The role of treatment duration in psychodynamic group therapy.

A randomized clinical trial of short-term and long-term Group Analytic Psychotherapy.

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‘Isolation only exists in isolation. Once shared, it evaporates.’

-Irvin Yalom

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Overview

Summary

The goal of all psychotherapies is to reduce the burden of symptoms, and to improve both interpersonal functioning and relationship to oneself. The efficacy of psychotherapy for a wide variety of different mental disorders has been clearly demonstrated. However, it remains unclear how long therapy must last for change to take place. There are hardly any systematic studies of the significance of treatment length in psychotherapy. In group psychotherapy, most outcome studies have an observational study design and are based on short-term therapies. Within the field of psychodynamic group therapy, our study is the first randomized trial investigating the impact of treatment duration. This study may generate knowledge on the differential effectiveness of short- and long-term dynamic group psychotherapy. Also, no previous randomized trials have investigated how presence of personality disorder (PD) impacts the long-term outcomes of group psychotherapy of different durations. Thus, there is a need for more research in these areas in order to develop evidence-based guidelines for outpatients receiving psychodynamic group therapy. This is especially relevant since psychodynamic groups are widely used within public mental health services.

My doctoral thesis is part of the study 'Short- and Long-term Group Analytic psychotherapy' (SALT-GAP), which randomized 167 psychiatric outpatients to either short-term group therapy lasting 6 months (20 weekly sessions) or long-term group therapy lasting two years (80 weekly sessions). Both therapies were manualized and targeted interpersonal problems, which are strongly related with distorted perceptions of both self and others (Lorentzen, 2014). Treatment fidelity and therapist competence were checked and found satisfactory. Inclusion criteria were at least one diagnosis on Axis I and/or Axis II of the DSM-IV. The patients were also required to identify interpersonal problems that they wanted to work with. Mainly, the patients suffered from depressive and anxiety disorders, whereas 45% of the patients had PDs. The main objectives of the study were to increase knowledge of the differential efficacy of short- and long-term psychodynamic group therapy, and to study process-outcome associations. The SALT-GAP study started in 2004, and the first groups were established in 2005. The evaluation at 3-year follow-up was completed in 2009, and a 7-year follow-up was done in 2013. The principal investigator is Professor Steinar Lorentzen,

University of Oslo. The present thesis contains three papers published in peer reviewed, international journals.

The SALT-GAP study has previously demonstrated that there were no significant differences between short- and long-term therapies for the average patient at 3-year follow-up. Symptoms (measured by the Symptom Check-List 90-R, SCL-90-R) and interpersonal problems (measured by the Inventory of Interpersonal Problems, IIP-C) were significantly reduced, and psychosocial functioning (measured by Global Assessment of Functioning; GAF) also improved significantly after both short-term and long-term therapy (Lorentzen, Ruud, Fjeldstad, & Høglend, 2013). At 7-year follow-up, we found support for a delayed effect (i.e. continued change after the end of therapy) in long-term therapy, and a significantly larger change for both symptoms and interpersonal problems, compared to short-term therapy (Lorentzen, Fjeldstad, Ruud, & Høglend, 2015a).

In paper I and II of the present thesis, the objectives were to compare the differential patterns of change in personality functioning between short-and long-term therapy, using assessments of interpersonal problems (IIP-C subscales) and self-concept, i.e., the mental image of and relationship we have to ourselves (measured by Structural Analysis of Social Behavior, SASB-introject) at 3-year follow-up.

Paper I compared the differential patterns of change on 5 subscales of the IIP-C. We found that problems on the cold and the socially avoidant subscales improved earlier in the 3 yearlong study period in short-term than in long-term therapy. For the cold subscale the change was significant, while there was a trend toward significance for the socially avoidant subscale. After 3 years there were no significant differences between the therapies for any of the examined subscales.

Paper II aimed to identify differential changes of the various aspects of how patients relate to themselves (self-concept) in the two group formats. Patients improved significantly more from long-term therapy on the vector score Affiliation (a weighted dimension expressing more self-love and/or less self-attack). This difference was explained by greater improvement in the Self-blame, Self-attack, and Self-neglect scores during and after long-term therapy. Patients changed significantly and similarly on the vector score Autonomy (a weighted dimension expressing degree of self-emancipation versus self-control) in both formats. These changes were not significantly different in the two interventions.

At 3-year follow-up, the SALT-GAP study has previously demonstrated that patients with PD improved significantly more regarding symptoms, interpersonal problems, and psychosocial functioning in long-term therapy compared to short-term therapy (Lorentzen, Ruud, Fjeldstad, & Høglend, 2015b). There was a significant moderator effect of PD in favor of long-term therapy using GAF as outcome variable, whereas the moderator effect was not significant using interpersonal problems and symptoms as outcome measures. Patients without PD improved significantly more in short-term therapy than in long-term therapy during the first 6 months, but there was no difference between the interventions at 3-year follow-up.

Paper III examined whether differences in effects could be demonstrated at 7-year follow-up between the two treatment formats, and whether presence of PD at baseline moderated the treatment effect up to that time-point. A considerable part of the changes in LTG were *delayed effects*. The differential effects of short-term and long-term therapy were compared for patients with and without personality disorder regarding both symptoms and interpersonal problems. We found that PD had a significant moderator effect for symptoms and a trend effect for interpersonal problems. Patients with PD showed significantly greater improvement on both outcome measures with long-term therapy compared to short-term therapy. This was mainly accounted for by changes in the nonassertive, exploitable, and overly-nurturant subscales (Bonferroni correction). For patients without PD there were no significant differences between the formats for either symptoms or interpersonal problems.

Summing up:

The present findings indicate that *the average patient* improved in both interpersonal functioning and self-relatedness in both short-term and long-term Group-Analytic Psychotherapy across 3 years. Patients treated in the short-term format even seemed to change earlier on interpersonal problems related to being too cold and socially avoidant. With regard to change in the patients' relationship towards themselves over the first 3 years, patients in long-term therapy were likely to modify their negative attitudes towards themselves compared to patients in the short-term therapy.

For patients *with PD*, the participants in the long-term format improved significantly more after therapy. There was a delayed effect after long-term therapy, while the change was sustained after short-term therapy. Patients without PD seem to have no further improvement in symptoms or interpersonal problems after the first 6 months in either treatment format.

There is a strong need for more research on predictors and moderators of outcome. The main point is to obtain more knowledge that can be useful for the practitioner in advising patients about treatment duration, as well as making decisions whether patients should be offered a short- or a longer-term group treatment.

List of papers

PAPER I.

Patterns of Change in Interpersonal Problems during and after Short-term and Long-term Psychodynamic Group Therapy: A Randomized Clinical Trial.

Fjeldstad, A., Høglend, P.A., Lorentzen, S. (2017). *Psychotherapy Research, 7* (3), 350-361. https://doi.org/10.1080/10503307.2015.1102357

PAPER II.

The effectiveness of short- and long-term psychodynamic group psychotherapy on self-concept: Three-year follow-up of a randomized clinical trial.

Lorentzen, S., Fjeldstad, A., Ruud, T., Marble, A., Klungsøyr, O., Ulberg, R., & Høglend, P.A. (2015). *International Journal of Group Psychotherapy, 65* (3), 363-386. https://doi.org/10.1521/ijgp.2015.65.3.362

PAPER III.

Presence of Personality Disorder Moderates the Long-Term Effects of Short-Term and Long-Term Psychodynamic Group Therapy: A 7-Year Follow-up of a Randomized Clinical Trial

Fjeldstad, A., Høglend, P. A., Lorentzen, S. (2017). *Group Dynamics: Theory, Research and Practice.* Advance online publication. https://doi.org/10.1037/gdn0000055

Abbreviations

ANOVA	-	Analysis of variance
CI	-	Confidence Interval
DSM IV/DSM V	-	Diagnostic and Statistical Manual of Mental Disorders
ES	-	Effect-Size
GAD	-	Generalized Anxiety Disorder
GAF	-	Global Assessment of Functioning Scale
GSI	-	Global Severity Index
ICC	-	Intra Class Correlation
IIP-C	-	Inventory of Interpersonal Problems – Circumplex
LMM	-	Linear mixed model
MBT	-	Mentalization-Based Therapy
OIP	-	Outpatient Individual Psychotherapy
PD	-	Personality Disorder
RCT	-	Randomized Clinical Trial
SALT-GAP	-	Short- and Long-Term Group Analytic Psychotherapy
SASB	-	Structural Analysis of Social Behavior
SCID-II	-	Structured Clinical Interview for DSM-IV
SCL-90-R	-	Symptom Check List – 90 items - Revised
SD	-	Standard Deviation
SPSS	-	Statistical Package of the Social Sciences

1. Introduction

1.1 Group therapy

Therapeutic groups within mental health services cover a broad range. Ward (2012) has emphasized the importance of distinguishing between psychoeducational groups, counselling groups, and psychotherapy groups. In group psychotherapy the theoretical background is often either psychoanalytic, behavioral, cognitive behavioral, existential, systemic, or interpersonal. There is an array of other theoretical approaches, including combinations of those previously mentioned. Group psychotherapy has become a common treatment for a variety of psychiatric disorders, including anxiety- and mood disorders, complicated grief, substance abuse, post-traumatic stress disorder, eating disorder, and personality disorders (Burlingame, Strauss & Joyce, 2013), and the therapy format is used in different health care settings, including with inpatients, in day hospitals, and with outpatients.

1.1.1 Historical roots

Le Bon's classic work 'The Crowd' (1895) is seen as one of the first attempts to understand groups in a scientific way. He described how the ideas of large group behavior in this period were influenced by Darwin's instinct theory and events from the French revolution and he underlined the importance of unconscious forces influencing group behavior (Harrison, 2000). He claimed that when individuals become part of a crowd, a hypnotic power, the 'group mind', causes their behavior to change in regressive, primitive and uncivilized ways. Together with McDougall (1920) he influenced the early theory of social psychology, describing how something new occurs when individuals find themselves in groups. McDougall was also the first to describe how the group could promote positive individual change. Freud (1955; original work published 1921) argued against the theories of Le Bon and McDougall and maintained that people do not acquire new characteristics by participating in a group; instead they get in contact with and express previously repressed unconscious material. Freud's main theory was that the behavior of the group is determined by the intrapsychic lives of its members, and that the interactions in the social environment were determined by unconscious intra-psychic mechanisms instead of instinctual aspects of human behavior. In 'Group psychology and the analysis of the ego', Freud (1955) claimed that 'a primary mass is a

number of individuals who have put one and the same object in place of their ego ideal and consequently identify with each other'. He went on to describe how the group has a sense of purpose and how the individuals perceive a significant similarity with others in the group and identify with them. In addition, a clear leader of the group often emerges through the process of idealization.

The practice of group psychotherapy is commonly considered to have started in The United States of America more than a hundred years ago with Joseph Pratt (1906), and his group treatment of patients suffering from tuberculosis. The term group psychotherapy was first used in Europe where Jacob Moreno (1940), the founder of psychodrama, organized therapy groups for children and their caregivers at the Vienna Child Guidance Clinic in the 1920s. In the 1930s several clinicians began to apply Freudian psychoanalytic principles in the group setting (Schilder, 1936; Wender, 1940). Alexander Wolf and Emanuel Schwartz (1962) noticed that the depth and intensity of transference reactions increased in the group and developed a psychoanalytic approach to group therapy in the late 1930s.

1.1.2 Psychodynamic group psychotherapy

The tragic events of World War II made group therapy develop rapidly, because of the large number of military and civilian patients in need of treatment and rehabilitation. In the UK, the Northfield Military Hospital played an important role in the development of group therapy techniques, and group therapy was first established as a hospital treatment (i.e. the Northfield Experiments) (Harrison, 2000). Prominent figures in this endeavor were known psychiatrists like Wilfred Bion, Sigmund H. Foulkes, and John Rickman, all with their own distinctive contributions to the field, both practically and with their own, original theories. Psychoanalytic principles were tried out and tested in group psychotherapy. Through this work with soldiers suffering from post-traumatic conditions, new forms of psychodynamic group psychotherapy were developed, which challenged the traditional view of psychiatric patients as passive recipients of treatment.

Bion and Rickman followed the object relation theories of Melanie Klein and later Fairbairn. Object relations theory holds that human beings always direct their affects towards another, meaning we are object seeking. Our early relational experiences and the respective affects are internalized and during early development the infant starts to build an internal

relational world. Initially self- and object- representations are parts of self and object (lips, the nipple, a pleasant sensation), but through repeated experiences these parts would merge and eventually be integrated to more coherent gestalts of external, early objects, normally the caregiver (Klein, 1927). Bion and Rickman were also influenced by Moreno, and they emphasized the importance of the here-and-now experiences in the therapy, and the potential of the relationships within the group for patients' healing. They recognized that, unlike in individual psychoanalysis, the power of the group was not to uncover the past. Instead the patients had the opportunity to explore the impact of their behavior on other group-members and modify their relationships in the 'here-and-now'. Bion (1961), working in the Tavistock Clinic, subsequently developed his group theories of the therapy process and distinguished between 'work group' and the three 'basic assumptions-groups'. He claimed that the activity in an on-going group session will fluctuate between work (reality and task oriented activity) and activities based on basic assumptions the group members have about the purpose of the group (dependency, pairing, fight -or-flight).

Foulkes was a psychoanalyst, initially working in Vienna and Frankfurt. He focused on Freuds early ego- and drive-theory, and was also influenced by what later became the Frankfurter School of social philosophy, and the sociologist Norbert Elias. His early development of group analysis which started through his collaboration with Elias is described in his first book (Foulkes, 1948). Foulkes came to England in 1933 as a German refugee, and started to bring analytic patients into groups, and was enthusiastic about what emerged in the group dynamics. In his work at the Northfield Military Hospital, he applied both psychoanalytic concepts and gestalt psychological concepts in his approach to group therapy. Foulkes considered the group as the most basic psychological unit. According to him, every human being is fundamentally determined by the group or society he/she is part of. He termed our common cultural background the foundation matrix, which we bring into the groups. According to Foulkes, the matrix has two aspects: one foundation Group Matrix created by each of the patients' past familiar, cultural, social and lingual experiences and one dynamic Group Matrix emerging through the interactions and the relationships growing during the group process. This network of relationships in an analytic group was described as 'the hypothetical web of communications and relationships of a given group' and further as 'the common shared ground which ultimately determines meaning and significance of all events and upon which all communications and interpretations, verbal and non-verbal, rest' (Foulkes 1964; Foulkes and Antony, 2014). He maintained that the group is more than the sum of its

parts. The group also provides an opportunity to discover similarities and differences through each member, i.e. the participant mirrors himself in others (Rutan, Stone, & Shay, 2007). The therapist (whom he called the conductor) should take an indirect and facilitative stance, shifting his attention between the group and the individual, with an 'analytic attitude'. The conductor would thereby foster a therapeutic group culture which enables individual members to develop and mature. Foulkes started the Group Analytic Society in 1952 and was the president for 18 years. His group-analytic approach is still the most central model of psychodynamic group therapy, at least in Europe.

At about the same time, Samuel Slavson (1950) integrated the psychoanalytic contributions with theories of group therapy in the USA. He also founded the American Group Psychotherapy Association in 1942. In the 1960s and 1970s the treatment of outpatients in the USA expanded while hospital treatment was reduced. Sullivan's (1953) theories of the process and goal of individual interpersonal therapy proved to be useful for the understanding of interactions in group therapy, and facilitated the understanding of the connection between the group therapeutic process and effect. He argued that personality is almost entirely the product of our interactions with significant others (more detailed explained in section 1.2 'Interpersonal functioning') and that psychotherapy should be directed towards correction of interpersonal distortions, enabling individuals to create more satisfying relationships.

The interpersonal theories of Sullivan influenced the work of Irwin Yalom who has in turn made important contributions to psychodynamic group therapy. He is an American psychiatrist and group therapist who has developed and described a model of group therapy similar to Foulkes' Group Analysis. His best-known work is possibly his definition of 'therapeutic factors' in group therapy. They are derived from observations of individuals and their interactions in the group system, combined with inquiry about what patients in successful therapies found to be most helpful for change. In the book 'The Theory and Practice of Group Psychotherapy' (Yalom & Leszcz, 2005; first published by Yalom in 1970), the following 12 common therapeutic factors are described; instillation of hope, universality, imparting information, corrective recapitulation of primary family experience, altruism, cohesiveness, catharsis, development of socializing techniques, mirroring, existential factors, interpersonal learning and self-understanding. Yalom argued that while the therapist is considered the central vehicle of change in individual psychotherapy, in group psychotherapy all the group participants and the group-as-a-whole are therapeutic instruments. The focus is

on interpersonal learning, where the joint examination of intra-group reactions allows members to replace processes that have an historical origin in the there-and-then (the dynamic past) with those more appropriate to the here-and now (the dynamic present). Cohesion is considered as one of the central mechanisms in groups. It contains the members' sense of belonging, acceptance, commitment and allegiance to their group. The group cohesion is a platform for enabling self-disclosure, taking interpersonal risks, working on the group task, and receiving personal feedback (Bernard et al., 2008; Yalom and Leszcz, 2005). In a meta-analysis of 40 studies of group psychotherapy, 43% of the studies showed that cohesion is directly related to client improvement (Burlingame, McClendon, & Alonso, 2011). Johnson and colleagues (2005) found three factors that accounted for the relationship between process measures (alliance, cohesion, group climate, and empathy). The factors were the positive bonding relationship, the positive working relationship, and the negative relationship including conflict and distrust. Later this model was replicated in several clinical studies, and the Group Questionnaire, a self-report measure of the therapeutic relationship, has been developed and is based on these three factors (Krogel et al., 2013).

Psychodynamic group therapy comprises a range of theories and approaches, of which the group analytic is one. Group analysis shares many of the basic assumptions and concepts of other psychodynamic and psychoanalytic therapies i.e. focus on psychic defenses, the influence of unconscious motivation of both individual and group behavior, the ubiquity of psychological conflicts, and the developmental view on personality. Group Analytic therapy aims to promote interaction between its members, raising awareness of both group dynamics and the individual members' intrapsychic conflicts. Group Analytic therapy aims to promote interpersonal learning and increased self-understanding, through the interaction between its members, raising awareness of both group dynamics and the individual members' intrapsychic conflicts. Kennard, Roberts and Winter (1993) classify eight main forms of conductor interventions in Group Analytic group therapy: Maintenance of structure, open facilitation, guided facilitation, interpretation, no response, action, modelling and self-disclosure. These interventions are included in the manual of the SALT-GAP study, where also two techniques that are useful in short-term group therapies are included; 'staying with the focus' and 'switching to the here-and-now' (Lorentzen, 2014).

Rutan and colleagues (2007) places the different foci of psychodynamic group therapies on a continuum ranging from focus on the group- as-a whole, via focus on the interaction of the members to focus on the intrapsychic life of each individual. In therapies

focusing on the group-as-a-whole (Bion, 1961; Foulkes, 1975) the group and the group dynamics rather than the individuals are the main targets for interpretation. In therapies with an intrapsychic focus (i.e., Wolf & Schwartz, 1962; Slavson, 1950) the group is nothing more than the setting which makes the participants transference material available. Modern group analysis is an interpersonal approach; i.e. the group is the agent of change, a microcosm evoking the members' interpersonal profiles. The participants' interactional styles and their impact on others are explored through feedback in the group in the here-and-now. The group is a training ground for learning new interpersonal behaviors (Lorentzen, 2014). Interpersonal conflicts and patterns will emerge in relation to the group, to fellow patients, and to the therapist (Dinger & Schauenburg, 2010). The reflective attitude in the group particularly facilitates important corrective emotional experiences (Alexander & French, 1946), which are among the so-called common factors of change in psychotherapy (Wampold 2015). These experiences may in turn help promote changes outside of therapy. Thus, the main goal of psychodynamic group therapy is to improve self-understanding and interpersonal functioning using the therapist and the other group-members' immediate feedback (Mayer, 2004; Yalom & Leszcz, 2005).

Research on time-limited group treatment started in the early 1980s and initially short-term therapies mostly offered treatment for specific patient-groups or problems. MacKenzie (1997, 2000) developed techniques for time-limited group therapy. He combined psychodynamic principles with educational and behavioral interventions. For the present study, Lorentzen (2014), developed the clinical guidelines for both long-term and short-term group analytic psychotherapy. The short-term guidelines were influenced by the work of MacKenzie (e.g., 1997, 2000), group analytic theories and Lorentzen's own clinical experience and training in short-term analytic groups (more details in Method-section, 2.3.2).

Systematic group therapy was introduced in Norway in the early 1950s inspired by the development in Europe and the U.S. (Lorentzen, Wilberg, & Martinsen, 2015c). Group treatment in the outpatient setting has continuously expanded since the 1980s, partly aiming to reduce hospital treatment in psychiatry. The Norwegian Psychiatric Association decided to improve the standard of group work in psychiatry and a formal training program was started in 1984, in collaboration with the Institute of Group Analysis in London. Some years later both the foundation of the Norwegian Group Psychotherapy Association and the Institute of Group Analysis (1992) strengthened the professional milieu (Lorentzen, Herolfsen, Karterud, & Ruud, 1995). Today psychodynamic group psychotherapy in Norway is mainly organized

within the specialist mental health services (Lorentzen & Ruud, 2014) and often recruits poorly functioning patients with a range of personality pathologies. One way that psychodynamic group therapy has been implemented in Norway is through the development of group-based treatment programs for patients with personality disorders (PDs) in day care wards (Karterud et al., 2003), later also in out-patient clinics (Kvarstein, Pedersen, Urnes, Hummelen, Wilberg, & Karterud, 2015). Group psychotherapy is also offered in private specialist practices. It appears to be one of the most cost-effective forms of treatment in the mental health field (Fuhriman &Burlingame, 1994; Piper, McCallum, Joyce, Rosie, & Ogrodniczuk, 2001).

1.2 Personality functioning

Difficulties in interpersonal relationships and in relation to oneself are among the most common reasons why patients seek therapy (Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988; Maling, Gurtman, & Howard, 1995). How a person relates to his/herself and his/her interpersonal style are strongly correlated and both are related to measures of psychopathology and personality functioning (Benjamin, 1974; Pincus, 2011). In a study of a large Norwegian sample of outpatients, Bjerke and colleagues (2011, 2014, 2015) found higher degree of symptom distress, interpersonal problems, and problems with self-relatedness than in a reference sample of healthy subjects.

