AN EXAMINATION OF THE EFFECTIVENESS OF CO-THERAPY SUPERVISION ON

TREATMENT OUTCOME, CLIENT RETENTION, AND THERAPY TRAINING

By

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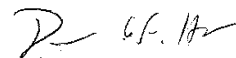of American University

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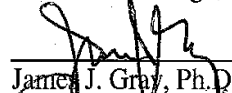the Requirements for the Degree

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DEDICATION

This document is dedicated to the clinical supervisors I've worked with through the

years. You've all had a hand in making me the clinician I am today, and I am grateful for

your support.

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ABSTRACT

Co-therapy has been theorized to be effective both as a treatment technique and as a training technique for beginning therapists. However, little data exists to support either claim. The present study examined the effectiveness of co-therapy in both capacities. Groups of clients treated by supervisor-trainee duos and groups of clients treated by solo trainees with varying exposure to co-therapy supervision were compared on changes in scores on the Outcome Questionnaire (OQ-45). A comparison in the percentage of clients dropping out of treatment was also made across the groups. Although the results indicated that therapy produced statistically significant changes, with clients experiencing a reduction in scores on the OQ-45 across time, there was no difference between groups in the magnitude or direction of change. There was also no difference between groups on the variable of client retention. These results suggest that therapy provided by a supervisor-trainee duo was no more effective for the client than therapy provided by a solo trainee. Similarly, co-therapy supervision was no more effective for the trainee than ex post facto supervision.

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CHAPTER 1

INTRODUCTION

Co-therapy is an umbrella term referring to psycho-therapy provided conjointly by two therapists. Underneath that umbrella there is variation in the number of clients being treated and the experience differential between the co-therapists. The practice was first conceived of by Alfred Adler in the early 1920s as "a case conference or consultation with the patient in question as a non-participant observer," the rationale being that the patient would benefit from the insight generated by the co-therapists through their discussion (Hoffman & Hoffman, 1981, p. 218). The definition of co-therapy eventually evolved to refer to an open dialogue between co-therapists of approximately equal experience level and a patient, couple, or group (Hoffman & Hoffman, 1981).

In the 1940s an offshoot of the traditional practice arose in which co-therapy began to be used as a training technique for new therapists. The new therapist or trainee would sit in on sessions with his/her more experienced colleague, observing and making occasional contributions (Hoffman & Hoffman, 1981). This offered the trainee "the opportunity to observe his/her co-therapist in action, as well as to receive feedback about his/her own interventions" (Hoffman & Hoffman, 1981, p. 218). Today co-therapy remains an open dialogue between therapists and client(s) and can be conducted either by a pair of peers or a team comprised of a supervisor and trainee.

Co-therapy conducted in this manner usually begins with the supervisor serving as the primary therapist and the trainee as an active observer, chiming in only occasionally. Gradually, over the course of treatment, the trainee takes on a more active role, eventually inheriting the role of primary therapist. This process hinges on the trainee's development of self-confidence in his/her ability to provide care and the supervisor's ability to assess the trainee's growth. Hogan developed a model to help supervisors track the stages of trainee development: "beginning trainees were insecure, uninsightful, and neurosis-bound; second-stage trainees struggled with dependency-independency conflicts and were ambivalent about supervision; third stage trainees were more self-confident and motivated; and the fourth stage trainee was personally autonomous and self-assured" (1964, p. 140).

Ideally, as the supervisor deems that the trainee has gained the necessary skills and autonomy, the supervision should move from proactive to reactive (Tetoni, 1994). Proactive supervision is driven by an agenda: "sessions are planned; goals are clearly identified; interventions are usually initiated by a supervisor or even planned before a supervision session" (Worthington, 1987, p. 189). In contrast, reactive supervision takes a wait-and-see approach: "Goals are identified, but the supervisor awaits critical incidents and intervenes when those incidents arise, not initiating his or her agenda." (Worthington, 1987, p. 189). Stoltenberg (1981) offered a more structured recommendation for the supervisory shift from proactive to reactive, specifying the type of supervision needed for therapists in each of Hogan's four stages of development. According to Stoltenberg, first-stage trainees require structure. By the time they reach the second stage, trainees have begun to carve out their own identity as a counselor and "should be allowed more latitude

in making decisions regarding behavior in the counseling sessions while the supervisor becomes more of a reference source and less of an advisor" (Stoltenberg, 1981, p. 62). Since third-stage trainees have acquired a number of different options for interventions in the first and second stages, the supervisory relationship "can become more of a peer interaction, with both individuals gaining insight and support from the supervision experience" (Stoltenberg, 1981, p.63). Finally, fourth-stage therapists seek consultation from the supervisor only when needed (Stoltenberg, 1981).

Co-therapy offers several theoretical advantages both to the client and to the trainee. Yalom (1975) identified some general advantages conferred to clients seen by two therapists, not necessarily a supervisor-supervisee duo, including continuity of care, with one therapist being able to provide one-on-one care in the event that the other needs to cancel; the expanded fund of creativity; the modeling of an effective interpersonal relationship; and the potential for two therapists to complement and compensate for each other's weaknesses. There are also specific advantages of co-therapy provided by a supervisor-supervisee duo both relative to supervision that does not allow the supervisor to provide immediate feedback and relative to other forms of "live supervision."

Advantages Relative to "ex post Facto" Supervision

In the specific case of co-therapy provided by a supervisor-trainee duo, the presence of the second therapist in the room, i.e. the supervisor, might be essential rather than advantageous. Clearly co-therapy requires greater involvement on the part of the supervisor than other kinds of supervision. There is no obvious demarcation of a trainee's

stage progression as outlined by Stoltenberg, so the supervisor must be highly attuned not only to the client but also to the trainee in order to make the subjective judgment of when to intervene. However, some believe that involvement is not only beneficial but necessary to protect the welfare of the client. According to Esposito and Getz, "in order to provide ethical, professional, and effective practice and to guard against the possibility of litigation, there is a need for an experienced supervisor to be available when students are seeing clients" (2005). The authors argue that didactic classes cannot adequately prepare trainees to see clients independently; clients seen by neophyte therapists require immediate or "live" feedback from the supervisor.

This argument downplays the feedback provided through ex post facto supervision. Technically, trainees receiving supervision from a licensed psychologist are not seeing clients "independently." The supervisor not only offers feedback on the previous session but also offers training and expertise to aid the development of a treatment plan, as well as the execution of future techniques. However, although a supervisor is typically provided with an audio or visual recording of the session, the supervisor might not always have the opportunity to review the tape in its entirety prior to the supervision session. Therefore, the supervisor's feedback often relies on the trainee's memory of a session that may have occurred the previous week. For this reason, while live supervision might not be necessary to avoid litigation, it can certainly enhance the accuracy of a supervisor's understanding of the case and, in turn, the quality of the supervisory feedback.

Advantages Relative to Other
Forms of Live Supervision

"Live supervision," including co-therapy and other forms of supervision that allow the supervisor to provide immediate feedback to the trainee, fills a void in the progression of therapist training, offering an intermediate step between didactic classes and solo therapy with tape review (Esposito & Getz, 2005). Other forms of live supervision include an intervening telephone call or knock on the door on the part of the supervisor, observing the session through a one-way mirror from a different room; "bug-in-the-eye" technology, in which the supervisor delivers instant messages to the trainee on a computer screen not visible to the client; and "bug-in-the-ear" technology, in which the supervisor delivers feedback through earbuds. These methods have been subjected to a fair share of criticism. Telephone calls and knocks on the doors have been found to be distracting and disruptive to the flow of the session (Klitzke & Lombardo, 1991). Bug-in-the-ear and bug-in-the-eye technology, while less disruptive to the client, may still be distracting to the trainee. Furthermore, the computer equipment required to run these programs can be costly and require a "substantial degree of comfort and skill in using computer technology" (Miller, Miller, & Evans, 2002, p. 190). Relative to other "live supervision" techniques, co-therapy is more conducive to a natural, uninterrupted dialogue between therapist(s) and client and does not present any additional financial burden, aside from the cost of the supervisor's time.

Potential Disadvantages of Co-therapy
for Clients and Trainees

Co-therapy offers several potential advantages to the client and the therapist

trainee alike. However, there are also some potential hazards. The most commonly cited

hazard is the disruption of the delicate balance that exists in the relationship between

therapist and client. The alliance between therapist and client, though crucial to the

success of therapy and considered to be at the center of common factors theory, can be

difficult to forge. The addition of another therapist only complicates the alliance further.

One potential peril is that focus might shift away from the client and onto the supervisory

relationship. Co-therapists intent on presenting a united front and modeling a functional

interpersonal relationship might not be devoting the required amount of attention to the

client (Bowers & Gauron, 1981).

On the other hand, the modeling of a dysfunctional interpersonal relationship is an

equally hazardous peril of co-therapy. Bowers and Gauron (1981) warned that since

modeling is such a crucial component of co-therapy, an unhealthy relationship between

co-therapists could reinforce a client's dysfunctional pattern of relating interpersonally.

