

Impact of Therapist Emotional Intelligence on Psychotherapy

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Abstract: The concept of emotional intelligence (EI) describes a set of emotional skills that may comprise efficacious therapist variables. The present study is the first to investigate EI among psychotherapists. Based on conceptual overlaps between the EI model and psychotherapy models, as well as a review of empirical evidence from both literatures, we make several predictions of how therapist EI impacts treatment. In a small pilot study, we assessed psychotherapist EI to determine its relation to psychotherapy outcome and process. Therapists with higher ratings of EI achieved better therapist-rated outcome results and lower drop-out rates compared with therapists with lower ratings of EI. Though not hypothesized, higher therapist EI was significantly associated with increased patient assessment compliance. There was no relationship between early working alliance ratings and therapist EI. Findings offer preliminary support for the relevance of therapist EI to psychotherapy.

Key Words: Psychotherapy, emotional intelligence, psychotherapy process, therapist effect, therapist variables.

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Psychotherapy researchers remain concerned by the neglect of therapist variables in outcome studies (Vocisano et al., 2004; Wampold, 2001; Beutler, 1997). The few studies focusing on therapist characteristics confirm that therapists vary substantially in their success even after controlling for patient and treatment variables (Blatt et al., 1996; Huppert et al., 2001). Additionally, meta-analytic reviews show therapist competence accounts for significantly more variance in treatment outcome than type of treatment (5%–10% vs. <1%; Elkin et al., 2006; Wampold, 2001; Crits-Christoph and Mintz, 1991). Yet progress in competency research depends on the availability of reliable measures that can test clinically meaningful therapist variables.

Since most efficacy research restricts therapist variables to measures of protocol adherence (Bradley et al., 2005), few measures of therapist qualities and skills appear in the literature. Most studies that have investigated therapist qualities focus on general characteristics such as gender, ethnicity, and years of experience (Vocisano et al., 2004). However, a growing consensus within the psychotherapy research community suggests we look to the relational skills of the therapist to locate the active ingredients of therapeutic change (Skovholt and Jennings, 2004; Safran and Muran, 2000).

Safran and Muran (2000), based on a review of contemporary relational theory, characterize 1 facet of therapist competence as the therapist's ability to correctly perceive, process, understand, and

appropriately respond to the relational dynamics between the therapist and patient. According to a separate literature, based on the research areas of cognition and affect, such relational skills are part of an individual's emotional intelligence (EI). The present study was designed to investigate therapist EI as a potential mediator of psychotherapy process and outcome. While a variety of EI models appear in the literature, a general agreement exists in conceptualizing EI as the capacity to use emotional information to both understand and navigate the social world (Mayer et al., 2008). In this study, we will adopt Mayer and Salovey's (1997) model of EI as an ability-based capacity and employ the Mayer-Salovey-Caruso EI Test (MSCEIT) to assess EI.

The Mayer and Salovey (1997) model of EI consists of 4 underlying groups of abilities, or "branches": (1) perceiving emotions, (2) integrating emotions in thought, (3) understanding emotions, and (4) managing emotions (see Methods for details on EI measurement).

Branch 1 comprises the most fundamental element of EI: the ability to accurately perceive emotions. Only through accurate perception of emotions can you acquire the information needed for appropriate interpersonal behaviors (Mayer and Salovey, 1997). Salovey and Mayer hypothesized that the emotion-perception system is an evolutionarily determined system which, in early life, promotes empathic mirroring between infant and caregiver (Salovey and Mayer, 1989/1990). Through this empathic connection, the developing infant learns to perceive emotional patterns in the caregiver, and gradually generalizes this ability to other people, and eventually objects (e.g., artwork; Mayer, 2000).

Once emotion has been perceived, it becomes integrated into thought (Branch 2). There are several ways in which the emotion-integration system describes the impact of emotion on reasoning (Mayer, 2000). Emotion can interrupt and prioritize problems, as when a feeling of anxiety over the approaching end-of-session interrupts a therapist's sustained concentration, alerting the therapist to wrap-up. Emotion can provide a memory store about emotion itself, as when a therapist's memories of personal feelings help to understand a patient experiencing such feelings. Mood shifting can refresh the cognitive system, and allow for diverse perspectives on a problem, and ensure that, over time, all cognitive resources are brought to bear on a problem. For example, a patient might evoke a positive mood in a therapist, making established goals appear desirable and thereby sustaining the motivation to continue as is; in contrast, a patient might evoke a negative mood in a therapist, thus enhancing detailed processing, which encourages the formation of a new perspective.

Finally, mood can provide implicit information about earlier experiences which is valuable in decision making. For example, a patient's behavior may be familiar to a therapist, and though explicit memories are not available, the feelings evoked provide information about the patient, and about alternative interventions.

Besides the direct integration of emotion into thought (i.e. Branch 2), emotions contain information that can be thought about (Branch 3). Emotion-understanding begins with the ability to label an emotion, and then to discern its basic meaning; for example, joy may reflect a harmonious relationship with another (Mayer, 2000). More sophisticated emotion-understanding involves comprehension of emotion relations (e.g., anger and disgust form contempt), pro-

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gressions (e.g., annoyance builds to anger and then to rage), and transitions (e.g., rage turns to guilt). Finally, emotion-understanding at the highest level includes skills in discerning the interpersonal meanings of emotions, understanding their causes, and predicting how people will feel and react in different situations. For example, knowing why a patient feels anxious at the end of a difficult session; or, predicting how a particular intervention might make a patient feel at a particular moment.

The knowledge gained through emotion-perception, emotion-integration, and emotion-understanding makes personal growth possible, but not inevitable (Mayer and Salovey, 1997). To grow, a person must manage this knowledge in ways that promote constructive outcome through the skillful regulation of one's own and others' emotions (Branch 4). Effective emotion-management therefore involves applying strategies to alter emotions, and monitoring the effectiveness of these strategies. These strategies need not be pre-conceived, and are more or less flexibly adapted to different situations. In the context of the therapeutic encounter, different therapeutic approaches exemplify different emotion-management strategies; for example, meta-communication refers to a strategy of openly sharing with a patient one's present emotional experience, whereas a traditional psychoanalytic approach advocates censoring therapist affect. Therapists may apply such strategies in ways that are more or less adaptive to their patient's needs; therefore, differences in efficacy may reflect the quality of a therapist's approach, and their sensitivity in choosing one strategy over another, rather than superiority of one approach over another.

