The Influence of Supervision on Manual Adherence and Therapeutic Processes

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Objectives: To identify the effectiveness of psychotherapy supervision on therapists’ immediate (next session) and long-term (1 year) adherence to time-limited dynamic psychotherapy (TLDP).

Method: Sixteen therapists from the Vanderbilt II psychotherapy project were assigned new cases in pretraining, training, and booster/posttraining year-long cohorts. Technical adherence to the manual, as well as general therapeutic relational processes, were rated for clinical supervisory sessions in which the third therapy session was discussed. The therapy sessions immediately before and after the supervisory sessions were also rated for technical adherence and relational processes.

Results: Postsupervision adherence increased from the presupervision session during the training cohort. In supervision, therapists’ discussion of techniques and strategies from the manual in supervision was significantly related to technical adherence in the session prior to (but not after) supervision. However, supervisors’ discussion of specific techniques predicted therapists’ total technical adherence in the therapy session after (but not before) supervision. In terms of the type of techniques, supervisors’ influenced postsupervision therapy adherence on TLDP’s unique approach to formulation, the cyclical maladaptive pattern, but did not influence technical adherence on the therapeutic relationship.

Conclusions: In supervision, therapists tend to focus on how they adhered to techniques from the previous session, whereas supervisors’ comments about specific techniques predicted how the therapist would adhere to techniques in the next therapy session. The findings provide support for the immediate effects of supervision in shaping therapist techniques as well as highlighting the challenges of altering common relational processes through technical training. © 2012 Wiley Periodicals, Inc. J. Clin. Psychol. 68:972–988, 2012.

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Clinical supervision of individual cases is the primary vehicle for training in the fidelity and competent delivery of treatments (Falender et al., 2004), and yet little is known about the effects of supervision in training therapists to apply new therapeutic strategies within therapy sessions. Therapy manuals can facilitate organization and structure in supervision and training (Lambert & Ogles, 2004) and therapists report that manuals are helpful in promoting consistent treatment delivery (Godley, White, Diamond, Passetti, & Titus, 2001). In spite of the widespread use of manuals, relatively little is known about how the supervisor’s actions might influence a therapist’s adherence to the specific techniques defined in the manual and meet the overarching goals of the treatment (Holloway & Neufeldt, 1995; Patton, Kivlinghan, & Multon, 1997).

As noted by Falender and Shafranske (2007), “empirical studies are needed to accurately assess the bidirectional influences of supervision processes on therapeutic processes and on the outcomes of treatment and supervision, as well as to investigate the effectiveness of education and training strategies involved in developing competence in supervision practice” (p. 235). The present study will examined these bidirectional influences by examining the effects of technical
adherence and relational process variables observed within supervisory sessions on parallel forms of these variables in the therapy sessions adjacent to the supervisory sessions.

Findings from surveys of therapists’ supervisory and training experiences indicate that therapists consider supervision a vital element in the effective use of therapy manuals. Therapists and case managers in the Cannabis Youth Treatment Study (Godley et al., 2001) and a group of 47 practicing cognitive behavioral therapists described supervision as a necessary component when learning how to deliver specific manualized treatments (Najavits, Weiss, Shaw, & Dierberger, 2000). In qualitative interviews, therapists explained that supervision was critical to the appropriate implementation of the therapy manual because supervisors reviewed how to implement specific techniques and how to be flexible in the application of a manual during challenging clinical encounters (Godley et al., 2001). Likewise, in a multisite study on treatment of cocaine abuse, 44 therapists reported that experiences from supervisory sessions were more influential than the actual therapy manual in the appropriate implementation of the treatment protocol (Najavits et al., 2004).

Previous empirical studies on the effects of supervision with therapy manuals, though sparse, suggest that training and supervision may increase adherence of targeted therapist interventions. In the National Institute of Mental Health (NIMH) Treatment of Depression Collaborative Research Program (TDCRP), therapists achieved a high level of adherence in applying manualized techniques for interpersonal psychotherapy after didactic training and supervision for three to four cases (Rounsaville, O’Malley, Foley, & Weissman, 1988). When combined with supervisory booster sessions, skills learned from the manual were maintained (Rounsaville, Chevron, Weissman, Prusoff, & Frank, 1986).

Thus, supervision and training with manuals can lead to increased adherence even though it is unclear which training processes and instructional foci led to these increases. It remains unclear whether techniques of varying complexity and varying supervisory procedures can account for how therapists learn in supervision. In general, it appears likely that therapists’ performance is enhanced when supervisors provide a facilitative relational environment in supervision that includes empathy, trustworthiness, support, and a positive “teaching alliance” (Book, 1987; Carey, Williams, & Wells, 1988; Guest & Beutler, 1988; Kennard, Steward, & Gluck, 1987; Lambert & Ogles, 1997; Shanfield, Mohl, Hetherly, & Mathews, 1992).

Moreover, the supervisor’s focus on specific issues and interventions is related to positive trainee attitudes and performance, particularly for therapists in the later stages of training (Guest & Beutler, 1988; Shanfield, Matthews, & Hetherly, 1993). Determining the effectiveness of supervised training with therapy manuals in randomized clinical trials (e.g., Miller & Binder, 2002) and examining how supervisory competencies affect therapist specific competencies (Falender et al., 1997) are the next logical steps in research on psychotherapy supervision.

Few studies have examined the influence of specific supervisory interventions on specific targets of therapist performance (Friedlander, Siegel, & Brenock, 1989; Holloway & Neufeldt, 1995) and how learning specific technical skills affects the maintenance of positive therapist-patient relational processes. Hilsenroth, DeFife, Blagys, and Ackerman (2006) found that structured training and supervision of short-term psychodynamic psychotherapy was associated with increased technical adherence for graduate students in clinical training. Further, they found that there were no significant increases for cognitive behavioral technical adherence and the targeted adherence measure increased with more training.

