences found in response to transference interpretations. One finding is the gender differences in brain activation-pattern (fMRI) between women and men during processing of negatively valenced

words versus non-words (Hofer et al., 2007). Women showed greater activation in areas participating in understanding and expressing language and processing emotions and memories. Men showed greater activation in areas important for executive functions and behavior. Transference interpretations often spot difficult conflict areas. Gender-related neural responses to emotional stimuli might be connected to different responses between women and men to transference interpretations. Oxytocine (higher levels in women than in men) partly determines interpersonal affiliation during loss of social contact. The mechanisms are distinctly different in women and men (Taylor and Gonzaga, 2007). Female wolves sought contact with other female wolves while male wolves sought solitude and loneliness after stressful events. This result might somehow be connected to the gender differences found in profiting from transference interpretations. Despite this, one should be careful when drawing a connection between neuroscience and other biological findings and response to psychotherapy.

Other research areas have also explored gender differences and might contribute to speculations on the gender differences in FEST. In a review of conversation research Coates (2004) maintains that women are more indirect, pay more compliments to other speakers and use more linguistic forms associated with politeness, while men talk more and use aggravated directives to get things done. Feminine speech is often labeled cooperative and powerless while male speech is often labeled competitive. In the transference therapies, the therapists encouraged the patients to explore thoughts and feelings about the therapist. It might be that these techniques offered women an experience of inclusion and cooperation and opened up for reflection, while men experienced a more competitive situation (Friedman and Downey, 2008).

6 Clinical implications of the main findings and future research

There is probably an array of active ingredients in the therapeutic action of psychotherapy and it requires a sensitive practitioner to tailor the approach to the patient. The treatment should be adjusted to the patient, not the patient to the treatment (Gabbard, 2004).

Research on the effect of transference interpretations does not support the use of high levels of transference interpretations. High frequency of transference interpretations does not seem to overcome defensiveness, resistance or hostility in “difficult patients” (Høglend and Gabbard, In Press). Moderate emphasis on transference work may be particularly useful when treating patients with personality disorders pathology and more severe and chronic difficulties in establishing stable and fulfilling relationship. This might be of importance because this is a group that require more mental health treatment, has a higher death rate, and are more often disabled and put out of the work force.

The effect of gender and level of relational functioning on response to psychotherapy might contribute to develop more targeted treatment interventions to women and men. Poor relational functioning women might be a sub group of patients profiting most from transference interpretations.

The effects of transference interpretations and other interpretations are probably dependent upon the quality of the interaction between the patient and the therapist when the interpretations are offered. Certain characteristics of interpretations and the context might be important; e.g. the timing, the therapist’s countertransference feelings, how the patient reacts to the interpretation, and stage of therapy. Since there is still little known about effective therapeutic factors, a detailed description of process in dynamic psychotherapy with or without transference interpretations should be explored. Scoring the process of interaction (e.g. SASB) between therapists and patients in a large number of sessions from different therapies, might add some knowledge upon important aspects of the interpretations themselves.

Future research may add transference interpretations to other psychotherapy modalities for depression, anxiety, and personality disorders and investigate the potential for improved outcomes.

It remains to be seen whether patients with high Quality of Object Relations Scale scores and especially high QOR men, may benefit from transference interpretations in long-term intensive therapy.

7 References

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8 Appendix

8.1 Outcome measures

Psychodynamic Functioning Scales (PFS) (Høglend et al., 2000; Bøgwald and Dahlbrender, 2004; Hagtvet and Høglend, 2008). PFS were developed to capture statistically significant clinician-rated changes in psychodynamic and interpersonal functioning. These six scales have the same format as the Global Assessment of Functioning, and ranges from 1 – 100. PFS measure psychological capacities over the previous three months. The scales are Quality of Family Relationships, Quality of Friendships, Quality of Romantic/Sexual Relationships, Tolerance for Affects, Insight, and Problem Solving Capacity. Interpersonal functioning is the mean of the three interpersonal sub scales. Aspects of content validity, internal domain construct validity, inter-rater reliability, discriminant validity from symptom measures, and sensitivity for change in dynamic therapy have been established (Høglend et al 2000; Bøgwald and Dahlbrender, 2004; Hagtvet and Høglend, 2008). Three clinical raters, blind to treatment group, made evaluations at pretreatment, and again 1 year, 2 years, and 4 years after the start of therapy. The inter-rater reliability estimates (ICC) for average scores used in this study were about 0.90 for the Psychodynamic Functioning Scales. According to the criteria from Jacobson and Truax (1991) the change should be more than 4.2 points and the score on the Psychodynamic Functioning Scales should be less than 70 at pre-treatment and more than 71 after treatment for the patient to be recovered (Jacobson and Truax, 1991).

Inventory of Interpersonal Problems - Circumplex version (IIP-C) (Alden et al., 1990). IIP-C was designed to identify interpersonal sources of distress. The total mean score measures psychodynamic change and change in interpersonal functioning. The circumplex model has 8 sub-scales; dominant, hostile (vindictive), cold, socially avoidant, non-assertive, exploitable, overly nurturing and intrusive. The patients rated each of the 64 questions on a scale from 0 – 4. The IIP-C items appear in two forms: “It is hard for me to....” and “I....too much.” IIP-C was used to assess at pre-treatment, mid-treatment, post-treatment, at 1-year follow-up, and at 3-year follow-up. IIP-C had high internal consistency, high test-retest reliability and the instrument is sensitive to clinical change (Horowitz et al., 1988). In FEST Reliable change is expected to be more

than 0.37 points and the cut-off score is 0.77. The sub scale “exploitable” is used in Paper V. In Paper II the gender findings are controlled for the scores on the two sub scales “dominant” and “hostile”, different in women and men.