Taken together, the 4 branches yield an individual's EI quotient (EIQ). Although formed of separate branches, EIQ constitutes a unitary factor that describes an individual's ability to reason with emotion across all domains, and to use emotions in adaptive ways (Salovey et al., 1993; Salovey and Mayer, 1989/1990).

THE CONCEPTUAL OVERLAP BETWEEN EI AND OTHER THERAPIST QUALITIES

Contemporary models of therapeutic change propose that a number of therapist qualities and relational skills directly affect patient relatedness and treatment outcomes by providing a corrective emotional experience (Alexander and French, 1946; Goldfried, 1980; Safran and Muran, 2000). While differences exist in terms of which relational skills are emphasized in various models, the various factors of the EI model overlap with at least 4 such skills prominent in the psychotherapy literature: empathy (Rogers, 1980; Elliot et al., 2004; Brackett et al., 2006), reflective functioning (Fonagy and Target, 1999; Karlsson and Kermott, 2006), psychological mindedness (Appelbaum, 1973; Farber and Golden, 1997), and affect regulation (Main, 1990; Magai and McFadden, 1995; Schore, 2003; Wallin, 2007).

Our impression is that considerable conceptual overlap exists between these psychotherapy constructs and various dimensions of the 4 EI branches (Table 1). For example, empathy is to some extent tapped by the first 2 branches of EI, since empathy involves following 2 abilities (Rogers, 1980): (1) the ability to tune-in to what the other person is feeling (Branch 1) and (2) having a sense of what it's like to

experience that feeling (Branch 2). Psychological mindedness, on the other hand, refers to seeing relationships among thoughts, feelings, and actions to understand behavior (Appelbaum, 1973), and therefore conceptually mirrors the "mental processor" described in EI Branch 3 (as mentioned earlier in the text). Reflective functioning also corresponds, in some respects, with the third EI Branch in its emphasis on an ability to recognize and understand mental processes taking place in the self and others (Fonagy et al., 1997).

Finally, Affect Regulation refers to strategies for responding to emotional states in oneself and others (Main, 1990; Magai and McFadden, 1995; Safran and Reading, 2008; Schore, 2003; Wallin, 2007), and conceptually mirrors the fourth Branch of EI, Managing Emotions.

These conceptual overlaps between the EI model and other therapist qualities and relational skills suggest a number of potential avenues by which therapist EI might affect treatment outcome: (a) as a primary and active agent of change (e.g., affect regulation), (b) as an essential background condition that facilitates active interventions (e.g., psychological mindedness), and (c) as a background condition that promotes a positive therapeutic relationship (e.g., empathy).

A number of studies demonstrate that various therapist relational skills can mediate therapeutic process and outcome. For example, research suggests that helpful therapists are more empathic (Greenberg et al., 2001; Lambert and Barley, 2001; Orlinsky and Howard, 1986), manage interpersonal ruptures effectively (Safran and Muran, 2000; Safran et al., 2002), and manage difficult emotions effectively (Dalenberg, 2004; Hill et al., 2003). Such skills are consistent with those skills described in the EI model, and therefore offer examples of how EI might directly mediate treatment outcome.

While the present study is, to our knowledge, the first to explore the potential role of therapist EI as a mediator of therapeutic process and outcome, empirical studies investigating correlates of EI in various nontherapist samples (e.g., undergraduate students, community samples) attribute the following qualities to individuals with high EI (vs. low EI): (a) better social relations (Lopes et al., 2003); (b) greater self-perceived confidence and less use of destructive interpersonal strategies (Brackett et al., 2006; Lopes et al., 2004); (c) better impression on others as empathic, socially adroit, and pleasant to be around (Brackett et al., 2006; Lopes et al., 2004, 2005); (d) more positive work performance and negotiation outcomes, and more success at work (Côté and Miners, 2006; Elfenbein et al., 2007; Rubin et al., 2005); (e) greater life satisfaction and self-esteem and lower ratings of depression (Bastian et al., 2005; Gohm et al., 2005; Matthews et al., 2006; and (f) fewer unhealthy behaviors, such as smoking ($r = -0.16$), alcohol ($r = -0.19$), illegal drug use ($r = -0.32$), and internet addiction (Trinidad and Johnson, 2002; Brackett et al., 2004; Engelberg and Sjöberg, 2000). Such qualities are consistent with those qualities attributed to expert therapists in the therapist expertise literature (e.g., strong relationship skills, mentally healthy, positive personal characteristics, etc. Skovholt and Jennings, 2004), and offer examples of how high EI might correlate with: (a) efficacious interventions, such as sensitivity to the patient's unique relational patterns and flexibility in technique (Goldfried et al., 1998); (b) efficacious therapist qualities, such as warmth and sensitivity (Ackerman and Hilsenroth, 2003); and (c) positive therapeutic relationships.

In sum, there are both conceptual and empirical grounds for hypothesizing that therapists with high EI may positively influence therapy through their associated abilities to (a) empathize; (b) engage emotionality in an open, nondefensive manner; (c) manage interpersonal ruptures effectively; (d) verbalize emotions, differentiate emotions, and manage difficult emotions effectively; and (e) regulate their own and others' emotions. Additionally, therapists

TABLE 1. Comparison of Psychotherapy Constructs and EI

Relational Skills	Branches of Emotional Intelligence
Empathy	Emotion-perception (branch 1)
Empathy	Emotion-integration (branch 2)
Psychological mindedness/RF	Emotion-understanding (branch 3)
Affect regulation	Emotion-management (branch 4)

EI indicates emotional intelligence; RF, reflective functioning.

with high EI should be more likely to (a) be sensitive and flexible in their application of therapeutic technique; (b) use positive personal characteristics (e.g., warmth and sensitivity) in therapeutically adaptive ways; and (c) develop positive relationships with their patients.

The conceptualization of EI as a multidimensional form of “intelligence,” while not beyond controversy (Roberts et al., 2001; Mayer et al., 2001), and the development of psychometrically sound and normed tests of EI such as the MSCEIT, offer advantages to psychotherapy researchers from both conceptual and practical perspectives. EI is a multidimensional construct with clearly defined and well-operationalized factors (e.g., perceiving, integrating, understanding, and managing emotional dynamics). Furthermore, the MSCEIT, as with cognitive IQ tests, provides an ability or performance-based assessment of EI that should not be as responsive to mediating factors such as demand characteristics and social desirability as many existing self-report measures of related constructs, such as affect regulation (e.g., the Difficulties with Emotion Regulation Scale; Gratz and Roemer, 2004) and empathy (e.g., Barrett-Lennard Relationship Inventory; Barrett-Lennard, 1962).