The Vanderbilt II psychotherapy project (Strupp, 1993) examined how supervision and training of specific relational techniques in time-limited dynamic psychotherapy (TLD; Strupp & Binder, 1984) were related to therapeutic processes and outcome. TLD is a treatment that aims to identify and change the patient’s cyclical maladaptive patterns, which involves patient’s chronic interpersonal difficulties. This maladaptive pattern is a cycle of actions and expectations toward others that influence how others act toward them, all of which reinforces longstanding, introjected views of the self (Levenson & Strupp, 2007). A primary goal of the treatment is to address these cyclical maladaptive patterns directly using the patient-therapist relationship as a vehicle for change (Strupp & Binder, 1984).

The fact that TLD is highly focused on techniques used to address the therapeutic relationship itself made this project a useful window into the issue of how technical skills and the therapeutic
relationship might interact. Previously published findings have examined the overall changes in adherence from the pre-TLDP training cohort (i.e., therapists' usual practices) to the post-training cohort (i.e., after training in TLDP). Henry, Strupp, Butler, Schacht, and Binder (1993) found that therapists demonstrated higher levels of adherence to TLDP in the posttraining phase when compared with adherence levels in the pretraining phase. While there were measurable increases in adherence, therapists also displayed increases in some problematic interpersonal processes, such as trends toward decreased optimism, decreased support of the patient's confidence, decreased time spent evaluating the patient's feelings, and increased defensiveness and interpersonally dominant behavior.

Therapists who scored high on measures of internally directed hostility and control were more likely to attain the highest levels of technical adherence (Henry, Schacht, Strupp, Butler, & Binder, 1993). Overall, these findings often have been interpreted to suggest that the combined increases in targeted therapist techniques often may be accompanied by undesirable therapist behaviors and negative therapy processes and that these processes deserve relatively greater emphasis over technical training within psychotherapy supervision (e.g., Anderson & Strupp, 1997; Binder, 2003; Henry & Strupp, 1994; Lambert & Ogles, 2004; Safran & Muran, 2000).

One advantage of investigating supervision in TLDP is that the treatment was designed, in part, to link to issues of professional therapist training and supervision. A primary aim of TLDP is to assist therapist from falling into problematic relational enactments when exploring transference issues with patients who present with problematic interpersonal patterns. In addition to instructing therapists how to locate and respond to these therapist-patient interactions, the TLDP supervisory model also recognizes the somewhat parallel processes of how therapists and supervisors communicate about patients within psychotherapy supervision. The supervisory relationship provides a practical forum for therapists to explore countertransference and learn how to best respond to problematic patient-therapist relational enactments (Levenson, 1995).

The current study differed from prior studies of the Vanderbilt II project in that adherence and relational processes from the supervision sessions as well as therapy sessions from that training year have not been examined empirically. Specifically, the current study hypothesized that therapists' technical adherence to TLDP interventions would increase in therapy sessions occurring immediately following supervision when compared with their adherence prior to supervision. Further, we hypothesized that the extent to which various TLDP specific techniques discussed in supervision would predict the specific technical adherence for the therapy session immediately following supervision.

Finally, it was predicted that adherence to TLDP strategies would be associated with therapists' positive relational processes, both as expressed within supervision sessions as well as within postsupervisory therapy sessions. This hypothesis is somewhat in contrast to prior findings on this project (Henry, Strupp, et al., 1993), which found some negative associations between adherence and relational process variables. However, as a treatment designed to facilitate the therapist's ability to address problematic interpersonal processes in therapy, the practice of TLDP should have led to decreases in negative therapist processes.

Method

Design

The Vanderbilt II study (Strupp, 1993) tested the effects of supervision and training of TLDP using a three-cohort, repeated-measures design (1 year per cohort). During the pretraining cohort (Year 1), therapists received no supervision or training in a baseline period that measured treatment as usual. In the training cohort (Year 2), each therapist treated one patient while receiving training and supervision in TLDP. During this cohort, therapists received training in the principles and implementation of TLDP techniques, which was applied to their training case. This was followed by the booster/posttraining cohort (Year 3) in which therapists were encouraged to follow TLDP principles with two patients. This cohort began after most of the training had been accomplished, though most therapists received some supervision during the
early phases of these cases, which reinforced TLDP principles from the training cohort. During each cohort of the project, therapists treated each of their assigned patients for 25 weekly sessions.

The present study used observational ratings of audio recordings of the supervision sessions that occurred during the training and supervision phase of the project. Each therapist presented their cases and discussed their patient’s third therapy session during these supervisory sessions. The two therapy sessions immediately before and after this supervision session (in which the third therapy session was discussed) were targeted for ratings of therapeutic process. Thus, this study involved three training cohorts. Within each case, the supervision of the third therapy session served as the focus for session-level data. Therapy sessions before and after this supervisory session allowed us to examine the associations between therapy and supervisory session adherence and processes.

**Participants**

**Therapists.** Sixteen licensed psychotherapists (eight psychologists, eight psychiatrists; 10 males, six females) participated, all of whom were in private practice with an average of 4.3 years (standard deviation $[SD] = 3.4$) postdoctoral clinical experience. Therapists were nominated for the study by senior clinicians in the community. Although therapists had previously received formal didactic training in psychodynamic therapy, none had received any specialized training in TLDP or any short-term dynamic therapy using a manual.