Global Assessment of Functioning (GAF) (Diagnostic and statistical manual of mental disorders, 1987) is a clinician rated measure which captures symptom relief. Hilsenroth and colleagues (2000) found GAF to be a reliable measure with high construct validity concerning global psychopathology. On the Global Assessment of Functioning the patient should improve from a score less than 70 to more than 71 and the change should be more than 5.8 for the patient to be recovered (Jacobson and Truax, 1991). Three clinical raters, blind to treatment group, made evaluations at pre-treatment, and again at post-treatment, 1-year follow-up, and 3-year follow-up. For the GAF, the inter-rater reliability estimates for average scores of 3 raters were more than 0.90. GAF was used at pre-treatment, at post-treatment, at 1-year follow-up, and at 3-year follow-up.

Symptom Checklist-90-R (SCL-90) (Derogatis, 1983) measures severity of psychiatric psychopathology and symptom distress. SCL-90 is a self rating form with 90 items. The patients rated each of the questions from 0 – 4. Based on factor analyses nine syndrome subscales have been used. One of them is depression (Paper V). Vassend and Skrodal (1999) reviewed the literature on validation and reliability of SCL-90. The construct validity and the external validity have been stated (Tingey et al., 1996). Vassend and Skrodal (1999) and Carpenter and Hittner (1995) have revealed factorial invariance across gender. In FEST Reliable change is expected to be more than 0.40 while the cut-off used is strict; 0.51. In FEST SCL-90 was used at pre-, mid-, post-, and at 1- and 3 year follow-ups. The Global Severity index (GSI) is the grand mean of SCL-90.

Measures used in Paper V

Feeling Word Checklist (FWC-58) (Røssberg et al., 2003) is a registration of the feelings awakened in the therapist during the sessions. The therapists fill in the form after each session. A psychometric evaluation of the extended version of Feeling Word checklist is reported by Røssberg and colleagues. They recommend 7 factors. Factor

analysis in FEST has however, revealed 4 main factors; positive, negative, paternalistic, and distancing. In Paper V 3 main factors are used and called countertransference feelings.

Therapist Representation Inventory (TRI) (Geller and Farber, 1993) is a registration of the patient's internalized representations of the psychotherapist and the psychotherapeutic relationship on a continuous scale from 1 to 10. In Paper V the factor "Internal Dialogue with Therapist" is used. One example of the statements is "I try to solve my problems in the way my therapist and I worked on them in psychotherapy".

Structural Analysis of Social Behaviour (SASB) (Benjamin and Cushing, 2000) is a method for doing fine grained analyses of the interaction between patient and therapist. The SASB arranges categories in a circle defined by an underlying horizontal axis of affiliation (hostile versus friendly) and a vertical axis of autonomy (independence versus control). Around these two axes the circumplex SASB - model has 8 clusters for plotting interpersonal behavior and social discourse (Figure 1, Paper V). Two experienced therapists were trained for the SASB-coding of the therapist-patient interactions during therapy session. Inter rater reliability estimates, Weighted Kappa, were 0.66, 0.80 and 0.70 (average 0.72).

8.2 Moderators

Quality of object relations (QOR) (Azim et al, 1991) is one dimension supposed to predetermine suitability for dynamic psychotherapy (Høglend, 2000). Piper and Duncan (1999) have summarized the investigation in several clinical studies on the reliability and construct validity of QOR. In FEST three clinical evaluators rated the patients' lifelong pattern of interpersonal relations on the QOR 8-point scale ranging from primitive to mature. The pre-determined cut-off for low versus high QOR was 5. The inter-rater reliability for the average scores of three raters was 0.84.

Quality of interpersonal relationships:

- 8 – 5: A history of relationships characterized by stability, gratification and mutuality in most important relations. Others are seen as whole, autonomous persons. Recent interpersonal functioning may be poorer, but the patient can give detailed examples from at least one earlier important high quality relationship. Conflictual feelings may be seen towards same sex persons and fears of loss of opposite sex persons.
- 4 – 3: Mostly stable but less gratification and mutuality in most important relations. Passivity, dependency or need to control others are predominant due to separation anxiety.
- 2 – 1: Mostly unstable relations of little valued persons. Others are seen as need-gratifying objects. Stable overly dependent relations only with parental objects.

Quality of sexual intimate relationships:

- 8 – 5: Ability to establish a deep mutual and stable relationship which includes sexual gratification and mutual support. Willingness to allow emotional vulnerability.
- 4 – 3: Submissiveness, controlling traits or low self—esteem interfere with sexual gratification and deep mutual contact. Lack of full commitment or preoccupation with possible loss.
- 2 – 1: Superficial unstable sexual relationships or unable to initiate sexual relationships.

Recent friendships:

- 8 – 5: Give-and take relations with at least two friends.
- 4 – 3: Superficial friendships or one mutual friendship.
- 2 – 1: No more than one confident outside near family.

Patient gender was used as a post-hoc putative moderator.

8.3 Some abbreviations

DSM	Diagnostic and Statistical Manual of Mental Disorders
FEST	First Experimental Study of Transference Interpretations
GAF	Global Assessment of Functioning
GSI	Global Severity Index
IIP-C	Inventory of Interpersonal Problems—Circumplex Version
LMM	Linear-Mixed Models
PFS	Psychodynamic Functioning Scales
QOR	Quality of Object Relations
SASB	Structural Assessment of Social Behavior

8.4 Figures

Figure 1. Schematic illustration of nested nature of longitudinal data in FEST. Modeled after Tasca and Gallop (2009).