PREDICTIONS

On the basis of our review of the various conceptual and empirical literatures, we predicted that therapist EI would positively affect treatment efficacy (i.e., through the various hypothesized routes discussed earlier). The present clinical study was designed to test this prediction by evaluating whether or not therapist EI measured by the MSCEIT has an effect on established measures of treatment outcome and working alliance, as well as patient drop-out rates. We predicted that higher therapist EI would (a) positively influence therapy outcome on multiple dimensions, including patient subjective distress, adaptive functioning, and interpersonal style; (b) reduce likelihood of patient dropout; and (c) positively influence the therapeutic relationship.

METHOD

Study Design

To evaluate the impact of therapist EI on therapeutic efficacy, we conducted a small-scale pilot study at the Brief Psychotherapy Research Project (BPRP) at Beth Israel Medical Center. Originating in the 1980s, the BPRP studies various factors mediating the efficacy of psychotherapy for depression, anxiety, and personality disorders (PD). Therapists and patients participating in the current study were randomized to one of the following two 30-session protocols: cognitive-behavioral therapy (CBT) or brief relational therapy (BRT).

The CBT (Turner and Muran, 1992) used in this study derives from Beck and Freeman's (1990) adaptation of cognitive therapy to the treatment of PDs. Treatment begins with establishing a case formulation (Person, 1989) in which a core belief system is defined, and the subsequent treatment protocol entails following 2 intervention phases: (1) Symptom reduction, in which the Axis I conditions are addressed and (2) Schema change, in which core beliefs are modified or restructured. Both phases include traditional cognitive-behavioral strategies, including self-monitoring, cognitive restructuring, behavioral exercises, and experimentation.

The BRT (Safran and Muran, 2000) protocol derived from contemporary relational theory and findings on alliance ruptures at BPRP. The treatment process involves cultivation of mindfulness skills to facilitate the patient's awareness of how their relational behaviors and internal processes contribute to self-defeating patterns. Technique involves a specialized approach to ruptures in the therapeutic alliance comprised of 2 essential skills: (a) identifying ruptures and (b) resolving alliance ruptures through metacommunication (i.e., communication

about the communication process itself; see Safran and Muran, 2000). BRT places a greater emphasis on process than CBT, and is oriented toward cultivating awareness of self in relation to other rather than correcting an irrational belief.

Sessions in both treatment conditions were videotaped and monitored through systemic scaled ratings for adherence to the treatment manuals. Both conditions were designed to treat a variety of disorders, and both treatments have demonstrated efficacy (Muran et al., 2002). Muran et al., 2005 evaluated the relative efficacy of both treatments with a comorbid population comparable to the current patient sample, and found both conditions equally effective for the same measures of change used in this study.

Participants

Our sample included 23 therapist-patient dyads consisting of 23 therapist trainees in the Beth Israel Department of Psychiatry, and 23 patients admitted to BPRP. All therapists and patients provided written informed consent.

Patient Participants

Patients were recruited through Beth Israel Medical Center Psychiatry Outpatient Services and through advertisements in the Village Voice. DSM-IV (American Psychiatric Association, 1994) diagnoses were derived using the Structured Clinical Interview for DSM-IV-I/P for Axis I Disorders (First et al., 1995), and the Structured Clinical Interview for DSM-IV-II for Axis II disorders (First et al., 1997). Graduate students, trained and tested for reliability, administered the interviews, and licensed clinicians supervised the intake process.

To be eligible for the study, the patients had to be between the ages of 21 and 65 years, willing to be videotaped, and willing to complete assessment parameters. The exclusion criteria included organic brain syndrome or mental retardation, psychosis or need for hospitalization, bipolar disorder, active substance abuse, active Axis III medical diagnosis, history of violent behavior or impulse control problems, active suicidal behavior, and psychotropic medication use within the past year.

The majority of the 23 patients were female (65.2%) and white (78.3%; 17.4% Hispanic, 4.3% Other). Their average age was 37.7 years (standard deviation [*SD*] = 11.9). Most patients were single (73.9%), and the remaining quarter were married (17.4%), or divorced or separated (8.7%). Most patients were currently employed (73.9%), and the majority (82.6%) had a college degree or higher.

Patient diagnoses in this sample encompassed a mixture of disorders. The majority of patients (87.0%) fulfilled criteria for a current major anxiety or mood disorder on Axis I of DSM-IV, and more than half (56.5%) fulfilled criteria for Cluster C PD or PD Not Otherwise Specified (NOS) on Axis II. The distribution of primary DSM disorders for Axis I was major depressive disorder (*N* = 8), dysthymia (*N* = 4), depressive disorder NOS (*N* = 1), generalized anxiety disorder (*N* = 2), social phobia (*N* = 1), panic disorder without agoraphobia (*N* = 1), post traumatic stress disorder (*N* = 1), V-Codes (*N* = 3), and deferred (*N* = 4); and for Axis II, avoidant PD (*N* = 5), obsessive-compulsive PD (*N* = 2), PD NOS (*N* = 6), and deferred (*N* = 10). Comorbidity rates varied as follows: 8 patients had 1 diagnosis, 9 patients had 2 diagnoses, and 6 patients had more than 2 comorbid diagnoses. Since comorbidity generally denotes greater severity of illness and worse prognosis (Kaplowitz and Markowitz, 2010), this small patient sample encompassed a clinically heterogeneous group with varying levels of severity and prognosis at intake.

Therapist Participants

The majority of the 23 therapists were female (73.9%) and white (69.6%; 8.7% Asian, 4.3% Hispanic, 8.7% Other). Their average age was 31.9 years (*SD* = 5.0). About half the therapists

were single and never married (52.2%), with the remainder married, although 2 therapists did not report their marital status. All therapists had a Master’s degree (100%), and most therapists had undergone some personal therapy (78.3%). Almost all therapists were first-year trainees with no prior clinical experience (78.3%); the remainder had some (1–5 years) previous clinical experience (21.7%).

Therapist Training

Therapist training in the CBT condition (*N* = 6) included an initial orientation seminar of 6 lectures of 1-hour introducing cognitive-behavioral theory, technique, and case formulation. Training in the BRT condition (*N* = 17) involved weekly 1.5 hour training concentrating on developing therapist recognition of rupture events and therapist use of metacommunicative interventions to facilitate the resolution process. Therapists training in both conditions also included weekly, 1-hour supervisions making use of videotaped sessions.