Shainess, a prominent critic of co-therapy, cautioned, "The patient or client is like a child,

carefully watching to see what adults do: to copy, to judge, to identify, to decide whether

to trust. Therapists must be alert to all their actions and to avoiding the implication, 'do as

I tell you, but not as I do'" (1977, p. 37). Since clients will be attuned to the relationship

between the co-therapists, co-therapists must not only be attuned to the client and their

relationship to the client but also to the relationship they share with each other, ensuring

that it reflects collaboration and respect. However, it is important to note that a power

imbalance between co-therapists will not necessarily lead to the modeling of a dysfunctional interpersonal relationship. A supervisory relationship reflecting an inherent power imbalance can still be healthy and quite beneficial to the client "as a means of internalizing appropriate ways of dealing with authority" (Tuckman, 1996, p. 139).

In addition to potentially hazardous dynamics between client, trainee, and supervisor, another drawback of co-therapy is the lack of empirical support to justify the use of virtually two times the clinical resources. Co-therapy requires much more of a commitment of time and energy on the part of the supervisor than tape review. Haley (1987) reasoned "Multiple therapists can make the situation more difficult to change. One therapist can do therapy as successfully as two, and one is more economical" (p. 178). While it is certain that one therapist is more economical than two, the jury is still out on whether or not one therapist is more successful- and whether or not co-therapy is a successful training technique.

Empirical Evaluation of Co-therapy as a Training Technique

Esposito and Getz examined the value of co-therapy in a study of 150 clients seen by trainee-supervisor duos within a counselor education master's program (2005). Qualitative data on the therapy experience was collected from clients, trainees, and supervisors at the end of the counseling relationship. All parties were asked to fill out a survey with questions focused on "what it was like to have a supervisor in the room during the session, the advantages and disadvantages of in-the-room supervision, and suggested changes for improvement of supervision" (Esposito & Getz, 2005, p. 4).

Responses were grouped according to thematic content and analyzed. Both trainees (43%

of respondents) and clients (10% of respondents) noted that having the supervisor present

in the room provided a significant amount of support; several trainees referred to their

supervisor as a "safety net" for themselves and their clients. Trainees also mentioned that

they were more likely to try new techniques as a result of the presence of the supervisor.

One reported, "I knew I had back-up so I went ahead fearlessly" (Esposito & Getz, 2005,

p. 7). Furthermore, both trainees (21% of respondents) and clients (10% of respondents)

appreciated the supervisors' interventions as didactic exercises and as additional

perspectives or viewpoints, respectively. One trainee noted, "Moments when I was stuck,

it was very helpful for me to have my supervisor intervene and guide me through the

counseling session by demonstrating innovative techniques" (Esposito & Getz, 2005, p.

7).

On the other hand, Esposito and Getz (2005) also unearthed several drawbacks of

co-therapy. Some trainees felt that they were less effective as therapists when their

supervisor was present in the room; 21% of respondents cited nervousness or discomfort

and another 10% cited inhibition, either because they were concerned about being judged

or because they expected the supervisor to take over the session given his or her greater

degree of experience (Esposito & Getz, 2005). The therapists were not the only ones who

felt inhibited. Clients (13%) reported inhibited self-disclosure as a result of having two

therapists present in the room. One stated, "I would have preferred not to share my

personal concerns with two people" (Esposito & Getz, 2005, p. 8). Furthermore, clients

(8%) were aware of the discomfort and nervousness on the part of the trainee and found it

to be a distraction. One noted that she "felt it was less private and made the counselor

nervous" (Esposito & Getz, 2005, p. 8). These observations indicate that the therapeutic alliance may suffer as a result of the addition of another therapist, an authority figure in particular. Though this study offers some important insight as to why co-therapy may or may not be more effective than therapy provided by a solo therapist, the results do not indicate whether co-therapy actually is more effective. They also leave no indication of whether or not the increased effectiveness is indeed a function of live supervision rather than the presence of an additional therapist.

Hendrix, Fournier, & Briggs (2001) evaluated the effectiveness of co-therapy teams on client outcomes and therapist training in marriage and family therapy. They followed 402 client systems, couples and families, 33 therapist trainees, and 3 supervisors at a clinic operated through a university's master's level training program. The co-therapy teams varied in terms of experience differential. Trainees were classified as "low experience" if their experience level at the beginning of the case was less than 276 days, the midpoint of the student therapists' number of days of training. Trainees with more than 276 days of training were classified as "high experience." Out of the 183 co-therapy teams, 40% were comprised of two "low experience" trainees, 21% were comprised of two "high experience" trainees, 28% were comprised of one "low experience" and one "high experience" trainee, and 11% were comprised of a faculty supervisor and a student trainee.

Quantitative results were obtained for client outcomes, with comparisons made across the different types of co-therapy teams. Client outcomes were divided into three categories:

(a). Completers- clients who accomplished treatment goals by termination,

(b). Continuers, clients who attended three or more sessions but did not accomplish treatment goals, and

(c.) Dropouts, clients who discontinued therapy before the third session without having accomplished the treatment goals.

A 5 x 3 chi-square analysis was carried out with five levels of therapist team composition: one student therapist, one experienced and one inexperienced student therapist, one student and one faculty therapist, two inexperienced student therapists, and two experienced student therapists. The analysis showed significant differences across groups ($p < .005$), with the student-faculty duos accounting for the majority of the differences (Hendrix et al., 2001). Teams of student trainees and faculty supervisors had the highest percentage of completers (55%), with the percentage of completers for the other four types of teams ranging from 18-23% (Hendrix et al., 2001). Student-faculty duos also had the lowest percentage of dropouts (5%), with the percentage of dropouts for the other four types of teams ranging from 29-37% (Hendrix et al., 2001). These results indicate that clients seen conjointly by a supervisor and trainee are more likely to attend sessions and accomplish their treatment goals than clients seen by individual trainees or trainee pairs.

Qualitative results of the training experience were also collected through focus groups comprised of 4 "high experience" trainees, 5 "low experience" trainees, and 3 faculty supervisors. The groups discussed "the rewards and challenges of co-therapy, the benefits and cost for clients, their experiences working with multiple supervisors, and the challenges of mixing therapist experience levels in one team as opposed to more homogeneous pairings" (Hendrix et al., 2001, p. 76). Several consistent themes arose as

advantages for therapist trainees and clients engaged in co-therapy. The advantages included the therapist trainees' greater degree of comfort and, therefore, greater likelihood of taking risks as a result of having a second therapist as a back-up; the therapist trainees' increased insight into the relational system of the client as a result of being forced to see the client through the eyes of a colleague offering a different world view; and more knowledge and resources available to trainees and clients alike as a result of working with an additional therapist (Hendrix et al., 2001).

Though many prominent psychologists, Yalom and Stoltenberg included, have theorized that co-therapy is more effective than therapy provided by a solo therapist, there is little empirical evidence to support this claim. The results of Hendrix et al. (2001) offer the only quantifiable support for the superior effectiveness of co-therapy provided by supervisor-supervisee duos. A conceptual replication of these results is needed in order to strengthen the authors' claims. Furthermore, the clients and client systems in this study were primarily couples and families. A study of individuals treated by co-therapists is needed in order to apply these effects to single clients. The claim that participating in co-therapy with a supervisor makes the trainee a more effective therapist is even less substantiated. To date no research study has evaluated this theory. In order to validate the claim, a study would need to demonstrate that therapist effectiveness increases as a result of exposure to co-therapy supervision.

The active theoretical debate regarding the value of co-therapy for clients and trainees, coupled with the dearth of research on the topic, mandates further empirical exploration. Empirical justification is particularly critical given the high cost of co-therapy in terms of the supervisor's resources. The current study examined the

effectiveness of co-therapy for individual clients treated by a co-therapy duo consisting of a graduate student therapist and faculty supervisor at American University's James J. Gray Psychotherapy Training Clinic. Effectiveness was evaluated both in terms the value of the treatment to the client and the value of the training experience to the graduate student therapist.

Research Questions and Hypotheses

Aim 1

The present study aimed to answer four main research questions. The first question concerned the treatment effectiveness of co-therapy provided by a supervisor-trainee duo relative to therapy provided by a solo trainee. Treatment effectiveness was defined in terms of client outcome, which was measured by the Outcome Questionnaire-45 (OQ-45), a self-report measure designed for repeated measurement of client progress throughout the course of therapy. The OQ-45 is comprised of three Subscales: Symptom Distress, Interpersonal Relations, and Social Role Performance. Clients were administered the measure prior to each session. Results of clients treated by a supervisor-trainee duo were compared to those of three control groups:

a.   All clients treated by a solo trainee, some of whom received co-therapy supervision and some of whom did not,

b.   Clients treated by a solo trainee who received co-therapy supervision at some point during his/her training, and

c.   Clients treated by a solo trainee who did not receive co-therapy supervision.

Based on the results of Hendrix et al., co-therapy was hypothesized to be a more effective treatment modality than therapy provided by a solo trainee. This effect was expected to be observed across all three control groups, with clients treated by a co-therapy dyad being more likely to experience a reduction in scores on the overall OQ-45 scale, as well as each of the Subscales, than clients treated by a solo trainee, regardless of the trainee's exposure to co-therapy supervision.