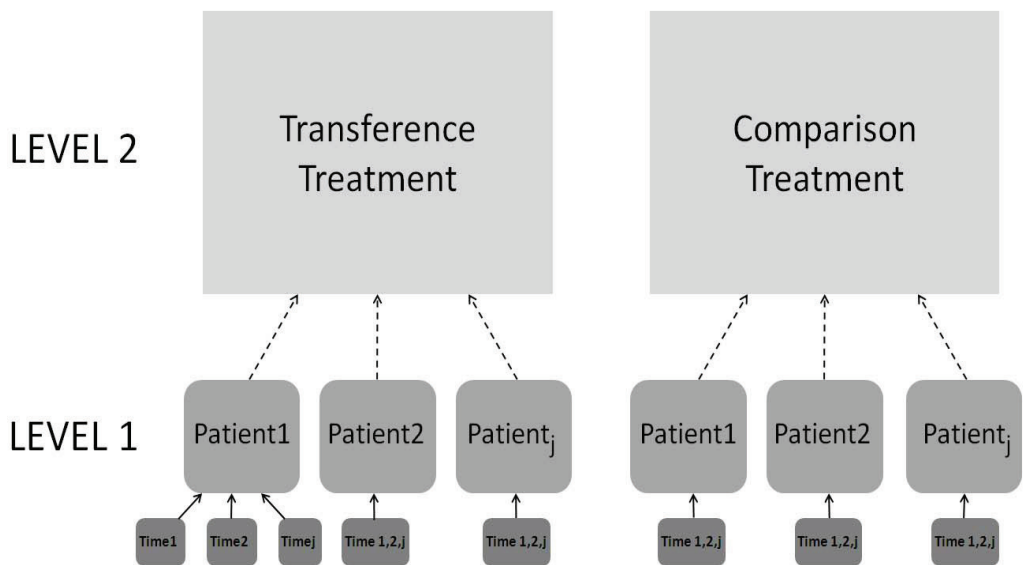


Figure 2. The proportion of patients recovered on both the primary outcome measures PFS and IIP-C at three year follow-up.

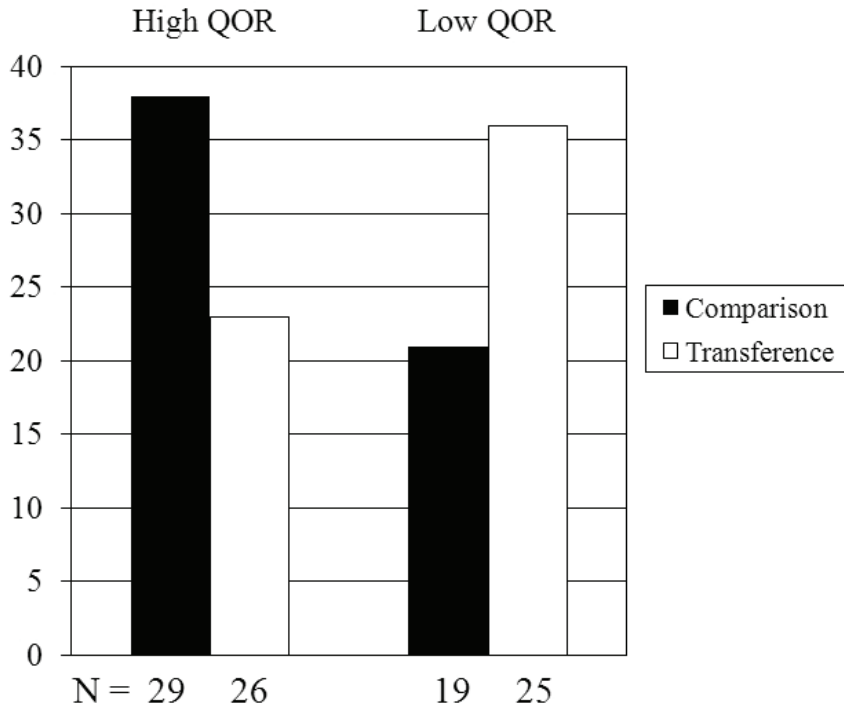
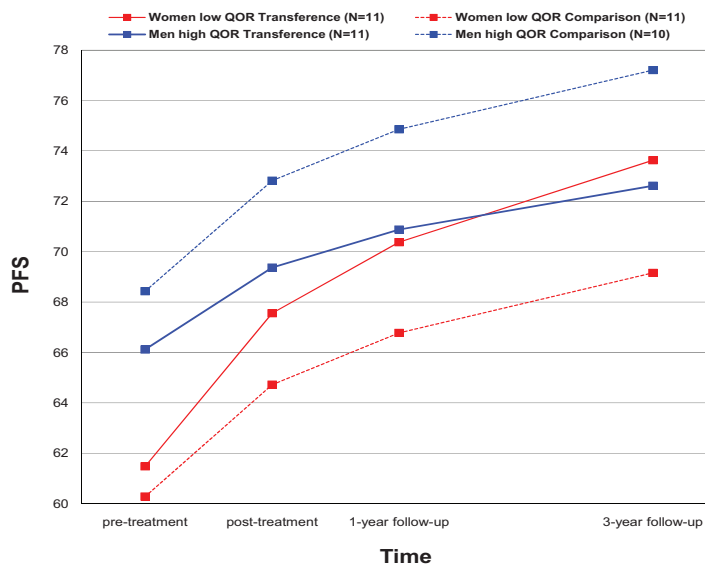


Figure 3. Trajectories of the Psychodynamic Functioning Scales (PFS) for the transference group and comparison group within the subsamples of female patients with low scores and male patients with high scores on the Quality of Object Relations Scale (QOR)



Between groups effect sizes
(Cohens' d)

Women:

	0.91	1.02	1.09
p=0.268	p=0.045	p=0.027	p=0.018

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Highlights

PSYCHODYNAMICS OF EATING DISORDER BEHAVIOR IN SEXUAL ABUSE SURVIVORS

Colin A. Ross, M.D.

FROM SUBMISSION TO AUTONOMY: APPROACHING INDEPENDENT DECISION MAKING. A SINGLE-CASE STUDY IN A RANDOMIZED, CONTROLLED STUDY OF LONG-TERM EFFECTS OF DYNAMIC PSYCHOTHERAPY

**Randi Ulberg, M.D., Per Høglend, M.D., Ph.D.,
Alice Marble, Psy.D., and Øystein Sørbye, M.D.H.**

Dedicated to the Transtheoretical Practice and Research of Psychotherapy

From Submission to Autonomy: Approaching Independent Decision Making. A Single-case Study in a Randomized, Controlled Study of Long- term Effects of Dynamic Psychotherapy

RANDI ULBERG, M.D.*
PER HØGLENDE, M.D. Ph.D.#
ALICE MARBLE, Psy.D.#
ØYSTEIN SØRBYE, M.D.H.