In the current study personality functioning is measured with self-concept (Structural Analysis of Social Behavior, SASB-introject, Benjamin, 1983) and interpersonal problems (Inventory of Interpersonal Problems – Circumplex, IIP-C, Alden, Wiggins, & Pincus, 1990). Both measures are related to interpersonal experiences and attachment patterns in early life (Salzer et al., 2010). Favourable early experiences with caregivers, enable the development of a stable self-concept (Winnicott, 1965). The relationship to the caregivers provide the ‘secure base’ for the child’s exploration of reality, and serves as a working model that is generalized to other relationships throughout life (Bowlby, 1969, 1988). The goal in the development of the self is individuation and psychological separation from important others (Mahler, Pine, & Bergman, 1975).

Harry Stack Sullivan (1953) holds that our perception of self and others reflects how we were validated by significant others as children. He introduced the term ‘interpersonal’ in

the 1920s, and described human personality as representing 'the relatively enduring pattern of recurrent interpersonal situations which characterize a human life' (Sullivan, 1953). He developed the term "self-concept", which represents the sum of an individual's self-perceptions. This self-system protects the sense of identity, by actively ignoring information that will disconfirm self-concepts. This is achieved by evasive manoeuvres such as dissociation and selective inattention. In addition, the individual's interpersonal style is developed in order to make others confirm previous self-concepts. He maintained that people learn to treat themselves as they have been treated by others. For instance, persistent criticism from a significant other, may foster self-criticism, while causing interpersonal difficulties to manifest in many ways. We continue to seek safety in new relationships and situations throughout life, to confirm and maintain congruence in our inner world. This sometimes produces distorted perceptions of others.

Object relations theory and interpersonal theory try to describe how early close relationships are internalized, and how these internalized aspects of self and others, build intrapsychic structural models that in turn influence our behavior, cognitions, and affective responses later in life (Sullivan, 1953). In group psychotherapy, these inner models will appear in the transference and countertransference, thus enabling patients to understand and change dysfunctional patterns.

Compared to reduction of symptoms, changes in interpersonal problems and self-relatedness likely represent a more fundamental and structural personality change, and are more difficult to obtain (Blatt, Zuroff, Hawley, & Auerbach, 2010). Horowitz (2004) described the complexity underlying interpersonal problems, asserting that interpersonal style is part of a relatively stable personality construct, such that improvement requires changing an entire coping strategy. Shedler (2010) noted that changes in personality structure and functioning are specific targets in long-term psychodynamic therapies, and are assumed to require longer therapeutic interventions to change. However, most support for these assumptions comes from observational studies of individual therapy (e.g., Kopta, Howard, Lowry, & Beutler, 1994; Barkham, Rees, Stiles, Hardy, & Shapiro, 2002; Haase et al., 2008; Howard, Lueger, Maling, & Martinovich, 1993; Leichsenring, Biskup, Kreische, & Staats, 2005). It is therefore particularly relevant to measure these aspects experimentally, for example by comparing the effectiveness of short-term and long-term therapies within the same study (Lindfors, Knekt, Heinonen, Härkänen, & Virtala, 2015).

Personality disorders, interpersonal problems and problems with self-concept are closely related. Both the measures IIP-C and SASB-introject are based on the circumplex model of interpersonal behavior (Kiesler, 1983; Leary, 1957; see Methods section 2.3.4). This model assumes that each personality disorder reflects a characteristic pattern of behavior and experience - ways of relating to other people, ways of perceiving and thinking, and ways of relating to oneself (Horowitz, 2004). Most patients with PDs are characterized by rigid belief systems and dysfunctional interpersonal attitudes that make them vulnerable to depression, anxiety, and substance abuse. Presence of PD is one of the strongest predictors of recurrence of common mental disorders (Tyrer, 2015).

Psychotherapy is generally recommended as treatment for PD, with emphasis on improving maladaptive interpersonal patterns (American Psychiatric Association, 2000). Studies of the effectiveness of both individual and group psychotherapy for different PDs have thus far yielded inconclusive results regarding the importance of treatment duration, and long-term studies are scarce (Leichsenring & Leibing, 2003). Some data suggest that long-term therapy is more effective than short-term therapy for patients with PD and those with co-morbid and chronic disorders (Reich & Green, 1991; Gabbard, 2000; Leichsenring & Rabung, 2008, 2011; Lorentzen & Høglend, 2008; Perry, Banon, & Ianni, 1999). Presence of PD also predicts a need for more sessions in long-term dynamic therapy (Perry, Bond, & Roy, 2007). In a meta-analysis of controlled studies of psychodynamic treatment, Leichsenring and Rabung (2011) reported that long-term therapies led to better results than short-term therapies among patients with chronic problems or PDs. There was a positive correlation between the length of treatment and overall effect size for psychodynamic therapy. However, the included studies do not compare treatments of different lengths within the same study.

1.2.1 Interpersonal problems

The IIP-C (Alden et al., 1990) measures a person's perception of the degree of interpersonal distress or difficulties. The circumplex model is organized around a horizontal and a vertical axis. The horizontal axis describes the person's affiliation profile, ranging from 'sacrificing too much of one's own needs in favor of others' to 'lacking care for others and feeling interpersonally detached'. The vertical axis describes the person's dominance profile, ranging from being too controlling to being too submissive. Engaging in and coping with interpersonal situations is an essential part of life. Poorly integrated internal self- and other-

representations, may lead to an increased risk of extreme scores in one direction or another. This may in turn increase the chance of serious interpersonal problems and possibly of symptoms like anxiety and depression. Thus, IIP-C has turned out to be a useful instrument in studies of effects of psychotherapy. Studies of outpatients in psychodynamic group therapy, mostly of shorter duration, have demonstrated improvements in interpersonal problems (e.g., Bateman and Fonagy, 2009; Kvarstein, Nordviste, Dragland, & Wilberg, 2017; Lorentzen, Bøgwald, & Høglend, 2002; Piper et al., 2001; Tasca, Balfour, Presniak, & Bissada, 2012; Tschuschke, Anbeh, & Kiencke, 2007).

Problems related to the domains of being nonassertive, exploitable, and overly-nurturant (the IIP-C is explained in detail in Method section 2.3.4) tend to improve significantly in both short-term and long-term *individual* psychodynamic therapy (Horowitz, Rosenberg, & Bartholomew, 1993; Leichsenring et al., 2005). Furthermore, some studies have found that patients did not improve much on the cold and socially avoidant subscales of the IIP-C after short-term psychodynamic individual therapy (e.g., Crits-Christoph, Connolly Gibbons, Narducci, Schamberger, & Gallop, 2005; Horowitz et al., 1993), and observational studies generally indicate that interpersonal difficulties measured by these subscales may need longer time to resolve. (e.g., Barkham et al., 2002; Huber, Henrich, & Klug, 2007; Salzer et al., 2010). Huber et al. (2007) found a significant change on all subscales of the IIP-C during psychoanalytic psychotherapy for depressed patients and the total IIP-C score change correlated significantly with treatment duration. However, none of these studies used repeated measurements during treatment. Consequently, they could not determine when the change actually occurred during the course of treatment.

The Helsinki Psychotherapy Study is the only study we know of that randomized patients to individual treatments of different lengths (Knekt et al., 2008). The effectiveness of two short-term individual psychotherapies (solution-focused, less than 12 sessions, and short-term psychodynamic, 20 sessions) and one long-term psychodynamic therapy (mean duration 31 months) were compared in a study of outpatients (n=326) with anxiety and mood disorders (18% of the patients had a PD). At 5-year follow-up, the authors found that long-term therapy improved personality functioning more than did short-term therapies (Lindfors et al., 2015). To our knowledge, the only randomized trial which compared IIP subscale changes in group psychotherapy was performed by Tasca and colleagues (2012). Patients with binge eating disorder received 16 sessions of interpersonal psychodynamic or cognitive–behavioral group

therapy. Their cold subscale scores improved more with interpersonal psychodynamic therapy than with cognitive therapy.

Several studies of short-term therapies (both individual and group format) maintain that the short time frame is not sufficient to change maladaptive interpersonal patterns (Ogrodniczuk, Sochting, Piggott, & Piper, 2009; Schauenburg, Kuda, Sammet, & Strack, 2000). The evidence is scarce both for the significance of treatment length within the same study, and for differences in change between various types of interpersonal problems.

1.2.2 Self-concept

In order to investigate adaptive change during psychotherapy, treatment studies need to include personality functioning as an outcome measure. SASB, which focuses on introjects, tries to map internalization of interpersonal experiences, including behaviors directed toward the self (see method section 2.3.4 for details; Benjamin, 1983). The self-concept is described both as a stable and adaptive model of a person's treatment of him/herself, which impact both cognitive and interpersonal behavior (Henry, Schacht, & Strupp, 1990).

The circumplex model of the introject is arranged with the horizontal axis: Affiliation, with the endpoints Self-love and Self-attack, and the vertical axis; Autonomy with the endpoints Self-free and Self-control. Healthy positive Affiliation (self-acceptance) behavior should be accompanied by healthy flexibility in Autonomy (Benjamin, 1987). Positive Autonomy behaviors are defined as 'letting the self go', and implies to live out one's feelings without strict worries about possible consequences. In contrast, negative Autonomy is defined as 'controlling the self', which implies doing things the right way with a desire to be 'perfect'. The different Autonomy behaviors are neither 'good' nor 'bad', however ideally they should vary in intensity depending on the context. Extremes of these behaviors without context related flexibility are considered unhealthy. Several studies have indicated a strong relationship between the Affiliation dimension of SASB introject and levels of psychopathology. Self-attack reflects high, and Self-love reflects low emotional distress. A corresponding relationship between the Autonomy dimension and levels of psychopathology is less studied, and the findings are contradictory, probably partly due to the fact that some of the dimensions are sometimes found to be less reliable (Halvorsen & Monsen, 2007). Clinical

studies have, therefore, mainly been concerned with the Affiliative dimension (Bjerke, Solbakken, Friis, & Monsen, 2015).

In spite of the close connection between self-concept and mental health, only a few high-quality clinical trials have studied the effectiveness of different psychotherapies in improving self-concept. Most studies are observational and describe improvement during individual, short-term therapies (Svartberg, Seltzer, & Stiles, 1996; Junkert-Tress, Schnierda, Hartkamp, Schmitz, and Tress, 2001). Many of these studies were done on samples of specific diagnostic groups, whereas the sample in the current study includes patients with mixed diagnoses. Studies of psychodynamic group psychotherapy have rarely used the SASB introject. Granberg and Armelius (2003) studied changes in self-concept of more disturbed psychiatric patients in a naturalistic, five-year follow-up program of milieu treatment. All patients changed on the Affiliation dimension, but there was no change on the Autonomy dimension, after treatment. A more detailed analysis showed that change in patients with neurotic and psychotic personality organization was due to a less attacking self-image, while change in patients with borderline personality organization was due to more self-love.

Although some studies have demonstrated a positive association between treatment length and improvement of self-concept (Arnold, Farber, & Geller, 2000; Lindfors et al., 2012), results concerning the effect of individual psychodynamic therapy remain inconclusive on this point. A small sample of patients with anxiety disorders receiving short-term psychodynamic psychotherapy experienced self-freeing growth on the SASB-introject during and after therapy (Svartberg et al., 1996). Arnold et al. (2000) found that patients (N=50) in a university-based clinic became more benevolent, accepting, and caring at post-treatment. Moreover, they were less self-critical and described themselves less harshly by termination of therapy. The improvement was positively correlated with duration of the therapy, which was psychodynamically oriented, and lasted from 3-193 sessions. Junkert-Tress et al. (2001) studied changes in a heterogenous sample of patients' self-directed Affiliation after short-term dynamic psychotherapy, and found that most of the patients did not change at six-month follow-up, except for a subgroup of somatoform patients.

1.3 Psychodynamic group therapy research

Numerous outcome studies and meta-analyses have demonstrated general efficacy and effectiveness of psychotherapy for a wide array of psychiatric disorders and problems (Lambert & Ogles, 2004; Lambert, 2013; Leichsenring, Leweke, Klein, & Steinert, 2015). This also includes group psychotherapy, where the empirical evidence is substantial (Burlingame et al., 2013). Lambert and Bergin (1994) found that the effects of therapies with different theoretical backgrounds (psychodynamic, cognitive, and interpersonal) are not significantly different. Newer meta-analytic reviews support that it does not matter which treatment is given, as long as it is theory-driven (Lambert, 2013). Historically group therapy has been considered a secondary choice of treatment compared to individual therapy. However, reviews indicate that there are no significant differences in efficacy between group and individual psychotherapy (e.g., Bednar & Kaul, 1994; McRoberts, Burlingame, & Hoag, 1998). Burlingame and colleagues (2013) reviewed more than 250 studies of group therapy for more than 12 disorder/patient populations. They found clear effects of group therapy for most of the reviewed disorders (including mood- and anxiety disorders and PD). There is also increased evidence for the effects of group therapy in mixed diagnoses groups. A recent meta-analysis tested the outcome difference in studies comparing group and individual formats *within* the same study (Burlingame et al., 2016). No differences between the formats were demonstrated concerning rates of treatment acceptance, dropout, remission, or improvement. A problem with the existing research is that most of the examined group therapies are of short duration (less than 20 sessions), although therapies lasting one year or more are quite common in clinical practice, at least in Europe (Lorentzen et al., 2015c; Burlingame et al., 2013). It is obvious that psychodynamic group therapy is a cost-effective, accessible and relatively low-risk treatment (Malat & Leszcz, 2014).

Despite the clinical utility of psychodynamic group therapy, research on differential effects between approaches, the significance of treatment duration, and how and for whom it works is still scarce. Blackmore, Tantam, Parry, and Chambers (2011) systematically reviewed Group Analysis and analytic/dynamic group psychotherapy, including 34 primary studies and 19 reviews. They found that in most studies of psychodynamic group therapy, the patients also received other interventions which are poorly defined and controlled. This led to difficulties attributing effects to the experimental therapy in the studies. In addition, there was a lack of controlled studies (n=5). The number of studies of *long-term psychodynamic group*

therapy is very limited and the documentation of effectiveness is mainly based on a few naturalistic studies.

1.3.1. Long-term psychodynamic group therapy

Studies of long-term psychodynamic group therapy for outpatients demonstrate improvements in both symptoms and interpersonal functioning (eg., Bateman & Fonagy, 2009; Budman, Demby, Soldz, & Merry, 1996; Lorentzen et al., 2002; Kvarstein et al., 2017; Wilberg et al., 2003; Tschuschke et al., 2007).

In an observational study on long-term psychodynamic group therapy, Lorentzen and colleageus (2002) found that symptomatic distress, interpersonal problems, and social functioning improved significantly in 69 outpatients. The improvement continued in the follow-up period after therapy, and treatment duration up to 2.5 years was a strong positive predictor of outcome (Lorentzen & Høglend, 2004). Furthermore, high levels of pretreatment distress, as measured by the GSI, was a strong predictor of the time needed to improve with respect to interpersonal problems: The higher the GSI, the longer was the treatment needed. Their findings also suggested that patients with more severe pathology required longer therapies to improve interpersonal functioning (Lorentzen & Høglend, 2008). Another naturalistic study investigated the outcome of long-term psychodynamic group therapy for more than 450 patients treated by experienced group analysts in private practices (Tschuschke et al., 2007). Symptom distress, interpersonal problems, and overall psychiatric functioning improved with an average effect size above 1.3. They found support for a dose-response relationship, i.e., the longer the therapy, the better was the effect.

In a naturalistic study, 49 outpatients with PD treated with 18-months group therapy, Budman et al. (1996) found that both symptom distress and self-esteem improved. Kvarstein and colleagues (2017) conducted a naturalistic study with a 3-year follow-up after long-term psychodynamic group therapy (mean treatment duration was 1.5 years) for 109 outpatients with various PDs. Their results indicate improvements comparable with other group therapy studies, of patients with less severe psychopathology. They also reported increased occupational functioning and reduced use of mental health services at 3-year follow-up. Patients with Borderline PD had shorter treatment duration compared to patients with other

PDs, and were associated with poorer outcomes for the patients who had the shortest treatment duration.

1.3.2 Combined therapy/treatment programs

For patients with severe PDs, effectiveness has been demonstrated for group therapy, often manualized in combination with other therapy formats, for example mentalization-based treatment (MBT, e.g., Bateman & Fonagy, 2008, 2009), step-down day-ward treatment program (e.g., Antonsen et al., 2014; Chiesa, Fonagy, & Holmes, 2006), and dialectical behavior therapy (e.g., Clarkin, Levy, Lenzenweger, & Kernberg, 2007; Linehan et al., 2006). The existing RCT studies of different forms of outpatient group psychotherapy have typically addressed the efficacy of these specialized treatment programs with use of conjoint (individual and group) psychotherapy, especially for borderline PD (Antnonsen et al., 2014; Bateman & Fonagy, 2008, 2009; Clarkin et al., 2007; Linehan et al., 2006; McMain, Guimond, Streiner, Cardish, & Links, 2012).

Bateman and Fonagy (2009) tested the effectiveness of an 18-month mentalization-based treatment (MBT) approach in an outpatient context compared to a structured clinical management outpatient approach for treatment of borderline PD. They found substantial improvement in both conditions on all outcome variables. MBT was superior in reducing symptoms and particularly in improving interpersonal functioning. In an earlier RCT with 8-year follow-up they compared 18 months of MBT in day treatment followed by 18 months' outpatient group therapy with treatment as usual, and it turned out that patients in the MBT improved significantly more on most outcome variables.

Clarkin and colleagues (2007) assigned 90 patients with borderline PD to three different therapy formats of one-year duration; psychodynamic transference-focused psychotherapy (individual, 2 sessions weekly), dialectical behavior therapy (1 group and 1 individual session weekly), or supportive treatment (individual, 1 session weekly). Patients in all three treatment formats showed significant improvement on both symptoms and psychosocial functioning. The transference-focused psychotherapy was associated with more changes than the other formats. In another RCT patients (n=180) with borderline PD were followed three years after start of either dialectic behavior therapy (individual and group) or manualized individual psychotherapy lasting one year (McMain et al., 2012). Equal

improvements were demonstrated in the two formats, the effects were sustained after therapy, and there was even some delayed improvement in interpersonal problems in both formats. Linehan and colleagues (2006) randomized patients (n=101) to one year of either dialectical behavior therapy or community treatment by experts. Dialectical behavior therapy was superior on almost all outcome variables, at 1-year follow-up after treatment. The existing evidence indicates that the effects of manualized active therapies for specific disorders are not very different. In a recent review, Schnell and Herpertz (2018) emphasized that most PD treatments focus on improving dysfunctions of emotion regulation, social cognition, and interpersonal behavior in addition to emphasizing the importance of the therapeutic alliance.

In Norway a RCT was conducted at the Department of Personality Psychiatry at Oslo University Hospital (Antonsen et al., 2014; Karterud et al., 2003). Patients (n=113) with various moderate to severe PDs were randomly assigned to either a step-down program consisting of short-term day-hospital treatment followed by a combination of long-term outpatient group therapy and individual psychotherapy, or 'ordinary' outpatient individual psychotherapy (OIP) according to the therapists' preferred method. At 3-year follow-up patients in both treatment formats had improved on several measures, and contrary to expectations, patients in the OIP improved significantly more. At 6-year follow-up there were no significant differences in outcome between the treatment groups (Antonsen et al., 2014). Effect sizes ranged from medium to large for all outcome variables in both treatment arms. However, from 3- to 6-year follow-up patients improved more after the step-down group compared to the OIP on psychosocial and interpersonal functioning, suggesting that the step-down format may have stimulated long-term changes.

In a prospective, naturalistic study of outpatients (n=187), the effectiveness of psychodynamic group therapy following a day treatment program for patients with PD (86% patients had PD), was investigated (Wilberg et al., 2003). The average length of outpatient therapy after day-treatment was 24 months. For PD patients, the improvement obtained by day treatment was maintained during outpatient therapy, but further improvements were modest for both symptoms and interpersonal problems.

The inclusion of multiple therapy formats in treatment programs naturally makes it difficult to determine how much of the reported improvement is attributable to group psychotherapy. Most of the existing research literature on psychotherapeutic outcome for patients with PD concerns patients with borderline PD. There is a remarkable lack of

empirical evidence regarding psychotherapy for other PDs and for mixed PD diagnoses, despite the large sizes of these patient populations. Thus, more studies emphasizing the outcome of psychotherapeutic treatment for a variety of personality pathologies are needed.

1.3.3 Short-term psychodynamic group therapy

In the literature, the length of short-term psychodynamic therapy is less than one year and generally ranges from 8-40 sessions (Leichsenring, Rabung, & Leibing, 2004). Piper and colleagues (2001) used psychodynamic principles in time limited groups, treating patients with complicated grief. They randomized patients to two forms of short-term group psychotherapy (supportive and interpretative) and found that both formats improved both symptoms and interpersonal distress (Ogrodniczuk, Sochting, Piggott, & Piper, 2009; Piper et al., 2001). They further demonstrated that patients with more mature interpersonal relationships did better in interpretative therapy, whereas patients with poorer interpersonal functioning did better in supportive therapy. In a previous RCT they uncovered significant treatment effects after 18 weeks of psychodynamic group therapy in a day-hospital setting for patients with both affective disorders and PDs (Piper, Rosie, Azim, & Joyce, 1993). Compared with wait-list controls, symptomatic distress, interpersonal functioning, self-esteem, life satisfaction, and defensive functioning improved after 4 months of treatment, and gains were maintained at 8-month follow-up. Another randomized trial of short-term group therapy was conducted by Tasca et al. (2012) where patients with binge eating disorder were randomized to either psychodynamic therapy or cognitive behavioral therapy. Both therapies resulted in a significant decrease in interpersonal problems. Another RCT compared short-term cognitive and psychodynamic group therapy for patients with work-related depression (Sandahl et al., 2011). Both group formats showed significant improvements, and there were no differences in outcome between the formats or the comparison group at the 1-year follow-up.