Aim 2

The second aim of the study concerned the effectiveness of co-therapy supervision as a training technique. Effectiveness was defined in terms of the trainee's ability to reduce a client's scores on the OQ-45 across treatment, as well as the trainee's ability to retain clients. The results of clients treated by a solo trainee who did not receive co-therapy supervision were compared to those of the following control groups:

a.   Clients treated by a solo trainee who received co-therapy supervision at some point during his/her training,

b.   Clients treated by a solo trainee who had already received at least one session of co-therapy supervision,

c.   Clients treated by a solo trainee who had already received at least eight sessions of co-therapy supervision.

Co-therapy supervision was hypothesized to be a more effective training technique than traditional supervision. Therefore, clients in each of the control groups were expected to have greater reductions in scores on the overall OQ-45 scale, as well as each of the Subscales, and to be less likely to drop out of treatment than clients treated by

a solo trainee who did not receive co-therapy supervision. Clients in the second control group would be expected to experience a greater reduction in symptoms relative to clients in the first control group, since some of the trainees in the first control group received co-therapy supervision after the conclusion of their solo case. Furthermore, a dosage effect would be expected such that clients in the third control group, those whose therapists had been exposed to the greatest number of co-therapy sessions, would experience the greatest reduction in symptoms and represent the lowest percentages of dropouts.

An additional comparison was made between clients treated by a solo trainee who had already received at least one session of co-therapy supervision and clients treated by a solo trainee who later received co-therapy supervision. Since the trainees and supervisors were the same across these two groups, this within-subject comparison controls for potential differences in trainee and supervisor effectiveness. Clients in the former group were expected to experience a greater reduction in scores on the OQ-45 and to drop out of treatment at a lower rate.

Aim 3

The third question concerned the treatment effectiveness of co-therapy, defined in terms of client retention. Retention was measured in terms of percentage of "dropouts" across groups. Cases in which the client attended 3 sessions or less were classified as "dropouts." Cases in which the client attended more than 3 sessions were classified as "continuers." As was the case with the previous analysis, results of clients treated by a supervisor-trainee duo were compared to those of three control groups:

a. All clients treated by a solo trainee,

b.   Clients treated by a solo trainee who was supervised by the same supervisor who provided the co-therapy supervision, and

c.   Clients treated by a solo trainee who was supervised by a different supervisor.

Based on the results of Hendrix et al. (2001), clients seen conjointly by a supervisor and trainee were expected to drop out of treatment at a lower rate than clients seen by a solo trainee, regardless of supervisor. These effects were expected to be the same across the control groups.

Aim 4

The fourth and final aim of the study concerned the potential effect of pre-treatment symptom severity on co-therapy treatment outcome. Clients with more severe symptom distress have been shown to respond differently to treatment than clients reporting less severe symptom distress. In another study also using data collected from the James J. Gray Psychotherapy Training Clinic, Greenfield, Gunthert, and Haaga found that a clinical sample differed from a subclinical sample in terms of outcome and course of treatment, as measured by the OQ-45 (2011). Specifically, for the clinical sample, "sudden gainers," defined as clients experiencing abrupt and substantial improvements in symptoms, were more positively impacted by the course of therapy than "gradual gainers" (Greenfield et al., 2011). This difference was not significant in the subclinical sample.

Based on those results, as well as the hypothesis that co-therapy supervision is more effective than therapy provided by a solo trainee, symptom severity was expected to have a moderating effect, such that clients scoring in the clinical range on the pre-

treatment OQ-45 who were treated by a supervisor-trainee duo would experience greater

gains than clients scoring below the cutoff for the clinical range, regardless of their

therapists' exposure to co-therapy.

CHAPTER 2

METHODS

The present study employed a retrospective design to compare groups of clients treated by supervisor-trainee duos and groups of clients treated by solo trainees with varying exposure to co-therapy supervision on changes in scores on the Outcome Questionnaire (OQ-45) across treatment. A comparison in the percentage of clients dropping out of treatment was also made across the groups.

Participants

Clients

The James J. Gray Psychotherapy Training Clinic, a university-based cognitive-behavioral therapy training clinic, offers therapy at a low cost to members of the community. Fees range from $10 to $40 per session depending on the client's income. Most clients do not have insurance and are attracted to the low-fee, sliding scale. The clinic obtains referrals from former clients, the faculty supervisors, local private practice therapists, the Behavior Therapy Center of Greater Washington, the National Institute of Mental Health, and the American University Counseling Center. A majority of clients (62%) have been female. The clinic has no age restrictions. Clients have ranged in age from 7 to 78 years ($M = 35.66$, $SD = 13.69$) and run the gamut in terms of DSM-IV

diagnosis. However, clients with diagnoses of disorders for which cognitive-behavioral therapy has been proven to be particularly effective, such as panic disorder and trichotillomania, are most commonly referred. Clients are excluded and referred elsewhere on the basis of imminent suicidal crises and diagnosis of a psychotic disorder.

Trainees and Supervisors

The clinic is overseen by a director, who obtains referrals, conducts phone screens with prospective clients, and acts as clinical supervisor for a class of practicum students, who serve as the primary staff of the clinic. Though treatment is occasionally provided by a graduate student not currently enrolled in the class, usually as part of a research study conducted through the clinic, the majority of clients are seen by practicum students. The Director rotates with two other psychology department faculty members in his role as clinical supervisor of the students. On his "off" years, he refers inquiries to the current supervisor. The class is comprised of clinical psychology doctoral students, usually six or seven at a time, completing the final year of a three year practicum sequence within an American Psychological Association-accredited PhD program. The first two years of the sequence involve training in client-centered and psychodynamic treatment modalities. Therefore, most of the doctoral students, while having some clinical experience, are inexperienced with the cognitive-behavioral technique at the start of the practicum. The class of doctoral students and the faculty supervisor rotate at the beginning of each academic year.

Only one of the three rotating supervisors, Supervisor A, practices co-therapy with the trainees. Supervisor A takes on one co-therapy case per trainee over the course of the year. Cases are randomly assigned to be co-therapy cases within the constraints of scheduling considerations. At the end of the academic year cases are either terminated or transferred to a new trainee. All cases are treated with manual-guided cognitive-behavioral therapy.

Case information dating back to 1997, including 206 cases in which a graduate student served as the solo therapist and 30 cases in which a graduate student and Supervisor A served as co-therapists, comprises the clinic's data set. Each case file includes basic demographic information, as well as information on treatment progress across sessions. Demographic information is collected at the beginning of treatment. Progress of treatment is tracked through the Outcome Questionnaire-45 (OQ-45), which is filled out by the client at the start of each session (Lambert, Hansen, Umphress, Lunnen, Okiishi, & Burlingame, 1996).

Measures

The OQ-45 is a 45-item self-report inventory developed to monitor progress across treatment. It requires the client to rate his or her functioning on a 5-point Likert-type scale. The OQ-45 includes one comprehensive scale and three Subscales evaluating Symptom Distress, Interpersonal Relations, and Social Role Performance. Items were chosen to tap symptoms commonly occurring across a wide variety of disorders and to measure personally and socially relevant characteristics relating to quality of life

(Maruish, 2004). Evaluation of the reliability and validity of the measure has revealed its psychometric competency. The OQ-45 has demonstrated adequate three-week test-retest reliability ($r = .84$) and excellent internal consistency (Cronbach's alpha = .93) (Lambert, Burlingame, Umphress, Hansen, Vermeersch, Clouse, & Yanchar, 1996; Lambert, Hansen, Umphress, Lunnen, Okiishi, Burlingame, Huefner, & Reisinger, 1996). It also has strong concurrent validity coefficients, ranging from .55 to .88 (all significant at $p < .01$) on the SCL-90R, BDI, Zung Depression Scale, Taylor Manifest Anxiety Scale, STAI, Inventory of Interpersonal Problems, and the Social Adjustment Scale (Vermeersch, Lambert, & Burlingame, 2000). Finally, the OQ-45 has been shown to be sensitive to changes in individuals undergoing treatment while remaining stable in untreated individuals (Vermeersch et al., 2000).

Analyses

Pre-treatment Equivalence of Groups

Though assignment to co-therapy was quasi-random, in that clients were not systematically assigned to be treated by a co-therapy duo on the basis of specific criteria, a formal randomization process was not employed. Due to the fact that clients were not randomized, analyses were conducted to evaluate the pre-treatment equivalence of groups on the following variables: age, sex, and symptom severity. Chi-squared tests were used for the discrete variables, age and sex. T-tests were used for the continuous variable, symptom severity.

Effect of Co-therapy on Client Outcome

In order to evaluate the effect of co-therapy on client outcome, a mixed between-within subjects analysis of variance was conducted with number of therapists as the between subjects variable and time (pre-treatment versus post-treatment) as the within subjects variable. Scores from the first administration of the OQ-45, prior to the first therapy session, were designated as the pre-treatment scores. Scores from the final administration of the OQ-45, prior to the last therapy session, were designated as the post-treatment scores.

Effect of Co-therapy on Trainee Effectiveness

In order to evaluate the effect of co-therapy on trainee effectiveness, a mixed between-within subjects analysis of variance was conducted with trainee exposure to co-therapy supervision as the between subjects variable and time (pre-treatment versus post-treatment) as the within subjects variable. Again, scores from the first administration of the OQ-45, prior to the first therapy session, were designated as the pre-treatment scores. Scores from the final administration of the OQ-45, prior to the last therapy session, were designated as the post-treatment scores.