In the First Experimental Study of Transference Interpretations (FEST), showing the best treatment effects from dynamic psychotherapy with transference interpretations, one subgroup was female patients who had difficult relationships with others (low quality of object relations).

The aim of the present study was to explore further a highly successful therapy for this subgroup with a single case study in a randomized, controlled study of long-term effects of dynamic psychotherapy with a patient who was depressed and felt exploitable. Case formulation, transcription of sessions, and repeated applications of self-reports and observer-rated measures, both during and after therapy, are used. Detailed observer ratings of the therapist-patient interaction, using Structural Analysis of Social Behaviour (SASB) showed increasing patient autonomy and high positive complementarity throughout the therapy. The therapist's countertransference feelings were almost exclusively positive. These findings coincide well with the patient's sequential improvement: quick recovery from depression, increased insight, and FOLLOWED BY improved interpersonal functioning and less exploitability.

KEYWORDS: long-term effect; gender; therapy process; transference interpretation; psychodynamic

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INTRODUCTION

During the last century, development in psychodynamic psychotherapy was primarily based on clinical data, with a reliance on case reports and case studies. Talented practitioners described mental states, e.g. Klein's (1975) paranoid-schizoid position and depressive position based on a blend of intuition and clinical experience. Traditional single-case studies have been criticized for relying too heavily on narrative persuasion, revealing highlights, few details, having only one ending and no loose ends (Charman, 2004; Lorentzen & Høglend, 2002). The evidence is not rich enough for the reader to draw his own conclusions.

Hillard (1993) described three basic types of single-case research: A) Single-case experiments that involve quantitative data, manipulation of treatment variables, and hypothesis testing. B) Single-case quantitative analyses that may be used for generation of hypotheses. C) Single-case studies using qualitative data. The present study has a mixed design. With data from a randomized controlled trial, both B and C are used. We used observer-rated measures and patient self-report measures to investigate quantitatively the therapy and outcome in a highly successful case. Qualitative data has been explored to construct the narratives of the patient's predisposing life events, symptoms, psychological mechanisms, treatment story, and impact of therapy.

The goal of psychodynamic psychotherapy is long-term psychodynamic change (Gabbard 2004; McGlashan & Miller, 1982). This means improvement in areas such as tolerance of affects, interpersonal functioning, insight and autonomy, leading to increased competence and the ability to make independent decisions.

Clinical theory recognizes that a patient's gender contributes to his or her experience of therapy and therapist (Opdal, 2007; Notman & Nadelson, 2004). Using data from the First Experimental Study of Transference-interpretations (FEST), we previously reported (Ulberg et al., 2009a; Ulberg, et al., 2009b) that women with a history of less mature interpersonal relations, measured by the Quality of Object Relations Scale (QOR) (Azim et al., 1991; Høglend, 2003), had an especially positive treatment effect of transference interpretation in dynamic psychotherapy.

RESEARCH QUESTION

By using quantitative and qualitative approaches, we present the treatment model in FEST, explore the therapy process in a single case, and illuminate and illustrate a good outcome therapy process for one woman

with poor relational functioning. We hypothesize that changes in symptoms, self-image, insight and interpersonal functioning coincide well with the therapist's countertransference feelings and the changes in process between therapist and patient. We expect that in this good outcome therapy, the therapist-patient process is characterized by friendly complementarity, with very little antithetic turns between the therapist and the patient. We also wonder whether the use of transference interpretations would vary during therapy.

MATERIAL AND METHODS

Data from the First Experimental Study of Transference-interpretations (FEST) is used. Detailed descriptions of FEST—study's research design and methods have previously been published (Høglend et al., 2006; Høglend et al., 2008) and are briefly described here. A treatment manual in Norwegian was published in 1990 (Høglend, 1990). The Regional Ethics Committee, Health-Region 1, Norway, approved the study protocol.

Fifty-two patients were randomly assigned to dynamic psychotherapy with a low-to-moderate use of transference interpretation (the transference group). Forty-eight patients were assigned to dynamic psychotherapy without transference interpretation (the comparison group). The patients underwent weekly 45-minute sessions for one year. Before the random assignment, each patient had a two-hour psychodynamic interview (modified after Malan (1976) and Sifneos (1992)), which was audio recorded.

The transference interventions were categorized in different levels. The levels represent degrees of comprehension from superficial to profound analysis of the emotions and behavioral patterns. Level 1: the therapist addressed transactions in the patient-therapist relationship. Level 2: the therapist encouraged exploration of thoughts and feelings about the therapy and the therapist, including repercussions to the transference by high therapist activity. Level 3: the therapist was to encourage the patient to discuss how the patient believed the therapist might feel or think about the patient. Level 4: the therapist includes himself explicitly in interpretive linking of dynamic elements (conflicts), direct manifestations of transference, and allusions to the transference. Level 5: the therapist interprets repetitive interpersonal patterns and links these patterns to transaction between the patient and the therapist. In the comparison group these techniques were proscribed. Both treatments were mainly exploratory in nature.

Quality of Object Relations Scale (QOR) (Høglend, 2003; Azim et al., 1991) was the preselected primary moderator in the study protocol. The

QOR measures the patient's life long tendency to establish certain kinds of relationships with others, from mature to primitive. Quality of Object Relations represents a personality style associated with the capacity to establish and maintain a collaborative relationship for instance with the therapist based on mutuality and autonomy. Low QOR score (below 5) indicates a history of less gratifying relationships, characterized by need for dependency or over control.