**Patients.** Eighty-four patients received short-term (i.e., a maximum of 25 sessions) dynamic psychotherapy in the Vanderbilt II study. These 84 patients were selected from a larger pool of 449 adults who applied for low-cost psychotherapy. After patients were accepted into the project (i.e., having completed a telephone questionnaire, and screening interview), they underwent an extensive assessment interview conducted by a clinical psychologist. Only patients who manifested significant distress on the Global Severity Index (GSI) of the Symptom Checklist-90-R (T-score > 40 with outpatient norms) and who were experiencing problems that had an interpersonal component, were included.

Patients were offered up to 25 sessions through the project and were seen for an average of 22 sessions. Four patients left treatment after fewer than five sessions and were replaced with new patients. Thus, cohort sizes from the original study comprised 32 patients (two patients per therapist) who received treatment prior to the therapists’ training in TLDP (“pretraining”), 16 patients (one patient per therapist) who participated as TLDP training cases (“training”), and 32 patients (two patients per therapist) who received treatment after therapists’ training (“booster/posttraining”).

To maximize coding resources and to match cases in the within-subjects design, the present study examined 48 patients (three groups of 16 patients), each equally drawn from the three cohorts of the study. First, all 16 patients from the training cohort were used. An additional training group of 16 patients were selected from the booster/posttraining cohort. Because eight therapists had two cases supervised for this phase, only one of the two cases was randomly selected for inclusion for the within-subjects analyses. Finally, one of the therapists’ two pretraining cases was randomly selected to form an equally balanced group of 16 pretraining patients (one per therapist). These pretraining cases were included as a control and to test for any session-to-session maturational changes in TLDP adherence that may have existed independent of training.

Patients in the study had a mean age of 40.7 years (range: 26–62 years). The sample was mostly female (72.9%) and Caucasian (95.8%). The most common diagnoses made (using the NIH Diagnostic Interview Schedule). Among Axis I diagnoses, the most common were depressive disorders (67%), followed by other disorders (29%), and anxiety disorders (17%). Most patients also met criteria for an Axis II diagnosis (62.5%) and 92% of these also had an axis I diagnosis.

**Supervisors and training.** Each therapist was trained in one of four groups of four therapists. All training groups were supervised by one of the authors of the therapy manual. Each supervisor had two groups and each therapist remained with the same supervisor and group throughout the study. The training program comprised a range of 45–57 meetings, which were
mostly once per week and lasted from a range of 15–18 months. All supervision sessions were audio recorded. Therapists read the TLDP manual and spent the first 5–10 meetings reviewing the principles and interventions of TLDP. These initial sessions occurred within a didactic format (lecture and discussion) and used videotaped examples of TLDP principles from “model patients” who had been treated by the supervisors and other members of the clinical research team. The first 12 sessions of the training cohort were devoted to didactic instruction and demonstration of the model case and the remainder of the sessions were mostly devoted to supervision of individual therapist cases.

Supervision sessions generally followed a traditional supervisory format in which (a) the supervised therapist presented background information about his/her patient, (b) an audiotaped or videotaped segment of the therapist’s therapy session was played, and (c) TLDP interventions and strategies, as related to the clinical issues of the therapist’s case, were emphasized by the supervisor and discussed with the presenting therapist. While the supervised therapy session was typically the therapist’s most recent session, it was sometimes not practical to supervise some sessions until a few additional therapy sessions had passed. As noted, final training sessions included supervision of the beginning sessions of the booster/posttraining cases and the frequency of these supervision sessions decreased from weekly to bimonthly or monthly. The format of booster-training supervision sessions matched earlier sessions.

**Measures**

Three parallel forms of the Vanderbilt Therapeutic Strategies Scale (VTSS; Butler, Henry, & Strupp, 1995) were adapted in the present study. Two of the parallel forms measured TLDP content discussed during supervisory meetings, rated separately for supervisor and therapist/supervisee each. A final parallel form measured TLDP therapy session adherence. All measures were based on independent observer ratings of audio recordings of both therapy and supervision sessions (see below).

**Supervisory adherence.** Adherence to TLDP techniques in supervision session discussions was measured with the VTSS – Supervision, a parallel form of the in-session adherence measure for TLDP created by Butler et al. (1995). The original VTSS was adapted for this study as a measure of the adherence to TLDP manual content discussed by supervisor and therapist/supervisee during supervisory sessions. Supervisory adherence measured the general and TLDP-specific therapeutic techniques in supervisory discussions, whereas therapy adherence was a measure of the adherence of specific interventions in psychotherapy sessions (see below).

Because supervisors and therapists could have had differing levels of TLDP adherence in any supervisory discussion, separate ratings were made for supervisors and therapists. Therapist and supervisor separate contributions to supervisory adherence will be referred to as “supervisory adherence – supervisor” and “supervisory adherence – therapist.” Similar to the therapy adherence measure, the items were rated on a 5-point scale, ranging from 1 (none) to 5 (main point), but the level descriptors were adapted to describe the emphasis given to each technique in supervisory discussions. Each variable was expressed as the mean of the items.

The supervisory adherence measure comprised 26 items that were divided into following four rationally derived subscales. The Interviewing Style subscale included 12 items that were nearly identical to those found on the therapy adherence measure (intra-class correlations [ICC] = .73; \( \alpha = .60 \); all ICCs and \( \alpha \) reported herein are from the ratings made in the present study). The interviewing style items were designed to measure adherence on general interviewing behaviors and clinical skills emphasized in psychodynamic psychotherapy. The remaining 14 items measured TLDP specific strategies (ICC = .88; \( \alpha = .85 \)), which included 6 additional strategy items.