Effect of Co-therapy on Client Retention

In order to evaluate the effect of co-therapy on client retention, a 2 x 2 Chi-square analysis was conducted to compare each of the groups, divided in terms of number of therapists and trainee exposure to co-therapy supervision, on two levels of client outcome

("continuers" versus "dropouts"). Cases in which the client attended 3 sessions or less were classified as "dropouts." Cases in which the client attended more than 3 sessions were classified as "continuers."

**Effect of Pre-treatment Symptom Severity
on Treatment Outcome**

In order to determine the effects of pre-treatment symptom severity on treatment outcome, a mixed between-within subjects analysis of variance was conducted with sample status (clinical vs. subclinical) and type of therapy (co-therapy vs. therapy provided by a solo trainee) as the between subjects variables and clients' scores on the OQ-45 across two time periods (pre-treatment, post-treatment) as the within subjects variable. The recommended OQ-45 cutoff for distinguishing between clinical and subclinical samples is ≥ 64 versus ≤ 63 (Lambert et al., 1996). Using this criterion, the sample was split into a clinical group, who had intake scores greater than or equal to 64 and a sub-clinical group with intake scores below 64.

CHAPTER 3

RESULTS

Pre-treatment Equivalence of Groups

Due to the fact that clients were not randomly assigned to treatment groups,

analyses were conducted to evaluate the pre-treatment equivalence of the groups. Clients

treated by a solo trainee were compared to clients treated by supervisor / trainee duo on

the variables of age, sex, and baseline OQ-45 scores (chi squared tests for discrete

measures and *t* tests for continuous measures). None of these tests approached

significance. The descriptive statistics for each group are depicted in Table 1. For the

sample as a whole, clients ranged in age from 7 to 85 ($M = 35.66$, $SD = 13.69$, $N = 236$).

The one client under the age of 16 was accompanied to therapy by his mother, who filled

out the OQ-45 on his behalf. All other data was self-reported. The majority of clients

(62.3%) were female.

Table 1

Pre-treatment Descriptive Statistics

Average age of clients across groups			
Group	N	M	SD
Clients treated by a co-therapy duo	30	32.20	13.92

Average age of clients across groups			
Group	N	M	SD
Clients treated by a solo trainee	206	36.19	13.62

Pre-treatment OQ-45 scores across groups			
Group	N	M	SD
Clients treated by a co-therapy duo	30	56.23	30.98
Clients treated by a solo trainee	206	60.20	29.10

Gender distribution across groups		
Group	Percentage of males	Percentage of females
Clients treated by a co-therapy duo	33.3%	66.7%
Clients treated by a solo trainee	38.3%	31.7%

The Effect of Co-therapy on Client Outcome

The first conceptual question of this study related to the benefits of co-therapy for clients treated by a supervisor-trainee duo. Clients treated by a supervisor-trainee duo were hypothesized to experience a greater reduction in scores on the OQ-45 than clients treated by solo trainees. To evaluate this possibility a mixed between-within subjects analysis of variance was conducted with therapy type (co-therapy versus therapy provided by a solo trainee) as the between subjects variable and time (pre-treatment, post-

treatment) as the within subjects variable. Scores from the first administration of the OQ-45, prior to the first session, were designated as the pre-treatment scores. Scores from the final administration of the OQ-45, prior to the last session, were designated as the post-treatment scores. Co-therapy cases were compared to three different control groups:

(1) all cases in which the client was treated by a solo trainee,

(2) all cases in which the client was treated by a solo trainee who was supervised by Supervisor A, and

(3) all cases in which the client was treated by a solo trainee who was supervised by Supervisor B or C.

When considered independently of one another, each of these comparisons has limitations that allow for alternate interpretations. However, when combined and interpreted as a whole, they offer convincing evidence regarding the relative effectiveness of co-therapy on client outcome.

Control Group 1

For the first analysis, all cases in which the client was treated by co-therapists (N = 30) were compared to all cases in which the client was treated by a solo trainee (N = 206). This analysis includes the potential confound of supervisor effectiveness, since all cases in the first group were supervised by Supervisor A, whereas the cases in the second group were supervised by all three supervisors. Therefore, greater gains by clients in the first group could be attributed to superior supervisory skills of Supervisor A, rather than co-therapy itself. On the other hand, this analysis has the advantage of maximizing the size of the control group.

With respect to total scores and scores for Subscale 1, which measures symptom distress, and Subscale 3, which measures social role performance (see Table 2), there were significant time effects such that clients reported reduced symptoms at post-treatment. The effect size for the overall scale was medium, per conventional criteria (Cohen, 1988). However, there were no significant group effects, and, most importantly, there were no significant group x time interactions (see Table 3). This suggests that, although clients in both groups improved over time, clients who were treated by co-therapists did not experience greater improvements than clients treated by a solo trainee. These results were consistent across Subscales.

Table 2

Descriptive Statistics for Control Group 1

Groups	Scale	Session	N	M	SD
Cases in which trainee and supervisor served as co-therapists	Overall	Pre	30	56.23	30.98
		Post	30	53.41	32.13
	Scale 1	Pre	30	32.87	19.45
		Post	30	30.76	19.87
	Scale 2	Pre	30	12.22	8.06
		Post	30	11.81	8.36
	Scale 3	Pre	30	11.26	5.81
		Post	30	10.86	6.17
Cases in which a solo	Overall	Pre	206	60.20	29.10

Groups	Scale	Session	N	M	SD
trainee served as therapist		Post	206	56.20	29.55
	Scale 1	Pre	206	35.17	18.25
		Post	206	32.39	18.53
	Scale 2	Pre	206	14.49	7.97
		Post	206	13.95	8.40
	Scale 3	Pre	206	11.13	5.89
		Post	206	10.42	5.71

Note. Subscale 1 measures symptom distress, Subscale 2 measures interpersonal relations, and Subscale 3 measures social role performance.

Table 3

Analysis of Variance for Control Group 1

Scale	Comparison	F	P	Partial eta squared
Overall OQ-45	Time	$F(1, 234) = 12.74$	p = .00	.05
	Group	$F(1, 234) = 0.35$	p = .56	.00
	Group x Time	$F(1, 234) = 0.38$	p = .54	.00
Subscale 1	Time	$F(1, 234) = 14.62$	P = .00	.06
	Group	$F(1, 234) = .30$	P = .58	.00
	Group x Time	$F(1, 234) = 0.28$	P = .60	.00
Subscale 2	Time	$F(1, 234) = 3.40$	P = .07	.01
	Group	$F(1, 234) = 1.95$	P = .16	.01
	Group x Time	$F(1, 234) =$	P = .81	.00

Scale	Comparison	F	P	Partial eta squared
Subscale 3	Time	0.06 F (1, 234) = 5.86	P =.02	.03
	Group	F (1, 234) = .07	P = .80	.00
	Group x Time	F (1, 234) = .47	P = .49	.00

Note. Subscale 1 measures symptom distress, Subscale 2 measures interpersonal relations, and Subscale 3 measures social role performance.

Control Group 2

For the second analysis, all cases in which the client was treated by co-therapists (N = 30) were compared to all cases in which the client was treated by a solo trainee who was supervised by Supervisor A (N = 60). While the control group for this analysis is smaller, it addresses the potential confound of supervisor effectiveness, given the fact that the trainees in both groups were supervised by Supervisor A. Although there is no reason to suspect that trainees in one cohort would be superior therapists to trainees in another, this analysis also controls for trainee effectiveness.

With respect to total scores and scores for Subscales 1 and 3 (see Table 4), there were significant time effects such that clients reported reduced symptom severity at post-treatment. The effect size for the overall scale was large. However, there were no significant group effects, and, most importantly, there were no significant group x time interactions (see Table 5). This suggests that, although clients in both groups improved,

clients in the co-therapy group did not experience greater improvements than clients in the control group. These results were consistent across Subscales.

Table 4

Descriptive Statistics for Control Group 2

Groups	Scale	Session	N	M	SD
Cases in which trainee and supervisor served as co-therapists	Overall	Pre	30	56.23	30.98
		Post	30	53.41	32.13
	Scale 1	Pre	30	32.87	19.45
		Post	30	30.76	19.87
	Scale 2	Pre	30	12.22	8.06
		Post	30	11.81	8.36
	Scale 3	Pre	30	11.26	5.81
		Post	30	10.86	6.17
Cases in which a solo trainee served as therapist	Overall	Pre	206	60.20	29.10
		Post	206	56.20	29.55
	Scale 1	Pre	206	35.17	18.25
		Post	206	32.39	18.53
	Scale 2	Pre	206	14.49	7.97
		Post	206	13.95	8.40
	Scale 3	Pre	206	11.13	5.89

Groups	Scale	Session	N	M	SD
		Post	206	10.42	5.71

Note. Subscale 1 measures symptom distress, Subscale 2 measures interpersonal relations, and Subscale 3

measures social role performance

Table 5

Analysis of Variance for Control Group 2

Scale	Comparison	F	P	Partial eta squared
Overall OQ-45	Time	F (1, 234) = 12.74	p = .00	.05
	Group	F (1, 234) = 0.35	p = .56	.00
	Group x Time	F (1, 234) = 0.38	p = .54	.00
Subscale 1	Time	F (1, 234) = 14.62	P = .00	.06
	Group	F (1, 234) = .30	P = .58	.00
	Group x Time	F (1, 234) = 0.28	P = .60	.00
Subscale 2	Time	F (1, 234) = 3.40	P = .07	.01
	Group	F (1, 234) = 1.95	P = .16	.01
	Group x Time	F (1, 234) = 0.06	P = .81	.00
Subscale 3	Time	F (1, 234) = 5.86	P =.02	.03
	Group	F (1, 234) = .07	P = .80	.00
	Group x Time	F (1, 234) = .47	P = .49	.00

Note. Subscale 1 measures symptom distress, Subscale 2 measures interpersonal relations, and Subscale 3

measures social role performance.