OUTCOME MEASURES

In the present case study, we use several outcome measures: both clinician-rated measures and self-reports.

Psychodynamic Functioning Scales (PFS)

Psychodynamic Functioning Scales (Høglend et al., 2000; Bøgwald & Dahlbrender, 2004; Hagtvet & Høglend, 2008) were developed to capture statistically significant clinician-rated psychodynamic changes and interpersonal functioning. These six scales have the same format as the Global Assessment of Functioning, and measure psychological capacities over the previous three months. The scales are Quality of Family Relationships, Quality of Friendships, Quality of Romantic/Sexual Relationships, Tolerance for Affects, Insight, and Problem Solving Capacity. Interpersonal functioning is the mean of the three interpersonal sub scales.

Inventory of Interpersonal Problems—Circumplex version (IIP-C)

The IIP-C (Alden et al., 1990) total mean score measures psychodynamic change and change in interpersonal functioning. The circumplex model has eight subscales, among which "exploitable" is one.

Global Assessment of Functioning (GAF)

The GAF (DSM.3rd ed, APA, 1987) is a clinician-rated measure that captures symptom relief.

Symptom Checklist-90 (SCL-90)

The SCL-90 (Derogatis, 1983) measures severity of psychiatric psychopathology and symptom distress.

Feeling Word Checklist (FWC-58)

The FWC-58 (Røssberg et al., 2003) is a registration of the feelings awakened in the therapist during the sessions (countertransference). The therapist filled in the form after each session. Factor analysis has revealed three main factors; positive, negative and paternalistic.

Therapist Representation Inventory (TRI)

The TRI (Geller & Farber, 1993) is a registration of the patient's internalized representations of the psychotherapist and the psychotherapeutic relationship by agreeing or disagreeing with a set of statements. The factor "Internal Dialogue with Therapist" is used. One example of the statements is "I try to solve my problems in the way my therapist and I worked on them in psychotherapy".

Structural Analysis of Social Behaviour (SASB)

The SASB (Benjamin, 1986; Benjamin 1995; Benjamin 1996a; Benjamin, 1996b; Benjamin, 2000; Benjamin & Cushing, 2000) is a way of describing aspects of self-image, but is also a method for fine-grained analyses of the interaction between patient and therapist. The SASB arranges categories in a circle defined by an underlying horizontal axis of affiliation (hostile versus friendly) and a vertical axis of autonomy (independence versus control). Around these two axes, the circumplex SASB-model has eight clusters for plotting interpersonal behavior and social discourse.

In the present study, we use the SASB system to analyze the interpersonal process. Clinician-rated process is an instrument aimed at assessing emotional and unconscious aspects of therapeutic interaction. The method is a microanalytic coding procedure, that is, it involves measurement of each turn of speech between the therapist and the patient in treatment sessions. Two surfaces (focus other and focus self) are coded (Benjamin, 2000).

Two experienced therapists were trained for the SASB-coding. Interrater reliability estimates (weighted kappa) (Simon, 2006) measured three times during the scoring period were 0.66, 0.80 and 0.70 (average 0.72). The coders worked from a transcript, while listening to recordings for intonation and nonverbal signals. Seven minutes of each selected session was transcribed, including material from the beginning, middle, and end of session. Speech was coded for the here-and-now interaction between the patient and the therapist (process analysis). Try something like this: Three sessions, each representing a phase of treatment, were scored using the SASB, session 7 (from the beginning of treatment), session 16 (mid-treatment) and session 29 (randomly chosen from the late-phase).

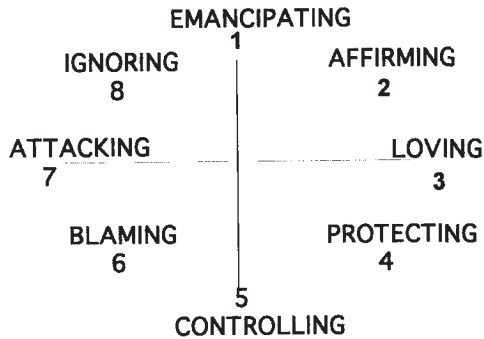
PATIENT SELECTION

We selected the patient in the present study because of a distinctively good outcome. We made the selection after the last follow up, based on the

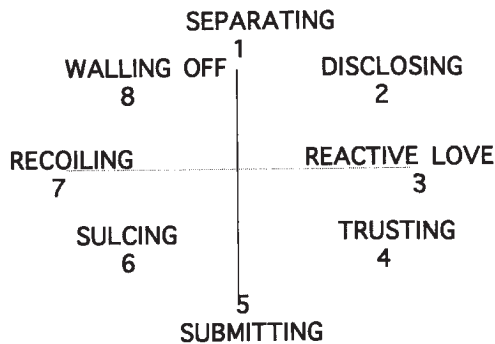
Figure 1

THE STRUCTURAL ANALYSIS OF SOCIAL BEHAVIOR (SASB): THE EIGHT CLUSTER VERSION MODELED AFTER BENJAMIN & CUSHING (2000).

SASB cluster: focus on other; the therapist focus on the patient; observer rated:



SASB cluster: focus on self; the patient focus on the patient; observer rated:



clinician rated GAF and PFS, but before we looked at the results from the self-report measures and observer-rated SASB process.

We have used all available data for the narrative including, the case formulation (Eels, 1997), transcripts and audiotapes. Furthermore, several expert raters read all the available data and the therapist's detailed account of the treatment process. Case formulation is the process by which the clinician posits hypotheses about the personal meanings, causes, and long-standing influences on a person's psychological, interpersonal, and behavioral problems. A case formulation helps organize information about the patient. (Eels & Lombart, 2004). In our study, we developed a case formulation based on those assessments made by three independent

experts who listened to the psychodynamic pretreatment interview (Malan, 1976; Sifneos, 1992).

STATISTICAL ANALYSES

We used SABS-works, the SASB-statistical program (Benjamin, 2000) and SPSS, version 16, for the statistical analyses.