In a naturalistic study, Jensen and colleagues (2010) found that psychodynamic group therapy (39 sessions, 13 weeks) in a sample of outpatients (n= 236) comparable to our study population, significantly improved symptomatic distress (medium to large effect sizes). However, a substantial part of the patients was still within the pathological range after therapy. They concluded that long-term therapy may be necessary for these patients.

Thus, the existing literature indicates that outpatient psychodynamic group therapy is an effective stand-alone treatment for PD patients (e.g., Budman et al., 1996; Jensen, Mortensen, & Lotz, 2010; Kvarstein et al., 2017; Lorentzen & Høglend, 2008; Lorentzen et al., 2013; Lorentzen et al., 2015b; Piper et al., 2001; Tschuschke et al., 2007).

2. The present study

2.1 The Short- and Long-term Group Analytic Therapy (SALT-GAP) study

The present study is part of the SALT-GAP study, which aimed to experimentally study whether the effect of psychodynamic group therapy varied by duration of treatment.

Psychiatric outpatients were randomized to either short-term (20 weekly sessions, lasting around 6 months) or long-term (80 weekly sessions, lasting around 2 years) psychodynamic group therapy. The patients were evaluated at 7 time-points during the 7-year study period, with follow-up at 3 and 7 years after therapy start. It is a multisite study and the 167 included patients were recruited from 3 urban areas in Norway (Ålesund, Sandnes/Stavanger, and Oslo). Paper I and II use material from the 3-year follow-up (completed in 2009), while paper III uses data from the 7-year follow-up (completed in 2013).

We have previously shown that after 3-year follow-up there were no significant differences between the therapies for *the average patient*, and symptom distress (GSI), interpersonal problems (IIP-C) and psychosocial functioning (GAF) significantly improved in both treatment arms (Lorentzen, Ruud, Fjeldstad, & Høglend, 2013). The intra-group effect sizes for the short- and long-term groups respectively were 0.3 and 0.5 for GSI; 0.6 and 0.6 for IIP-C; 0.9 and 1.3 for GAF-S; 0.8 and 1.0 for GAF-F. The average effect size across treatments and outcome measures was 0.8. Clinically significant change (recovery) as measured by the GSI was achieved by 33% of the patients in the short-term group and 37% in the long-term group. For IIP-C the corresponding numbers were 38 % v. 35%.

At 7-years follow-up of *the average patient*, we found support for a delayed effect with a significantly larger change after long-term therapy during the time interval from 3 to 7 years (particularly for IIP-C) (Lorentzen, Fjeldstad, Ruud, & Høglend, 2015a). At 7-year follow-up, 32% of the patients in the short-term format and 41% of those in the long-term format achieved a clinically significant change (recovery) for GSI. The corresponding numbers for the IIP were 35% and 49%.

During the first three years, we also found that patients with personality disorders (PDs) improved significantly more regarding symptoms, interpersonal problems, and psychosocial functioning in long-term than short-term therapy (Lorentzen, Ruud, Fjeldstad, & Høglend, 2015b). The moderating effect of presence of PD (indicated by number of positive

SCID criteria) was only significant using GAF-S as an outcome measure, with an effect-size of 0.4. When IIP-C total score was used as outcome variable, patients without PD tended to improve more in short-term than in long-term therapy during the first 6 months of the study period, but for patients with PD there was no difference between the formats (ES = 0.3 on the moderator term). When GSI and IIP-C mean scores were used as outcome variables, PD pathology did not moderate the treatment effects during the last 2.5 years for either outcome measures. Patients both with and without PD pathology improved more in long-term than in short-term therapy during this period. Using GAF-S we could detect a moderator effect with effect size 0.4 from baseline to 3-year follow-up, in favor of long-term therapy for patients with PD. For PD patients, clinically significant change in GSI and IIP-C was achieved by 41 % for both measures in the long-term format, and by 26% and 21 % respectively in the short-term format.

2.2 Aims of this thesis

This study is the first randomized trial investigating the difference in effectiveness of short- and long-term psychodynamic group therapy. This thesis aims to further inform about the potential significance of treatment length, and thus may impact the selection of patients for group therapy of different durations. Hopefully, the risk of referring patients to a treatment which is either too short or too long will be reduced.

The objectives of the current thesis are to study the significance of treatment duration of psychodynamic group therapy for obtaining change in a mixed outpatient sample in three essential domains in a person's life; the burden of symptoms, interpersonal problems and self-relatedness. We also wanted to investigate the long-term effects of short-term and long-term treatment for patients with PD versus patients without PD.

The specific aims and hypotheses for my papers are:

Paper I:

The aim was to identify the patterns of change on the various types of interpersonal problems during and after short-term and long-term psychodynamic group therapy. Interpersonal problems were assessed with the Inventory of Interpersonal Problems at six time points during the 3-year study period.

We estimated both early (within the first 6 months) and late (during the last 2.5 years) change.

Research questions/hypotheses:

- Are there differences in degree of change on the single IIP-C subscales between the formats?

Based on the limited findings from earlier studies of individual therapy we hypothesized:

- There will not be any significant differences between short- term and long-term therapy on the nonassertive, exploitable, and overly-nurturant subscales during the two time intervals of the study period.
- Patients in long-term therapy will improve significantly more than patients in short-term therapy on the cold and socially avoidant subscales during the last 2.5 years of the study period.

Paper II:

The first aim was to examine whether the patients' self-concept improved more from baseline to 3-year follow-up after long-term than after short-term psychodynamic group therapy. Furthermore, we examined whether the patients' 'at best' and 'at worst' ratings changed more during and after long-term, compared to short-term therapy. From the sparse literature on individual therapy we hypothesized that:

- The primary outcome variable Affiliation would change significantly more in long-term compared to short-term therapy.
- The main reason for improvement in Affiliation would be that the negative/hostile aspects of the introject, self-blame, self-attack and self-neglect, would change more in long-term than in short-term therapy.

Paper III:

The aims of this paper are to investigate the moderator effect of PD at 7-year follow-up, and to examine the long-term effects of the two treatments with regard to symptoms and interpersonal problems among patients with and without PD.

Research questions/hypotheses:

- The presence of PD would moderate treatment effects.
- Patients with PD profit more from long-term than from short-term therapy
- Significant between-groups differences in outcomes over the 7-year study period cannot be demonstrated in patients without PD.

Our secondary aim was to explore whether the diverse aspects of interpersonal problems (specific IIP-C subscales) would change differently with short- and long-term therapy among patients with PD.

2.3 Material and Methods

2.3.1 Participants

The study recruited outpatients that had been referred to community mental health services or private practice of psychologists/psychiatrists in three urban sites in Norway. Patients were included when they had one or more axis I and/or axis II diagnoses, a self-perception of interpersonal problems, motivation to work with these problems in the group, and a willingness to accept randomization. Patients were excluded if they had psychotic disorders, a main diagnosis of alcohol and/or drug addiction, or organic brain disease. Written informed consent was obtained from all patients, and the project was approved by The Data Inspectorate and The Regional Committee on Ethics in Health Research.

Table 1 reports the pre-treatment clinical and demographic patient characteristics.

Table 1. Pretreatment characteristics of patients randomized to either short-term or long-term psychodynamic group therapy (n = 167).

	Short-term therapy	Long-term therapy	Total sample
	n **= 77**	***n*** **= 90**	***n*** **= 167**
	mean (*SD*)	mean (*SD*)	mean (*SD*)
Age, years	38.6 (9.4)	38.2 (9.4)	38.4 (9.4)
Education, years	13.8 (3.3)	13.7 (3.1)	13.7 (3.2)
Expectations [a]	7.9 (2.4)	7.2 (2.7)	7.7 (2.6)
Number coexisting Axis 1 diagnoses	3.2 (1.9)	3.4 (2.0)	3.3 (2.0)
SCID-II criteria	7.5 (7.3)	8.5 (6.4)	8.0 (6.8)
	n (%)	*n* (%)	*n* (%)
Female	50 (65)	55 (61)	105 (63)
Single	34 (44)	41 (46)	75 (45)
Formerly hospitalized	7 (9)	13 (14)	20 (12)
Axis 1 diagnosis			
Major dep, single	5 (7)	10 (12)	15(10)
Major dep, recurrent	53 (69)	61 (72)	114(68)
Dysthymia	7 (9)	3 (20)	10(6)
Panic disorder	23 (30)	34 (40)	57 (34)
Agoraphobia	8 (10)	4 (4)	12 (7)
OC disorder	8(10)	20 (21)	28 (17)
Social phobia	24(31)	31(38)	55(33)
GAD [b]	11 (14)	28 (30)	39 (23)
PTSD	6 (8)	1 (1)	7 (4)
Somatoform disorder	12 (16)	23 (26)	35(21)
Other	29 (38)	28 (31)	57 (34)
Diagnosis lacks axis I	1 (1)	3 (3)	4 (2)
Axis 2 diagnosis			
Avoidant	18 (23)	29 (32)	47 (28)
Dependent	3 (4)	5 (6)	8 (5)
Obsessive Compulsive	3 (4)	11 (12)	14 (8)
Paranoid	7 (9)	4 (4)	11 (7)
Borderline	5 (7)	4 (4)	9 (5)
PD NOS	4 (5)	9 (10)	13 (8)
Antisocial	0	2 (2)	2 (1)

Note. [a] After randomization. [b] $\chi^2 = 3.84$, $df = 1$, $p = .050$ (n = 167) with continuity correction. Major dep = Major depression; OC = obsessive-compulsive; GAD = generalized anxiety disorder; PTSD = post-traumatic stress disorder.

Significantly more patients had generalized anxiety disorder ($\chi^2 = 3.84$, $df = 1$, $p = .050$) in the long-term compared to the short-term therapy group. All other differences were non-significant. Patients reported that the problems they wanted to address in therapy had lasted

for about 15 years on average. Sixty-eight percent reported previous psychiatric treatment. Among those who started treatment there were no differences in positive expectations about treatment between the two groups after randomization (t =71.22, *df* =144, *p* = 0.23, 95% CI 71.16 to 0.28). The mean number of comorbid Axis I diagnoses was 3.3 and 45 % had one or more PDs (mostly cluster C; see table 1).

A total of 19 patients withdrew before treatment start (12 in long-term therapy and 7 in short-term therapy; *p* = .47, see Figure 1). We have information from 13 of these 19 patients (68%): Six distrusted their therapist or doubted the possibility of getting help in a group format, four chose alternative treatments while waiting for the group to start, and three had external reasons. Overall, the formats had different rates of premature terminations; 26 patients (33%) prematurely terminated long-term therapy, whereas six patients (9%) prematurely terminated short-term therapy ($p < .001$). However, the numbers of premature terminations during the first 6 months were equal in both formats. After 6 months, there were several premature terminations in the long-term groups, but the rate was steady. This might indicate that the main reason for increased attrition was the longer duration. We have information about why 26 of 32 patients (81%) ended prematurely: Ten thought the group was not helpful, eight were dissatisfied with the group or the therapist, four got the help they needed from the therapy received, and four had external reasons. In the literature the drop-out rates vary from 20 to 50% of group members (LoCoco et al., 2015). Among the patients who started treatment, the average times in treatment were 18.9 (*SD* = 3.8) and 57.7 (*SD* = 26.9) sessions in the short-term and long-term therapy groups, respectively. In the long-term therapy, 79 of 90 patients (88%) completed the 3-year follow-up interview. In the short-term therapy, 71 of 77 patients (92%) completed the 3-year follow-up interview. In the 7-year follow-up with self-reports 64 of 90 patients (71%) completed in long-term therapy and 55 of 77 (71%) in short-term therapy.

2.3.2 Therapies

The study included 18 psychotherapy groups. Nine therapists were included, and each conducted one short-term therapy group and one long-term therapy group. The short-term therapy had 20 weekly sessions, lasting about 6 months. The long-term therapy had 80 weekly sessions, lasting about 2 years. Each therapy session was conducted weekly for 90 minutes. Each group consisted of seven to eight patients and one therapist, and the groups were closed

to new patients. However, patients who terminated during the first 6 months in the long-term groups (early attrition) were replaced, according to protocol, by the next patient of the same gender who was included in the project (n = 8). The replaced patients ended up in different groups. We wanted to avoid a potential collapse of therapeutic groups in case of high drop-out rates (e.g., Budman et al., 1996). All patients were included in the analyses, and the number of participants therefore was uneven between the formats.

Both therapy formats followed a manual (guidelines) for psychodynamic group psychotherapies (Lorentzen, 2014). The manual outlined theory, methods, and techniques for running a short-term and long-term version of group therapy, respectively, and gave suggestions for interventions. When the group members interacted, the individual's relational patterns (both adaptive as well as dysfunctional) would usually be activated and appeared as multiple transferences and resistances (or functional coping behavior) in the group. Knowledge of change mechanisms in psychodynamic therapy is still sparse, also concerning group therapy. In the treatment manual for this study the understanding of pathology rests on psychoanalytic and group analytic, social psychological, and interpersonal theories, with a developmental view on the individual. A focus of interpersonal problems, often related to dysfunctional interpersonal patterns and painful aspects of self-relatedness, is given a central position both in understanding pathology and therapeutic interventions. These areas had been discussed during the evaluation, so there was an agreement to work with these issues. The aims of the therapies were to help patients become aware of intrapsychic conflicts and dysfunctional interpersonal patterns and to increase the understanding of self, others, and interpersonal relationships.

From a research point of view, we wanted to make the therapies as similar as possible, except for the factor of length. From clinical and ethical points of view, however, we obviously had to use the existing evidence on how short-term therapies should be run. Thus, in the short-term format, the manual recommended the therapists to be more active, to focus more on a circumscribed problem, to work more in the here-and-now, and to be more attentive of the impending termination phase, compared to their conduct in the long-term format.

Therapists: Among the nine therapists, trained in psychodynamic psychotherapy, two were psychiatrists, three were psychologists, three were psychiatric nurses, and one was a social worker. They comprised two men and seven women, with a mean age of 52.7 (*SD* =

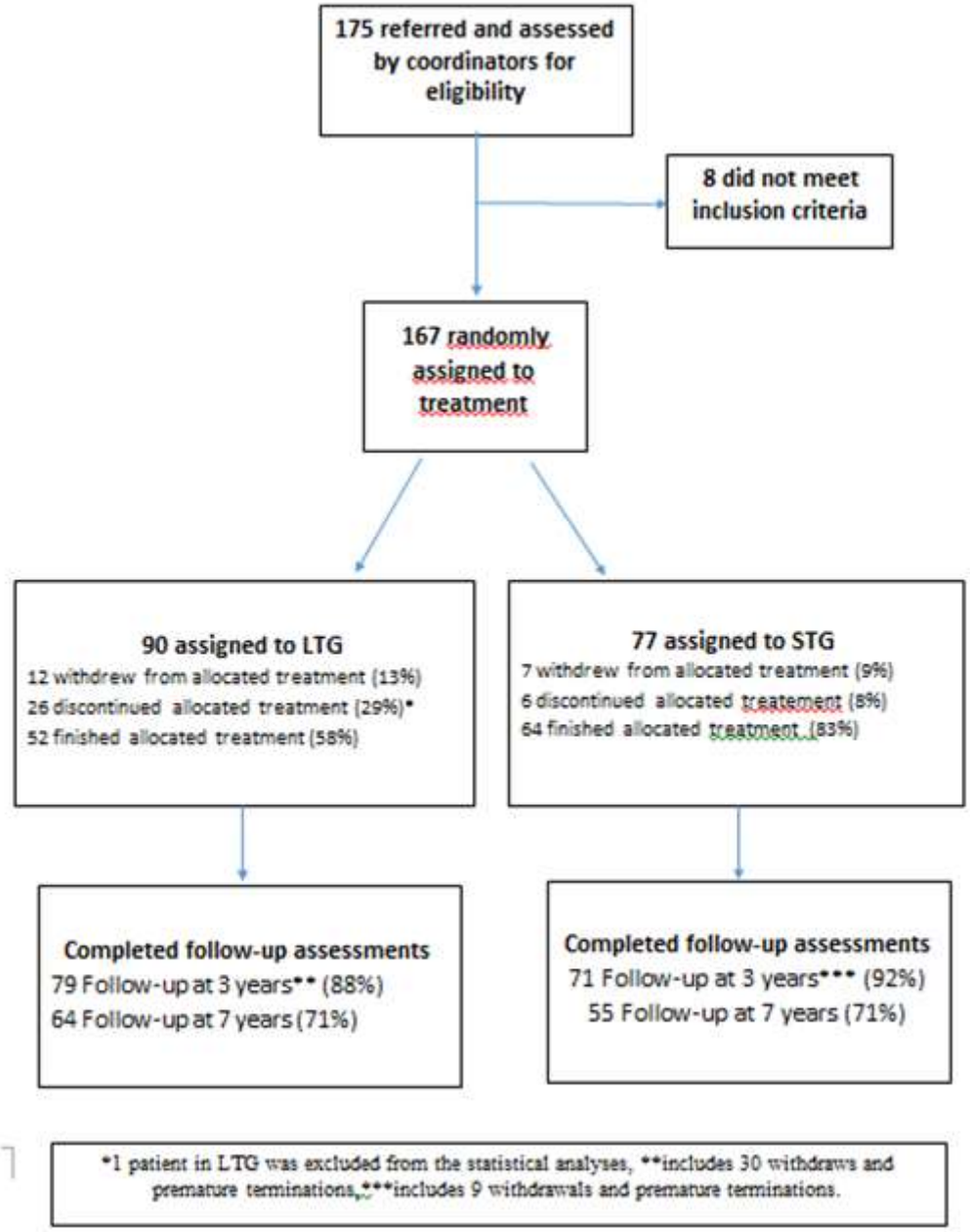
3.7) years, 19.7 (*SD* = 4.4) years in practice, and 12.5 (*SD* = 3.7) years of formal postgraduate psychotherapy training. The therapists were not blind to the main aim of the study, but did not know the hypotheses of the researchers. All therapists were running one short-term and one long-term group. The therapists were trained in both short-term and long-term formats, and they had regular supervision during the treatment period.

2.3.3 Procedures

Randomization

A total of 175 patients were referred to a local coordinator at each site and evaluated; of these, 167 eligible patients were included and randomized to either the long-term (90 participants) or the short-term (77 participants) treatment arm. The patient selection and inclusion procedure are shown on Figure 1. The randomization was carried out for each site by the local coordinator and was not influenced by the therapists (Schulz & Grimes, 2002). One short-term and one long-term group were gradually built simultaneously in each site. To secure mixed groups regarding gender, stratified randomization was conducted, allocating at least two women and two men to each group. The groups were built by having four pieces of paper (two were marked ‘short-term therapy’ and two ‘long-term therapy’) in one envelope for men and in another for women, plus eight pieces of paper (four ‘short-term therapy’ and four ‘long-term therapy’) in a third envelope. The first four men and women were randomized by drawing from the first and second envelope, respectively, and the remaining from the third envelope. The time from referral to evaluation/randomization varied from 1 to 7 weeks. Time from randomization to start of therapy varied from 2 to 12 weeks, with an average of 7 weeks. The randomization code was not opened until all data from the project had been collected (Schulz & Grimes, 2002). The study was registered at ClinicalTrials.gov as NCT00521417.

Figure 1. Patient flow in the SALT-GAP study



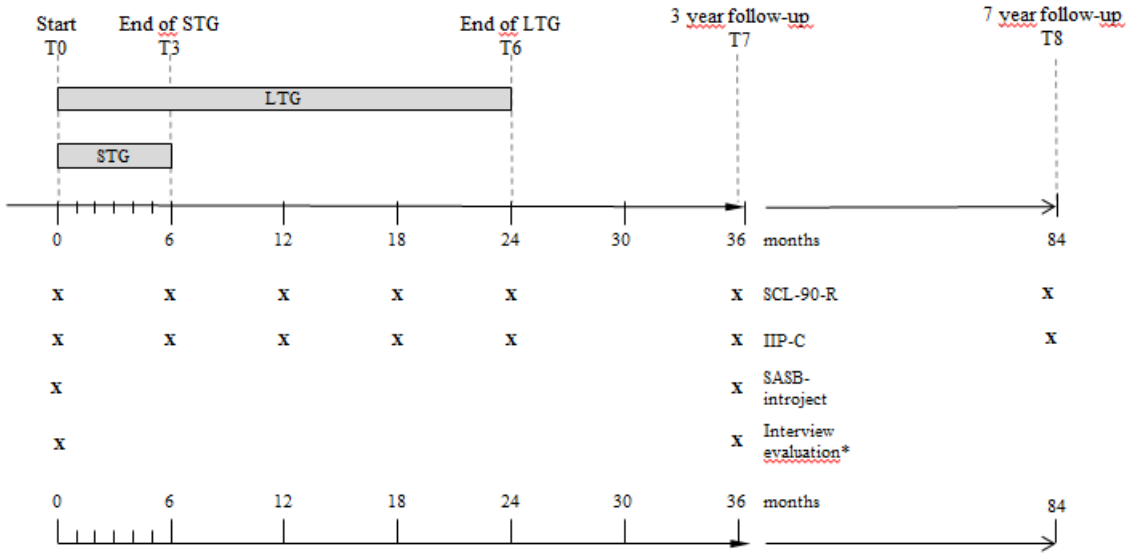
Assessment

Each patient was evaluated before the randomization by the local coordinator. The pre-randomization evaluation lasted 2–4 hours and included a full psychiatric record, the Mini International Neuropsychiatric Interview (MINI PLUS) (Sheehan et al., 2002), the Structured Clinical Interview for DSM IV Axis II Personality Disorders (SCID-II) (First, Gibbon, Spitzer, Williams, & Benjamin, 1997), and Global Assessment of Functioning (GAF) (Endicott, Spitzer, Fleiss, & Cohen, 1976). After randomization, the patients met with their therapist individually for two sessions, in which they received more information about the group and negotiated a treatment contract, preparing the patient for the groups.

The patients also completed self-report forms: Symptom Check List-90-R (SCL-90-R; Derogatis, 1983), Inventory of Interpersonal Problems Circumplex (IIP-C; Alden et al., 1990) and self-concept as measured by the Intrex long version of Structural Analysis of Social Behaviour (SASB-introject) (Benjamin, 1983). SASB were completed before the start of therapy and after three years, one year after the end of LTG. The SCL-90-R and IIP-C were also completed by all patients every 6 months for as long as the long-term therapy was running, and at 3- and 7-year follow-up (a total of 7 time-points). Self-report forms were also sent to non-starters and premature enders. Three years after the start of therapy, the patients were interviewed again by the same coordinators and were diagnosed on Axes I and II. We consider this assessment to be nearly blind, since the coordinators could not possibly remember the original patient allocation, and the patients were instructed not to divulge this.