The “introject” item from the original VTSS was dropped due to poor inter-rater reliability for this item. Further, specific strategy items were categorized by content into the following three subscales: the Therapist-Patient Relationship subscale included five items specific to discussions of the therapeutic relationship as defined by TLDP (ICC = .92; \( \alpha = .77 \)). Six items were included to measure the Cyclical Maladaptive Pattern (ICC = .77; \( \alpha = .87 \)). Finally, three items formed a Higher Order Links subscale (ICC = .83; \( \alpha = .61 \)), which involved advanced and
integrative TLDP techniques, such as attempts to make connections between the Therapist-Patient Relationship and the Cyclical Maladaptive Pattern.

**Therapy adherence.** Therapist adherence to TLDP during psychotherapy sessions was measured with the VTSS – Therapy (Butler et al., 1995), also adapted from the original scale, which is a 26-item rating scale that measures therapist adherence to TLDP during psychotherapy sessions. Therapy adherence was a parallel measure to the supervisory adherence measure described above, using identical scaling to the original VTSS. The therapy adherence measure formed parallel subscales as those described for supervisory adherence, including psychodynamic interviewing style (ICC = .81; α = .88) and specific strategies (ICC = .85; α = .88). Similarly, the rationally derived subscales of the specific strategies scale included into Therapist-Patient Relationship (ICC = .80; α = .82), Cyclical Maladaptive Pattern (ICC = .85; α = .94), and Higher Order Links (ICC = .80; α = .76).

**Relational processes.** Indicators of supervisory and therapist relational attitudes and processes were measured with paralleled forms of the Vanderbilt Psychotherapy Process Scale (O’Malley, Suh, & Strupp, 1983; Suh, O’Malley, Strupp, & Johnson, 1989). Following earlier work by Henry, Strupp, et al. (1993), we selected the two subscales that measured therapist interactive style: Therapist Warmth and Friendliness (nine items) and Negative Therapist Attitude (six items). Other items were not rated for this study. Items were rated on a 1 (not at all) to 5 (great deal) level descriptors and these two scales were expressed as the mean of the items (after reverse scoring of negatively worded items).

The Therapist Warmth and Friendliness (hereafter referred to as Therapist Warmth) and Therapist Negative Attitude scales were also used as parallel forms for rating therapist-patient process in therapy sessions as well as a measure of therapist attitudes when discussing their patients in supervision sessions. When used as a supervisory measure, each of the items were reworded so that the item content was related to a supervision context (e.g., “In discussing the patient during supervision, the therapist shows concern about helping the patient feel accepted in the relationship”). These ratings were used to measure how therapists described the nature of their relationship-based attitudes toward patients during supervision sessions. Thus, ratings of the “actual” therapeutic relationship, as observed in therapy sessions, could be compared with the therapists’ verbal descriptions about the therapeutic relationship in supervision. Interrater reliability and internal consistency for these measures were acceptable (Therapist Warmth, ICC = .85, α = .94; Therapist Negative Attitude, ICC = .68, α = .76).

**Procedures**

**Supervision and therapy session observer ratings.** Ratings of supervisory and therapy TLDP adherence and processes were made independently by a doctoral-level psychologist and an advanced clinical psychology graduate student. Both raters were trained in TLDP principles as well as clinical experience in TLDP with clinical cases. Raters used supervision and therapy sessions that was not included in the final sample for practice in making codes and attaining agreement on items. Once it appeared there was agreement and understanding on all items (within one point on all items), ratings for the study commenced.

The supervision session in which a therapist received supervision for their third therapy session was identified for each of the training and booster cases in the study. The third therapy session was chosen as a reference point for case selection because these therapy sessions were videotaped and often served as a focus of supervision. For 2 of the 32 cases the third therapy session was not supervised and the therapy session closest to the third session was selected for rating. On average, therapists were supervised on these third sessions during the 19th supervisory meeting of the training program for the training cohort and in the 46th supervisory meeting for booster/posttraining cases.

All supervisory and therapy sessions from the study were given an identification number to blind raters from the cohort, date, session number, and other identifying information. Further, ratings of both therapy and supervisory sessions were made in random order to help insure that
raters would be relatively blind to the sequencing of the therapy session. Raters listened to audio materials in a private location within the research lab independently and at different times. After ratings were submitted, disagreements between the raters were resolved via discussion.

Therapy session ratings were made for the therapy sessions that occurred both immediately before and after the targeted supervision session (where the targeted third therapy session had been discussed in supervision). These sessions will be referred to as the before-supervision and after-supervision therapy sessions. The mean before-supervision session was of the 4.6th therapy session. That is, there was a delay of approximately 1.6 additional therapy sessions before the targeted third therapy session could be discussed within supervision. For one case, there was a recording failure of the before-supervision therapy session and the session that was two sessions before the supervision was selected as a replacement. For the pretraining cohort, one of each therapist’s two cases was randomly selected for a total of 16 patients. These cases were matched for equivalent session numbers to the training cohort since no actual supervision was provided during this cohort (this cohort was used as a control group for only).

Consecutive therapy sessions for these cases were matched to the same therapist’s session numbers used for his/her cases from the booster/posttraining cohort. Raters also were blind to whether the therapy session was before or after a chosen supervision session and whether the therapy sessions were from pretraining, training, or booster/posttraining cohorts. Therapy and supervision tapes were rated in random order and there did not appear to be any obvious indications within sessions that would have revealed study conditions to the raters.