Control Group 3

For the third and final analysis of client outcome, all cases in which the client was treated by a supervisor-trainee duo (N = 30) were compared to all cases in which the client was treated by a solo trainee who was supervised by Supervisor B or C (N = 146). This analysis does not control for differential supervisor effectiveness, but it does control for an additional confound of the previous two analyses: carryover effects of co-therapy supervision for the solo trainee. Although all trainees in control groups 1 and 2 conducted one-on-one therapy, both groups included trainees who received co-therapy supervision from Supervisor A at some point during their training. Therefore, trainees in these control groups might confer the benefits of co-therapy to their clients in an indirect way. No trainees in control group 3 had exposure to co-therapy supervision, allowing for a clean examination of co-therapy versus solo therapy by a trainee.

With respect to total scores and scores for Subscales 1 and 3 (see Table 6), there were significant time effects such that clients reported reduced symptoms at post-treatment. The effect size for the overall scale was medium. However, there were no significant group effects, and, most importantly, there were no significant group x time interactions (see Table 7). As was the case with the first two analyses, these results indicate that, although clients in both groups improved, clients in the co-therapy group did not experience greater improvements than clients in the control group. These results were consistent across Subscales.

Taken together, these three analyses strongly suggest that therapy provided by a supervisor-trainee duo did not differ significantly in effectiveness from therapy provided by a solo trainee in terms of client outcome.

Table 6

Descriptive Statistics for Control Group 3

Groups	Scale	Session	N	M	SD
Cases in which trainee and supervisor served as co-therapists	Overall	Pre	30	56.23	30.98
		Post	30	53.41	32.13
	Scale 1	Pre	30	32.87	19.45
		Post	30	30.76	19.87
	Scale 2	Pre	30	12.22	8.06
		Post	30	11.81	8.36
	Scale 3	Pre	30	11.26	5.81
		Post	30	10.86	6.17
Cases in which a solo trainee served as therapist	Overall	Pre	206	60.20	29.10
		Post	206	56.20	29.55
	Scale 1	Pre	206	35.17	18.25
		Post	206	32.39	18.53
	Scale 2	Pre	206	14.49	7.97
		Post	206	13.95	8.40
	Scale 3	Pre	206	11.13	5.89
		Post	206	10.42	5.71

Note. Subscale 1 measures symptom distress, Subscale 2 measures interpersonal relations, and Subscale 3 measures social role performance.

Table 7

Analysis of Variance for Control Group 3

Scale	Comparison	F	P	Partial eta squared
Overall OQ-45	Time	F (1, 174) = 12.43	.00	.07
	Group	F (1, 174) = 0.22	.64	.00
	Group x Time	F (1, 174) = 0.45	.50	.00
Subscale 1	Time	F (1, 174) = 14.69	.00	.08
	Group	F (1, 174) = 0.13	.72	.00
	Group x Time	F (1, 174) = 0.35	.56	.00
Subscale 2	Time	F (1, 174) = 3.42	.07	.02
	Group	F (1, 174) = 1.60	.21	.01
	Group x Time	F (1, 174) = 0.07	.79	.00
Subscale 3	Time	F (1, 174) = 4.91	.03	.03
	Group	F (1, 174) = .37	.55	.00
	Group x Time	F (1, 174) = .34	.56	.00

Note. Subscale 1 measures symptom distress, Subscale 2 measures interpersonal relations, and Subscale 3 measures social role performance.

The Effect of Co-therapy Supervision
on Trainee Effectiveness

The second conceptual question of this study related to the benefits of co-therapy

as a training technique. Trainee effectiveness was measured through clients' scores on the

OQ-45. Co-therapy supervision was hypothesized to have carryover effects for the trainee, such that clients treated by a solo trainee who received co-therapy supervision would experience greater reduction in symptom severity than clients treated by a solo trainee who did not receive co-therapy supervision. In order to explore this possibility, a mixed between-within subjects analysis of variance was conducted with exposure to co-therapy supervision as the between subjects variable and time (pre-treatment versus post-treatment) as the within subjects variable. Scores from the first administration of the OQ-45, prior to the first session, were designated as the pre-treatment scores. Scores from the final administration of the OQ-45, prior to the last session, were designated as the post-treatment scores.

Four different comparisons were made: (1) All cases in which the client was treated by a solo trainee who received co-therapy supervision at some point during his/her training versus all cases in which the client was treated by a solo trainee who never received co-therapy supervision, (2) All cases in which the client was treated by a solo trainee who had already received at least one session of co-therapy supervision prior to the start of therapy versus all cases in which the client was treated by a solo trainee who never received co-therapy supervision, (3) All cases in which the client was treated by a solo trainee who had already received at least eight sessions of co-therapy supervision prior to the start of therapy versus all cases in which the client was treated by a solo trainee who never received co-therapy supervision, and (4) All cases in which the client was treated by a solo trainee who had already received at least one session of co-therapy supervision prior to the start of therapy versus all cases in which the client was treated by a solo trainee who received co-therapy supervision after the start of therapy.

Again, each of these distinct comparisons allows for alternate interpretations. However, when viewed in conjunction with one another, they offer convincing evidence regarding the effectiveness of co-therapy supervision as a training technique.

Comparison 1

For the first comparison, clients treated by a solo trainee who received co-therapy supervision at some point during his/her training (N = 60) were compared to clients treated by a solo trainee who did not receive co-therapy supervision (N = 146). All trainees in the first group were supervised by Supervisor A and all trainees in the second group were supervised by Supervisor B or C. This allows for the potential confound of supervisor and/or trainee effectiveness. Furthermore, this analysis does not take timing into consideration; the first group includes cases in which the therapist began receiving co-therapy supervision after the therapy terminated. Co-therapy supervision could not be expected to impact the trainee's effectiveness in these specific cases, allowing for any potential benefits of co-therapy supervision to be diluted. However, this comparison offers the advantage of maximizing the sample size of cases in which the trainee was exposed to co-therapy supervision.

With respect to total scores and scores for each of the Subscales (see Table 8), there were significant time effects such that clients reported reduced symptoms at post-treatment. The effect size for the overall scale was large. However, there were no significant group effects, and, most importantly, there were no significant group x time interactions (See Table 9). This suggests that, although clients in both groups improved, clients treated by a trainee who received co-therapy supervision at some point in his/her

career did not experience greater improvements than clients treated by a solo trainee who did not receive co-therapy supervision. These results were consistent across Subscales.

Table 8

Descriptive Statistics for Comparison 1

Groups	Scale	Session	N	M	SD
Cases treated by a solo trainee who received co-therapy supervision	Overall OQ-45	Pre-treatment	60	61.50	28.56
		Post-treatment	60	57.86	28.45
	Subscale 1	Pre-treatment	60	36.67	18.16
		Post-treatment	60	34.11	17.80
	Subscale 2	Pre-treatment	60	14.94	8.35
		Post-treatment	60	14.44	8.99
	Subscale 3	Pre-treatment	60	12.16	5.80
		Post-treatment	60	11.37	5.67
Cases treated by a solo trainee who did not receive co-therapy supervision	Overall OQ-45	Pre-treatment	146	59.66	29.40
		Post-treatment	146	55.51	30.05
	Subscale 1	Pre-treatment	146	34.57	18.30
		Post-treatment	146	31.69	18.83
	Subscale 2	Pre-treatment	146	14.30	7.83
		Post-treatment	146	13.75	8.17
	Subscale 3	Pre-treatment	146	10.71	5.89
		Post-treatment	146	10.03	5.70

Note. Subscale 1 measures symptom distress, Subscale 2 measures interpersonal relations, and Subscale 3 measures social role performance.

Table 9

Analysis of Variance for Comparison 1

Scale	Comparison	F	P	Partial eta squared
Overall OQ-45	Time	F (1, 204) = 26.15	p = .00	.11
	Group	F (1, 204) = 0.22	p = .64	.00
	Group x Time	F (1, 204) = 0.11	p = .74	.00
Subscale 1	Time	F (1, 204) = 27.52	P = .00	.12
	Group	F (1, 204) = 0.65	P = .42	.00
	Group x Time	F (1, 204) = 0.10	P = .76	.00
Subscale 2	Time	F (1, 204) = 6.41	P = .01	.04
	Group	F (1, 204) = 0.28	P = .60	.01
	Group x Time	F (1, 204) = 0.10	P = .91	.00
Subscale 3	Time	F (1, 204) = 16.31	P =.00	.08
	Group	F (1, 204) = 2.56	P = .11	.01
	Group x Time	F (1, 204) = .09	P = .76	.00

Note. Subscale 1 measures symptom distress, Subscale 2 measures interpersonal relations, and Subscale 3 measures social role performance.