Measures

Outcome Assessment

Outcome measures comprised a battery of patient and therapist rated questionnaires administered at 4 time points: intake, midphase, termination, and 3-month follow-up. Therapist “intake” ratings were completed after the third session of treatment. Adequate psychometric properties have been reported for all the outcome measures.

Outcome measures administered to patients included:

The Symptom Checklist–90 Revised (SCL: Derogatis, 1977, 1983), a 90-item self-report inventory designed to assess general psychiatric symptomatology. Items are scaled in a Likert-type format on degree of severity. In this study, the Global Severity Index, which is an overall mean score, was used.

The Target Complaints Questionnaire (TCQ: Battle et al., 1966), an idiographic self-report measure developed to assess patients’ particular presenting problems. Space is provided for 3 problems per patient, and each problem is rated by the patient on a Likert-type scale in terms of degree of severity. The ratings of 3 problems were averaged for an overall index.

The Inventory of Interpersonal Problems (IIP: Horowitz et al., 2000), a self-report inventory designed to assess patient social adjustment and interpersonal difficulties. A short form, developed at BPRP from factor analytic procedures, consists of 32 items scaled in Likert-type format on degree of distress (Safran et al., 2005). In this study, an overall mean score was used to determine outcome.

Outcome measures filled-out by therapists, describing their view on patient’s problems, included: (a) a therapist-rated version of the IIP; (b) a therapist-rated version of the TCQ; and (c) the Global Assessment Scale (GAS; Endicott et al., 1976), a clinician-rated scale for evaluating the overall mental health of a patient. The GAS involves a single rating on a continuum ranging from 1, which represents the hypothetically sickest individual, to 100, the hypothetically healthiest. All therapists were trained to reliable standards (intraclass correlations ≥ 0.90) on all 3 therapist-rated outcome measures.

Alliance Assessment

Patients completed a postsession questionnaire (Muran et al., 2004) after all 30 sessions, which included a 12-item version of the Working Alliance Inventory (Horvath and Greenberg, 1989; Tracey and Kokotovic, 1989). The WAI measures 3 dimensions: agreement on the tasks and goals of treatment, as well as the affective bond between patient and therapist. In this study, we examined an overall mean score. Since research shows patient-rated early alliance to be

TABLE 2. Guidelines for Interpreting MSCEIT Scores

EQ Range	Qualitative Range
69 or less	Consider development
70–89	Consider improvement
90–99	Low average score
100–109	High average score
110–119	Competent
120–129	Strength
130+	Significant strength

MSCEIT indicates Mayer-Salovey-Caruso Emotional Intelligence Test; EQ, emotional intelligence quotient.

most predictive of outcome (Castonguay et al., 2006; Constantino et al., 2002; Henry and Strupp, 1994), we used only WAI data from the first 6 sessions. The WAI is a widely used measure with well-established psychometric properties (Horvath and Greenberg, 1989).

EI Assessment

To assess therapist EI, therapists completed the online version of the MSCEIT V.2 (Mayer et al., 2002), a 141-item, self-administered abilities measure designed to assess EI in adults (17+). The MSCEIT follows the tradition of measures of intellectual intelligence in that answers can be right or wrong, which qualifies it as an “abilities measure.” As with cognitive IQ, MSCEIT scores are computed as empirical percentiles and positioned on a normal curve with a mean of 100 and an *SD* of 15. MSCEIT scores are interpreted according to the guidelines provided in Table 2.

2 methods have been employed to determine the correctness of items on the MSCEIT: (1) the use of general consensus of test-takers and (2) the use of expert judges. Comparison of answers from both methods shows a strong correlation between responses (*r* ranged from 0.96 to 0.98; see Mayer et al., 2004 for review). The present study employed the general consensus method, which provides an absolute measure of therapist EI, since a respondent’s general consensus score on each scale compares that individual’s performance to the 5000 individuals in the normative database who have taken the test (Mayer et al., 2002).

The MSCEIT measures respondents’ emotional skills with 8 individual tasks (e.g., “Sensations,” “Transitions,” “Blends,” and “Emotional Management”), which combine into 4 underlying branches (each measured by 2 tasks). The 4 MSCEIT branch scores provide information on a subject’s specific emotional abilities, based on the 4 branches of abilities that compose the Mayer and Salovey (1997) EI model: (1) emotion-perception, (2) emotion-integration, (3) emotion-understanding, and (4) emotion-management. For this study, the total EQ score was used to test hypotheses; in a second set of analyses, branch scores were analyzed and reported.

The MSCEIT’s full-scale reliability is 0.93; branch-score reliabilities range from 0.79 to 0.91; test-retest reliability is *r* = 0.86 (Mayer et al., 2001). Several studies show that a single, global factor can describe MSCEIT test-data, and that more specific factors corresponding to MSCEIT branches can be extracted from the general factor (Mayer et al., 2008).

Subsequent to January 2006, the MSCEIT was administered to therapists at the outset of treatment; therapists initiating therapy protocols prior to this date (*N* = 10) completed the MSCEIT post-treatment. As with cognitive IQ, MSCEIT EQ and branch scores are considered stable in adults and therefore should not have significantly changed for those therapists who completed the measure posttreatment. In this study, an independent-samples *t* test found no significant differences in mean EQ scores between ther-

apists assessed with the MSCEIT before treatment ($M = 103.62$, $SD = 12.6$) versus after treatment ($M = 106.09$, $SD = 10.2$).

Data Reduction and Statistical Analyses

Data Reduction

No group differences were found between different treatment protocols (CBT vs. BRT) for therapist EI (CBT, $M = 104$; BRT, $M = 105$), patient outcome, working alliance, or patient drop-out rates. Because there were no statistically significant differences between the 2 treatment conditions on any of the measures in this study, we chose to combine the data from the 2 treatment conditions to maximize statistical power.

Hypotheses

Hypotheses were chosen on the basis of predictions described earlier. Hypothesis 1: Higher EIQ in therapists will predict positive change in patient functioning (SCL, TCQ, IIP, and GAS). Hypothesis 2: Higher therapist EIQ will predict a lower likelihood of patient withdrawal from treatment prior to completion of the 30-session protocol. Hypothesis 3: Higher therapist EIQ will predict stronger early working alliance (WAI).