Results

Preliminary Analyses

The correlations among the three parallel forms of supervisory adherence and therapy adherence with the number of minutes of supervision, which focused on the targeted case were examined as possible covariates. Discussion of cases in supervision lasted approximately 1 hour ($M = 53.5$ minutes; $SD = 12.2$). Although the total number of minutes in supervision spent discussing the targeted case did not vary between the training ($M = 55.62$; $SD = 8.83$) and booster/posttraining cohorts ($M = 51.24$; $SD = 14.94$), the number of minutes spent viewing recordings of targeted therapy sessions was significantly greater for the training cohort ($M = 20.36$; $SD = 4.38$) than in booster/posttraining cohort ($M = 14.44$; $7.83$; $SD = 7.83$), $F(1, 31) = 6.87$, $p = .02$, $\eta^2 = .19$.

Further, the number of days between the targeted therapy session used in supervision (i.e., the third session) and the supervision session was significantly less for the training cohort ($M = 4.88$; $SD = 3.54$) than for the booster/posttraining cohort ($M = 27.33$; $SD = 26.24$), $F(1, 31) = 11.53$, $p = .002$, $\eta^2 = .28$. Because of the differences between training and booster/posttraining cohort, separate analyses were conducted for the training and booster/posttraining cohorts.

Short-Term Effects on Adherence

Means and standard deviations of the therapy adherence session ratings, both before and after supervisory sessions, are provided for each cohort in Table 1. Power analyses indicated that the small sample size would only be adequate for detecting small effects when selecting critical $\alpha = .10$ and, hence, we used this level for our decision rule. A within-subjects analysis of variance (ANOVA) of the three training cohort x two therapy session (before vs. after supervision session) on therapy adherence specific strategies total found a training cohort x therapy session interaction, $F(2, 30) = 3.67$, $p = .04$, $\eta^2 = .20$.

This interaction primarily was accounted for by the increased adherence in the training cohort compared with other cohorts and sessions, $F(1, 15) = 4.57$, $p = .05$, $\eta^2 = .23$. Figure 1 displays this training cohort x session interaction. A main effect for cohort was also present, $F(2, 30) = 4.74$, $p = .02$, $\eta^2 = .24$, which was due to the relatively small amount of adherence during the pretraining cohort relative to the training cohort, $F(1, 15) = 13.57$, $p = .002$, $\eta^2 = .48$. Also, adherence in specific strategies for the booster/posttraining cohort was significantly greater than in pretraining, but the effect was weak, $F(1, 15) = 3.18$, $p = .09$, $\eta^2 = .17$. There was no main
Table 1
Means and Standard Deviations on Therapy Adherence for Training Cohort and Supervision Session

<table>
<thead>
<tr>
<th>Adherence</th>
<th>Pre-Training n = 16</th>
<th>Training n = 16</th>
<th>“Booster” / Post-Training n = 16</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Interviewing Style</td>
<td>2.74</td>
<td>0.67</td>
<td>2.98</td>
</tr>
<tr>
<td>Specific Strategies</td>
<td>1.34</td>
<td>0.31</td>
<td>1.33</td>
</tr>
<tr>
<td>Relationship</td>
<td>1.46</td>
<td>0.63</td>
<td>1.36</td>
</tr>
<tr>
<td>CMP</td>
<td>1.37</td>
<td>0.45</td>
<td>1.34</td>
</tr>
<tr>
<td>Higher Order Links</td>
<td>1.04</td>
<td>0.11</td>
<td>1.11</td>
</tr>
</tbody>
</table>

Note. Before and After refers to the timing of the session relative to when it was discussed in supervision. At Pre-Training “Before” and “After” supervision session refers to the unsupervised sessions that were matched by session number to the post-training cohort. “Relationship” = Therapist-Patient Relationship; CMP = Cyclical Maladaptive Pattern; HOL = Higher Order Links.
effect for session. Similar analysis of the therapy adherence interviewing style scale found no differences for cohort, session, and the cohort x session interaction (all $p > .10$).

Similarly designed repeated measures ANOVAs were conducted for the TLDP content subscales. Both the Therapist-Patient Relationship and Higher Order Links subscales showed main effects by cohort, and these were both due to differences between contrasts of the pretraining cohort and training cohort: $F(1, 15) = 13.01, p = .003, \eta^2 = .47$ for Therapist-Patient Relationship and $F(1, 15) = 10.01, p = .006, \eta^2 = .40$ for Higher Order Links. There were no effects on the Cyclical Maladaptive Pattern subscale.

**Supervision and TLDP Adherence**

As seen in Table 2, ratings of supervisors’ and therapists’ separate contributions to the discussions of TLDP content during the supervisory sessions displayed different patterns of association to the practice of TLDP adherence within therapy sessions. Specifically, during the training cohort, therapists’ discussion of TLDP specific strategies was highly related to what they had actually adhered to in the therapy session before supervision ($r = .65, p < .01$), whereas supervisors’ comments during supervision were unrelated (in terms of TLDP) to what the therapist had done ($r = .13$), but were significantly predictive of how the therapist would adhere in the therapy session following supervision ($r = .50, p < .05$). The booster/posttraining Cohort, however, showed no significant relationship between supervisory adherence and therapy adherence.