Comparison 2

For the second comparison, clients treated by a solo trainee who had already received at least one session of co-therapy supervision prior to the start of therapy (N = 27) were compared to clients treated by a solo trainee who did not receive co-therapy

supervision (N = 146). Again, all trainees in the first group were supervised by Supervisor A and all trainees in the second group were supervised by Supervisor B or C, allowing for the potential confound of supervisor and/or trainee effectiveness. However, this analysis takes timing into consideration; the first group excludes cases in which the trainee began receiving co-therapy supervision after the therapy terminated, eliminating the potential for dilution of the effects of co-therapy supervision.

With respect to total scores and scores for each of the Subscales (see Table 10), there were significant time effects such that clients reported reduced symptoms at post-treatment. The effect size for the overall scale was large. However, there were no significant group effects, and, most importantly, there were no significant group x time interactions (see Table 11). This suggests that, although clients in both groups improved, clients treated by a trainee who received at least one session of co-therapy supervision prior to the start of therapy did not experience greater improvements than clients treated by a solo trainee who did not receive co-therapy supervision. These results were consistent across Subscales.

Table 10

Descriptive Statistics for Comparison 2

Groups	Scale	Session	N	M	SD
Cases treated by a solo trainee who received co-therapy supervision at some point	Overall OQ-45	Pre-treatment	27	67.10	28.49
		Post-treatment	27	62.42	28.04
	Subscale 1	Pre-treatment	27	40.26	17.90
		Post-treatment	27	31.69	16.75
	Subscale 2	Pre-treatment	27	14.59	7.82

Groups	Scale	Session	N	M	SD
		Post-treatment	27	13.65	8.12
		Pre-treatment	27	12.06	5.88
	Subscale 3	Post-treatment	27	11.25	5.81
	Overall OQ-45	Pre-treatment	146	59.66	29.40
		Post-treatment	146	55.51	30.05
Cases treated by a solo trainee who did not receive co-therapy supervision	Subscale 1	Pre-treatment	146	34.57	18.30
		Post-treatment	146	31.69	18.83
	Subscale 2	Pre-treatment	146	14.30	7.83
		Post-treatment	146	13.75	8.17
	Subscale 3	Pre-treatment	146	10.71	5.89
		Post-treatment	146	10.03	5.70

Note. Subscale 1 measures symptom distress, Subscale 2 measures interpersonal relations, and Subscale 3 measures social role performance.

Table 11

Analysis of Variance for Comparison 2

Scale	Comparison	F	P	Partial eta squared
Overall OQ-45	Time	$F (1, 171) = 16.69$	p = .00	.09
	Group	$F (1, 171) = 1.39$	p = .24	.01
	Group x Time	$F (1, 171) = 0.06$	p = .81	.00
Subscale 1	Time	$F (1, 171) = 17.72$	P = .00	.01
	Group	$F (1, 171)$	P = .16	.01

Scale	Comparison	F	P	Partial eta squared
		= 2.01		
	Group x Time	F (1, 171) = 0.10	P = .75	.00
	Time	F (1, 171) = 6.53	P = .01	.04
Subscale 2	Group	F (1, 171) =.00	P = .96	.00
	Group x Time	F (1, 171) = 0.45	P = .50	.00
	Time	F (1, 171) = 8.48	P =.00	.05
Subscale 3	Group	F (1, 171) =1.13	P = .29	.01
	Group x Time	F (1, 171) = .07	P = .80	.00

Note. Subscale 1 measures symptom distress, Subscale 2 measures interpersonal relations, and Subscale 3 measures social role performance.

Comparison 3

For the third comparison, clients treated by a solo trainee who had already received at least eight sessions of co-therapy supervision prior to the start of therapy (N = 20) were compared to clients treated by a solo trainee who did not receive co-therapy supervision (N = 146). Again, all trainees in the first group were supervised by Supervisor A and all trainees in the second group were supervised by Supervisor B or C, allowing for the potential confound of supervisor and/or trainee effectiveness. However, this analysis offers the advantage of employing the strictest criteria for classification as "exposure to co-therapy supervision." The co-therapy group in this comparison excludes cases in which the trainee began receiving co-therapy supervision after the therapy terminated, eliminating the potential for dilution of the effects. It also addresses the

assumption that there is dosage requirement for co-therapy supervision to confer any advantages to the solo trainee; cases in which the trainee had only received seven or fewer sessions of co-therapy supervision were excluded. Thus, although the sample size of the co-therapy group in this comparison is small relative to the size of the groups in the previous comparisons, the potential for contamination of results is also smaller.

With respect to total scores and scores for Subscales 1 and 3 (see Table 12), there were significant time effects such that clients reported reduced symptoms at post-treatment. The effect size for the overall scale was small. However, there were no significant group effects, and, most importantly, there were no significant group x time interactions (See Table 13). This suggests that, although clients in both groups improved, clients treated by a trainee who received at least eight sessions of co-therapy supervision prior to the start of therapy did not experience greater improvements than clients treated by a solo trainee who did not receive co-therapy supervision. These results were consistent across Subscales.

Table 12

Descriptive Statistics for Comparison 3

Groups	Scale	Session	N	M	SD
Cases in which the client was treated by a solo trainee who received at least 8 sessions of co-therapy supervision	Overall OQ-45	Pre-treatment	20	62.61	29.32
		Post-treatment	20	60.69	30.21
	Subscale 1	Pre-treatment	20	36.57	18.17
		Post-treatment	20	35.76	18.49
	Subscale 2	Pre-treatment	20	13.75	8.06
		Post-treatment	20	13.27	8.56
	Subscale 3	Pre-treatment	20	11.42	6.32

Groups	Scale	Session	N	M	SD
Cases in which a solo trainee who did not receive co-therapy supervision served as therapist	Overall OQ-45	Post-treatment	20	10.70	6.34
		Pre-treatment	146	59.66	29.40
		Post-treatment	146	55.51	30.05
	Subscale 1	Pre-treatment	146	34.57	18.30
		Post-treatment	146	31.69	18.83
	Subscale 2	Pre-treatment	146	14.30	7.83
		Post-treatment	146	13.75	8.17
	Subscale 3	Pre-treatment	146	10.71	5.89
		Post-treatment	146	10.03	5.70

Note. Subscale 1 measures symptom distress, Subscale 2 measures interpersonal relations, and Subscale 3 measures social role performance.

Table 13

Analysis of Variance for Comparison 3

Scale	Comparison	F	P	Partial eta squared
Overall OQ-45	Time	$F(1, 164) = 6.08$	p = .02	.04
	Group	$F(1, 164) = 0.34$	p = .56	.00
	Group x Time	$F(1, 164) = 0.83$	p = .37	.01
Subscale 1	Time	$F(1, 164) = 4.87$	P = .03	.03
	Group	$F(1, 164) = 0.47$	P = .50	.00
	Group x Time	$F(1, 164) = 1.52$	P = .22	.01
Subscale 2	Time	$F(1, 164) = 2.39$	P = .12	.02

Scale	Comparison	F	P	Partial eta squared
	Group	F (1, 164) = 0.07	P = .79	.00
	Group x Time	F (1, 164) = 0.01	P = .92	.00
	Time	F (1, 164) = 5.72	P =.02	.03
Subscale 3	Group	F (1, 164) = .24	P = .62	.00
	Group x Time	F (1, 164) = 0.01	P = .94	.00

Note. Subscale 1 measures symptom distress, Subscale 2 measures interpersonal relations, and Subscale 3 measures social role performance.

Comparison 4

For the fourth comparison, clients treated by a solo trainee who had already received at least one session of co-therapy supervision prior to the start of therapy (N = 27) were compared to clients treated by a solo trainee who received co-therapy supervision after the start of therapy (N = 33). The trainees in both groups were supervised by Supervisor A, allowing the analysis to control for supervisor effectiveness and/or baseline differences in trainee effectiveness.

With respect to total scores and scores for Subscales 1 and 3 (see Table 14), there were significant time effects such that clients reported reduced symptoms at post-treatment. The effect size for the overall scale was medium. However, there were no significant group effects, and, most importantly, there were no significant group x time interactions (See Table 15). This suggests that, although clients in both groups improved, clients treated by a trainee who had received at least one session of co-therapy

supervision prior to the start of therapy did not experience greater improvements than clients treated by a solo trainee who had not received any co-therapy supervision at the outset of therapy. These results were consistent across subscales.

Table 14

Descriptive Statistics for Comparison 4

Groups	Scale	Session	N	M	SD
Cases treated by a solo trainee who had already received at least one session of co-therapy supervision prior to the start of therapy	Overall OQ-45	Pre-treatment	27	67.10	28.49
		Post-treatment	27	62.42	28.04
	Subscale 1	Pre-treatment	27	40.26	17.90
		Post-treatment	27	31.69	16.75
	Subscale 2	Pre-treatment	27	14.59	7.82
		Post-treatment	27	13.65	8.12
	Subscale 3	Pre-treatment	27	12.06	5.88
		Post-treatment	27	11.25	5.81
Cases treated by a solo trainee who received co-therapy supervision after the start of therapy	Overall OQ-45	Pre-treatment	33	56.92	28.21
		Post-treatment	33	54.12	28.68
	Subscale 1	Pre-treatment	33	33.83	18.16
		Post-treatment	33	31.90	18.54
	Subscale 2	Pre-treatment	33	15.22	8.86
		Post-treatment	33	15.06	9.70
	Subscale 3	Pre-treatment	33	12.24	5.82
		Post-treatment	33	11.46	5.64

Note. Subscale 1 measures symptom distress, Subscale 2 measures interpersonal relations, and Subscale 3 measures social role performance.