PATIENT; SYMPTOMS AND NARRATIVES

Ann was a 31-year-old nursery school teacher referred by her general practitioner because of depression, a sense of emptiness and helplessness, and lack of energy. She felt overburdened with her tasks as a leader at work, and was considering leaving her romantic partner, but was ambivalent regarding this.

Symptoms and complaints

Ann described depressive symptoms of one year's duration. There was no acute triggering stressor. She felt that she took on too much responsibility at work without being sent for relevant refresher courses. She felt attentive towards her partner and friends without receiving much in return. Since she was a teenager, she had always felt highly exploitable. She recounted that she felt vulnerable and tended not to forget an unkind remark. She described her quality of life as poor.

Predisposing Life Events. Ann grew up on a farm, the oldest of three sisters. Her mother was a fulltime housewife, though educated as a social worker. Ann's father was a farmer and a former military officer. Ann felt that her mother did not consider the children's feelings enough because she was too submissive to her husband. Ann described him as a domineering and religious man. The patient described her two younger sisters as unruly and demanding, and Ann took a nurturing role towards them. She knew many people, but had no close friends or relationships during childhood, adolescence, or young adulthood.

Psychological Mechanisms. In childhood, Ann tried to help her mother and to search for acceptance from her father. From 14 years of age, Ann had had several boyfriends. She fell in love very easily, but soon lost interest, and felt tired and uneasy. She found it difficult to end unsatisfying relationships. Ann seemed to love the relatively few people she knew, sought their approval, and longed for love in return. As an adult, she thought she had to manage everything both at work and in relationships with others by herself. She seemed to accept any demand from work and her partner, though she had a low tolerance for stress.

Diagnosis. She was diagnosed with major depressive disorder and no personality disorder. Her Quality of Object Relation Scale score was low (QOR=4.3).

TREATMENT HISTORY

Ann had never previously received any kind of psychological or psychopharmacological treatment. In FEST she was randomized to individual dynamic psychotherapy with transference interpretations (transference group). The therapist was a psychodynamically trained, experienced, male psychotherapist. The therapy lasted for 38 sessions.

Ann expected a lot from therapy, thinking it could help her understand herself better. She also hoped she could become more independent and less exploitable.

Initially, Ann tried to be a clever patient and seemed to respond exactly the way she thought the therapist expected her to. She wanted the therapist to teach her how to think and talk during the sessions and tell her what the goals were. The therapist explored her dependency, her tendency to care about others while not caring about her own needs, and her perceived lack of equality between her and other people.

After some time, Ann stated that she looked forward to the therapy sessions and seeing the therapist. She explored the way she easily fell in love with men even though she did not feel any real attraction to them. She often focused on her dependent relationships with her parents and wondered how she could listen more carefully to herself. Ann was often concerned about the therapist's well being. Several times, she asked the therapist if he was tired. She was grateful to the therapist for his emotional closeness and for giving her the opportunity to reflect on her life and herself. Gradually, she understood how she took the caring role in her family to compensate for the lack of care that she felt from her mother. While in therapy, she left her partner and decided to leave her job and move away.

WORK ON TRANSFERENCE

During therapy the transference work changed from superficial to deeper exploration. Levels 1, 2, and 3 are preparatory interventions. Levels 4 and 5 are transference interpretations. Early in therapy, the identified transference interventions were in level 1 and 2. In the middle phase of the therapy, the transference interpretations were in levels 3, 4, and 5. Late in therapy, few transference interpretations were used, but more work on exploration of external relationships was performed.

Example with Transference Interpretation in Level 4

The therapist included himself explicitly in the interpretive linking of dynamic elements (conflicts), direct manifestations of transference, and allusions to the transference:

Therapist: I remember you told me that you were a good listener, and that you seldom expected others to listen to you.

Patient: Yes.

Therapist: You have expected the same to happen here, but when you talked with me . . . that was something else?

Patient: Yes, that's right. Here I find it easy to think and . . . talk about myself.

Examples with Transference Interpretation in Level 5

The therapist interpreted repetitive interpersonal patterns and linked these patterns to transactions between the patient and the therapist:

Therapist: You experienced that you became attracted to that handyman because he seemed to be somehow attentive and caring towards you. You fell in love very fast, like you used to do since you were a teenager.

Patient: Yes, ehm.

Therapist: I don't know, but when I was attentive towards you and linked your relation to me to your relation to other people, you didn't fall in love with me, but it seems you became more attentive towards yourself.

Patient: Yes, that is absolutely right. I really wondered what happened with me when I met that guy. I find it easier to reflect here with you . . . I'm not hiding . . . my feelings . . . I don't fell in love to escape . . .

Most transference interpretations, as the two examples above, were delivered when the dyadic process was characterized by the therapist protecting and the patient trusting (cluster 4). Some transference interpretations were scored as controlling and the patient's response was scored as submitting (cluster 5). However, the patient still seemed to accept the intervention as a corrective emotional experience, and her responses moved from submitting to more autonomous self-exploring:

Therapist: Ehm . . . It's one more subject; you plan to leave your partner, Peter.

Patient: Yes, ehm.

Therapist: Then your are going to leave town, your job, Peter, and you are going to leave me. Is there a connection here?

Patient: Yes, it feels right. I think I can manage by my own. I want this change—want to build my own house.

Therapist: Yes.

Post-treatment

At termination, Ann acknowledged that the focus on the relationship between herself and the therapist had been helpful. She especially emphasized the exploration of how her repetitive behavioral and emotional patterns towards other people were connected to what she experienced in the therapy sessions.

Ann left her job and found work near her hometown. She married and built a house on her parent's farm.

At the 3-year follow-up Ann summarized: "I am more in contact with my self, and take myself more seriously, and see my own worth. I can forgive myself and ask for help if I need it." She was no longer depressed, but she still had some difficulty saying "no" to other people's demands. She believed that the most helpful aspects of therapy had been the therapist's caring attitude and interest. Her emphasis on the impact of transference interpretation was diminished at this time.