Using hierarchical regression, we removed the influence of prior adherence by including the before-supervision session as the first block in the regression equation, predicting after-supervision therapy adherence. Next, supervisory adherence – therapist and supervisory adherence – supervisor were treated as the second block of variables. Tolerance statistics and other checks indicated an absence of collinearity for the analyses. Table 3 displays the results of these analyses for overall technical adherence, specific strategies total, as well as the three adherence sub-scales. Supervisory adherence influenced changes in specific strategies total and this was primarily from the positive contributions from supervisors, which stood in relative contrast to therapists’ significant, but negative, influence during supervision.
Table 2
Correlations of Supervisory Adherence and Therapy Adherence (Before-Supervision and After-Supervision)

<table>
<thead>
<tr>
<th>Supervisory adherence</th>
<th>Therapy adherence</th>
<th>Training phase</th>
<th>Booster training</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>n = 16</td>
<td>n = 16</td>
</tr>
<tr>
<td></td>
<td>Before-supervision</td>
<td>After-supervision</td>
<td>Before-supervision</td>
</tr>
<tr>
<td>Specific strategies total</td>
<td></td>
<td>.65**</td>
<td>.01</td>
</tr>
<tr>
<td>Therapist</td>
<td>.13</td>
<td>.50*</td>
<td></td>
</tr>
<tr>
<td>Supervisor</td>
<td>.13</td>
<td>.45*</td>
<td></td>
</tr>
<tr>
<td>Therapist-Patient Relationship</td>
<td></td>
<td>.43*</td>
<td>-.19</td>
</tr>
<tr>
<td>Therapist</td>
<td>.23</td>
<td>.45*</td>
<td></td>
</tr>
<tr>
<td>Supervisor</td>
<td>.23</td>
<td>.71***</td>
<td></td>
</tr>
<tr>
<td>Cyclical Maladaptive Pattern</td>
<td></td>
<td>.17</td>
<td>.45*</td>
</tr>
<tr>
<td>Therapist</td>
<td>.17</td>
<td>.71***</td>
<td></td>
</tr>
<tr>
<td>Supervisor</td>
<td>.17</td>
<td>.71***</td>
<td></td>
</tr>
<tr>
<td>Higher Order Links</td>
<td></td>
<td>.80***</td>
<td>-.13</td>
</tr>
<tr>
<td>Therapist</td>
<td>.50*</td>
<td>.44*</td>
<td></td>
</tr>
<tr>
<td>Supervisor</td>
<td>.50*</td>
<td>.44*</td>
<td></td>
</tr>
</tbody>
</table>

Note. Therapist-Patient Relationship, Cyclical Maladaptive Pattern, and Higher Order Links are components of the specific strategies total (first row).
* p < .05, ** p < .01, *** p < .001.

Technical Adherence and Therapeutic Processes

Zero-order correlations between the adherence variables and the therapy process variables are presented in Table 4. Supervisory adherence – therapist variables were positively correlated with Therapist Warmth and inversely associated with Negative Therapist Attitude within supervisory sessions. This relationship was similar for ratings of attitudes expressed about relational processes in supervision as well as the more direct measurement of these relational processes within therapy sessions. However, relational process variables did not relate to therapy adherence in the booster/posttraining sessions.

Regression analyses included the supervisory adherence – supervisor variables as predictors of after-supervision therapy session measures of Therapist Warmth and Therapist Negative Attitudes. A series of regression analyses were performed to predict the after-supervision therapy relational processes (Therapist Warmth, Negative Therapist Attitude), removing before-supervision therapy relational process variable in the first block and adding supervisory adherence – therapist and supervisory adherence – supervisor as predictors. Tolerance statistics and other checks indicated an absence of collinearity for all these analyses.

These analyses consistently found that supervisory adherence was not predictive of either Therapist Warmth or Therapist Negative Attitude, though each before-supervision therapy relational process was always highly predictive of after-supervision therapy relational process. For example, during the training cohort, after-supervision Therapist Warmth was significantly related to before-supervision Therapist Warmth, $R^2 = .71, p < .001$. The second block of supervisory adherence (specific strategies for therapist and supervisor each) was not significantly related when Therapist Warmth was removed from before-supervision therapy sessions. Similarly, after-supervision Negative Therapist Attitude was also accounted for by its before-supervision score, $R^2 = .51, p < .001$, yet supervisory adherence variables were not predictive.
Table 3  
Hierarchical Regressions Predicting After-Supervision Therapy Adherence

<table>
<thead>
<tr>
<th>Predictor</th>
<th>ΔR²</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interviewing style</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td>.46***</td>
<td>.67***</td>
</tr>
<tr>
<td>Before-supervision therapy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td>.03</td>
<td>.02</td>
</tr>
<tr>
<td>Supervision (supervisor)</td>
<td></td>
<td>.16</td>
</tr>
<tr>
<td>Supervision (therapist)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Specific strategies total</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td>.09</td>
<td>.30</td>
</tr>
<tr>
<td>Before-supervision therapy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td>.27**</td>
<td>.63***</td>
</tr>
<tr>
<td>Supervision (supervisor)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervision (therapist)</td>
<td></td>
<td>−.48**</td>
</tr>
<tr>
<td><strong>Specific strategy subscales: Therapist-Patient Relationship</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1 (Therapy)</td>
<td>.10</td>
<td>.31</td>
</tr>
<tr>
<td>Presupervision</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2 (supervision)</td>
<td>.05</td>
<td>.23</td>
</tr>
<tr>
<td>Supervisor</td>
<td></td>
<td>−.27</td>
</tr>
<tr>
<td>Therapist</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cyclical Maladaptive Pattern</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1 (Therapy)</td>
<td>.03</td>
<td>−.02</td>
</tr>
<tr>
<td>Presupervision</td>
<td></td>
<td></td>
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<tr>
<td>Step 2 (Supervision)</td>
<td>.23*</td>
<td>1.01**</td>
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<tr>
<td>Supervisor</td>
<td></td>
<td>−.74*</td>
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<tr>
<td>Therapist</td>
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</tr>
<tr>
<td><strong>Higher Order Links</strong></td>
<td></td>
<td></td>
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<tr>
<td>Step 1 (Therapy)</td>
<td>.06</td>
<td>.25</td>
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<tr>
<td>Presupervision</td>
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<td>Step 2 (Supervision)</td>
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<tr>
<td>Supervisor</td>
<td></td>
<td>−.30</td>
</tr>
<tr>
<td>Therapist</td>
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</tbody>
</table>

*p < .05. **p < .01. ***p < .001.