Missing Outcome Data

Outcome data were missing at several assessment points due to patient attrition (30%) and patient noncompliance with assessment protocols (9%–26%). Attrition rates were consistent with the literature (Wierzbicki and Pekaric, 1993) as well as other studies at BPRP (Bruck et al., 2006). Table 3 shows the number and percentages of missing data for patients and therapists on the different outcome scales, including amount of missing data due to dropout versus noncompliance. While therapist assessment noncompliance rates were negligible (0%–10%), patient assessment noncompliance rates ranged from moderate (13%) to substantial (32%). Patient-rated TCQ in particular had more missing data due to assessment noncompliance than other measures, including measures given at the same assessment points (Table 3).

Missing Alliance Data

Missing data for the first 6 sessions for WAI prior to calculating mean scores were moderate (16%). After calculating mean

scores based on any data present for the first 6 sessions, 1 case (4%) was missing data (due to patient assessment noncompliance).

Statistical Analyses

Before testing hypotheses, we conducted preliminary analyses to assess (a) the outcome results for this sample, (b) the association of working alliance and outcome in this sample, (c) the distribution of therapist EIQ scores in the sample, and (d) the impact on outcome of patient-effects and therapist-effects (other than therapist EIQ). With only 23 therapists each observed with just a single patient, it was not feasible to assess moderators of EI effects on outcome or working alliance, as this would essentially entail dividing a sample that was quite small. Instead, we performed a series of comparative analyses (i.e., bivariate correlations, t tests, and analysis of variances) between change in outcome (from intake to termination) and all patient and therapist demographic data.

For hypothesis 1, for which data involved roughly continuous measures of functioning (e.g., measures given at Intake, Midphase, and Termination), the small sample size at intake ($N = 23$) coupled with the accumulation of missing data in the successive assessment points made the usual repeated-measures analysis of variance inadvisable. Instead, this hypothesis was tested with multilevel analyses (Singer and Willett, 2003), which provide greater tolerance of missing data when applied to longitudinal data, permitting subjects with incomplete data to participate in the analyses.

In our analysis of Hypothesis 1, dependent variables included the various outcome measures (mentioned earlier in the text). Hypothesized level-1 and level-2 statistical models were fitted simultaneously to the data using the mixed modeling procedure in the *nlme* package (Pinheiro et al., 2008; Pinheiro and Bates, 2000) of the R statistical computing software (R Development Core Team, 2008). We examined interindividual differences in slope (i.e., rate of change in outcome; level-1) as a function of therapist EIQ (and in an extended analysis, all 4 EI branch scores) by specifying an interaction between time and therapist EI (level-2). These analyses yielded estimates of the fixed effect of therapist EIQ on the slope of each outcome variable over time. In each of these mixed models, therapists and patients were nested within a particular dyad, and the intercept of the outcome variable was allowed to vary across dyads. Time was coded so that $-2 =$ "Intake," $-1 =$ "Midphase," $0 =$ "Termination," and $1 =$ "Follow-up," which resulted in the intercept coefficient corresponding to patient outcome at the termination time point. When both patients and therapists rated an outcome, separate estimates of therapist EI effects on patient and therapist ratings of change (i.e., outcome variable slope) were obtained by including a 3-way interaction between therapist EI, time, and rater, as well as all 2-way interaction and main effects for the variables involved in the 3-way interaction (e.g., the association between EIQ and patient rating of change).

For Hypothesis 2, drop-out rates were analyzed by logistic regression. For Hypothesis 3, working alliance and therapist EI were compared by Pearson bivariate correlation. Working alliance was computed as the mean of the first 6 sessions.

Given the small sample size and the fact that this is an exploratory pilot study, marginally significant associations ($p < 0.10$) are reported and discussed.

RESULTS

Preliminary Analyses

Patient Outcome

Results for each outcome measure are presented in Table 4, including paired samples t tests of intake-termination differences (analyses used the method of last observation carried forward). As a group, patients showed slight improvements on the GAS, and

TABLE 3. Missing Outcome Data

Outcome Measures	Intake $N = 23$ N^b	Midphase $N = 19^a$		Termination $N = 15^a$		Follow-Up N^b
		N^b	NC ^c (%)	N^b	NC ^c (%)	
Therapist rated						
GAS	23	19	0 (0%)	15	0 (0%)	
TCQ	23	17	2 (10%)	15	0 (0%)	
IIP	23	19	0 (0%)	15	0 (0%)	
Patient rated						
SCL	22	16	3 (16%)	13	2 (13%)	4
TCQ	23	13	6 (32%)	11	4 (27%)	4
IIP	23	15	4 (22%)	13	2 (13%)	4

^aTotal N minus dropouts: 4 dropouts by midphase (15%); 8 dropouts by termination (30%).

^bTotal completed scores at each time point, minus both dropouts and noncompliance.

^cNumber of missing scores due to assessment non-compliance only (i.e. excluding dropout); NC indicates noncompliance.

GAS indicates Global Assessment Scale; TCQ, Target Complaints Questionnaire; IIP, Inventory of Interpersonal Problems; SCL, Symptom Checklist-90 Revised.

TABLE 4. Outcome Effect

Patient Outcome	Intake M (SD)	Termination M (SD)	t	df	p
Therapist rated					
GAS	66.68 (9.06)	69.45 (9.36)	-2.00	21	0.059
TCQ	9.57 (1.83)	7.32 (2.78)	3.72	21	0.001
IIP	1.59 (0.46)	1.29 (0.55)	2.92	21	0.008
Patient rated					
SCL	0.80 (0.41)	0.59 (0.49)	2.13	21	0.054
TCQ	10.07 (2.07)	8.24 (2.59)	3.16	22	0.005
IIP	1.39 (0.62)	1.26 (0.63)	1.76	22	0.093

M indicates mean, SD, standard deviation; GAS, Global Assessment Scale; TCQ, Target Complaints Questionnaire; IIP, Inventory of Interpersonal Problems; SCL, Symptom Checklist-90 Revised.

moderate improvements on all other measures, with trend significance on GAS, SCL, and patient-rated IIP, and statistically significant improvements on therapist-rated TCQ and IIP, and patient-rated TCQ. Movement in a negative direction is indicative of improvement, except for the GAS where movement in a positive direction indicates improvement.

Alliance and Outcome

To evaluate the association between working alliance and rate of change in outcome, we used the mixed modeling procedure described above for hypothesis 1, except with WAI as the predictor variable. Only 1 significant association was found, between WAI and patient-rated SCL ($\beta = -0.12, t(30) = -2.47, p = 0.02$). WAI had no effect on other patient-rated outcome measures or any of the therapist-rated outcome measures.