Table 15

Analysis of Variance for Comparison 4

Scale	Comparison	F	P	Partial eta squared
	Time	F (1, 58) = 4.44	p = .04	.07
Overall OQ-45	Group	F (1, 58) = 1.13	p = .29	.02
	Group x Time	F (1, 58) = 1.57	p = .22	.03
	Time	F (1, 58) = 8.81	P = .00	.13
Subscale 1	Group	F (1, 58) = 1.54	P = .22	.03
	Group x Time	F (1, 58) = 0.64	P = .43	.01
	Time	F (1, 58) = 1.03	P = .31	.02
Subscale 2	Group	F (1, 58) = .20	P = .65	.00
	Group x Time	F (1, 58) = 2.24	P = .14	.04
Subscale 3	Time	F (1, 58) = 5.16	P =.03	.08
	Group	F (1, 58) = .91	P = .35	.02
	Group x Time	F (1, 58) = .11	P = .74	.00

Note. Subscale 1 measures symptom distress, Subscale 2 measures interpersonal relations, and Subscale 3 measures social role performance.

The Effect of Co-therapy Supervision
on Client Retention

The third conceptual question of the study related to the effect of co-therapy

supervision on client retention. Clients treated by a supervisor-trainee duo or a solo

trainee who received co-therapy supervision were hypothesized to drop out of treatment

at a lower rate than clients treated by a solo trainee who did not receive co-therapy supervision. In order to explore this possibility, a 2 x 2 Chi-square analysis was conducted to compare each of the groups on two levels of client outcome ("continuers" versus "dropouts"). Based on the rationale for the comparison groups utilized in the previous two conceptual questions, the following comparisons were made:

(a) Cases in which trainee and supervisor served as co-therapists versus cases in which a solo trainee served as therapist.

(b) Cases in which a trainee and supervisor served as co-therapists versus cases in which a solo trainee supervised by Supervisor A served as therapist.

(c) Cases in which a trainee and supervisor served as co-therapists versus cases in which a solo trainee supervised by Supervisor B or C.

(d) Cases in which the client was treated by a solo trainee who received co-therapy supervision at some point in his/her career versus cases in which a solo trainee who did not receive co-therapy supervision served as therapist.

(e) Cases in which the client was treated by a solo trainee who had received at least one session of co-therapy supervision versus cases in which a solo trainee who did not receive co-therapy supervision served as therapist.

 (f) Cases in which the client was treated by a solo trainee who had received at least 8 sessions of co-therapy supervision versus cases in which a solo trainee who did not receive co-therapy supervision served as therapist, and

(g) Cases in which a solo trainee who had already received at least one session of co-therapy supervision prior to the start of therapy served as therapist versus cases treated by a solo trainee who received co-therapy supervision after the start of therapy.

Cases in which the client attended 3 sessions or less were classified as "dropouts." Cases in which the client attended more than 3 sessions were classified as "continuers." The percentages of "dropouts" across groups are displayed in Table 5. Fisher's exact test was performed for those comparisons limited by sample size. Statistical analysis demonstrated that none of the differences between groups were significant. [(a) $p = 0.55$, Fisher's exact test; (b) $p = 0.55$, Fisher's exact test; (c) $p = 0.47$, Fisher's exact test; (d) chi-squared (df = 1, N = 206) = 0.40, $p = 0.53$; (e) $p = 0.56$, Fisher's exact test; (f) $p = 0.48$, Fisher's exact test; (g) $p = 0.41$, Fisher's exact test]. These results suggest that co-therapy supervision had no impact on client retention.

Table 16

Percentage of "Drop-outs" Across Group

Group	Percentage
Cases in which trainee and supervisor served as co-therapists	10.7%
Cases in which a solo trainee served as therapist	12.4%
Cases in which a solo trainee who was supervised by Supervisor A served as therapist	9.1%
Cases in which a solo trainee who was supervised by Supervisor B or C served as therapist	13.7%
Cases in which a solo trainee who had received at least 1 session of co-therapy supervision prior to the start of therapy served as therapist	12.0%
Cases in which a solo trainee who had received at least 8 sessions of co-therapy supervision prior to the start of therapy served as therapist	16.7%
Cases in which a solo trainee who received co-therapy supervision after the start of therapy served as therapist	6.7%

The Effect of Pre-treatment Symptom
Severity on Treatment Outcome

The fourth and final conceptual question of the study concerned the potential

effect of pre-treatment symptom severity on co-therapy treatment outcome. Symptom

severity was expected to have a moderating effect, such that clients scoring in the clinical

range on the pre-treatment OQ-45 who were treated by a supervisor-trainee duo would

experience greater gains than clients scoring below the cutoff for the clinical range,

regardless of their therapists' exposure to co-therapy. In order to determine the effects of

pre-treatment symptom severity on treatment outcome, a mixed between-within subjects

analysis of variance was conducted with sample status (clinical vs. subclinical) and type

of therapy (co-therapy vs. therapy provided by a solo trainee) as the between subjects

variables and clients' scores on the OQ-45 across two time periods (pre-treatment, post-

treatment) as the within subjects variable. The recommended OQ-45 cutoff for

distinguishing between clinical and subclinical samples is ≥ 64 versus ≤ 63 (Lambert et

al., 1996). Using this criterion, the sample was split into a clinical group, who had intake

scores greater than or equal to 64 and a sub-clinical group with intake scores below 64.

The descriptive statistics for each of these groups, broken down further by type of

therapy, are depicted in Table 17.

The interaction between sample status (clinical versus sub-clinical) and time was

not significant [F (1,234) = 3.44, p = .07, partial eta squared = .02]. This suggests that the

change in scores over time did not differ significantly for the two groups. Furthermore,

the interaction between sample status (clinical versus sub-clinical), therapy type (co-

therapy versus therapy by a solo trainee), and time was not significant [F (1,234) = .68, p

= .41, partial eta squared = .00]. This suggests that the change in scores over time did not

differ significantly based on either between-subjects variable. It appears that therapy is

equally effective regardless of the pre-treatment symptom severity of the client and the

number of therapists providing treatment.

Table 17

Scores on Overall OQ-45 Scale Across Time and Group (Defined by Symptom Severity)

Group	Time period	N	Mean	Standard Deviation
Clinical sample treated by a co-therapy duo	1	15	85.13	16.71
	2		76.60	22.04
Clinical sample treated by a solo trainee	1	114	84.77	15.53
	2		72.57	22.78
Sub-clinical sample treated by a co-therapy duo	1	15	35.07	18.51
	2		30.13	23.96
Sub-clinical sample treated by a solo trainee	1	92	35.51	21.93
	2		32.70	24.77

CHAPTER 4

DISCUSSION

Co-therapy provided by a supervisor-trainee duo has been hypothesized to be beneficial for both client care and therapist training; however, little empirical evidence exists to substantiate this claim. Such evidence would be needed to justify the use of additional clinical resources; co-therapy supervision necessitates additional time and energy on the part of the supervisor. Therefore, in order for co-therapy to be deemed a worthwhile treatment modality and training technique, the benefits to the client and trainee would need to outweigh the costs to the supervisor. Through an exploration of treatment outcome and client retention in 236 clients, 30 of which were treated by a supervisor-trainee duo, this study argues against the greater value of co-therapy supervision, relative to ex post facto supervision, for client care and therapist training.

Clients in each of the comparison groups, divided in terms of number of therapists and trainee exposure to co-therapy supervision, experienced a significant reduction in scores on the OQ-45 between the first and last session of therapy, indicating that therapy resulted in statistically significant change for clients. These results were consistent across the overall OQ-45 scale, Subscale 1, which measures symptom distress, and Subscale 3, which measures social role performance. It is important to note that, although statistically significant, the effect sizes for change in scores across time were small to medium. This could be attributed to the trainees' inexperience with cognitive-behavioral theory and practice. However, numerous studies have failed to show a link between therapist training

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and treatment outcome (Callahan & Hynan, 2005). It also could be attributed to a "floor effect;" in the present study, clients' pre-treatment scores, were significantly lower than the normative means reported for clinical populations, suggesting less room for improvement (Lambert, Hansen, Umphress, Lunnen, Okiishi, & Burlingame, 1996).

It is also important to note that there was not a significant change in scores on Subscale 2, which measures interpersonal relations. More specifically, Subscale 2 measures the quality of the client's interpersonal functioning, in terms of "friction, conflict, isolation, inadequacy, and withdrawal in intimate relationships" (Lambert, Gregerson, & Burlingame, 2004, p. 193). Perhaps the lack of significant change in scores on Subscale 2 is a reflection of the kind of therapy provided by the clinic. Cognitive-behavioral therapy has been criticized at times for downplaying the importance of the common factors of therapy, the therapeutic alliance in particular (Castonguay, Goldfried, Wiser, Raue, & Hayes, 1996). In a study exploring the process variables related to therapy outcome in a sample of depressed clients receiving cognitive therapy, Castonguay et al. discovered a negative correlation between therapist focus on cognitive distortions and outcome (1996). The authors theorized that this was because the cognitive therapists on distortions at the expense of addressing alliance ruptures (Castonguay et al., 1996). It is possible that a certain amount of attention to the relationship between therapist and client serves as a necessary corrective experience and model for healthy interpersonal relationships. The fact that therapists in the clinic provided cognitive-behavioral therapy might have prevented the level of attendance to the therapeutic alliance necessary to provide this corrective interpersonal experience, thus preventing improvement on the domain of interpersonal functioning.