The patients recorded important life events, prior to starting therapy and at 1, 2, and 3 years. The self-report had 35 items covering positive and negative events in family, work, social life and health, and patients are asked to rate the degree of influence when it happened (Havik et al., 1995). At the 3-year follow-up the patients participated in a detailed semi-structured interview about additional treatment during the 3-year study period, including medication, visits to family doctor, sick leaves etc.

Figure 2. Assessment points over the 7-year study period



*Interview evaluation including Axis I, II, GAF.

Treatment Adherence/Therapist Competence

Treatment fidelity was assessed to ensure that patients actually received the treatment they were randomized to. Thirty-nine audio recordings from the first 6 months of therapy (sessions 3, 10, and 17), from both formats, were drawn from the pool of 54 recordings. Two evaluators blindly and independently rated sessions on therapist activity level, degree of focus, group work in the here-and-now, and therapist competence, using Likert scales from 0 (not at all) to 4 (very much).

Interrater reliability measures the degree of consensus between several observers or evaluators on the same case which can be attained through the computation of Kappa or weighted Kappa (categorical data), Pearson correlations (continuous data) or Intraclass Correlations (for continuous scales). In our study the Intraclass Correlation for the therapy process scales ranged from 0.70 to 0.94. There was significantly more work with a circumscribed problem focus (t = 2.3, df = 15, p = .036) and work in the here-and-now (t = 2.1, df = 35, p = .042) in short-term therapy, in line with the guidelines described in the treatment manual. The level of therapist activity was equal in the two formats. Mean therapist

competence (using six Likert scales on desired therapist interventions ranging from 0 (not at all) to 4 (very much)), was similar in both formats, ranging from moderate to high: 2.7 (*SD* = 0.5) in the short-term format and 2.3 (*SD* = 0.5) in the long-term format.

2.3.4 Measures

Symptoms

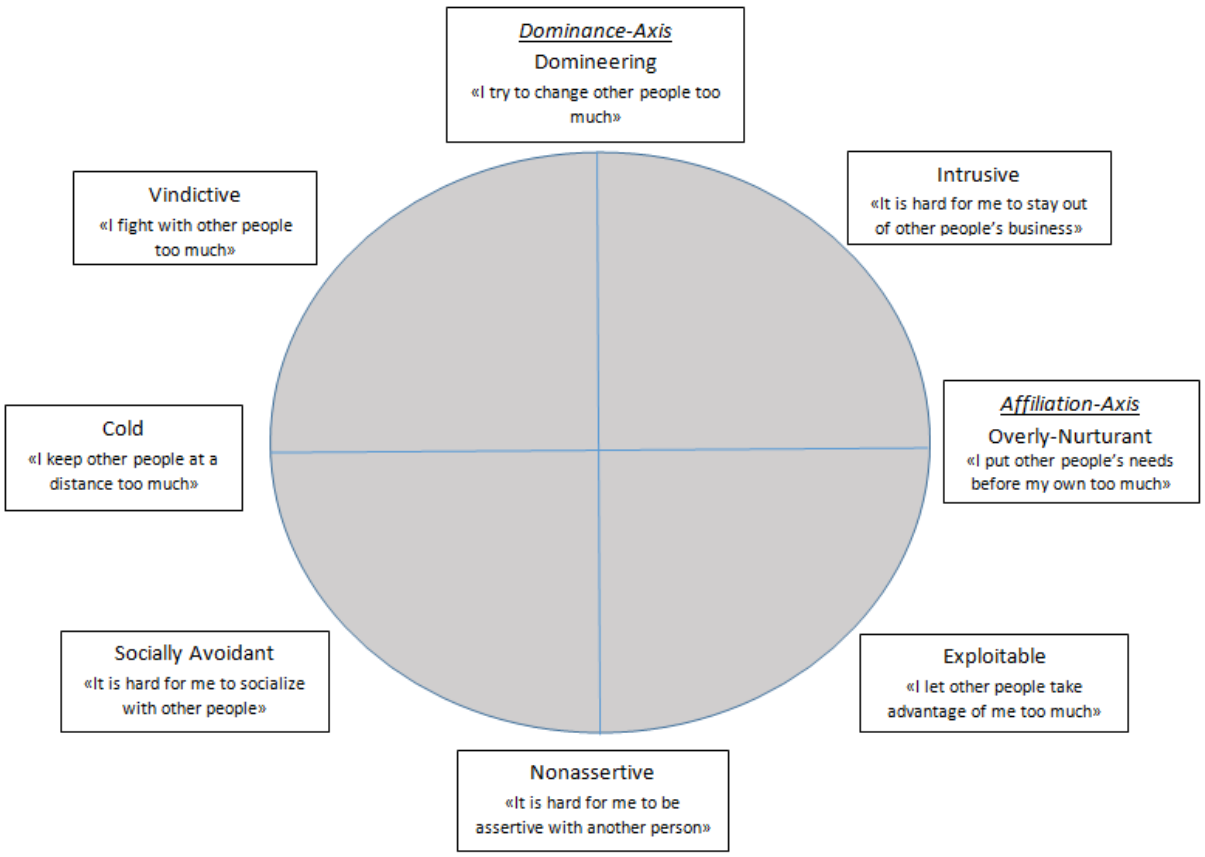
The Symptom Checklist 90 Revised (SCL-90-R; Derogatis, 1983) is a self-report comprising 90 items where severity of symptoms over the last week is rated on a five-point Likert scale from 0 (not distressing) to 4 (extremely distressing). SCL-90-R was designed to cover the major symptoms of psychiatric distress. It is one of the most widely used psychometric instruments in psychotherapy research. The nine subscales measure depression, anxiety, somatization, obsessive-compulsiveness, interpersonal sensitivity, hostility, phobic anxiety, paranoid ideation, and psychoticism. The general symptom load is measured by the mean of all ratings, termed the Global Severity Index (GSI), used in paper 3. The Norwegian version of the SCL-90-R has presented adequate reliability (Bjerke, Solbakken, & Monsen, 2014). Here we calculated a Cronbach's alpha for GSI of .96.

Interpersonal problems

The Inventory of Interpersonal Problems (IIP-C; Alden et al., 1990) is one of the most widely used instruments for evaluating the extent of an individual's interpersonal problems. Briefly, patients must rate themselves on 64 possible interpersonal problems, which can be grouped into eight subscales. When these interpersonal problems are applied to the circumplex model, they can be organized in counter-clockwise order, starting from the top, as domineering, vindictive, cold, socially avoidant, nonassertive, exploitable, overly-nurturant, and intrusive (Figure 3) (Alden et al., 1990; Horowitz, Alden, Wiggins, & Pincus, 2000). Clinical samples of outpatients, also in Norway, typically have most of their problems in the nonassertive, exploitable, and overly-nurturant area in the circumplex (Bjerke, Hansen, Solbakken, & Monsen, 2011; Horowitzet al., 1993; Puschner, Kraft, & Bauer, 2004).

The 64-item version of the IIP-C is a standardized, well validated and reliable instrument that is sensitive to change (Horowitz et al., 1988; Horowitz et al., 2000; Huber et al., 2007). We used the validated Norwegian translation of the instrument (Monsen, Hagtvet, Havik, & Eilertsen, 2006). The first 39 items begin with the phrase, 'It is hard for me to' and the next 25 items describe 'Things that I do too much'. For each item, the degree of difficulty or distress is rated on a 5-point Likert scale ranging from 0 (not at all distressing) to 4 (extremely distressing). The circumplex is organized around two orthogonal axes, one of dominance (vertical axis) and the other of affiliation (horizontal axis). The dominance dimension ranges from being too controlling (i.e., domineering; for example, 'I try to change other people too much') to being too submissive (i.e., nonassertive; for example, 'It is hard for me to be assertive with another person'). The affiliation dimension ranges from sacrificing too much of one's own needs in favor of others (i.e., overly-nurturant; for example, 'I put other people's needs before my own too much') to lacking care for others and feeling interpersonally detached (i.e., cold; for example, 'I keep other people at a distance too much').

Figure 3. Inventory of Interpersonal problems with examples of subscale-items around the circumplex model.



The concept of reliability describes the consistency of a measure. Reliability can be estimated in different ways and for self-reports the following is common: *test-retest reliability* of an instrument: the instrument is applied repeatedly at different time points (we have not done this in our study); *Internal consistency reliability* is used with measures that have several items. Cronbach's alpha is one way to assess this, and is mathematically defined as the mean of an infinite number of split-half correlations. It is both a function of the average covariance between the items and the number of items within a scale. It is expressed as a number between 0 and 1 and describes the extent to which all the items in a test measure the same concept or construct (Tavakol & Dennick, 2011). A coefficient above .6 is considered acceptable in most cases and a coefficient above .7 is normally viewed as good. Low values indicate that the items represent a relatively wide concept. If the reliability becomes too high,

one may question the validity of the measure. It indicates that the observed variables are too closely corresponding to the latent construct. The reliability of a measure is closely linked with the sample which is used, and should be calculated for every new study-sample.

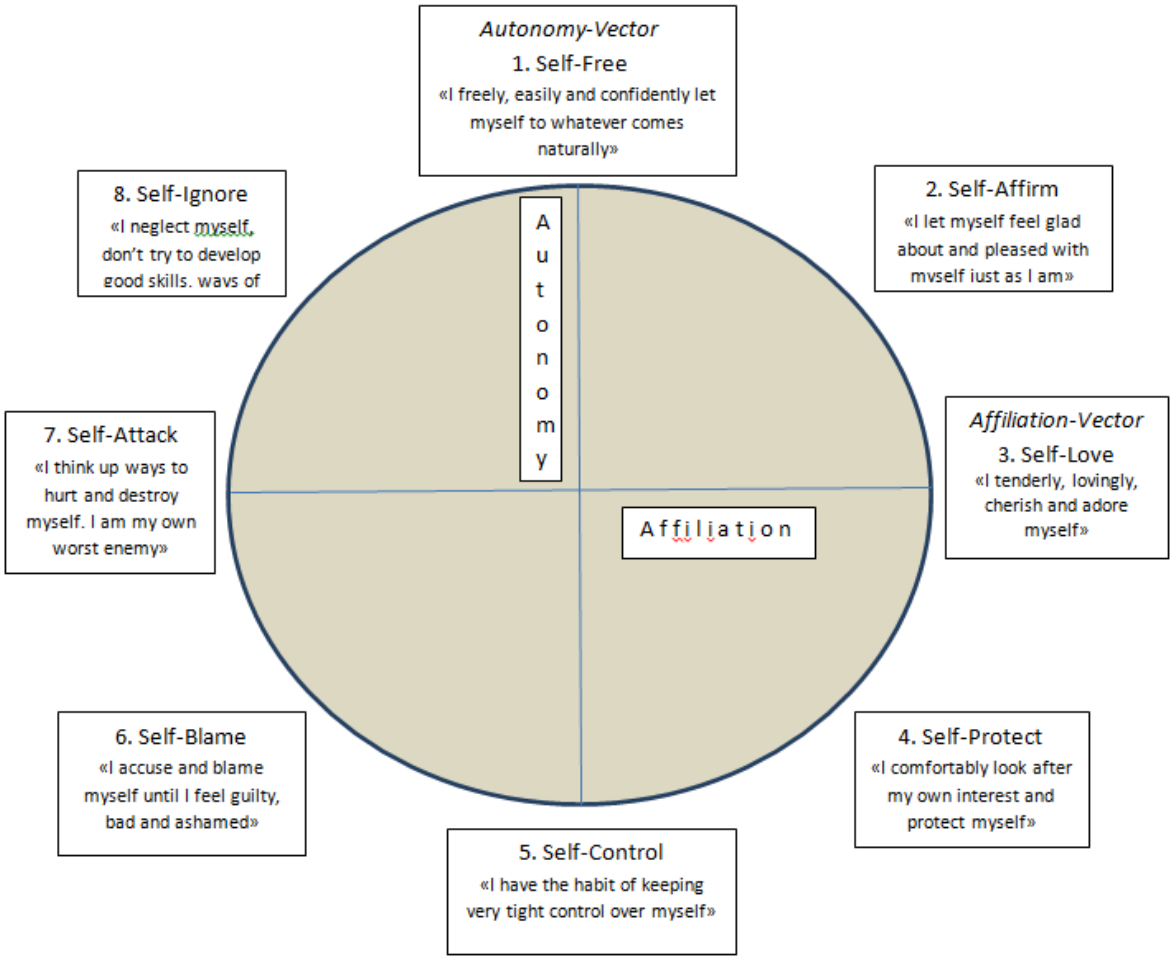
Research has provided strong support for the reliability of the measurements from IIP-C scales in the range .72 -.85 (Alden et al., 1990; Vittengl, Clark, & Jarrett, 2003). Examination of the Norwegian version of IIP-C displayed alphas from .71 to .83 in the reference sample and .69 - .87 in the outpatient sample (the intrusive subscale lowest in both) (Monsen et al., 2006). In the present study, the Crohnbach's alphas at baseline were for Domineering: .76, Vindictive: .70, Cold: 75, Socially avoidant: .86, Nonassertive: .88, Exploitable: .84, Overly-nurturant: .83, and Intrusive: .69. It has a range from .69 to .88 with a median of .76, which indicates good internal consistency and similar to previous studies with similar samples.

Self-concept

Structural Analysis of Social Behavior Intrex long version (SASB-introject; Benjamin, 1983), is a system for evaluating self-concept, i.e., attitudes and feelings that one can have towards oneself. The self-report was completed before the start of therapy and after three years. The questionnaire consists of 36 items, and each is rated on a scale ranging from 0 (never, not at all) to 10 (always, perfectly). The patients rated both how they felt 'at their best' and how they felt 'at their worst'. As mentioned in the Introduction interpersonal psychology and the interpersonal circumplex models underlie the SASB model, like the IIP-C. The model implies that different aspects of the self-concept can be arranged around a circumplex, expressed by two main (orthogonal) dimensions, Affiliation (self-love vs. self-attack) and Autonomy (self-free vs. self-control), plus four additional interpersonal behaviors which are blends of the two main dimensions. Affiliation reflects affection for the self, and it is positively associated with self-love, self-affirmation and self-protection, all valuable aspects of self-acceptance and good mental health. However, improved Affiliation may also reflect a reduction in self-blame, self-attack and self-neglect (cluster scores that are negatively associated with the Affiliation vector). The four behaviors on the main dimensions Affiliation (love versus attack) and Autonomy (free versus control) are represented by five items, while the four remaining

behaviors are represented by four items, and are situated equidistant between the others (see figure 4).

Figure 4. SASB- introject circle with example of cluster-items around the circumplex mode



Data from the Intrex introject questionnaire may be represented at various levels of specificity, as different, but related indexes expressing degree of self-affiliation (love or attack) and autonomy (control versus emancipation).

- *Cluster scores*. Starting on the top of the model and moving clockwise we find eight interpersonal behaviors situated at equal intervals around the circumplex. These cluster

scores are derived as the mean of the four or five items: self-free, self-affirm, self-love, self-protect, self-control, self-blame, self-attack, and self-neglect. See figure 4.

- Two *principal vector scores*, the self-directed affiliation score on the horizontal axis and the self-directed autonomy score on the vertical axis, are formed by a weighting of the eight clusters, indicating the degree to which the eight scores were oriented around the two main axes (Benjamin, 2000). The equations for the weighted scores are:
  Affiliation = 0 x cluster1 + 4.5 x cluster2 + 7.8 x cluster3 + 4.5 x cluster4 - 0 x cluster5 – 4.5 x cluster6 - 7.8 x cluster7 - 4.5 x cluster8.
  Autonomy = 7.8 x cluster1 + 4.5 x cluster2 + 0 x cluster3 - 4.5 x cluster4 – 7.8 x cluster5 – 4.5 x cluster6 – 0 x cluster7 + 4.5 x cluster8.
- *Affiliation* and *Autonomy* are the primary outcome variables in this study as recommended by Pincus, Newes, Dickinson, and Ruiz (1998), who argue that they are uncorrelated and close to normally distributed, with implications for statistical analyses and interpretations.

The reliability and validity of the scales have consistently been found adequate, with a mean internal consistency of 0.82 and good convergent and discriminant validity with other personality-related measures (Benjamin, Rothweiler, & Critchfield, 2006). We used the Norwegian translation of the SASB Long-Form Intrex Introject Questionnaire, tested for validity and reliability by Monsen, VonderLippe, Havik, Halvorsen, and Eilertsen (2007). They found that the Norwegian version has acceptable reliability as estimated by Cronbach's alpha and by test-retest correlations on most SASB introject clusters, ranged from .39 (for self-free and self-control, the rest were >.70) to .77.

Construct validity was fairly good in the outpatient sample, but not in the reference sample (Monsen et al., 2007). We presume this has no consequence to the use of the instrument in our study. In this study the reliability using the Cronbach's alpha was low 'at best' for cluster scores self-free (.39) and for self-control (.44), but satisfactory (from .60 to .77) for the other cluster scores. For 'at worst', Cronbach's alpha was a little low for self-freeing (.51), but satisfactory for the rest (from .65 to .81).

Personality Disorder

In this study the local coordinators established baseline Axis II diagnoses (PD diagnoses) using the SCID-II interview (First et al., 1997). A blind evaluator rated 30 cases, showing an

interrater reliability with Intraclass Correlation (ICC) of 0.85 with the diagnoses of the local coordinator.

In Paper III, PD was a dichotomous variable (0 = no PD, 1 = PD), which produced a model with better fit to our data, compared to using a continuous variable based on the number of positive SCID criteria. In the Paper III model, a *moderator* of treatment effects is a pre-treatment variable that specifies for whom a specific treatment works. A moderator has a differential influence on treatment strength and/or direction depending on the treatment group (Kraemer, Wilson, Fairburn, & Agras, 2002). Thus, establishing moderators of treatment effects may facilitate better matching between patients and treatment type.

2.3.5 Statistical analyses

The sample was analyzed with univariates statistics. All results were obtained by intention-to-treat analyses, based on treatment assignment. The power analysis of the study was based on expected change for one of the primary outcome measures in the study, GAF, over the planned 3 years' study period. We wanted to detect a moderate difference in effect-size between long-term and short-term group psychotherapy, i.e. d =.50. In an effectiveness study (Lorentzen et al., 2002) we found that the post-therapy GAF standard deviation was 5.9. We consider that 3.0 GAF-points can be seen as the least improvement that is clinically significant, i.e. d = .50, during treatment. We read directly from a nomogram (Altman, 1991) that a sample size of n = 120 (60 patients in each group) was needed to obtain a power of .80 with a significance level of .05 (two-tailed). Thus 60 patients must be included in each group. Our aim was to include 170 patients to ensure that an adequate sample size of patients would complete the study in case of substantial drop-out rates. For the analyses of longitudinal data, one case had to be deleted. This patient did not meet the inclusion criteria and should not have been included.

The analysis of group data, and particularly the evaluation of treatment effect is complex (Baldwin, Murray, & Shadish, 2005; Roberts & Roberts, 2005). The main challenges are the within-group dependency, because the data members who are in the same group will influence each other mutually, which means that individuals who attend the same group are more similar to one another than individuals who participate in different groups. This dependence is commonly expressed in terms of correlation between observations (Kenny et

al., 2002), and when ignored increase the risk of type 1 error (Baldwin et al., 2005; Burlingame et al., 2013). On the other hand, stronger differences can be the effect (negative correlations). Group dependency is quantified by the Intraclass Correlation (ICC), i.e., the magnitude of the dependency among observations done on members of the same group (Kenny et al., 2002). Modelling time in a longitudinal analysis with repeated measurements will improve power for the treatment effect, in part by reducing the ICC, by accounting for dependency over time (Baldwin et al., 2005).

In *paper I and III* we used IIP-C and SCL-90 with repeated measurements over the 3 years (6 measure points) and 7 years (7 measure points) to examine change over time. IIP-C and SCL-90 were the dependent variables, while treatments were the independent variables. We used linear mixed models (LMM; Fitzmaurice, Laird, & Ware, 2004) to analyze longitudinal data in paper I and III (SPSS, 2008). LMM is a multilevel model which enables integration of several levels of change (e.g., individual trajectories, treatment groups etc.). In our study repeated measures within patients is level 1, patient-predictors (PD) and treatment (short/long) is level 2, and groups are level 3. LMM allows longitudinal analysis and can assess the trajectory of within-person change over time, and also between-person differences in change over time, and explain or predict between-person differences in change over time. When we planned the study, we chose a study design with repeated measurements of the potential change in the two treatments made at the same time-points, and we expected that this would optimize the internal validity in the study.

LMM can tolerate incompleteness resulting from missing data. 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 intervals between the time-points at which data are obtained. The assumption is that the missing data are missing at random (Fitzmaurice et al., 2004). We also assessed if change were dependent on missing data patterns. Separate treatment effects were calculated as a weighted average of the treatment difference over the patterns (Singer & Willett, 2003). To explore whether missing data might have influenced the results in the SALT-GAP study, we used a pattern mixture approach (Gibbons & Hedeker, 1997). Patients were considered dropped out when they had attended less than two thirds of the scheduled sessions (i.e., fewer than 53 sessions in long-term therapy or 13 sessions in short-term therapy); this definition was based on clinical consensus and was determined before the statistical analyses were performed.

Independent variables were defined as factors (categorical variables dividing the observations into groups; e.g., treatment, PD) or covariates (continuous measures). In LMM there are both fixed and random effects. The fixed effect (parameter estimate) is shared for all patients, while random effects varies between patients around the fixed effects. In this study, treatment (paper I and III) and PD (in paper III) were fixed effects. Intercepts and time were both fixed and random effects. To determine which random effects should be used in the analysis, it is necessary to describe the variance (covariance) structure of the data. With the IIP-C as the outcome variable in paper I, the variances for the therapists and groups indicated negligible non-independence in the data; all ICCs were <0.02. In paper III the corresponding ICC was < 0.01 for IIP-C and GSI. Indicating the proportion of total variation due to different groups, which was here less than 1 %, on the other hand, small ICC's may increase the risk of Type 1 error.