QUANTITATIVE RESULTS

On all the four outcome measures, PFS, IIP-C, GAF and SCL-90, the patient was recovered at post-treatment and at the 1- and 3-year follow ups. Table 1 summarizes more quantitative results.

The weighted autonomy score is the summary of the amount of autonomy. This score is calculated separately for the therapist and the patient based on transcript ratings and provides a measure of how emotionally close the therapist and the patient are to each other. The autonomy scale is the vertical axis in the SASB circumplex model. A negative value means that the process in the therapist-patient relation is controlling-submitting. A positive value means it is emancipating-separating. The therapist's autonomy scores changed from pretreatment to midtreatment. At treatment inception it was registered as a negative (-16.25) value, but as treatment progressed it turned into a positive (9.27) value and remained positive. The therapist turned from more controlling to more emancipating interventions. That is the therapist gradually encouraged autonomy and differentiation. The patient's autonomy scores also changed from a negative (-4.3) to a positive (18.12) value (Table 1). The patient changed from being submissive to being able to separate.

High complementarity in the therapist-patient process measured by the SASB, means that both the therapist and the patient are focused on the same person, and both are located in the same cluster. In the present

From Submission to Autonomy

Table 1. CHANGES IN PROCESS AND OUTCOME MEASURES IN A GOOD OUTCOME THERAPY DURING 1 YEAR DYNAMIC PSYCHOTHERAPY AND UP TO 3 YEAR FOLLOW-UP

Process	Weighted autonomy ^a Therapist	Wighted autonomy ^a Patient	Counter transference; Positive ^b	Counter transference; Negative ^b	Counter Transference; Paternalistic ^b
Pre-treatment	-16.25	-4.3	2.7	0.2	3.0
Mid-treatment	9.27	18.1	2.8	0.0	2.3
Late in treatment	9.97	15.4	3.2	0.0	2.3
1 year post-treatment		-	-	-	-
3 year post-treatment		-	-	-	-

Outcome	Depression ^c	Insight ^d	Internal dialogue with therapist ^e	Interpersonal functioning ^d	Exploitable ^f
Pre-treatment	1.9	65.7	-	65.0	2.00
Mid-treatment	0.3	-	-	-	0.69
Treatment termination	0.0	80.0	7.2	73.7	0.79
1 year post-treatment	0.0	81.0	2.0	81.1	0.50
3 year post-treatment	0.0	80.3	2.0	79.8	0.50

^aProcess autonomy; observer rated Structural analysis of Social Behavior

^bPositive, Negative and Paternalistic; sub scales of the counter transference form (Rossberg, 2003)

^cDepression; a sub scale of the Symptom Checklist-90

^dInsight and Interpersonal functioning; the mean of three sub scales of the Psychodynamic Functioning Scales

^eInternal dialogue with the therapist; Therapist Representation Inventory (Geller & Faber, 1993)

^fExploitable; a sub scale of the Inventory of Interpersonal Problems - Circumplex version

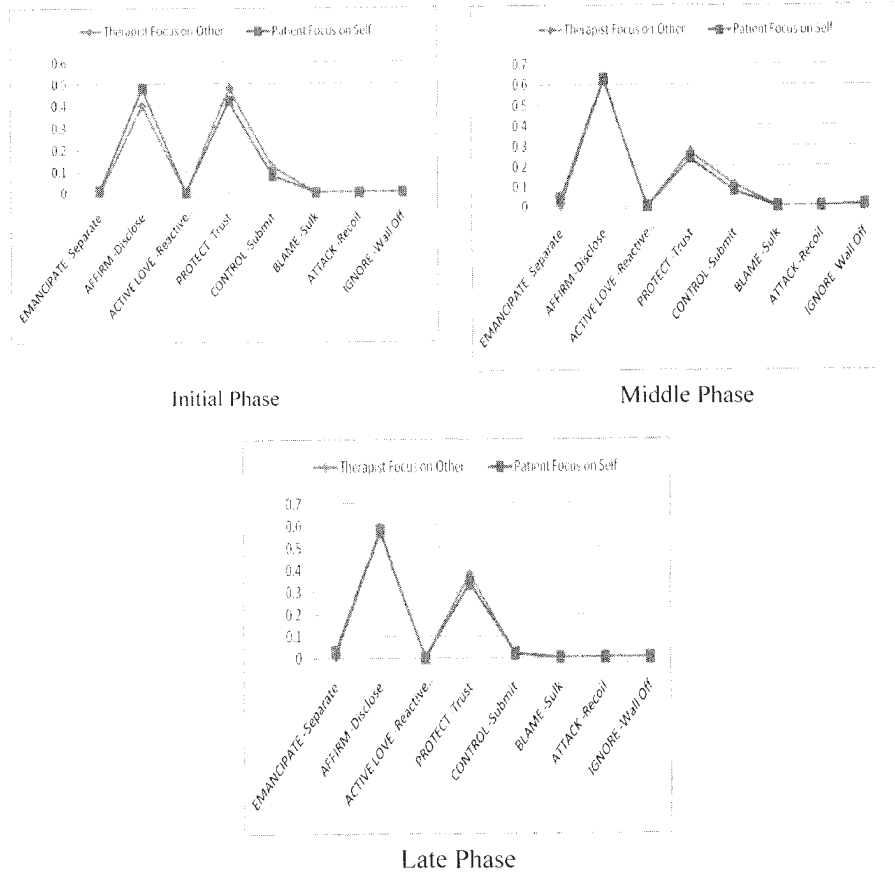
therapy, the therapist and the patient exclusively focused on the patient in the process between the two of them.

Figure 2 shows that during therapy the frequency of cluster 2 (affirming-disclosing) stays high, cluster 4 (protecting-trusting) diminishes, and cluster 5 (controlling-submitting) disappears. The process was highly complementary and probably supported more patient autonomy.