Discussion

This study found that supervised training in techniques from the manual influenced therapists’ in-session performance at two different time levels. First, during the year of more intensive training there was a spike in therapists’ use of specific strategies in comparison to the pretraining year. Second, overall adherence in the booster/posttraining year was sustained relative to pretraining levels, but there was a decrease in the absolute value of adherence levels in comparison to the training cohort. Third, supervision was associated with increased overall TLDP technical adherence in the therapy session immediately following the supervision session and this was true even when presupervision levels of adherence were removed. This supervisory effect was significant for both the training and booster-training cohorts, though the overall effects of adherence for the booster/posttraining cohort were weak, which brings into question how integrated the learning had become within the therapists’ longer term common practices.

This study is the only study, to our knowledge, in which parallel measures for technical adherence were administered in both supervisory sessions as well as in therapy sessions adjacent to the supervisory sessions. Prediction of supervisory effects on changes of in-session therapist behavior allowed testing of the directional influences. Thus, this study meets empirical research standards of precise measurement and specificity, which are common in many treatment studies,
but largely have not been met in prior empirical research on supervision (Milne, 2007). Having controlled for before-supervision levels of performance in TLDP, it is more likely that the increases in after-supervision therapy adherence were from some aspect of the supervisory experience. The design of the study allowed for greater confidence in concluding that supervision likely was the source for these changes.

**Supervisory Influence on TLDP Technical Adherence**

Further supporting the hypothesis that changes in therapy session adherence were from the supervision was the pattern of relationships between supervisory adherence ratings and both in-session therapy adherence ratings for sessions immediately before and after these supervisory sessions. Specifically, therapists’ supervisory discussions were most related to their technical adherence in the before-supervision therapy session, while the supervisors’ discussion was unrelated to the therapists’ before-supervision therapy adherence. Instead, supervisors’ comments about TLDP specific strategies was most related to therapists’ performance on those TLDP techniques in the after-supervision therapy session.

The supervisors’ significantly and positively influenced technical adherence in the therapy sessions immediately following supervision, even when controlling for the therapists prior levels of adherence. Even more, the significance of the supervisors’ influence on the postsupervision session was combined with a relatively low contribution of the therapists’ discussion of those same specific strategies. In short, the supervisors had an important and independent influence on these therapists’ gains in adherence. The findings can be framed as being supportive of a common supervisory experience and lore: Supervisees focus on the display of their successful technical accomplishments in their most recent therapy session, while supervisors tend to focus on clinical strategies that they believe will be useful to the supervisee in future sessions. In fact, the results show that supervisees successfully incorporate the supervisors’ suggestions into their very next therapy session!
It is interesting to note that therapists were responsive to supervisors’ comments in supervision in some areas of technical adherence, but not in others. It appeared that supervisors had an influence on the technical adherence of therapists when therapists were not consistently practicing those specific strategies in the first place (i.e., low before-supervision to after-supervision relationship on two of the three subscales of specific strategies; see Table 3). This might also help to explain part of the reason for why there appeared to be higher relationships between supervisory adherence and therapy session adherence during the training cohort but not during the booster/posttraining cohort. Given the small sample size, these training cohort differences could not be examined inferentially through our regression analyses. Arguably, the Cyclical Maladaptive Pattern and Higher Order Links provided the most novel strategies and therapists were engaged in new learning of these strategies. Focus on the Cyclical Maladaptive Pattern formulation is the primary schematic for treatment formulation used in TLDP (Levenson & Strupp, 2007) and arguably is the most unique treatment strategy of TLDP.

In contrast, therapists likely had already received extensive training in common relational processes (the Interviewing Style subscale) as well as specific relational-based interventions (the Therapist-Patient Relationship subscale), and hence there may have been relatively little room for improvement in those areas. Arguably, the Therapist-Patient Relationship subscale reflects the transference work that defines the vast majority of all psychodynamic therapies, and thus may not have been appreciably different from relationship work that the therapist had learned throughout their previous training.

However, the null findings with therapist-patient relational interventions may also reflect difficulties that these therapists had in competently delivering the unique nature of transference TLDP, which frequently has been noted as being one of the possible limitations of the specific skills attained by the Vanderbilt II therapists (e.g., Bein et al., 2000; Crtis-Christoph et al., 2006; Safran & Muran, 2000). It also may be that the nature of training therapists to alter their interpersonal style through relational techniques (e.g., Therapist Offered Relationship) is far more complex and difficult than training the relatively more cognitive ability of using the treatment formulation (e.g., the Cyclical Maladaptive Pattern).

**Supervisory Influence on Common Relational Processes**

Supervision and the extent of TLDP techniques discussed in supervision were unrelated to observed common relational processes in the therapy session after supervision. The only predictors of therapy relational processes in after-supervision therapy sessions were the same relational process variables before supervision. The fact that the supervisors’ instruction was not influential on the manifestation of these relational processes within therapy might suggest that the development of these basic interpersonal process skills were not as amenable to training as was instruction to specific techniques. These findings may also be consistent with the argument that these relational processes are a more enduring and common facet of therapeutic work and more difficult to train through traditional therapist training methods (Strupp & Anderson, 1997; Vakoch & Strupp, 2000).