Dependency on three levels was accounted for Thus, random intercepts and slopes were fitted for each patient, each group, and for each of the nine therapists. The treatment groups were coded as long-term therapy = 1 and short-term therapy = 0. Time was coded on a time interval axis, with months as the unit. By design, the treatment group means were equal at baseline. The statistical model forced both treatments to have a common intercept for assessing change in time1. This model is powerful and routinely recommended for analyses of randomized clinical trials (Fitzmaurice et al., 2004). Because of the higher attrition of patients in long-term therapy compared to short-term therapy, we did our analyses both including (1) all existing data, (2) only with starters in therapy and (3) with completers. We obtained very similar results, indicating little bias from early termination.

Goodness of fit to multivariate normally distributed responses was assessed. To compare the goodness of fit for different statistical model, the measure '2-log-likelihood' can be used. In paper I and III, a model with a piecewise linear spline for the mean response was fitted, with a knot at 6 months (the end of short-term therapy). The two-piece model fitted the data better than the fit with a linear time trend using change in log likelihood. With the spline model, we could test change separately, during the first 6 months (time1, earlier change) or during the last 2.5 years (time2, later change). This model gave also a better goodness of fit, than having another time-point for the spline. This accords also with the inspection of raw-data, where we see an early change during the first 6 months for the total sample. It is also clinically applicable since it is the length of the short-term therapy.

In the SALT-GAP study we test the treatment effects over time (difference in slopes between short-term and long-term therapy). In a RCT, there is a treatment effect if the difference in effect between the therapies compared is significant, i.e., the difference in change during and after short-term therapy and long-term therapy must be significant.

Paper I:

The following composite model equation was calculated in paper I:

$$Y_{ij} = B_0 + B_1\ TIME1_{ij} + B_2\ (TIME1_{ij} \times TREATMENT_i) + B_3\ TIME2_{ij} + B_4\ (TIME2_{ij} \times TREATMENT_i) + [\zeta_{0i} + \zeta_{1i}\ TIME1_{ij} + \zeta_{2i} TIME2_{ij} + \varepsilon_{ij}]$$

In this equation, Y_{ij} is the dependent variable score for $patient_i$ at $timepoint_j$; $B_0 – B_4$ are the fixed effects; and ζ_{oi}, ζ_{1i}, ζ_{2i}, and ε_{ij} are the random intercept, random slope in time period 1, random slope in time period 2, and error term, respectively. Random effects for groups nested within therapists were also tested. The relevant parameters were B_2 and B_4, which represented the treatment effects (the difference in slopes between long-term therapy and short-term therapy) observed from 0 to 6 months and from 6 to 36 months, respectively. Between-group effect sizes (converted to Cohen's *d*; Cohen, 1988), derived from the *F*-test for the mixed effects model, were calculated as:

$$d = 2\sqrt{\frac{F}{df}}$$

where *F* is the *F*-test statistic for the effect of interest in the repeated model, as well as in other multilevel designs (Verbeke & Molenberg, 2000). Testing potential differences with LMM included five subscales; because of multiple tests, we used Bonferroni-adjusted alpha levels of 0.01 per test. We also controlled for the IIP severity score, and using mean IIP-total score at baseline as covariate in the analyses did not change the pattern of the results.

For endpoint comparison, we used the independent sample t-test to test potential differences between the two treatment formats at baseline and at 36 months. In order to further illustrate *when* the change occurs during the study period for the two formats, the

intragroup effect sizes were calculated using Cohen's *d*. We calculated effect sizes from baseline to post-treatment (i.e. 6 months for short-term and 24 months for long-term groups) and from post-treatment to 1 year following treatment termination (6 to 18 months for short-term and 24 to 36 months for long-term groups).

Paper III:

A moderator of treatment effect is a pre-treatment variable that specifies for whom a specific treatment works. The effect of treatment on outcome (therapy effect) will be different for the different values of a putative moderator (i.e., different therapy effect for patients with and without PD). In a randomized controlled trial, the moderator is by definition uncorrelated with treatment, and has an interactive effect with treatment outcome. While a general *predictor* influences outcome independently of treatment condition, a moderator influences the strength and/or direction of a treatment effect on outcome differentially between different treatments (Kraemer et al., 2002; Johansson & Høglend, 2007). Moderator effects should not be calculated by p values, but rather by effect sizes (Kraemer et al., 2002).

To investigate treatment effects over time (difference in slopes between short-term and long-term therapy), plus the putative moderator effect of presence of PD, the following composite model equation was calculated in paper III:

$$Y_{ij} = B_0 + B_1\,\mathrm{TIME1}_{ij} + B_2\,\mathrm{TIME2}_{ij} + B_3\,(\mathrm{TIME2}_{ij} \times \mathrm{TREATMENT}_i) + B_4\,\mathrm{PD}_i + B_5\,(\mathrm{PD} \times \mathrm{TIME2}_{ij}) + B_6\,(\mathrm{PD} \times \mathrm{TIME2}_{ij} \times \mathrm{TREATMENT}_i) + [\zeta_{0i} + \zeta_{2i}\mathrm{TIME2}_{ij} + \varepsilon_{ij}]$$

In this equation, Y_{ij} is the dependent variable score for $\mathrm{patient}_i$ at $\mathrm{timepoint}_j$, $B_0 - B_6$ are the fixed effects, TIME1 represents the first 6 months, and TIME2 represents the last 6.5 years. ζ_{0i}, ζ_{2i}, and ε_{ij} are random intercept, random slope, and error term, respectively. We also tested random effects for groups nested within therapists.

The relevant parameter is the treatment effect $B_3\,(\mathrm{TIME2}_{ij} \times \mathrm{TREATMENT})$, i.e., the difference in slopes between long-term and short-term therapy during the last 6.5 years. B_3 can be interpreted as the treatment effect for the typical PD patient when PD is coded as 0,

and the effect for patients without PD when PD is coded as 1. The moderator effect B_6 (PD × $TIME2_{ij}$ × TREATMENT) corresponds to whether the treatment effect differs between patients with and without PD.

No longitudinal analyses were conducted on patient subgroups. Effect sizes (converted to Cohen's *d*) were derived from the *F*-test for mixed effects model calculated as above in paper I. In paper III we also controlled for severity of anxiety at baseline, by using the Anxiety subscale score from SCL-90-R as covariate in the analyses. This did not change the pattern of results. To explore the potential differences in the LMM for the eight IIP-C subscales, we used Bonferroni-adjusted alpha levels of .006 per test (.05/8) for multiple tests. Finally, to further illustrate the different effects over the 7-year follow-up for patients with and without PD in the two formats, we calculated intragroup effect sizes using Cohen's *d*, from baseline to end of short-term and long-term therapy (6 and 24 months, respectively) and up to the 84-month follow-up. The ES was calculated as pre–post difference divided by the pooled SD.

Paper II:

In paper II, univariate ANOVAs was used to analyses change in SASB measured at baseline and at 3-year follow-up. SASB-introjects were the dependent variable, while treatment was the independent variable. The dependence in the data was accounted for by multilevel analysis (MLM; SPSS, 2008), with patients, groups and therapists as the three levels. Intraclass correlations indicated more dependence within group than between groups (within same therapist). Maximum Intraclass Correlation (ICC) was found for neglect (ICC within = 0.13 / ICC between = 0.05). However, due to negligible change in the standard errors for the group effects, compared to univariate ANOVAs, the latter was chosen as a method that may be more familiar to clinicians. Paired *t*-tests and ANOVAs were thus performed to assess and compare within (vector scores) and between group (vector and cluster scores) change for long-term therapy and short-term therapy. Group length is also here a dichotomous variable coded as long-term =1 and short-term = 0.

Effect sizes (ES) are standardized differences, within or between groups, in order to have benchmarks for the magnitudes of effects. These were calculated as Cohen's *d*: small = 0.2, medium = 0.5 and large = 0.8 (Cohen, 1988).

3. Results

3.1 Summary paper I

In this study, we compared the patterns of change in interpersonal problems between short-term and long-term psychodynamic group therapy. The outcome measures were 5 subscales of the IIP-C (cold, socially avoidant, nonassertive, exploitable, and overly-nurturant), and we chose those subscales where our sample had significantly higher scores at baseline than a healthy Norwegian reference sample (Monsen et al., 2006). Change was analyzed using LMM with a spline model, where we could test change separately, during the first 6 months (earlier change) and during the last 2.5 years (later change). Contrary to what we hypothesized, short-term therapy induced a significantly larger change during the first 6 months compared to long term therapy on the cold subscale ($p = .01$) and there was a trend in the same direction for the socially avoidant subscale ($p = .02$), using a Bonferroni-adjusted alpha ($\alpha = .01$). The effect-sizes for the treatment effects (difference in rate of change between the two formats) were 0.4 for both subscales. There were no significant treatment effects during the last 2.5 years for any of the 5 subscales.

There were no significant differences between short-term and long-term group therapy in any of the subscales in the end-point comparisons after 3 years. The intra-group effect-sizes during treatment (0-6 months in short-term, and 0-24 months in long-term format) were similar and small for the two treatment formats (ESs range from 0.2-0.4), but in the year following the respective treatments there was a small to moderate effect in the long-term group (delayed effect), but no further effect in the short-term group (sustained effect). The largest improvement is seen in the socially avoidant subscale during and after the long-term format (ES = 0.7).

In sum, patients in both treatment arms made significant gains reducing their interpersonal problems, and we could not find any significant difference in the effectiveness between the formats over the 3-year study-period for any of the subscales. Patients changed earlier on the cold and socially avoidant subscales in short-term therapy (during the first 6 months).

3.2 Summary paper II

We compared differences in self-concept changes during and after short-term and long-term psychodynamic group psychotherapy up to three years. Self-concept was assessed at baseline and at 3-year follow-up, using the SASB-introject self-report questionnaire. Patients rated themselves as they felt ‘at best’ and ‘at worst’. The vector scores Affiliation and Autonomy were primary outcome measures, and the eight cluster scores self-free, self-affirm, self-love, self-protect, self-control, self-blame, self-attack, and self-neglect were secondary outcome measures.

Our hypothesis was supported, i.e. comparisons between the therapy formats (rated ‘at best’) demonstrated a significantly larger improvement in Affiliation in long-term than in short-term therapy ($p = .01$; between-group ES = 0.4). This difference was explained by a higher improvement in self-blame, self-attack, and self-neglect for patients in long-term therapy, dimensions that impact negatively on the Affiliation score. Differences between formats in change in ‘at best’ ratings, show that more improvement in the long-term therapy included the vector score Affiliation and the cluster scores self-blame, self-attack, and self-neglect, while ‘at worst’ ratings only included more improvement in self-blame and self-attack. Thus patients perceived the improvement as more extensive when they rated themselves ‘at best’.

Within group univariate analyses showed change for patients in the long-term format on both Affiliation and Autonomy, and both ‘at best’ and ‘at worst’. Patients in the short-term format only changed significantly on the Autonomy ‘at best’, while there was a trend towards improvement in the ‘at worst’ ratings. Patients in the short-term format had no significant intra-group change in the Affiliation scores.

3.3 Summary paper III

We compared the effects of short-term and long-term group analytic therapy among patients with and without PD, with regard to symptoms and interpersonal problems during a 7-year follow-up. For interpersonal problems we included both the mean total scores on IIP-C and scores on the eight subscales. We hypothesized that presence of PD would moderate the treatment effect in favor of long-term treatment. This was supported as PD showed a

significant moderator effect for symptoms (p = .03; ES = 0.4) and a trend for interpersonal problems (p = .07; ES = 0.3).

For patients *with* PD, long-term was superior to short-term therapy with regard to effects measured between 6–84 months using GSI (*p* = .001, and between-group ES = 0.6) and IIP-C mean total (p = .007, between-group ES = 0.5). For patients *without* PD, there were no significant differences between the formats for either outcome measure over the last 6.5 years. Intra-group ESs for symptoms and interpersonal problems for patients with PD in the long-term format were large (ES = 1.0 and 1.3, respectively) over the 7-year study period, and the pattern confirms that patients with PD have a delayed effect after long-term treatment (post-treatment ES = 0.6 and 0.7, in symptoms and interpersonal problems, respectively). The effects in short-term treatment seemed to be sustained (post-treatment ES = 0.1 and 0.2, respectively).

Patients with PD showed significantly higher change rates on the subscales nonassertive, exploitable, and overly-nurturant with long-term compared to short-term therapy, with between-group effect sizes of 0.5, 0.6, and 0.7, respectively.

4. Discussion

The objective of the current thesis was to study the significance of treatment duration in a diagnostically heterogeneous outpatient sample treated with psychodynamic group therapy. Changes were measured within three different domains essential to a person's well-being: the burden of symptom distress, problems in relationships, and the quality of a person's relationship to him-/herself. We have also investigated the role of having a PD for the potential differences in long-term changes after short-term therapy versus long-term therapy.

4.1.1 Patterns of change in interpersonal problems

Comparing the patterns of change in the different aspects of the circumplex we found, as hypothesized, no treatment effects (significant differences in the rate of change between the short-term and long-term formats) during any of the time intervals (the first 6 months and the last 2.5 years) for the nonassertive, exploitable, and overly-nurturant subscales. The improvements on the cold and socially avoidant subscales did not, as hypothesized, significantly differ between long-term and short-term therapy during the last 2.5 years of the study period, in favor of the long-term format. Instead, we found a significantly larger improvement on the cold and a trend in the socially avoidant subscales during the first 6 months in short-term compared to long-term therapy.

According to the manual, and supported by our treatment fidelity evaluations, the therapists were more expectant and reticent towards the patients in the early phase in the long-term therapy (Lorentzen et al., 2013). Conversely, during short-term therapy, the therapists to a larger degree stimulated the interactional work, by focusing more on the here-and-now and to a higher degree addressing the individual dysfunctional interpersonal patterns. Therefore, we can expect these patients to start to interact and work on their interpersonal focus at the very beginning of therapy. Thus, probably the short-term therapy format targeted the cold (distancing themselves from others) and socially avoidant problems more than they did in the early phase of long-term therapy. In our study the patients in the short-term format formulated a circumscribed interpersonal problem together with the therapist, using the IIP-C profile, ahead of therapy start. This, together with the shorter duration of the therapy, may create an urge to 'get going' and to use the available time in a meaningful way. We know that patients with high scores on the cold subscale often fear rejection from others, which may escalate

hostility, mistrust, and the tendency of keeping others at a distance (Alden et al., 1990). These attitudes may on the other hand be counteracted by early support from the therapist and peer group members.

The intra-group effects during treatment were similar and small for the two treatment lengths. However, during the year following the respective treatments there was a delayed improvement in the long-term format (small to moderate ES), but no further significant change in the short-term format. Inspection of the observed values revealed a tendency toward faster change in short-term therapy during the first 6 months, followed by a sustained effect after therapy termination, while long-term therapy had similar effects across a longer time interval. There were no differences after 3 years on any of the five analyzed subscales, within the endpoint comparisons.

To our knowledge, the only randomized trial on group psychotherapy that examined the change in IIP subscales was performed by Tasca et al. (2012). In that study, patients with binge eating disorder received 16 sessions of interpersonal psychodynamic or cognitive–behavioral group therapy. The patients achieved larger improvements on the cold subscale with psychodynamic therapy than with cognitive therapy. The authors' interpretation was that the therapist when they focused on the interpersonal pattern of patients who struggled with problems in the cold area, also had mobilized support in the group. This may again have helped the patients to both experience and express difficult emotions in the group. These results support our finding that short-term psychodynamic group therapy can bring about an early significant change on the cold subscale.

Previous research on individual short-term therapies, including cognitive–behavioral and short-term psychodynamic therapies, showed only small improvements on the cold dimension of the IIP-C (Borkovec, Newman, Pincus, & Lytle, 2002; Crits-Christoph et al., 2005; Horowitz et al., 1993). However, the fact that our results differ from findings from previous studies may be due to differences in sample composition or in other aspects of the design. Borkovec et al. (2002) and Crits-Christoph et al. (2005) studied homogeneous samples of patients with generalized anxiety disorder treated with cognitive behavioral individual therapy or interpersonal individual psychodynamic therapy. Another possible explanation of our findings may be that problems in the cold area are more readily activated in a *group* setting, enabling patients to face these problems earlier and to a higher degree than

in an individual therapy. Groups may also contain more unspecific therapeutic factors than individual therapy, for example support from other group members.

Several individual long-term therapy studies have suggested that the long time frame allows changes to occur on almost all subscales, including the cold subscale (e.g., Huber et al., 2007; Salzer et al., 2010). However, none of those studies used repeated measurements during treatment; consequently, they could not determine at which point during the course of treatment the change actually occurred. The results suggest that short-term therapy may have some advantages over long-term therapy for patients who have more problems connected to being cold and socially avoidant, by effecting an early change in these traits. The changes achieved in short-term therapy were maintained after the end of treatment, and this is consistent with follow-up results in studies of individual short-term psychodynamic therapy (Driessen et al., 2010; Høglend et al., 2008; Leichsenring et al., 2004; Svartberg, Stiles, & Seltzer, 2004). Another indication of the positive changes achieved with short-term therapy in the current study was that the patients did not engage in additional treatment to any larger extent than those who received long-term therapy, during the 3-year study period (Lorentzen et al., 2013). A meta-analysis of the effectiveness of long-term individual psychodynamic therapy (Leichsenring & Rabung, 2008) demonstrated that further improvements occur after treatment termination for many patients in long-term therapy. At the time we did the 3-year follow-up, we could only speculate whether a longer follow-up period would have produced larger differences in outcome between the two formats.

4.1.2 Change in self-concept

In paper II, our hypothesis that Affiliation scores on the SASB-introject improved more after long-term than after short term therapy at 3-year follow-up was supported. This treatment effect was mainly accounted for by a larger improvement of the hostile attitudes self-blame, self-attack, and self-neglect cluster scores in the long-term format.

It might be tempting to attribute the increased improvement in self-directed hostile attitudes only to the difference in the length of therapy in the two formats, i.e., a dose-response relationship. Patients in long-term therapy have had more time to change their dysfunctional patterns. However, since the therapies are slightly different in several aspects, variances in outcome could also be attributed to any of these. The therapists were more

expectant and reticent in the early phase in the long-term therapy compared to their behavior during short-term therapy where they worked more in the here-and-now and had a higher degree of focus on individual dysfunctional interpersonal patterns (Lorentzen et al., 2013). The idea is that patients with more negative attitudes towards themselves may become more defensive and even deteriorate, if these aspects are focused too early in therapy, before a feeling of mutual acceptance is developed

Intra-group changes showed that patients in long-term therapy improved on both Affiliation and Autonomy, whereas patients in short-term therapy improved significantly on 'at best' ratings of Autonomy only, and they had no significant change in Affiliation. Generally, we found a similar change in 'at best' and 'at worst' ratings, although the improvement was larger during the 'at best' condition. This difference may reflect findings from previous reliability studies that the ratings 'at worst' tend to be less stable than the ratings 'at best', although test-retest changes systematically go in the same direction (Benjamin, 2000). We did not hypothesize distinct changes of Autonomy scores. The main determinants of this score are self-free and self-control cluster scores, which were both moderately reliable (Cronbach's alpha) in the present study. Therefore, these clusters scores should be interpreted with care. Similar results have been found in a small sample of psychosomatic patients who experienced an improvement in self-concept after an affect-based, psychoeducative combined individual/group therapy of short duration. The improvement was also in that study due to the fact that patients blamed, attacked, and ignored themselves less after treatment than before (Bergdahl, Armelius, & Armelius, 2000).

In the Helsinki Psychotherapy Study, Lindfors and colleagues (2012) found that the patients' self-concepts improved more in both forms of short-term therapies than in long-term psychodynamic individual therapy during the first year. However, at 3-year follow-up, the long-term therapy was more effective than the short-term solution focused therapy regarding improvement in the Affiliation scores (and the cluster scores Self-affirm, Self-blame, and Self-neglect). The long-term format also showed better results than the short-term psychodynamic format, as the 5-year data supported the superiority of long-term therapy Lindfors et al., 2015). They also found that a lower initial values of Affiliation and Autonomy were predictors of better effect, and patients improved more after long-term therapy compared to short-term therapies on both symptoms and work ability (Lindfors Knekt, Heinonen, & Virtala, 2014). In line with our findings, it seems that longer time in treatment may be

preferable with more serious disturbances in self-directed Affiliation, especially if negative aspects are overly harsh and punitive.

In a study of long-term individual therapy, Halvorsen (2006) demonstrated that a change in negative attitudes towards oneself occurs earlier in therapy and is easier to achieve than changes in positive self-acceptance attitudes, which have shown to require longer time to change. The negative attitudes are likely to be associated with negative affects, like depression and anxiety, which often improve faster during therapy. Reducing the hostile attitudes towards oneself may promote optimism and pave the way of more fundamental changes, like being more accepting towards oneself. Unfortunately, we have SASB-introject measurements at only two time points, and can therefore not describe the pattern of change over time.

Our results accord with earlier findings of improvements in self-concept, mostly from short-term *individual* therapy studies (Svartberg et al., 1996; Junkert-Tress et al., 2001), but also from long-term studies of individual psychotherapy (Granberg & Armelius, 2003; Arnold et al., 2000). The improved Autonomy represents a movement towards more emancipation (self-freeing) and less self-control, in line with the findings of Svartberg et al. (1996). This change is also an explicit goal in psychotherapy, especially with depressed, anxious, and inhibited patients, who are predominant in outpatient samples like ours. However, the samples in these studies on individual therapy are not directly comparable to ours. Some previous studies were done on samples of specific diagnostic groups, whereas we have studied a sample of patients with mixed diagnoses. Another problem is that most researchers instructed their patients to rate their self-perception 'as it usually is', whereas we instructed patients to rate their self-concept both 'at best' and 'at worst'.

4.1.3 The moderator effect of PD on long-term change in symptoms and interpersonal problems

The hypothesis that presence of PD is a moderator of treatment effect, i.e., presence of PD influences the outcome depending on the treatment format, was supported by the results in paper III. Using symptoms (GSI) as the outcome measure, we found a significant moderator effect of PD during the last 6.5 years of the study period ($p = .03$; ES = 0.4). With

interpersonal problems (mean IIP-C total) as outcome variable, presence of PD had a trend of a moderator effect (p = .07; ES = 0.3). In the present study, substantial change is expected within both treatment conditions, since we compare two active treatment modalities. Thus, even small effects of a moderator probably have clinical significance.