Very little antithetic interactions were found in the sessions. In the early and the middle sessions, a single therapist-patient interaction in each session was coded in opposite clusters; therapist was in cluster 5 (controlling) while the patient responded in cluster 1 (separating). In a session from the late phase of therapy no antithetic interactions were scored. No

Figure 2

FREQUENCIES OF CLUSTER IN-PROCESS SCORING WITH THE STRUCTURAL ANALYSIS OF BEHAVIOUR (SASB) IN DIFFERENT PHASES OF PSYCHOTHERAPY.



hostility between the patient and the therapist was found. Weighted affiliation (summary observer-rated SASB score horizontal axis) was highly positive and stable for the therapist and the patient throughout the whole therapy.

The therapist described more positive and very little negative feelings during therapy (Table 1). He also described more paternalistic feelings in the beginning of the therapy than in the middle and later phases.

The patient recovered rapidly from her depression and she also gained improved insight rapidly (Table 1). Interpersonal functioning changed during treatment but also very much after treatment. During treatment the patient described herself as less exploitable. This improvement also con-

tinued after treatment, in line with observer rated interpersonal functioning. At post-treatment the patient described a vivid internal dialogue with the therapist (Geller & Faber, 1993). However, at the 1- and 3-year follow ups, this dialogue was described as much less present in her mind.

DISCUSSION

In the First Experimental Study of Transference Interpretations (FEST), female patients with difficult interpersonal relationships (low QOR) was the subgroup who showed the most improvement from dynamic psychotherapy with transference interpretations.

The patient in the present case study profited highly. We found that the changes in the process between the therapist and the patient ran parallel with the patient's experienced symptom relief and the changes in the patient's self-image during psychotherapy. Improvement continued during the 3-year follow-up period.

Evidence in clinical empirical research suggests that the degree of friendly complementarity and little degree of antithetic turns of talk in the communication between the therapist and the patient enhance the outcome after psychotherapy (Henry et al., 1986; Critchfield et al., 2007; Lippe et al., 2008). The therapist-patient process in this good outcome therapy showed friendly interactions characterized by a high level of complementarity and few antithetic turns of talk between the therapist and the patient. Initially, the process was characterized by the therapist being controlling and the patient being submissive. Early on, the process changed to the therapist being more emancipating and the patient being more separating. The therapist encouraged differentiation, and the patient gained autonomy.

The therapist's countertransference reaction seems important for exploring the psychotherapy relationship and entails understanding the interpersonal aspects cocreated by the therapist and the patient. In dynamic psychotherapy both participants affect and are affected by the other's transference material (Gelso, 2004; Ferro & Basile, 2008). The therapist's countertransference feelings have been understood as an unconscious phenomenon. The construct itself is extremely complex and unconscious phenomena are difficult to investigate empirically. However, it is possible to register the therapist feelings during therapy sessions (Røssberg et al., 2003). In this successful case, the therapist described highly positive feelings and very little negative feelings towards the patient. The therapist also described more paternalistic feelings in the beginning of the therapy than in the middle and later phases.

During and after psychotherapy, the patient showed a sequential improvement. Initially, her depressive symptoms disappeared and her capacity for insight improved rapidly. Internalization of the therapist and the therapeutic relationship may promote the treatment's lasting impact. This is illustrated by the importance of the internal dialogue with the therapist during late phase of therapy. At the 1- and 3-year follow-up interviews she described the dialogue as much less present. It might be that with time, the dialogue with the therapist became a more integrated part of the patient's mental functioning, i.e. the external relationship, transformed into a meaningful internal relationship. Improvement in interpersonal functioning, and decrease in exploitability seemed to develop during therapy and continued during the 3-year follow-up period. After gaining symptom relief and insight, it might take more time to develop better interpersonal functioning (Johansson et al., submitted).

Consistent with the friendly complementarity between the therapist and the patient and the rapid improvement, the patient rated the alliance with the therapist very high throughout the whole therapy. A high, stable working alliance is of importance for outcome (Hersoug et al., 2009).

We found that the transference interpretations were delivered in a friendly way, and the patient seemed to take those interventions to heart. The transference interpretations were more exploratory in the middle than in the early phase of therapy. Patient responses to transference interpretations are quite limited in the short transcripts. Delayed responses are beyond the scope of this paper. In a single case study it is difficult to make causal conclusions, but based on the main study (Høglend et al., 2008), it is reasonable to believe that these interventions contributed to the good short- and long-term results for this woman.

After treatment, the patient emphasized the impact of the use of transference interpretations, and the patient was grateful to the therapist for creating a sense of closeness and being receptive to her contributions.

The quantitatively measured changes in the therapist-patient process, the symptom relief, the changes in psychodynamic functioning, and the patient's self-image, coincided, in our opinion, well with the narratives. Initially the patient was submissive to the therapist, and the therapist explored the lack of mutuality in her relations to other people. During the therapy and the follow-up period, the patient's autonomy and ability to make important personal decisions increased. While still in therapy she left her partner, and after therapy, she moved, changed jobs, and married.

On the four outcome measures, the PFS, IIP-C, GAF and SCL-90, this patient showed significant change and was considered recovered. How-

ever, since this is a single case study, we cannot know whether the quantitative results on the subscales and SASB process are statistically significant changes.

The assessments used in the present study cover several outcome variables, including self-reports and observer-rated measures in line with an established research design. However, the intention has been to illustrate a well-known pattern during dynamic psychotherapy, the patient's development from submission to autonomy.

CONCLUSION

The process between the therapist and the patient showed friendly complementarity. The autonomy-encouraging interaction coincided with the positive changes in depressive feelings, insight, self-image, and interpersonal functioning. The patient became less exploitable and less "overly" caring after individual dynamic psychotherapy with transference interpretations. That is, she became more autonomous, independent, and capable of choosing what was best for herself.

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