However, it is again important to consider the possibility of a "floor effect" in regard to scores on Subscale 2. If pre-treatment scores on Subscale 2 indicated that interpersonal functioning was not a concern, then a lack of significant change on scores across time would not be worth interpreting. The mean pre-treatment score for Subscale 2 for the entire sample used in this study was 14.6 (SD = 8.15, N = 236). This was significantly different from the normative mean (M = 10.20, SD = 5.56, N = 815) of a community sample (Lambert, Hansen, Umphress, Lunnen, Okiishi, & Burlingame, 1996). The pretreatment mean for the present sample also differed significantly from the mean score (M = 19.68, SD = 5.93, N = 342) of a community mental health sample (Lambert, Hansen, Umphress, Lunnen, Okiishi, & Burlingame, 1996). In other words, the pre-treatment level of interpersonal functioning for the present sample fell somewhere between the level of functioning of a community sample and the level of functioning of a community mental health sample. Further research is needed to determine the effect of cognitive-behavioral therapy provided by co-therapists on interpersonal functioning.

Although the results indicate that therapy produced statistically significant changes on the overall scale, as well as on Subscales 1 and 3, with clients experiencing a reduction in scores on the OQ-45 across time, there was no difference between groups in the magnitude or direction of change. There was also no difference between groups on the variable of client retention. These results suggest that therapy provided by a supervisor-trainee duo was no more effective for the client than therapy provided by a solo trainee. Similarly, co-therapy supervision was no more effective for the trainee than ex post facto supervision. Taken a step further, these results suggest that the benefits to the client and trainee do not outweigh the cost to the supervisor. However, rather than

dismissing the concept of co-therapy altogether, it is important to consider other factors that might have influenced these results.

One such factor is the potentially equalizing effect of manual guided care on therapist effectiveness. Crits-Christoph & Mintz (1991) performed a meta-analysis of 10 methodologically sound psychotherapy outcome studies, honing in on the issue of differences in therapist effectiveness, termed "therapist effects." They concluded that "therapist effects" are a random factor with the potential to account for a significant amount of variance in treatment outcome. However, they also found that the use of treatment manuals effectively controlled for "therapist effects" (Crits-Christoph, P., 1991). The treatment provided by therapists in the present study was manual-guided cognitive-behavioral therapy. Both solo trainees and trainee-supervisor duos followed manuals to guide treatment. It is possible that the standardization of therapy through manual-guided care masked the differences in therapist effectiveness, and, in turn, client outcome. In other words, perhaps the manual acted as an equalizer, leveling the playing field for solo trainees who did not receive co-therapy supervision, solo trainees who did receive co-therapy supervision, and supervisor-trainee duos. Differences conceivably would have been observed in an examination of co-therapy provided without the use of a treatment a manual, requiring more clinical judgment on the part of the therapist.

It is also possible that the way trainee effectiveness was measured was insufficient to tap into the clinical development of the trainee. Retention was defined in terms of number of sessions attended, with clients attending 3 sessions or fewer classified as "drop-outs" and clients attending 4 or more as "continuers." Attending 3 or fewer sessions is not necessarily indicative of treatment failure. "Drop-outs" tend to be viewed

as treatment failure and reflect negatively on the therapist; they are interpreted as evidence that the therapist was unable to form the alliance required to maintain the client in needed treatment. While termination after 3 or fewer sessions can be a reflection of a skill deficit on the part of the therapist, it is also possible that the client dropped out after 1 to 3 sessions for reasons unrelated to the therapist. Another possibility is that the client terminated after 3 sessions having met his or her treatment goal. In this case, the therapist could be viewed as highly efficient rather than ineffective. In order to rule out these possibilities, retention categorization would need to incorporate accomplishment of treatment goals, in addition to attendance. For example, Hendrix et al. (2001) employed three categories: (1) completers- clients who accomplished treatment goals by termination, (2) continuers- clients who attended three or more sessions but did not accomplish treatment goals, and (3) dropouts- clients who discontinued therapy before the third session without having accomplished treatment goals. Such categorization would offer more information on therapist skill than categorization based on number of sessions alone. For instance, a relatively high number of continuers might indicate that the therapist is skilled at building an alliance but lacks the skills necessary to execute a particular intervention. This additional level of categorization is needed to strengthen the link between the variables of client retention and treatment success / therapist skill. Furthermore, additional measures of therapist competence, such as supervisor or expert ratings of trainee performance, would aid in the evaluation of co-therapy as a training technique.

In addition to "therapist effects," it is important to consider the potential impact of "client effects" on results. In a study evaluating the effectiveness of interpersonal

psychotherapy for depression, O'Malley, Foley, Rounsaville, Watkins, Sotsky, Imber, &

Elkin (1988) examined the link between treatment outcome, therapist competence, and

client characteristics, such as pre-treatment symptom severity, expectation for change,

and social adjustment. Outcome was measured through the Hamilton Rating Scale for

Depression (HRSD) and clients' ratings of change on a scale of 1 (much worse) to 7

(much better). Therapist competence was measured through supervisors' ratings of

trainee performance on The Strategy Rating Form (TSRF) and The Process Rating Form

(TPRF). Client characteristics were measured through ratings of expectation for treatment

outcome on a scale of 1 (I expect I'll feel much better) to 5 (It's possible I could feel a

little worse) and the Social Adjustment Scale (SAS). Ratings of therapist competence

contributed significantly to client outcome. However, for several of the indices of

depression, the amount of variance explained by the competence measures did not

contribute significantly beyond that accounted for by client characteristics (O'Malley et

al., 1988). Given this finding, future research on the effectiveness of co-therapy should

control for client characteristics, either through random assignment of clients to treatment

conditions or pre-treatment measurement of expectations and social adjustment.

Yet another possibility is that the self-report instrument used to track treatment

progress did not tap into the symptoms most commonly experienced by clients in the

sample. The data on presenting problem and diagnosis for the sample is highly limited

and, therefore, was not included in the analyses. However, disorders for which cognitive-

behavioral therapy has been found to be particularly effective represent the most common

presenting problems for clinic referrals. The OQ-45 is heavily loaded with items tapping

into mood and anxiety disturbances for adults (Lambert et al., 2004). Though cognitive-

behavioral therapy has demonstrated effectiveness for the treatment of mood and anxiety disorders, these two broad categories do not entirely capture the spectrum of disorders for which cognitive-behavioral therapy has been proven effective; nor do these two categories capture the spectrum of disorders treated by therapists in the clinic. Substance abuse and impulse control disorders are also commonly treated. If, in fact, the OQ-45 does not adequately tap into symptoms of these disorders, it is possible that treatment progress, and, more importantly, differences in treatment progress across groups, was not accurately tracked.

Lastly, it is important to consider the power of this study to detect the effect size observed in the sample. Although the retrospective nature of the design allowed for a large sample of cases, spanning 10 years, the subset of co-therapy cases was relatively small (N = 30). Due to this small sample size, the power to detect a small effect size when comparing co-therapy cases to cases treated by solo a trainee was very low. Given this low value, it is possible that differences between the groups across time existed but were not detected.

In addition to the issue of power, the retrospective nature of this study introduced several other methodological limitations. For example, the fact that clients, trainees, and supervisors were not randomized to co-therapy conditions, introduced the potential confounds of trainee and / or supervisor effectiveness, as well as client characteristics. Ideally, all supervisors would provide co-therapy supervision and all trainees would receive co-therapy supervision. In this case, the question of treatment effectiveness would only require one comparison (co-therapy cases versus cases treated by a solo trainee). The question of training effectiveness would also require only one comparison (cases

treated by a solo trainee who had not received co-therapy supervision prior to the start of the therapy versus cases treated by a solo trainee who had received co-therapy supervision prior to the start of therapy). In addition to the simplification of the analyses, this would strengthen conclusions made based on results.

Future studies of co-therapy effectiveness would ideally employ a prospective design, which would allow for randomization of all three parties, supervisor, trainee, and client, to treatment group and an a priori power analysis to determine the requisite sample size. Another future direction for co-therapy research is the issue of manual guided care. An examination of co-therapy effectiveness, with the use of a manual as an additional between subjects variable, would test the theory that the manual-guided nature of the therapy provided in the present study masked differences in effectiveness between co-therapy and therapy provided by a solo trainee. Finally, assessment represents a ripe area for future co-therapy research. Additional measures for assessing client outcome and controlling for client characteristics need to be employed to further explore the impact of co-therapy supervision on client outcome and therapist training.

The results of this study offer a preliminary argument against the use of co-therapy supervision, based on the relatively high cost to the supervisor's time. However, there is still much to explore about the way co-therapy works and the impact it has on both client and trainee.

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