Furthermore, patients with PD showed significantly greater improvement during the study period from 6 to 84 months with long-term compared to short-term therapy with regard to both symptomatic distress (between-group effect size, 0.6) and interpersonal problems (between-group effect size, 0.5). The between group effect sizes at 3-year follow-up, previously published (Lorentzen et al., 2015b), were 0.4 and 0.3 for GSI and mean IIP-C total, respectively. Thus, our 7-year follow-up demonstrated continuation and even further increase of this treatment effect, indicating a *delayed effect* of the long-term therapy compared to a *sustained effect* of the short-term therapy.

Our third hypothesis was also supported, as patients *without* PD showed no significant treatment effects on any of the outcome measures during the study period. In one of our previous papers we reported that patients without PD showed a larger change in interpersonal problems and a trend for a greater change in symptoms during short-term therapy in the first 6 months of the study period (Lorentzen et al., 2015b). The minimal change during the rest of the study period (6.5 years) may be partly explained by the low levels of symptomatic stress and interpersonal problems observed at 6 months after baseline for patients without PD (i.e., a floor effect).

The intra-group effect sizes from baseline to the 7-year follow-up support the superiority of long-term therapy for patients with PD (effect sizes for the long-term format were 1.0 and 1.3 for GSI and IIP-C, respectively, and for the short-term format the corresponding effect sizes were 0.3 and 0.4). In contrast, the effect sizes from baseline to the 7-year follow-up for patients without PD were similar between the two formats (0.5 and 0.6 for GSI and IIP-C respectively, for both formats).

It should be emphasized that the patients in short-term therapy also changed considerably; those without PD obtained small to moderate ESs during therapy, while patients with PD obtained small ESs. In both sub-samples the change was sustained up to seven years after baseline. PD patients in short-term therapy also obtained small or moderate ESs on most IIP-C subscales across seven years. Examining the ESs at therapy termination indicates a delayed effect after the end of long-term therapy, especially among patients with more PD.

When patients *with* PD have changed more during and after long-term, than short-term therapy, it is probably associated with therapy duration (i.e., dose-response relationship) (Huber et al., 2007; Kopta et al., 1994). In a meta-analysis of controlled studies of psychodynamic treatment, Leichsenring and Rabung (2011) reported that long-term therapies led to better results than short-term therapies among patients with chronic problems or PDs. However, the included studies did not compare treatments of different lengths within the same study. Moreover, presence of PD in itself has been demonstrated to predict a need for more sessions in long-term dynamic therapy, in estimations on statistical models (Perry et al., 2007).

Finally, we examined whether patients with PD showed significantly different levels of improvement on the IIP-C subscales in long-term versus short-term group therapy. We observed a treatment effect with moderate to large between-group effect sizes, in favor of long-term therapy within the nonassertive, exploitable, and overly-nurturant problem areas. This suggests that the treatment effect for the mean IIP-C total score was primarily explained by differential changes on these subscales. The intra-group effect sizes for these subscales also clearly indicate that patients with PD experienced significantly greater change in long-term therapy. Another study of long-term psychodynamic individual therapy for patients with PD reported change on similar subscales (socially avoidant, exploitable, overly-nurturant, and intrusive), but with only small effect sizes (Vinnars, Barber, Noren, Gallop & Weinryb, 2005).

The PD diagnoses in our study were predominantly cluster C, and avoidant PD was the largest category (63%). These individuals are often ambivalent to close relationships, and slower to open up to the therapist and group members (Wilberg, Karterud, Pedersen, & Urnes, 2009). The larger change in the nonassertive, exploitable, and overly-nurturant subscales with long-term therapy indicates that these patients improved their ability to be more self-assertive, and more attentive to their own feelings and needs. Given the entrenched and chronic nature of PDs, long-term follow-up is crucial to evaluate the results of psychotherapeutic treatments (Levy, 2008). Some follow-up studies of patients with PD suggest that the initial need for symptom relief is largely met, but not the more complex needs of improvement in interpersonal functioning and lasting change in personality structure (Bateman, Gunderson, & Mulder, 2015). There are relatively few studies addressing long-term effects, but there is some support for the delayed effect for patients with PD after combined treatment programs (e.g., Antonsen et al., 2014; Bateman & Fonagy, 2008; Chiesa et al., 2006; McMain et al.,

2012). This supports the finding that the treatment effects in our study increase from 3 to 7 years in favor of long-term therapy for patients with PD pathology.

4.2 Discussion of main findings

We know from the literature that both short-term and long-term psychodynamic group therapy cause improvement in clinical outcomes, with medium to large ESs from pre- to post treatment (Burlingame et al., 2013). However, the evidence is sparse regarding which therapy works best, for whom it works, and for how long the effect lasts. The results presented in this thesis, together with the previous SALT-GAP results, show that outpatients with mixed diagnoses can improve in both short-term and long-term group analytic psychotherapy on both symptoms, interpersonal problems, psychosocial functioning, and self-relatedness. At the same time, we have demonstrated that patients with PD over a span of several years will improve more on symptoms and interpersonal problems after long-term therapy, compared to short-term therapy.

While group analytic and social psychological theories underscore the social determinants of human behavior (Foulkes & Anthony, 2014; Brown & Zinkin, 1994), psychoanalytic theories (especially object relations and interpersonal theories) examine personality from a developmental perspective. In a group setting, aspects of the internal world will regularly be reenacted (Sullivan, 1953; Malat & Leszcz, 2014) and can be modified, provided that a safe group analytic culture has been developed. This can potentially constitute profound learning situations for all group members, because it can enhance the participants' understanding of self (insight) and others in both short- and long-term therapies. Group Analysis is an important 'brand' of therapy belonging to a larger family of psychodynamic group therapies. These therapies are often not so different as some proponents of a specific approach may maintain. This was also mentioned in the Introduction (see section 1.2), and we think it is important to try to integrate similar theories and concepts, which may make it easier to search for common mechanisms of change specific for psychodynamic group therapies.

Group therapy, with its emphasis on feedback in a social microcosm where individual behaviors are displayed, is a particularly effective treatment for patients who need to get acquainted with and understand their interpersonal problems better (Lorentzen, 2014). Yalom

and Leszcz (2005) have repeatedly asserted that a primary focus of group therapy should be to correct interpersonal distortions through relational experiences within the group context. Such transactions in combination with careful joint exploration of interpersonal events may challenge an individual's maladaptive beliefs about the self and others through interpersonal feedback. The group process carries with it potential change mechanisms or important therapeutic factors like emotional corrective experiences (Alexander & French; Malat & Leszcz, 2014) or group relationships (Krogel et al., 2013) which most likely contributed to the change observed in patients having participated in both our short- and long-term therapies. Each member's interpersonal style will sooner or later appear in his or her behavior in the group. Some sooner, like people with vindictive traits, who quickly may catch the group's attention, while other traits, like an exploitable style may require longer time to become visible for the other group members (Yalom & Leszcz, 2005).

A central component that may be relevant for this study as a possible explanation for the improvement in both self-relatedness and interpersonal problems, is the theoretically supported connection between patients' problems, treatment focus, and outcome measure (PTO-congruence; Henry, 1996). The importance of these factors is boosted by the theoretical underpinnings of the manuals (Lorentzen, 2014), which provide an understanding of psychopathology, and the importance of general and specific interventions, which includes the deliberate use of elements in the group process. Awareness of interpersonal problems, which indirectly implies distorted self- and other perceptions, was an explicit inclusion criterion, and the patients' recognition of having such problems, already implies a certain ability to mentalize. Thus, interpersonal problems were specifically targeted in both treatment manuals. Gurtman and Balakrishnan (1998) hold that patients who reported more specific interpersonal problems, e.g., problems with interpersonal detachment, profited more during therapy than patients reporting more diffuse distress. The objective in our study was to increase the group members' awareness of the dynamics of the group and of the individual group members' dysfunctional interpersonal strategies, as a step towards correcting both irrational forms of behavior, distorted self and other perceptions, and problematic interpersonal patterns. The use of these insights and new corrective experiences in- and outside the group, may have contributed to a better and more realistic self-image in both our therapy formats. The gains obtained by the PD patients in the long-term format several years after termination suggest that the group experience has promoted structural changes. These therapeutic factors are potential mechanisms through which psychotherapy produces benefits, i.e., both common and

specific factors (Wampold, 2015). As an indicator of a similar initial level of group relationships in our study, we found no significant differences in early therapeutic alliance or group cohesion in the two treatments (Bakali, Wilberg, Hagtvet, & Lorentzen, 2010). Another common factor, pre-treatment expectancy, was also not significantly different between the formats.

Reviews of non-randomized studies on the importance of treatment duration have failed to establish the optimal length of therapy for different disorders (Orlinsky, Rønnestad, Willutszki, 2004; Leichsenring et al., 2004, 2008). However, there seems to be a general view that longer psychotherapies will result in larger change (Barkham et al., 2002; Huber et al., 2007; Arnold et al., 2000; Zimmermann et al., 2014). Luborsky (2001) reviewed studies on the benefits of short-term versus long-term therapy and found that the results to some degree depended on the research method. Studies that compared treatments of different lengths directly in the same study tended to show non-significant outcome differences, whereas comparisons of results from different studies tended to show better results for longer therapies. The dose-response relationship is one explanation for the larger improvement after long-term therapy in papers II and III. The long-term treatment gives patients better opportunity to work through their problems and also leads to more insight into the origin of their dysfunctional patterns, which may contribute to more long-lasting changes than do short-term treatments (Huber, Henrich, Clarkin, & Klug, 2013; Lorentzen, 2014). The patients have more time to internalize the group as a good inner gestalt in the long-term therapy, the members receive more feedback and take part in more corrective emotional experiences. These will gradually enable them to modify their object- and self-representation. In this way, long-term psychodynamic therapy may over time facilitate changes in underlying psychological structures (e.g., defenses, interpersonal problems, and self-relatedness), at best producing long-lasting benefits after therapy (Kopta et al., 1994; Shedler, 2010; Town et al., 2012).

A recent study comparing the effects of two psychodynamic therapies of different number of sessions for depression support the ideas presented above (Zimmermann et al., 2014). The authors concluded that both ‘dosage’ (more sessions) and therapeutic techniques (the application of psychoanalytic techniques) facilitated change in depressive patients in their study. It is also plausible that patients in the short-term therapy use the sessions more actively, than patients do in early sessions of a long-term therapy they know will continue for a long time (Barkham et al., 2002).

During the last few decades several meta-analyses have indicated that the treatment effects are maintained after both short-and long-term psychodynamic therapy (Leichsenring et al. 2015). It has also been suggested and demonstrated that improvement after long-term psychodynamic therapy continues several years after the end of therapy (Gabbard, Gundersson, & Fonagy, 2002; Perry & Bond, 2009). Individual psychodynamic therapy lasting up to 40 sessions have shown additional improvement during the follow-up period (Høglend et al., 2008; Leichsenring et al., 2014; Town et al., 2012; Vinnars et al., 2005). However, delayed effects are often reported based on clinical experience, rather than systematic empirical research (e.g., Bateman, & Fonagy, 2008; Leichsenring and Rabung, 2008). An exception is the Helsinki psychotherapy study with up to 10-year follow-up (described in Introduction section 1.2). Lindfors et al. (2015) demonstrated that patients in long-term individual psychodynamic therapy had improved more in both interpersonal problems and self-concept than patients in the two short-term therapies, at 5-years follow-up. The difference was less marked at the 10-year follow-up, where they could not demonstrate significant differences between short- and long-term therapy regarding personality functioning. They reasoned that this could be due to more frequent use of additional treatment in the short-term therapy groups from 3 to 10-year follow-up (Knekt, Virtala, Härkänen, Vaarama, Lehtonen, & Lindfors, 2016). Their results with a delayed improvement after long-term therapy, and the sustained improvement after the two short-term therapies, are consistent with some of the findings in the present thesis.

Another issue that could be argued is that patients with PD in mixed groups (which includes patients with and without PD), may be more likely to improve than patients in homogeneous PD groups. However, mixing patients with different degrees of PD-pathology poses an ethical question, since some patients could be kept in treatment longer than necessary. But, there may also be subgroups of patients without PD who would benefit from longer treatment, and some PD patients who may be sufficiently helped by short-term therapy. Future research should be aimed at investigating further which patients are best suited for long-term versus short-term psychotherapy.

4.3 Discussion of methods

The study design

We planned a study with a RCT-design to fulfill the criteria for high quality research, comparing two active psychotherapies, in order to be able to distinguish selection effects from treatments effects.

Good validity and reliability, and representability are prerequisites for our results to be generalized to other patients than those investigated (e.g., Meinert, 1986). Internal validity refers to whether inferences about a causal relationship between an independent and a dependent variable can be drawn (Shadish, Cook, & Campbell, 2002), which again depends on the extent to which a study minimizes systematic error (bias). In this study, the internal validity dictates whether the observed results of differential treatment effects can be attributed to differences between the treatment conditions. External validity is the extent to which the results of a study can be generalized to other situations and to other people (Aronson, Wilson, Akert, & Fehr, 2007).

Random assignment is essential for achieving initial comparability between treatments and reduces the plausibility of alternative explanations for observed effects (Shadish et al., 2002). We did not have a control group, meaning that we could not conclude that the treatments were responsible for the observed improvements, which may represent a threat to the internal validity. When having a control group, like wait-list or placebo-like therapy of management, there is a greater certainty that the effects are not just due to common factors like the quality of the therapist contact and positive expectations about being helped. On the other side, our aim of the study was to *compare* outcome between two active therapy formats and these potential differences cannot be explained by a natural course. Adding a third arm to a trial is also a question of economy, and not the least feasibility: It is impossible to have a control group in a long-term study. People with active problems would surely seek treatment elsewhere, if they would have to wait for active treatment for 2 years. Randomization in our study was regarded as successful because the patient groups in the two treatment conditions were comparable at baseline in terms of outcome variables, sex, sociodemographic factors, and diagnoses. The exception was a significant difference in the diagnosis generalized anxiety disorder with more patients in the long-term format. However, when we compared the Anxiety subscales of the SCL-90-R the two formats did not differ (see method 2.3.1). There were also more patients with PD in long-term therapy, but there were no significant

differences comparing the number of positive SCID-II criteria between the formats. The inclusion of new participants in the long-term groups to substitute for early attrition was an irregularity of the randomization process, but turned out to have little or no impact on the results of this study (Lorentzen et al., 2013). We tested this, and when we included starter status (yes/no) and/or premature termination status (yes/no) in the statistical models, these terms were not significant in the model, and the pattern of results did not change. Also the analyses of the sample of patients that started therapy (n = 148) and the analyses of completers (n = 116) gave the same pattern of findings.

While randomization is the gold standard methodologically, clinically it may be a drawback, since therapists are not allowed to select their own patients and compose their own groups. On the other hand, the fact that they were not allowed to exclude patients from their groups may increase generalizability and reduce the magnitude of the treatment effects, reducing the likelihood of overestimating the effects of the treatments. There are several methodological challenges to undertake a RCT of therapies with different durations. In the Helsinki study the authors discussed possible consequences of not following the patients' preference for a specific treatment and not of considering other patient factors of suitability to treatment format (Laaksonen, Lindfors, Knekt, & Aalberg, 2012). Accordingly, there were many patients who used different auxiliary mental health services extensively in both their short-term therapy formats, suggesting that the right therapy modality might have been long-term therapy from the effectiveness point of view (Knekt et al., 2016).

An important strength of this study is the long follow-up period, which enabled us to detect potential delayed post-treatment effects. In psychotherapy research it is difficult to know what interferes with patients' progress, especially in long-term follow-up studies. Another challenge in long-term studies is the attrition of patients, which reduces the internal validity. We had an almost complete dataset, with 90% patient participation in the 3-year follow-up, and 73% at 7-year follow-up, offering a better opportunity for intention to treat analyses.

Patients in the two therapy formats did not significantly differ in important positive and negative life events or additional (extra-study) treatment during the three first years of the study. Unfortunately, we lack information regarding life events and additional treatment during the last four years of the follow-up period. It seems plausible that short-term patients would be more likely to pursue additional treatment than patients who received long-term

treatment. In the Helsinki study the short-term patients probably had received significantly more additional treatment than the long-term patients at 10-years follow-up (Knekt et al., 2016). This indicates that the difference in outcome in our study is robust and that our results probably do not overestimate the treatment effects.

Participants

The patient sample was recruited among patients who were referred to specialist public mental health services by psychiatrists and psychologists in public or private practice at three different urban areas in Norway and the treatment took place in ordinary clinical settings. This increases the external validity of the study. The patient diagnoses are probably representative for people seeking therapy in public mental health outpatient services in Norway. The use of specific exclusion and inclusion criteria have resulted in a sample that can be characterized as moderately disturbed, as there are no patients with psychoses and few with cluster A and B PDs.

Compared to some similar mixed samples of outpatients our participants had relatively low scores on especially SCL-90-R at baseline. One important reason for this is probably a 'positive expectancy'-effect, since the patients had been accepted for treatment after randomization a few weeks before the groups started, while the self-rated measures were completed right ahead of therapy start. Time from randomization to start of therapy varied from 2 to 12 weeks, with an average of 7 weeks.

Therapy adherence and therapist competence

The therapists in this study were highly trained and had long experience in performing psychodynamic group therapy. They had also received additional training in both formats before starting and participated in regular supervision by the manual author throughout the therapy period. The use of specially trained psychotherapists in a study may make it difficult to generalize the results to clinical practice where therapists often may be less experienced.

The therapies were both manualized (Lorentzen, 2014). There was assessment of treatment integrity and skills, ensuring that the given therapy was psychodynamic. We also assessed whether practice was in line with specific characteristics for each therapy, that had been teased out in the manual. The adherence-competence check showed good integrity (see

Method 2.3.3). Both monitoring treatment adherence to the manual, and therapist competence will ensure a good internal validity.

The two therapy formats in this study are similar in most respects, but they can also be distinguished from each other based on other factors than difference in duration. An important aspect was the stage-orientation in short-term therapy according to Mackenzie's model (1997). The therapists were instructed to draw attention to the stages of engagement; differentiation, interpersonal work, and termination. Even though the purpose is to investigate the effect of treatment duration, other therapy characteristics may certainly also have influenced the differences, for instance different therapeutic techniques between the two approaches (i.e., more use of here-and-now-interventions in the short-term therapy and more expectant therapist stance in the early phase of long-term therapy).

Measures/measure points

Longitudinal studies allow individuals to be assessed at several time-points over several years, thereby providing important clinical information about changes over time, variability in change patterns, and differences between subgroups (moderator analyses). A strength of this study is the use of repeated assessments of IIP-C and SCL-90-R (7 time-points over 7 years) over a long follow-up period. It allowed us to analyze change at different time-points, making our results more valid and detailed.

Information about treatment outcomes were obtained from both patients (self-reports), therapists, and independent raters (research coordinators). The three outcome measures (IIP-C, SCL-90-R, and SASB introject) are self-rated instruments, and they pick up mostly conscious, often ego-dystonic problems. Personality functioning may be harder to report because it is so well assimilated into the self, and remains partly outside of conscious and explicit awareness. The benefit of using self-reports is that they are less expensive. Expert ratings are both more expensive and time-consuming (e.g. GAF-rating). Self-reports seem most relevant when it comes to information about a person's subjective well-being, functioning, and quality of life. Therapist ratings are not used in our study and may be biased because of personal interest in the results of the treatment, but there are also possibilities for bias (idiosyncrasies) and threats to objectivity when independent evaluators are used (Mercer & Loesch, 1979).

Reliability describes the consistency of a measure and reflects the amount of error, both random and systematic, involved in any measurement. It is defined as the part of the total variance in a set of measurements (e.g. in a subscale), which is true. The most important aspects of reliability in the present study are the interrater reliability measures, and the internal consistency reliability. The instruments used showed good reliability in the present study. The exception is the SASB introject Autonomy cluster scores self-free and self-control, the reliability of which was moderate to low (see discussion section 4.1.2).

Statistical validity

It may be difficult to balance between the risk of type I and II errors in a study. In both paper I and III we controlled for type I error by using a Bonferroni correction because of multiple tests (using a lower α value), reducing the possibility of false-positive findings. The use of a multilevel mixed modeling approach in papers I and III also reduced the risk of type I errors compared to more traditional statistical analyses which are often too conservative in estimates of the standard error of covariance between data levels. In contrast, the multilevel approach accounts for a lack of independence in data, because of the nesting of the repeated measurements within the patient, the groups, the therapists, and the treatment conditions (Baldwin et al., 2005). The risk for more type II errors increases with smaller samples (i.e., testing on sub-samples). In a few places we tried to compensate for this by reporting trends for significance also.

We used a robust statistical analysis method that tolerated non-independence and missing data. A larger sample size would have increased the statistical power and reduced the chance of type-II errors. Overall, the statistical tests uncovered significant results and the effect-size estimates were in the moderate to large range.

Summing up strengths and limitations

In this study, good internal and external validity was ensured through randomization, by using repeated measurements, and by monitoring of treatment adherence to the manual and therapist competence. There is arguably high generalizability to similar clinical samples. On the other hand, there are several methodological challenges to the internal validity because of the complexity involved in studying long-term effects of therapy. These include differential

attrition rates, life-events and additional treatments during the follow-up period, and the effects accounted for by the natural recovery process. Therefore, causal inferences about treatment effects must be drawn with caution. Also, it is not entirely possible to establish whether treatment effects should be attributed to different treatment duration or to the differences in therapist approach in the two treatment conditions. This may be a limitation, although in both formats therapists focused mainly on relational and interpersonal problems.

5. Conclusions

5.1 Clinical implications

The results of the present thesis demonstrate that outpatients with mixed diagnoses can improve in both short-term and long-term group analytic psychotherapy, achieving a better relationship to themselves, less interpersonal problems, in addition to a reduction in symptom distress.

- There are no differences between short-term and long-term therapy with regard to improvement of the cold, socially avoidant, nonassertive, exploitable, and overly-nurturant dimensions of the interpersonal circumplex over the first three years, for the typical patient in the study (Paper I). Since the effects appeared sooner (during the first 6 months) for patients in short-term group therapy and the results of the two treatments were equal after three years, short-term therapy might be the preferred therapy for the typical outpatient struggling with especially problems being too cold and socially avoidant.