Therapist Heterogeneity

The distribution of EIQ scores in the therapist sample ($M = 104.80, SD = 11.30$; range, 83.19–124.55) was consistent with the MSCEIT normative sample ($M = 100, SD = 15$). Independent-samples *t* tests showed no differences in mean EIQ scores between female ($M = 104.47, SD = 11.1$) versus male therapists ($M = 105.72, SD = 12.9$), or single ($M = 105.46, SD = 8.9$) versus married therapists ($M = 106.28, SD = 14.3$). A slight difference was found ($p = 0.067$) in mean EIQ scores between therapists with no clinical experience ($M = 107.82, SD = 9.8$) versus some (1–5 years) clinical experience ($M = 97.6, SD = 12.6$). No relation was found between therapist EIQ and therapist age.

Therapist Effects

There were no differences in any outcome measure for male and female therapists, single versus married therapists, therapists of different age, race, or clinical experience.

Patient Heterogeneity

Therapists with higher EIQ had younger patients than therapists with lower EIQ ($r = -0.468, p = 0.024$). Otherwise, therapist EIQ was equally distributed among therapists assigned to male or female patients, single, married or divorced patients, employed versus unemployed patients, Hispanic versus white patients, and patients of differing diagnostic severity (measured by either presence of Axis II or number of comorbid diagnoses).

Patient Effects

There were no differences in any outcome measure for patients of different gender, age, marital status, employment status, or

TABLE 5. Effects of Therapist EIQ on Rate of Change (Slope) in Patient Outcome

Patient Outcome	EIQ		
	β	p	ES r
Therapist rated			
GAS	-0.013	0.86	0.03
TCQ	-0.043	0.09	0.19
IIP	-0.011	0.07	0.20
Patient rated			
SCL	0.004	0.39	0.16
TCQ	0.001	0.96	0.01
IIP	0.002	0.68	0.04

The β coefficient represents the unstandardized regression coefficient: a negative β coefficient indicates that therapist EIQ was associated with greater improvement in patient outcome (excepting the GAS). ES *r* indicates effect size $r = (t^2 / (t^2 + df))^5$ (Rosenthal, 1991), which may be interpreted as follows: 0.10, small effect; 0.24, medium effect; and 0.37, large effect (Cohen, 1988). Differences in power among analyses prevent one-to-one correspondence between effect size and statistical significance (i.e. *df* for GAS and SCL, with only one rater each, are 32 and 30, respectively; whereas *df* for TCQ and IIP, with 2 raters each, are 76 and 82, respectively).

EIQ indicates emotional intelligence quotient; GAS, Global Assessment Scale; TCQ, Target Complaints Questionnaire; IIP, Inventory of Interpersonal Problems; SCL, Symptom Checklist-90 Revised.

race. Change in patient-rated outcome measures, but not therapist-rated measures, were associated with diagnostic severity of patients measured by presence of Axis II (SCL: $t = 2.202, p = 0.04$) and number of comorbidities (TCQ: $r = 0.462, p = 0.083$), indicating that Axis II patients and highly comorbid patients reported more improvement than patients with fewer comorbidities or without a PD. Additionally, we found a positive association between the presence of Axis II and WAI ($t = -2.379, p = 0.027$), indicating patients in this sample diagnosed with PD reported better alliances.

Hypothesis 1: Therapist EI and Patient Outcome

The results of the mixed model analyses for Hypothesis 1 (i.e., the association of therapist EIQ with rate of change [slope] in patient outcome), including estimates of the effect size correlation coefficient (*r*) (Rosenthal, 1991), appear in Table 5. For 2 of the 6 models fitted, the coefficient representing the association between therapist EIQ and patient change was marginally significant (therapist TCQ, $p = 0.09$; therapist IIP, $p = 0.07$), indicating that higher therapist EIQ influences treatment outcome positively with regard to therapist ratings of patient interpersonal problems and target complaints. The magnitude of these associations were “medium” in size (TCQ, $r = 0.19$; IIP, $r = 0.20$). There was no association between therapist EIQ and GAS, SCL, or patient-rated IIP and TCQ. The percentage of marginally significant associations in the predicted direction was 33% (2/6), which is greater than would be expected by chance, even at the more stringent 10% level (vs. the customary 5% level).

We conducted a second phase of mixed model analyses using the 4 EI branches as predictors to see if specific EI factors were associated with more positive patient changes. The results of these analyses are presented in Table 6. For 5 of the 24 models fitted, the coefficient representing the association between an EI factor and patient change was either significant or marginally significant, including trends for EI branch 2 and therapist rated outcome (TCQ, $p = 0.09$; IIP, $p = 0.07$), and significant associations for EI Branch 3 with 2 therapist-rated outcomes (TCQ, $p = 0.03$; IIP, $p = 0.05$), indicating that higher therapist abilities to integrate emotion into thought and, in particular, to understand emotions (e.g., discern interpersonal meanings of emotions), predicted positive change in

TABLE 6. Effects of Therapist EI Branch Scores on Rate of Change (Slope) in Patient Outcome

Patient Outcome	EI Branch 1 Perceiving Emotion			EI Branch 2 Integrating Emotion			EI Branch 3 Understanding Emotion			EI Branch 4 Managing Emotion		
	β	<i>p</i>	ES <i>r</i>	β	<i>p</i>	ES <i>r</i>	β	<i>p</i>	ES <i>r</i>	β	<i>p</i>	ES <i>r</i>
Therapist rated												
GAS	-0.068	0.21	0.22	0.069	0.31	0.18	0.150	0.20	0.22	-0.104	0.44	0.14
TCQ	-0.016	0.43	0.09	-0.042	0.09	0.19	-0.090	0.03	0.24	-0.045	0.37	0.10
IIP	-0.007	0.13	0.17	-0.010	0.07	0.20	-0.020	0.05	0.21	-0.001	0.96	0.01
Patient rated												
SCL	0.005	0.15	0.26	0.005	0.23	0.22	0.006	0.38	0.16	-0.015	0.09	0.30
TCQ	0.010	0.63	0.05	-0.016	0.44	0.09	0.031	0.40	0.10	-0.006	0.89	0.02
IIP	0.000	0.93	0.01	0.003	0.53	0.07	-0.001	0.90	0.01	0.001	0.91	0.01

The β coefficient represents the unstandardized regression coefficient; a negative β coefficient indicates that therapist EI was associated with greater improvement in patient outcome (excepting the GAS). ES *r* indicates effect size $r = (\beta^2 / (\beta^2 + df))^{0.5}$ (Rosenthal, 1991), which may be interpreted as follows: 0.10, small effect, 0.24, medium effect, and 0.37, large effect (Cohen, 1988). Differences in power among analyses prevent one-to-one correspondence between effect size and statistical significance (i.e., *df* for GAS and SCL, with only one rater each, are 32 and 30, respectively, whereas *df* for TCQ and IIP, with 2 raters each, are 76 and 82, respectively).