Although therapy relational process variables were not influenced by supervisory adherence, Therapist Warmth had a strong positive association with supervisory adherence in terms of the content discussed by therapist within supervision sessions. At first glance, this appears contradictory to those of Henry, Schacht, et al.’s (1993), which frequently has been cited as evidence that adherence to training manuals may have the unfortunate consequence of disrupting common relational processes between patient and therapist (e.g., Kolden, et al., 2006; Lambert, 1998; Piper & Ogrodniczuk, 1999; Strupp & Anderson, 1996). Discrepancies between the Henry et al. (1993) findings and the present study may be more understandable when considering the proximity in which the relational process measures were located to supervision (i.e., where therapist can learn to change their relational stance toward patients). When the relationship between supervisory adherence and relational processes are measured within the supervision session itself, the association was positive.
Implications for Clinical Supervision, Training, and Research

Methodological Issues

This study had a small sample and a specific training task, which may limit conclusions to the specific context and ecology of the training situation (Anderson & Strupp, 1996). The trade-off of generalizability for experimental control makes it difficult to know if the supervisory influences found in this study would, for example, apply to standard training with students who have not completed professional training and practical experience. Further, the study targeted the processes around supervision and there was no demonstration that these increases enhanced patient outcomes. It is noted that we performed some limited statistical analyses with patient outcomes, which were not significant and similar to the null outcome findings reported by Bein et al. (2000).

The archival selection of cases from the training year is another important limitation. The fact that the third sessions of all cases were selected for specific focus in supervision may address this limitation somewhat for the training cohort cases, but the changes in procedures for the supervision of the booster cases illuminates limitations of studying the session-to-session training and supervision processes in the context of a larger training mission (i.e., the larger goal of the project was to train therapist to use TLDP independently during the post-training cohort).

Limitations and Future Directions

A limitation and concern of these findings is the fact that many of the gains in technical adherence during the training year were not well sustained beyond the intensive training year. Although the levels of technical adherence in the booster/posttraining cohort have been shown to be significantly greater than the pretraining cohort (Henry, Strupp, et al., 1993), the increase in adherence levels in the present study was significant but weak.

Further, results indicated that the therapists were no longer responsive to the supervisors’ influence in these booster/posttraining sessions (see Figure 1). Taken together, this may suggest that therapists are mostly responsive to supervision (at least as defined by changes in technical adherence) during intensive training and immediately after supervision. This leaves open the possibility that the supervisory learning is quickly lost or poorly integrated. Furthermore, learning from supervision was not meaningfully linked to changes in patient outcomes (Bein et al., 2000). While we are encouraged by developing a method for identifying clinically relevant learning of techniques, session-to-session learning does not necessarily translate into sustained and integrated use of these skills in everyday practice.

As argued by Crits-Christoph et al. (2006), therapists who have a limited number of training cases of this complex treatment manual may not have had sufficient opportunity to consolidate learning of the manual’s principles. While it might seem that a year of intensive training is considerate for already fully trained and professionally licensed therapists, training therapists in the nuances of complex interpersonal patterns may require several years, especially if a therapist’s preexisting interpersonal skill set is limited (Strupp & Anderson, 1997). Alternatively, it is possible that therapists had sufficiently integrated TLDP technical interventions into their repertoire of therapeutic skills. Partly because of the intensity and length of the training, therapists may have become saturated in their ability to benefit further from TLDP supervision. The marked increase during the more intensive training and supervision year may have been from not have mastered competency in TLDP interventions until after the training cohort.

Stiles, Honos-Webb, and Surko (1998) suggested that therapists who are learning interventions from a therapy manual may initially apply techniques more frequently, but without discretion and in a wider variety of contexts than needed. Accordingly, therapists may have been more open to experimenting with TLDP interventions during the more intensive training cohort year, but then later may have learned to fit TLDP interventions with the responsiveness of their patients and with the specific context of treatment. In order for future studies to better understand which of these two explanations apply, it would be useful to include measures of clinical competence (Sharpless & Barber, 2009) that would allow researchers to better distinguish the learning of
technical adherence from *how* therapists use discretion in applying techniques within a wide variety of clinical contexts (i.e., competence).

Future research on supervision and training of common relational skills may benefit from development of more creative and intensive practicum training models in order to influence supervisees' basic relational patterns (Crits-Christoph et al., 2006; Strupp & Anderson, 1997). In comparison to the training cohort, the booster/posttraining cohort had a greater period of time between the targeted therapy and supervision session, and less of the supervisory time was spent reviewing the video material from the therapy session.

Future research on supervised training of therapists could address whether more immediate use of video technologies enhance psychotherapy training and supervision. Educational and cognitive science research has successfully used methods that contextualize learning of complex tasks through interactive video-enhanced problem-solving tasks (Biswas, Schwartz, & Bransford, 2001; Levenson, 1995; Vakoch & Strupp, 2000). Psychodynamic and Interpersonal supervision would likely advance through modeling the use of strategies that experimentally control for the nature of supervisory feedback in ways similar to recent supervision and training research on Motivational interviewing by Miller, Yahne, Moyer, Martinez, and Pirritano (2004).

Achieving the overarching goal of this project, training therapists to negotiate difficult relational impasses, likely requires concerted effort and synthesis of innovations in clinical practice, instruction, and research methods. Development of innovative training and supervisory strategies is an important link toward altering therapist relationship behavior. Clear and precise empirical definitions of supervised training largely has been absent in this effort thus far (Milne, 2007) and is essential to establishing empirical support for effective supervision. This research is all the more urgent given the increased frequency of supervision in clinical practice. Future studies would contribute to this goal by developing supervisory and training methods that are effective at the session level and beyond.

References