- During the first 3 years of the study, patients in long-term therapy improved more than those in short-term therapy on Affiliation, a weighted variable which also includes negative attitudes toward one-self, like the cluster scores self-blame, self-attack, and self-neglect (Paper II). The larger improvement in long-term therapy was mainly due to a greater improvement of these hostile cluster scores. Thus, patients who need to improve affiliative attitudes towards themselves may need longer time in therapy, especially if the low level of self-directed Affiliation is due to more serious self-neglect and/or harsh, punitive self-attack/self-blame. Patients were significantly and equally improved on the Autonomy dimension in both therapies.

- Personality disorder (PD):
  The study demonstrates that the presence of PD may be a selection criterion for deciding therapy duration. Patients with PD (mainly cluster C and mixed PDs) showed

significantly greater improvement of both symptom distress and interpersonal problems up to 7 years after long-term compared to short-term group analytic therapy (Paper III).

For patients *with* PD, there also seems to be a marked delayed effect after therapy for patients who have been treated in the long-term format (while the change is sustained after short-term therapy). Patients with PDs can be informed that the effects obtained during short-term therapy may be smaller than in long-term therapies, but that the results are often sustained several years after termination. The significantly greater effect for patients with PD after long-term therapy is partly accounted for by development of greater autonomy and less self-sacrificing behavior.

Moreover, patients *without* PD seem to have no further improvement in either interpersonal problems or symptoms after the first 6 months in either treatment format. Many patients without PD are likely to be sufficiently helped by short-term group therapy, while most patients with PD will require longer therapies to improve.

5.2 Implications for future research

We hope that this study will stimulate others to do further studies of the role of treatment duration in group analytic (psychodynamic) therapy, and help clinicians guiding patients to choose a treatment that can be helpful for their specific problems. My thesis emphasizes the need for establishing moderators of treatment effects to facilitate better matching between patients, and treatment type. No previous randomized trials have in a systematic way investigated how presence of PDs impacts the long-term outcomes of psychodynamic group psychotherapy of different durations. Future research should perform moderator analyses and explore therapeutic changes after a longer observational time to determine whether short-term and long-term therapy will show delayed effects. Our results need to be replicated in future studies.

We need more knowledge of how and why different therapies work. Analyzing the mechanisms of change is one way to investigate which processes and factors will mediate

relief of symptoms and relational problems. Insight has been identified as a mediator in a randomized study of individual psychodynamic therapy with and without transference interpretations (Johansson et al., 2010). In the group context other potential mechanisms of change can also be related to the therapeutic relationships like group cohesion (Burlingame, et al., 2011), group climate (Bakali, Wilberg, Klungsøyr, & Lorentzen, 2013), and therapeutic alliance (Piper, Ogrodniczuk, Lamarche, Hilscher, & Joyce, 2005). Another similar, but more detailed approach is the use of the Group Questionnaire (Krogel et al., 2013), which tries to track the development of positive bonding, working relationships, and negative reactions between each patient and the therapist(s), other members, and the group-as-a-whole. The idea is to associate these dimensions with aspects of treatment outcome. Such analyses might uncover new and unique information about mediators of change in complex treatment processes.

Given the potentially lower cost-effectiveness of group therapy versus individual therapy, it would be of interest to conduct cost-benefit analyses comparing group and individual psychodynamic therapy.

6. References

Alden, L. E., Wiggins, J. S., & Pincus, A. L. (1990). Construction of circumplex scales for the Inventory of Interpersonal Problems. *Journal of Personality Assessment, 55*(3–4), 521–536. https://doi.org/10.1080/00223891.1990.9674088

Alexander, F., & French, T.M. (1946). *Psychoanalytic therapy*, 353. New York: Ronald Press.

Altman, D. G. (1991). Practical Statistics for Medical Research: 456. Chapman & Hall,

American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*. Washington, DC: Author.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). https://doi.org/10.1176/appi.books.9780890423349

Antonsen, B.T., Klungsoyr, O., Kamps, A., Hummelen, B., Johansen, M., Pedersen, G.,.….Wilberg, T. (2014). Step-down versus outpatient psychotherapeutic treatment for personality disorders: 6-year follow-up of the Ullevål personality project. *BMC Psychitary, 14*, 119. https://doi.org/10.1186/1471-244X-14-119

Arnold, E.G., Farber, B.A., & Geller, J.D. (2000). Changes in patients' self-representation over the course of psychotherapy. *Journal of the American Academy of Psychoanalysis, 28 (3),* 449-466. https://doi.org/10.1521/jaap.1.2000.28.3.449

Aronson, E., Wilson, T.D., Akert, R.M., & Fehr, B. (2007). *Social psychology* (4th ed.). Toronto: Pearson Education.

Bakali, J.V., Wilberg, T., Hagtvet, K.A., & Lorentzen, S. (2010). Sources accounting for alliance and cohesion at three stages in group psychotherapy; Variance component analyses. *Group Dynamics: Theory, Research, and Practice, 14(4),* 368-383. https://doi.org/10.1037/a0019170

Bakali J. V., Wilberg T., Klungsoyr O., & Lorentzen S. (2013). Development of group climate in short- and long-term psychodynamic group psychotherapy. *International Journal of Group Psychotherapy 63*(3): 366–393. https://doi.org/10.1521/ijgp.2013.63.3.366

Baldwin, S. A., Murray, D. M., & Shadish W. R. (2005). Empirically supported treatments of Type-I errors? Problems with analysis of data from group administered treatments. *Journal of Consulting and Clinical Psychology, 73* (924-935). https://doi.org/10.1037/0022-006X.73.5.924

Barkham, M., Rees, A., Stiles, W. B., Hardy, G. E., & Shapiro, D. A. (2002). Dose-effect relations for psychotherapy of mild depression: A Quasi-experimental comparison of effects of 2, 8, and 16 sessions. *Psychotherapy Research, 12*(4), 463-474. https://doi.org/10.1093/ptr/12.4.463

Bateman, A., & Fonagy, P. (2008). 8-year follow-up of patients treated for borderline personality

disorder: mentalization-based treatment versus treatment as usual. *The American Journal of Psychiatry,* 165, 631-38. https://doi.org/10.1176/appi.ajp.2007.07040636

Bateman, A., & Fonagy, P. (2009). Randomized controlled trial of outpatient mentalization-based treatment versus structured clinical management for borderline personality disorder. *The American Journal of Psychiatry, 166*(12), 1355-1364. https://doi.org/10.1176/appi.ajp.2009.09040539

Bateman, A. Gunderson, J., & Mulder, R., (2015). Treatment of personality disorder. *Lancet, 21*,385(9969),735-43. https://doi.org/10.1016/S0140-6736(14)61394-5.

Bednar, R.L., & Kaul, T.J. (1994). Experimental group research: can the cannon fire? In: *Handbook of psychotherapy and behavioural change* (eds Bergin and Garfield), 4th ed., 631-663. Wiley. New York.

Benjamin, L.S. (1974). Structural analysis of social behavior. *Psychological Review, 81,* 392-425. https://doi.org/10.1037/h0037024

Benjamin, LS. (1983). *The INTREX user's manual: Part I.* Madison: WI: INTREX Interpersonal Institute.

Benjamin, LS. (1987). Use of the SASB dimensional model to develop treatment plans for personality disorders. *Journal of personality disorders,* 1, 43-70. https://doi.org/10.1521/pedi.1987.1.1.43

Benjamin, L.S. (2000). *SASB Intrex user's manual for short, medium, and long form questionnaires.* Salt Lake City: University of Utah.

Benjamin, L.S., Rothweiler, J.C., & Critchfield, K.L. (2006). The use of Structural Analysis of Social Behavior (SASB) as an assessment tool. *Annual Review of Clinical Psychology, 2,* 83-109. https://doi.org/10.1146/annurev.clinpsy.2.022305.095337

Bergdahl, L.V., Armelius, K., & Armelius, B-Å. (2000). *Affect-based treatment and outcome for a group of psychosomatic patients.* Report no 85, Department of Applied Psychology, Umeå University, S-90187 Umeå, Sweden.

Bernard, H., Burlingame, G., Flores, P., Greene, L., Joyce, A., Kobos, J.,….. Feirman, D. (2008). Clinical practice guidelines of group psychotherapy. *International Journal of Group Psychotherapy, 58(4),* 455-542. https://doi.org/10.1521/ijgp.2008.58.4.455

Bion, W. R. (1961). *Experiences in groups*. London, Routledge.

Bjerke, E., Hansen, R. S., Solbakken, O. A., & Monsen, J. T. (2011). Interpersonal problems among 988 Norwegian psychiatric outpatients. A study of pretreatment self-reports. *Comprehensive Psychiatry, 52*(3), 273-279. https://doi.org/10.1016/j.comppsych.2010.07.004

Bjerke, E., Solbakken, O.A., & Monsen, J.T. (2014). Are there specific relationships between symptom patterns and interpersonal problems among psychiatric outpatients? *Journal of Personality Assessment, 96*(2), 237-244. https://doi.org/10.1080/00223891.2013.834441

Bjerke, E., Solbakken, O.A., Friis, S., & Monsen, J.T. (2016). Self-relatedness and interpersonal

problems in a large psychiatric outpatient sample. *Psychology, 7,* 864-876. https://doi.org/10.4236/psych.2016.76088

Blackmore, C., Tantam, D., Parry, G., & Chambers, E. (2011). Report on a systematic review of the efficacy and clinical effectiveness of group analysis and analytic/dynamic group psychotherapy. *Group Analysis, 45*(1), 46-69. https://doi.org/10.1177/0533316411424356

Blatt, S.J., Zuroff, D.C., Hawley, L.L., & Auerbach, J.S. (2010). Predictors of sustained therapeutic change. *Psychotherapy Research, 20,* 37-54. https://doi.org/10.1080/10503300903121080

Borkovec, T. D., Newman, M., Pincus, A., & Lytle, R. (2002). A component analysis of cognitive-behavioral therapy for generalized anxiety disorder and the role of interpersonal problems. *Journal of Consulting and Clinical Psychology, 70*(2), 288-298. https://doi.org/10.1037/0022-006X.70.2.288

Bowlby, J. (1969). *Attachment, vol. 1 of Attachment and loss.* London: Pimlico.

Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development.* New York: Basic Books.

Brown, D., & Zinkin, L. (1994). The psyche and the social world. In *The Psyche and the Social world: Development in Group Analytic Theory* (eds. D Brown & L Zinkin), 232-252. London/New York: Routledge.

Budman, S.H., Demby, A., Soldz, S., & Merry, J. (1996). Time-limited group psychotherapy for patients with personality disorders; outcomes and dropouts. *International Journal of Group Psychotherapy, 46*(3), 357-377. https://doi.org/10.1080/00207284.1996.11490785

Burlingame, G.M., McClendon, D., & Alonso, J. (2011). Cohesion in group psychotherapy. In: *A guide to psychotherapy relationships that works*, (ed. JC Norcross) 2nd ed. Oxford University Press. Oxford.

Burlingame, G. M., Strauss, B., & Joyce, A. S. (2013). Change mechanisms and effectiveness of small group treatments, In: *Bergin & Garfield's handbook of psychotherapy and behavior change* (ed. MJ Lambert) 6th ed., pp. 640-690). Wiley, New York.

Burlingame, G.M., Seebeck, J.D., Janis, R. A., Whitcomb, K., Barkowski, S., Rosendahl, J., & Strauss, B. (2016). Outcome differences between individual and group formats when identical and nonidentical treatments, patients, and doses are compared: A 25-year meta-analytic perspective. *Psychotherapy 53 (*4), 446–461. https://doi.org/10.1037/pst0000090.supp

Chiesa, M., Fonagy, P., & Holmes, J. (2006). Six-year follow-up of three treatment programs to personality disorder. *J Pers Disord, 20*(5), 493-509. https://doi.org/10.1521/pedi.2006.20.5.493

Clarkin, J.F., Levy, K.N., Lenzenweger, M.F., & Kernberg, O.F. (2007). Evaluating three treatments for borderline personality disorder: a multiwave study. *The American Journal of Psychiatry, 164(*6), 922-8. https://doi.org/10.1176/ajp.2007.164.6.922

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences.* New York: Academic Press.

Crits-Christoph., P., Connolly Gibbons, M.B., Narducci, J., Schamberger, M., & Gallop, R. (2005). Interpersonal problems and the outcome of interpersonality oriented psychodynamic treatment of GAD. *Psychotherapy: Theory, Research, Practice, Training, 42*(2), 211-224. https://doi.org/10.1037/0033-3204.42.2.211

Derogatis, L.R. (1983). *SCL-90-R administration, scoring and procedure manual.* Towson, Md: Clinical Psychometric Research.

Dinger, U., & Schauenburg, H. (2010). Effects of individual cohesion and patient interpersonal style on outcome in psychodynamically oriented inpatient group psychotherapy. *Psychotherapy Research, 20*(1), 22-29. https://doi.org/10.1080/13009028555105034

Driessen, E., Cuijpers, P., de Maat, S. C., Abbass, A. A., de Jonghe, F., & Dekker, J. J. (2010). The efficacy of short-term psychodynamic psychotherapy for depression: a meta-analysis. *Clinical Psychology Review, 30*(1), 25-36. https://doi.org/10.1016/j.cpr.2009.08.010

Endicott, J., Spitzer, R.L., Fleiss, J.L., & Cohen J. (1976). The Global Assessment Scale: A procedure for measuring overall severity of psychiatric disturbance. *Archives of General Psychiatry, 33*(6), 766-771. https://doi.org/10.1001/archpsyc.1976.01770060086012

First, M.B., Gibbons, M., Spitzer, R.L., Williams, J.B.W., & Benjamin, L.S. (1997). *Structural Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II).* Washington, D. C: American Psychiatric Press, Inc.

Fitzmaurice, G., Laird, N.M., & Ware, J.H. (2004). *Applied longitudinal analysis.* New York: Hoboken.

Fuhriman, A., & Burlingame, G.M. (Eds.) (1994*). Handbook of group psychotherapy: An empirical and clinical synthesis.* New York: Wiley.

Foulkes, S. H. (1948). *Introduction to group-analytic psychotherapy*. London: Heinemann.

Foulkes, S. H. (1964). *Therapeutic group analysis*. London: Allen & Unwin.

Foulkes, S. H. (1975). *Group analytic psychotherapy: Methods and principles.* London: Gordon & Breach.

Foulkes, S.H., & Anthony, E.J. (2014). *Group Psychotherapy. The psychoanalytical approach*. London: Maresfield reprints. First published London: Penguin Books, 1957.

Freud, S. (1955). Group psychology and the analysis of the ego. In J. Strachey (ed. & Trans.), *The standard edition of the complete psychological works of Sigmund Freud* (Vol. 18, pp65-143). London: Hogarth Press. (Original work published 1921)

Gabbard, G.O. (2000). Psychotherapy of personality disorders. *The Journal of Psychotherapy Practice and Research, 9*(1), 1-6. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3330582/

Gabbard, G.O., Gunderson, J.G., Fonagy, P. (2002). The place of psychoanalytic treatments within psychiatry. *Archives of General Psychiatry 59*, 505–510. https://doi.org/10.1001/archpsyc.59.6.505

Gibbons, R. D., & Hedeker, D. (1997). Random effects probit and logistic regression models for three-level data. *Biometrix, 53,* 1527-1537. https://doi.org/10.2307/2533520

Granberg, Å. & Armelius, K. (2003). Change of self-image in patients with neurotic, borderline and psychotic disturbances. *Clinical Psychology and Psychotherapy, 10,* 229-237. https://doi.org/10.1002/cpp.371

Gurtman, M.B., & Balakrishnan, J.D. (1998). Circular measurement redux: The analysis and interpretation of interpersonal circle profiles. *Clinical Psychology: Science and Practice, 5,* 344-360. https://doi.org/10.1111/j.1468-2850.1998.tb00154.x

Haase, M., Frommer, J., Franke, G-H., Hoffmann, T., Schulze-Muetzel, S. J., Grabe, H-J….. Schmitz, N. (2008). From symptom relief to interpersonal change: Treatment outcome and effectiveness in inpatient psychotherapy. *Psychotherapy Research, 18*(5), 615-624. https://doi.org/10.1080/10503300802192158

Halvorsen, M.S. (2006). Self-image and Psychotherapy: Measurement, Predictor and outcome issues. Department of Psychology, Faculty of social sciences, University of Oslo.

Halvorsen, M.S., & Monsen, J.T. (2007). Self-image as a moderator of change in psychotherapy. *Psychotherapy Research., 17,* 205-217. https://doi.org/10.1080/10503300600608363

Harrison, T. (2000). *Bion, Rickman, Foulkes and the Northfield Experiment: Advancing on a different front.* London: Jessica Kingsley.

Havik, O.E, Monsen, J.T., von der Lippe, A., Lyngstad, G., Stiles, T. & Svartberg, M. (1995). *Multisenterprosjekt for studier av prosess og utfall i psykoterapi*, Prosjektbeskrivelse edn, Universitetet i Oslo.

Henry, W.P., Schacht, T.E., & Strupp, H.H. (1990). Patient and therapist introject, interpersonal process, and differential psychotherapy outcome. *Journal of Consulting and Clinical Psychology, 58(6),* 768-774. https://doi.org/10.1037/0022-006X.58.6.768

Henry, W.P. (1996). Structural Analysis of Social Behavior as a common metric for programmatic psychopathology and psychotherapy research. *Journal of Consulting and Clinical Psychology, 64(6),* 1263-1275. https://doi.org/10.1037/0022-006X.64.6.1263

Horowitz, L. M., Rosenberg, S. E., Baer, B. A., Ureno, G., & Villasenor, V. S. (1988). Inventory of interpersonal problems: psychometric properties and clinical applications. *Journal of Consulting and Clinical Psychology, 56*(6), 885-892. https://doi.org/10.1521/ijgp.52.3.419.45511

Horowitz, L. M., Rosenberg, S. E., & Bartholomew, K. (1993). Interpersonal problems, attachment styles, and outcome in brief dynamic psychotherapy. *Journal of Consulting and Clinical Psychology, 61*(4), 549-560. https://doi.org/10.1037/0022-006X.61.4.549

Horowitz, L. M. (2004). *Interpersonal formulations of psychopathology.* Washington, DC: American Psychological Association. https://doi.org/10.1037/10727-000

Horowitz L.M., Alden L.E., Wiggins J.S., & Pincus A.L. (2000). *Inventory of interpersonal problems manual.* San Antonio, Tx: The Psychological Corporation.

Howard, K. I., Lueger, R. J., Maling, M. S., & Martinovich, Z. (1993). A phase model of psychotherapy outcome: Causal mediation of change. *Journal of Consulting and Clinical Psychology,61,* 678-685. https://doi.org/10.1037/0022-006X.61.4.678

Huber, D., Henrich, G., & Klug, G. (2007). The Inventory of Interpersonal Problems (IIP): Sensitivity to change. *Psychotherapy Research, 17*(4), 474-481. https://doi.org/10.1080/10503300600856160

Huber, D., Henrich, G., Clarkin, J., Klug, G. (2013). Psychoanalytic versus psychodynamic therapy for depression: a three year follow-up study. *Psychiatry;* 76: 132–149. https://doi.org/10.1521/psyc.2013.76.2.132

Høglend, P., Bøgwald, K.P., Amlo, S., Marble, A., Ulberg, R., Sjaastad, M.C., … Johansson P. (2008). Transference interpretations in dynamic psychotherapy: Do they really yield sustained effects? *The American Journal of Psychiatry*, 165, 763-771. https://doi.org/10.1176/appi.ajp.2008.07061028

Jensen, H. H., Mortensen, E. L., & Lotz, M. (2010). Effectiveness of short-term psychodynamic group therapy in a public outpatient psychotherapy unit. *Nordic Journal of Psychiatry, 64*, 106–114. https://doi.org/10.3109/08039480903443874

Johansson, P., Høglend, P.A., Ulberg, R., Amlo, S., Marble, A., Bøgwald, K.P., ….Heyerdahl, O. (2010). The Mediating Role of Insight for Long-Term Improvements in Psychodynamic Therapy. *Journal of Consulting and Clinical Psychology 78* (3), 438–448. https://doi.org/10.1037/a0019245

Johansson, P., & Høglend, P.A. (2007). Identifying mechanisms of change in psychotherapy: Mediators of treatment outcome. *Clinical Psychology & Psychotherapy, 14,* 1-9. https://doi.org/10.1002/cpp.514

Junkert-Tress, B., Schnierda, U., Hartkamp, N., Schmitz, N., & Tress, W. (2001). Effects of short-term dynamic psychotherapy for neurotic, somatoform, and personality disorders: a prospective 1-year follow-up study. *Psychotherapy Research 11(2),* 187-200. https://doi.org/10.1080/713663890

Karterud, S., Pedersen, G., Bjordal, E., Brabrand, J., Haaseth, O., Haavaldsen, G.,…..Urnes, Ø. **(**2003). Day treatment of patients with personality disorders: experiences from a Norwegian treatment research network. *Journal of Personality Disorders, 17*(3):243-62. https://doi.org/10.1521/pedi.17.3.243.22151

Kennard, D., Roberts, J., & Winter, D. (1993). A workbook of Group-Analytic Interventions. London: Routledge.

Kernberg, O.F., & Caligor, E. (2005). A psychoanalytic theory of personality disorders. In

Major theories of personality disorder (Eds. JF Clarkin & MF Lenzenweger), 2nd ed.: 114–156. New York: Guilford.

Klein, M. (1927). Symposium on child analysis. *The International Journal of Psychoanalysis, 8*, 339-370.