EIQ indicates emotional intelligence; GAS, Global Assessment Scale; TCQ, Target Complaints Questionnaire; IIP, Inventory of Interpersonal Problems; SCL, Symptom Checklist-90 Revised.

therapist rating of patient interpersonal problems and target complaints. An association was also found for EI Branch 4 and patient-rated outcome (SCL, $p = 0.09$), indicating that higher therapist abilities to manage emotions (e.g., affect regulation skills) predicted improvements in patient symptoms. Effect sizes for these associations ranged from 0.19 to 0.30 ($M = 0.23$), indicating medium effects. The percentage of associations in the predicted direction was 21% (5/24), which is again greater than chance (10%).

Hypothesis 2: Therapist EI and Patient Drop-Out (and Compliance)

The results of the logistic regression indicate that drop-out rates were not influenced by therapist EI (Hypothesis 2), but were influenced by therapist EI Branch 4 ($p < 0.03$), showing that patients were less likely to drop out when their therapist had a higher EI Emotion-Management score. A 1 *SD* decrease in Branch 4 multiplied the odds of dropout by 4.72 (95% confidence interval, 1.38–33.42). The model predicted that about 44% of patients with a therapist having a Branch 4 score of 95 would drop out before completing while about 7% of patients with a therapist having a Branch 4 score of 105 would drop out before completing. One patient dropped due to external circumstances, which was implicitly treated as not dropping.

To further evaluate the association between missing data and therapist EI, we extended the drop-out analysis to include any missing data at midphase and termination (i.e., due to drop-out and assessment noncompliance; mentioned in Table 3). We found that the likelihood of missing patient-rated data across measures was associated with therapist EI ($r = -0.391$, $p = 0.065$), EI Branch 2 ($r = -0.396$, $p = 0.062$), and EI Branch 4 ($r = -0.628$, $p < 0.001$), indicating that dyads with lower therapist EI had more missing data on patient-rated measures. We also compared therapist EI with the rate of patient assessment compliance (i.e., excluding noncompliance due to dropout), and found that lower therapist EI, EI Branch 2, and EI Branch 4 all predicted lower rates of patient assessment compliance ($r = -0.446$, $p = 0.033$; $r = -0.428$, $p = 0.042$; $r = -0.591$, $p = 0.003$, respectively). This indicates that, in addition to greater likelihood of drop-out, therapists with lower EI were more likely to have patients not compliant with assessment. Finally, we compared WAI and the rate of patient assessment compliance, and found no association.

Hypothesis 3: Therapist EI and Working Alliance

The results of the Pearson bivariate correlations indicate that early working alliance is not associated with therapist EI (Hypothesis 3), or any of the EI Branches.

DISCUSSION

The present study, the first to apply EI to psychotherapists that we are aware of, found modest preliminary evidence for the hypothesis that therapist emotional skills positively influence treatment efficacy. In particular, higher overall therapist EI predicted greater improvements in therapist-rated patient interpersonal problems and target complaints. Additionally, higher therapist emotion-management abilities (EI Branch 4) were significantly associated with greater improvements in patient-rated symptomatology, as well as lower patient drop-out rates, although overall therapist EI was not associated with either patient-rated outcome or patient drop-out. Though not hypothesized, higher therapist EI was significantly associated with increased patient assessment compliance, suggesting that therapist EI positively affected patient compliance in this research protocol. Therapist EI did not, however, relate to working alliance in the beginning phase of treatment.

The impact of therapist EI on patient outcomes showed “medium” effect sizes. However, since there is no common approach to effect sizes for multilevel models, the reliability of these procedures remains unsettled (Snijders and Bosker, 1999). Additionally, reliance on Cohen’s (1988) metric (i.e., 0.10, small effect, 0.24, medium effect, and 0.37, large effect) is necessary because a substantive literature does not yet exist to provide a more relevant context for interpreting effect sizes of therapist relational variables on patient outcomes, and must therefore be interpreted cautiously. Most variables in psychotherapy research do not show “large” effects; however, therapeutic alliance, for example, which is the most robust predictor of outcome research has found so far, consistently shows effect sizes ranging from 0.22 to 0.26 (Castonguay et al., 2006), similar to effect sizes found among the significant associations in this study for EI ($r = 0.19$ – 0.30). It is premature, however, to suggest the associations in this study have practical significance, considering we did not control for potential confounds given small sample size.

Rater Effect

Therapist EI affected therapist-rated outcome more consistently than patient-rated outcome (overall EI was unrelated to

patient-rated outcome, although 1 patient-rated measure was associated with EI branch scores). One explanation is that shared method variance inflated coefficients on therapist-rated measures, since the independent variable (EI) was also rated by therapists. However, since therapist EI was measured by standardized performance tasks (i.e., tasks with right and wrong answers), and not by self-report, it seems unlikely that the findings were entirely attributable to shared method effect. For example, rating how hard it has been for a patient to feel close to other people (item from therapist-rated IIP) may ultimately be subject to the therapist's bias, despite the "objective" control of training protocols, since therapist ratings determine the final score; while rating which 2 emotions together are closest to contempt, (a) sadness and fear or (b) anger and disgust (examples of EI "blends" task) are ultimately rated and scored by standardized measures of "correctness" (e.g., general consensus). In the first instance, therapists are evaluating, whereas in the second, their EI was being evaluated. While therapist scores on the MSCEIT may be indicative of assessment skills, as well as other therapeutic skills (as our findings may demonstrate), which influence their ratings of patient functioning, the MSCEIT scores are not determined by the same method as in the outcome measures.