Knekt, P., Lindfors, O., Härkänen, T., Välikoski, M., Virtala, E., Laaksonen, M.A..,..…..& the Helsinki Psychotherapy Study Group (2008). Randomized trial on the effectiveness of long- and short-term psychodynamic psychotherapy and solution-focused therapy on psychiatric symptoms during a 3-year follow-up. *Psychological Medicine, 38*, 689–703. https://doi.org/10.1017/S003329170700164X

Knekt P., Virtala E., Härkänen T., Vaarama M., Lehtonen J., & Lindfors O. (2016). The outcome of short- and long-term psychotherapy 10 years after start of treatment. *Psychological Medicine*, Page 1 of 14. Cambridge University Press. https://doi.org/10.1017/S0033291715002718

Kopta, S. M., Howard, K. I., Lowry, J. L., & Beutler, L. E. (1994). Patterns of symptomatic recovery in psychotherapy. *Journal of Consulting and Clinical Psychology, 62*(5), 1009-1016. https://doi.org/10.1037/0022-006X.62.5.1009

Kraemer, H., Wilson, G.T., Fairburn, C., & Agras, W.S. (2002). Mediators and moderators of treatment effects in randomized clinical trials. *Archives of General Psychiatry, 59*(10), 877-883. https://doi.org/10.1001/archpsyc.59.10.877

Krogel, J., Burlingame, G., Chapman, C., Renshaw, T., Gleave, R., Beecher, M., Macnair-Semands, R. (2013). The Group Questionnaire: a clinical and empirically derived measure of group relationship. Psychotherapy Research, 23 (3), 344-354. http://doi.org/10.1080/10503307.2012.729868

Kvarstein, E.H., Pedersen, G., Urnes, Ø., Hummelen, B., Wilberg, T., & Karterud, S. (2015). Changing from a traditional psychodynamic treatment programme to mentalization-based treatment for patients with borderline personality disorder--does it make a difference? *Psychology and Psychotherapy, 88*(1), 71-86. http://doi.org/10.1111/papt.12036

Kvarstein, E.H., Nordviste, O., Dragland, L., & Wilberg, T. (2017). Outpatient psychodynamic group psychotherapy – outcomes related to personality disorder, severity, age and gender. *Personality and Mental* Health 11, 37–50. https://doi.org/10.1002/pmh.1352

Laaksonen, M.A., Lindfors, O., Knekt, P., & Aalberg, V. (2012). Suitability for Psychotherapy Scale (SPS) and its reliability, validity, and prediction. British Journal of Clinical Psychology 51, 351–375. https://doi.org/10.1111/j.2044-8260.2012.02033.x

Lambert, M.J., & Bergin A.E. (1994). The effectiveness of psychotherapy. In Handbook of Psychotherapy and Behavior Change (eds SL Garfield, AE Bergin): 143–89. New York, NY: John Wiley.

Lambert, M.J. (2013). The efficacy and effectiveness of psychotherapy. In M. J. Lambert (Ed.) *Bergin and Garfield's Handbook of Psychotherapy and Behavior Change*, 169-218. New York, NY: John Wiley.

Lambert, M.J., & Ogles, B.M. (2004). The efficacy and effectiveness of psychotherapy. In: *Bergin and Garfield's handbook of psychotherapy and behavior change* (ed. MJ. Lambert) 5th ed., 139–193. New York: John Wiley.

LeBon, G. (1920). *The Crowd: A study of the popular mind.* New York: Fisher, Unwin. (Original work published 1895).

Leichsenring, F., Biskup, J., Kreische, R., & Staats, H. (2005). The Göttingen study of psychoanalytic therapy: first results. *International Journal of Psycho-analysis*, *86*(2), 433-455. https://doi.org/10.1516/XX6F-AU0W-KWM3-G6LU

Leichsenring, F., & Leibing, E. (2003). The effectiveness of psychodynamic therapy and cognitive behavior therapy in the treatment of personality disorders: a meta-analysis. *The American Journal of Psychiatry, 160(*7):1223-32. https://doi.org/10.1176/appi.ajp.160.7.1223

Leichsenring, F., Leweke, F., Klein, S., & Steinert, C. (2015). The empirical status of psychodynamic psychotherapy – An update: Bambi's alive and kicking. *Psychotherapy and Psychosomatics, 84*,129-148.http://doi.org/10.1159/000376584

Leichsenring, F., Rabung, S., & Leibing, E. (2004). The efficacy of short-term psychodynamic psychotherapy in specific psychiatric disorders: a meta-analysis. *Archives of General Psychiatry, 61*(12), 1208-1216. https://doi.org/10.1001/archpsyc.61.12.1208

Leichsenring, F., & Rabung, S. (2008). Effectiveness of long-term psychodynamic psychotherapy: a meta-analysis. *JAMA, 300*(13), 1551-1565. https://doi.org/10.1001/jama.300.13.1551

Leichsenring, F., & Rabung, S. (2011). Long-term psychodynamic psychotherapy in complex mental disorders: update of a meta-analysis. *The British Journal of Psychiatry, 199*, 15-22. https://doi.org/10.1192/bjp.bp.110.082776

Leichsenring F, Salzer S, Beutel ME, Herpertz S, Hiller W, Hoyer J, …..Leibing E (2014). Long-term outcome of psychodynamic therapy and cognitive– behavioral therapy in social anxiety disorder. *American Journal of Psychiatry 171*, 1074–1082. https://doi.org/10.1176/appi.ajp.2014.13111514

Levi K.N. (2008). Psychotherapies and lasting change. *The American Journal of Psychiatry,165*(5), 556-559. https://doi.org/10.1176/appi.ajp.2008.08020299

Lindfors, O., Knekt, P., Virtala, E., Laaksonen, M.A., & the Helsinki Psychotherapy Study group. (2012). The effectiveness of solution-focused therapy and short- and long-term psychodynamic psychotherapy on self-concept during a 3-year follow-up. *Journal of Nervous and Mental Disease, 200 (11),* 946-953. https://doi.org/10.1097/NMD.0b013e3182718c6b

Lindfors, O., Knekt, P., Heinonen, E. & Virtala, E. (2014). Self-concept and quality of object relations

as predictors of outcome in short- and long-term psychotherapy. *Journal of Affective Disorders*, 152–154, 202–211. https://doi.org/10.1016/j.jad.2013.09.011

Lindfors, O., Knekt, P., Heinonen, E., Härkänen, T., & Virtala, E. (2015). The effectiveness of short- and long-term psychotherapy on personality functioning during 5-year follow-up. *Journal of Affective Disorders, 173*, 31-38. https://doi.org/10.1016/j.jad.2014.10.039

Linehan, M.M., Comtois, K.A., Murray, Am.m, Brown, M.Z., Gallop, R.J., Heard, H.L. ….Lindenboim, N. (2006). Two-year randomized controlled trial and follow-up of dialectical behavior therapy vs therapy by experts for suicidal behaviors and borderline personality disorder. *Archives of General Psychiatry, 63*(7), 757-766. https://doi.org/10.1001/archpsyc.63.7.757

Lo Coco, G., Salvatore, G., Prestano, C., & Burlingame, G.M. (2015). Current issues on group psychotherapy research: An overview. In: *Psychotherapy Research* (O.C.G Gelo et al., eds.), 279-292. Wien: Springer-Verlag. https://doi.org/10.1007/978-3-7091-1382-0_14

Lorentzen, S. (2014). *Group analytic psychotherapy: Working with affective, anxiety and personality disorders*. London/New York: Routledge.

Lorentzen, S., Bøgwald, K., & Høglend, P. (2002). Change during and after long-term analytic group psychotherapy. *International Journal of Group Psychotherapy, 52*(3), 419-429. https://doi.org/10.1521/ijgp.52.3.419.45511

Lorentzen, S., Herlofsen, P., Karterud, S., & Ruud, T. (1995). Block training in group analysis: The Norwegian program. *International Journal of Group Psychotherapy, 45*(1), 73–89. http://doi:org/10.1080/00207284

Lorentzen, S., & Høglend, P. (2004). Predictors of change during long–term analytic group psychotherapy. *Psychotherapy and Psychosomatics, 73*, 25–35. https://doi.org/10.1159/000074437

Lorentzen S., & Høglend, P. (2008). Moderators of the effects of treatment length in long-term psychodynamic group psychotherapy. *Psychotherapy and Psychosomatics, 77*(5), 321-322. https://doi.org/10.1159/000147946

Lorentzen, S., & Ruud, T., (2014). Group therapy in public mental health services: approaches, patients and group therapists. *Journal of Psychiatric and Mental Health Nursing,* 21(3), 219-225. https://doi.org/10.1111/jpm.12072

Lorentzen, S., Ruud, T., Fjeldstad, A., & Høglend, P. (2013). Comparison of short- and long-term dynamic group psychotherapy: randomised clinical trial. *The British Journal of Psychiatry, 203*, 280-287. https://doi.org/10.1192/bjp.bp.112.113688

Lorentzen, S., Fjeldstad, A., Ruud, T. & Høglend, P. (2015a). Comparing short- and long-term group therapy: Seven-year follow-up of a randomized clinical trial. *Psychotherapy and Psychosomatics, 84*, 320–321. https://doi.org/10.1159/000381751

Lorentzen, S., Ruud, T., Fjeldstad, A., & Høglend, P. (2015b). Personality disorder moderates outcome in short- and long-term group analytic psychotherapy: A randomized clinical trial. *British Journal of Clinical Psychology, 54,* 129-146. https://doi.org/10.1111/bcc.I2065

Lorentzen, S., Wilberg, T., & Martinsen, E.W. (2015c). Group Psychotherapy in Norway. *International Journal of Group Psychotherapy, 65*, 543-551. https://doi.org/10.1521/ijgp.2015.65.4.543

Luborsky, L. (2001). The meaning of empirically supported treatment research for psychoanalytic and other long-term therapies. *Psychoanalytic Dialogues: The International Journal of Relational Perspectives, 11*(4), 583-604. https://doi.org/10.1080/10481881109348630

MacKenzie, K. R. (1997). *Time-managed group psychotherapy: Effective clinical applications.* Washington, DC: American Psychiatric Association.

MacKenzie, K. R. (2000). Group psychotherapies and managed care. In: *A psychologist's proactive guide to managed mental health care* (eds. A.J. Kent & M. Hersen), 65-84. Mahwah, NJ: Erlbaum.

Mahler, M., Pine, F., & Bergman, A. (1975). *The psychological birth of the human infant.* New York: Basic Books.

Malat, J. & Leszcz, M. (2014). Group Psychotherapy, In: *Psychiatry* (eds. Tasman et al.) 4th ed., 1923-1942. John Wiley & Sons, Ltd.

Maling, M. S., Gurtman, M. B., Howard, K. I. (1995). The response of interpersonal problems to varying doses of psychotherapy. *Psychotherapy research, 5*(1), 63-75. https://doi.org/10.1080/10503309512331331146

Mayer, J.D. (2004). How does psychotherapy influence personality? A theoretical integration. *Journal of Clinical Psychology, 60, 1291–1315.* https://doi.org/10.1002/jclp.20076

McRoberts, C., Burlingame, G. M., & Hoag, M. J. (1998). Comparative efficacy of individual and group psychotherapy: A meta-analytic perspective. *Group Dynamics: Theory, Research, and Practice, 2,* 101–117. https://doi.org/10.1037/1089-2699.2.2.101

McCallum, M., & Piper, W.E. (1990). A controlled study of effectiveness and patient suitability for short-term group psychotherapy. *International Journal of Group Psychotherapy,* 40(4):431-52. https://doi.org/10.1080/00207284.1990.11490621

McDougall, W. (1920). *The group mind*. New York: Putnam.

Meinert, C.L. (1986). *Clinical trials: Design, conduct, and analysis.* New York: Oxford University Press.

Mercer, R.C., & Loesch, L.C. (1979). Audiotape ratings: comments and guidelines. *Psychotherapy: Theory, Research and Practice,16,*79-85. https://doi.org/10.1037/h0085879

Monsen, J.T., Hagtvet, K.A., Havik, O.E., & Eilertsen, D.E. (2006). Circumplex structure and personality disorder correlates of the Interpersonal Problems model (IIP-C): construct validity

and clinical implications. *Psychological Assessment, 18*(2), 165-173. https://doi.org/10.1037/1040-3590.18.2.165

Monsen, J.T., von der Lippe, A.L., Havik, O.E., Halvorsen, M.S., & Eilertsen, D.E. (2007).Validation of the SASB Introject Surface in a Norwegian clinical and nonclinical sample. *Journal of personality assessment, 88,* 235-245. https://doi.org/10.1080/00223890701268108

Moreno, J.L. (1940). Mental catharsis and psychodrama. *Sociometry, 3,* 209-244. https://doi.org/10.2307/2785151

Ogrodniczuk, J., Sochting, I., Piggott, N., & Piper, W. (2009). Integrated group therapy for a heterogeneous outpatient sample. *The journal of nervous and mental disease, 197*(11), 862-864. https://doi.org/10.1097/NMD.0b013e318be743d

Orlinsky, D.E.,Rønnestad, M.H.,& Willutzki, U. (2004). *Fifty years of psychotherapy process-outcome research: Continuity and change.* In M. J. Lambert (Ed.), Bergin and Garfield's handbook of psychotherapy and behavior change (pp. 307–389). New York, NY: Wiley.

Perry, J.C., Banon, E., & Ianni, F. (1999). Effectiveness of psychotherapy for personality disorders. *The American Journal of Psychiatry, 156*(9), 1312-1321. Retrieved from: http://ajp.psychiatryonline.org/journal.aspx?journalid=13

Perry, J.C., Bond, M., & Roy, C. (2007). Predictors of treatment duration and retention in a study of long-term dynamic psychotherapy: childhood adversity, adult personality, and diagnosis. *Journal of Psychiatric Practice, 13*(4), 221-32. https://doi.org/10.1097/01.pra.0000281482.11946.fc

Perry, J. C., & Bond, M. (2009). The sequence of recovery in long-term dynamic psychotherapy. *Journal of Nervous and Mental Disease, 197*(12), 930-937. http://doi.org/10.1097/NMD.0b013e3181c29a0f

Pincus, A. L. (2011). Some comments on nomology, diagnostic process, and narcissistic personality disorder in the DSM-5 proposal for personality and personality disorders. *Personality Disorders; Theory, Research, and Treatment, 2*(1), 41-53. https://doi.org/10.1037/a0021191

Piper, W. E., Rosie, J. S., Azim, H.F., & Joyce, A.S. (1993). A randomized trial of psychiatric day treatment for patients with affective and personality disorders. *Hospital and Community Psychiatry, 44*(8):757-63. https://doi.org/10.1176/ps.44.8.757

Piper, W.E., McCallum, M., Joyce, A.S., Rosie, J.S., & Ogrodniczuk, J. (2001). Patient personality and time-limited group psychotherapy for complicated grief. *International Journal of Group Psychotherapy, 51*(4), 525-552. https://doi.org/10.1521/ijgp.51.4.525.51307

Piper, W.E., Ogrodniczuk, J.S., Lamarche, C., Hilscher, T., & Joyce, A.S. (2005). Level of alliance, pattern of alliance, and outcome in short-term group therapy. *International Journal of Group Psychotherapy, 55(*4), 527-50. https://doi.org/10.1521/ijgp.2005.55.4.527

Pratt, J. H. (1906). The home sanatorium treatment of consumption. In*: Group therapy today* (ed. H. Ruitenbeek), 9-14. New York: Atherton Press.

Puschner, B., Kraft, S., & Bauer, S. (2004). Interpersonal Problems and Outcome in Outpatient Psychotherapy: Findings From a Long-Term Longitudinal Study in Germany. *Journal of Personality Assessment, 83*(3), 223-234. https://doi.org/10.1207/s15327752jpa8303_06

Reich, J.H., & Green, A. I. (1991). Effect of personality disorders on outcome of treatment. *The Journal of Nervous and Mental Disease, 179*(2), 74-82. https://doi.org/10.1097/00005053-199102000-00003

Roberts, C., & Roberts, S.A. (2005). Design and analysis of clinical trials with clustering effects due to treatment. Clinical Trials, 2. 152-162. https://doi.org/10.1191/1740774505cn076oa

Rutan, J. S., Stone, W.N., & Shay, J.J. (2007). History of small-group theory and practice. In *Psychodynamic group psychotherapy*,4th Ed., 8-32. New York: The Guilford Press.

Salzer, S., Leibing, E., Jakobsen, T., Rudolf, G., Brockmann, J., Eckert, J., . . . Leichsenring, F. (2010). Patterns of interpersonal problems and their improvement in depressive and anxious patients treated with psychoanalytic therapy. *Bulletin of the Menninger Clinic, 74*(4), 283-300. https://doi.org/10.1521/bumc.2010.74.4.283

Sandahl, C., Lundberg, U., Lindgren, A., Rylander, G., Herlofson, J., Nygren, Å., & Åsberg, M. (2011). Two forms of group therapy and individual treatment of work-related depression: A one-year follow-up study. *International Journal of Group Psychotherapy, 61 (*4), 539-555. http://doi.org/10.1521.ijgp.2011.61.4.538

Schauenburg, H., Kuda, M., Sammet, I., & Strack, M. (2000). The influence of interpersonal problems and symptom severity on the duration and outcome of short-term psychodynamic psychotherapy. *Psychotherapy Research, 10*(2), 133-146. https://doi.org/10.1080/713663670

Schilder, P. (1936). The analysis of ideologies as a therapeutic method, especially in group treatment. *American Journal of Psychiatry, 93*, 601-617. https://doi.org/10.1176/ajp.93.3.601

Schulz, K., & Grimes, D. (2002). Blinding in randomised trials: hiding who got what. *Lancet (London, England), 359*(9307), 696-700. https://doi.org/10.1016/S0140-6736(02)07816-9

Shadish, W.R., Cook, T.D., & Campbell, D.T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston: Houhton Mifflin Company

Shedler, J. (2010). The efficacy of psychodynamic psychotherapy. *American Psychologist,* 65, 98–109. https://doi.org/10.1037/a0018378

Sheehan, D., Janavs, J., Baker, R., Harnett-Sheehan, K., Knapp, E., & Sheehan, M. (2002). *Mini international neuropsychiatric interview.* Tampa: University of South Florida press.

Singer, J.D., &Willett, J.B. (2003). *Applied longitudinal data analysis: Modelling change and event occurrence*. New York: Oxford University Press.

Slavson, S. R. (1959). *Analytic group psychotherapy*. New York: Colombia University Press.

SPSS Inc. version 16.0, 2008.

Sullivan, H.S. (1953). *The collected works of Harry Stack Sullivan*. New York: Norton.

Svartberg, M, Seltzer, M.H., & Stiles, T.C. (1996). Self-Concept improvement during and after short-term anxiety-provoking psychotherapy: a preliminary growth curve study. *Psychotherapy Research, 6(1),* 43-55. https://doi.org/10.1080/10503309612331331568

Svartberg, M., Stiles, T., & Seltzer, M. H., (2004). Randomized, controlled trial of the effectiveness of short-term dynamic psychotherapy and cognitive therapy for cluster C personality disorders. *American Journal of Psychiatry, 161,* 810-817. https://doi.org/10.1176/appi.ajp.161.5.810

Tasca, G., Balfour, L., Presniak, M., & Bissada, H. (2012). Outcomes of specific interpersonal problems for binge eating disorder: comparing group psychodynamic interpersonal psychotherapy and group cognitive behavioral therapy. *International Journal of Group Psychotherapy*, *62*(2), 197-218. https://doi.org/10.1521/ijgp.2012.62.2.197

Tavakol, M., & Dennick, R. Making Sense of Cronbach's Alpha. *International Journal of Medical Education, 2,* 53-55. https://doi.org/10.5116/ijme.4dfb.8dfd

Town, J.M., Diener, M.J., Abbass, A., Leichsenring, F., Driessen, E., &Rabung, S. (2012). A meta-analysis of psychodynamic psychotherapy outcomes: evaluating the effects of research-specific procedures. *Psychotherapy (Chicago) 49,* 276–290. https://doi.org/10.1037/a0029564

Tschuschke, V., Anbeh, T., & Kiencke, P. (2007). Evaluation of Long-term Analytic Outpatient Group Therapies. *Group Analysis, 40*(1), 140-159. https://doi.org/10.1177/0533316407076127

Tyrer, P. (2015). Personality dysfunction is the cause of recurrent non-cognitive mental disorder: a testable hypothesis. *Personality and Mental Health, 9*(1), 1-7. https://doi.org/10.1002/pmh.1255

Verbeke, G., & Molenberg, G. (2000). *Linear mixed models for longitudinal data.* New York: Springer.

Vinnars, B., Barber, J.P., Noren, K., Gallop, R., & Weinryb, R.M. (2005). Manualized supportive-expressive psychotherapy versus nonmanualized community-delivered psychodynamic therapy for patients with personality disorders: Bridging efficacy and effectiveness. *The American Journal of Psychiatry*, *162,* 1933-1940. https://doi.org/10.1176/appi.ajp.162.10.1933

Walsh, R. (2011). Lifestyle and mental health. The American Psychologist, 66(7):579-92. https://doi.org/10.1037/a0021769

Ward, D.E. (2012). Definition of group counseling. In R. K. Conye (Ed.), *The Oxford handbook of group counseling* (pp. 36-51). New York: Oxford University Press.

Wender, L. (1940). Group psychotherapy: a study of its application. *Psychiatric Quarterly*, *14*, 708–718. https://doi.org/10.1007/BF01566791

Wilberg, T., Karterud, S., Pedersen, G., & Urnes, O. (2009). The impact of avoidant personality disorder on psychosocial impairment is substantial. *Nordic Journal of Psychiatry, 63,* 390-396. https://doi.org/10.1080/08039480902831322

Wilberg, T., Karterud, S., Pedersen, G., Urnes, O., Irion, T., Brabrand, J., ….Stubbhaug, B. (2003).

Outpatient group psychotherapy following day treatment for patients with personality disorders. *Journal of Personality Disorders, 17*(6), 510-521. https://doi.org/10.1521/oedi.17.6.510.25357

Winnicott, D.W. (1965). *The maturational process and the facilitating environment*. New York: International Universities Press.

Wolf, A., & Schwartz, E. K. (1962). *Psychoanalysis in groups.* New York: Grune & Stratton.

Yalom, I.D., & Leszcz, M. (2005). *The theory and practice of group psychotherapy*,5th ed. New York: Basic Books.

Zimmermann, J., Löffler-Stastka, H., Huber, D., Klug, G., Alhabbo, S., Bock, A., & Benecke, C. (2014). Is it all about the higher dose? Why psychoanalytic therapy is an effective treatment for major depression. *Clinical Psychology and Psychotherapy, published online in Wiley Online Library.* https://doi.org/10.1002/cpp.1917