One cannot rule out the possibility that patient ratings of outcome were more valid than therapist ratings; however, the high frequency of missing data from the patient perspective provides a plausible alternate perspective. For example, patient-rated TCQ was missing 43% of cases at midphase, and 52% at termination, due to patient assessment noncompliance and drop-out, thus reducing precision and power for testing. In contrast, compliance on therapist-rated outcome measures was close to perfect. Furthermore, higher rates of missing data on patient-rated measures (but not therapist-rated measures) was significantly correlated with lower therapist EIQ, indicating that dyads containing therapists with low EIQ were underrepresented in later assessment moments on patient-rated measures, thus reducing variance. For example, half of the patient-rated TCQ was missing at termination due to noncompliance and drop-out, and the missing half eliminated from analysis 7 of the 8 therapists with EIQ below 100. The SCL, however, which was the one measure for which an interaction with therapist EI was found, had the least missing data of the patient-rated measures (half of TCQ), implying that more reliable patient-rated measures do interact with therapist EI. Therefore, some evidence exists for the impact of therapist EI on patient-rated outcome, although this evidence remains inconclusive. Future research should attempt to replicate these findings with larger samples, different treatment modalities and therapists of varying levels of experience.

Working Alliance

No relationship was found between therapist EIQ and working alliance. It may be that therapist EI does not influence the therapeutic relationship or promote collaboration between therapist and patient, or does not do so in ways captured by the WAI. However, methodological limitations, particularly anomalies with alliance ratings in this study, may explain this finding. Although all of the outcome measures showed modest improvements, early working alliance only predicted 1 outcome measure (the SCL) in this sample. This is inconsistent with the literature, which clearly shows that working alliance has a modest yet consistent effect on outcome (Martin et al., 2000; Safran and Muran, 2006). It may be that a greater sample size is needed to generate sufficient power to detect this modest effect, particularly for a diagnostically heterogeneous patient sample. That higher patient ratings of the alliance were associated with greater diagnostic severity in this sample supports the likelihood of Type II error; i.e., that positive ratings were exaggerated, idealized, or otherwise unreliably reported by patients.

Another consideration is that therapist EI may influence outcome independently of alliance. In the introduction, we postulated several avenues by which therapist EI might influence treatment efficacy, only one of which involves working alliance. Working alliance by no means encompasses the sum total of relational factors in therapy—in fact, relational factors such as spontaneity, flexibility, and mutual regulation are gaining increasing importance in the theoretical literature, and these differ from alliance (Safran and Muran, 2006). The literature also shows that working alliance has a modest, but not overwhelming, effect on outcome (Castonguay et al., 2006), so EI may impact both outcome and the relationship without impacting working alliance. Safran and Muran (2006) describe a need for psychotherapy research to investigate relational factors other than working alliance. However, these findings first need to be replicated to determine whether EI in fact operates independently of alliance; it may be that in a sample in which alliance does predict outcome, as is more generally the case, the association of EI and alliance will be different than in this sample.

Yet another consideration is the interaction of clinical inexperience and therapist EI. Inexperienced therapists may rely on nontechnical relational skills associated with EI (e.g., good social skills, charisma) which, despite poor technique, may enhance outcome but not technical aspects of the alliance, such as tasks and goals, which are emphasized in the WAI. Alternatively, it may be that what registers as EI grows as a function of clinical experience. Although no differences on outcome or alliance were found between therapists with some versus no clinical experience, there were too few therapists with any experience ($N = 5$) for a conclusive analysis. Future studies should determine whether clinical experience increases the effect of therapist EI on efficacy, and expands this effect to working alliance.

EI Branch Scores

We conducted a second set of analyses examining the effect of EI branch scores on outcome, compliance, and working alliance. Several interesting patterns emerged. Emotion-perception (Branch 1) was not associated with any measure, while emotion-integration (Branch 2) was moderately associated with outcome and patient compliance, paralleling the empathy literature in which emotion perception leads to an "empathic" response with therapeutic value only once it has been integrated with a sense of what it feels like to have those emotions (Rogers, 1980). The finding that emotion-understanding (Branch 3) had the strongest association with outcome is consistent with some theorists who have argued that accurate appraisal is the hallmark of emotionally intelligent responding (MacCann et al., 2004; Parrott, 2002; Mayer et al., 2008).

Finally, emotion-management (Branch 4) seemed the most consistently predictive of all the EI branches, having had an effect on patient-rated outcome, as well as on drop-out rates and patient assessment compliance. This finding underscores those theories that emphasize the centrality of affect-regulation in the therapeutic process (Magai and McFadden, 1995; Schore, 2003; Wallin, 2007), and parallels studies of EI and social interaction that find EI Branch 4 (but not the other EI branches) predictive of social success (Lopes et al., 2004; Rivers et al., 2007). However, the current study, designed as a pilot study to evaluate the impact of overall EI on efficacy, is not sufficient to examine conclusively the specific effects of EI branch scores. Findings are suggestive, however, that differential effects may exist among the EI branch scores, and deserve further investigation in future research studies with greater power for testing.

Limitations and Strengths

This study has a number of limitations. The sample size was small, restricting statistical power and limiting the generalizability of our findings. In addition, some data were missing from some therapist-patient dyads on some variables. For these reasons, the results of this study should be considered preliminary. Additionally, therapists each had only 1 patient, thus restricting our ability to control for patient effects, including diagnostic heterogeneity among patients. Therapists also had limited clinical experience and training, restricting our ability to generalize our findings to more experienced therapists or to evaluate the interaction between EI and level of therapist experience. The small sample further restricted our ability to control for therapist and patient characteristics which may moderate the effects of EI on patient outcome. Although no significant differences were found in EI for therapists regardless of when they completed the MSCEIT, future research should control for the possible impact of time of test administration by having all therapists complete the MSCEIT prior to beginning treatment.

Our study also had a number of strengths, including the use of a measure of performance for the predictor variable, allowing us to evaluate skills and thereby reducing the demand characteristics of the measure. Additionally, despite uncontrolled, natural variation in patient characteristics, therapist EIQ was equally distributed among therapists assigned to patients of different characteristics, and EIQ was also equally distributed among therapist characteristics (although some exceptions were found, namely patient age and therapist experience, neither of these conditions influenced outcome).

Although statistical power was limited, identifying significant predictors of change/slope (as opposed to predictors of levels/intercepts) has proven to be extremely difficult in the behavioral sciences (Muthén and Muthén, 2001). Hence, it is noteworthy that therapist EI not only predicted subsequent change in symptoms but did so in a small, heterogeneous sample with limited statistical power. It is also noteworthy that findings in the predicted direction occurred on those measures which had the least missing data (i.e., therapist-rated outcome and the SCL), providing sufficient evidence that further research on this topic is warranted.

CONCLUSIONS

This study provides preliminary support for the relevance of therapist EI to psychotherapy, and for the use of the MSCEIT as a meaningful and potentially valid measure of therapist EI. If replicated with larger samples, the results of this study may have potentially important clinical implications for the selection and training of therapists and the organization and delivery of psychotherapy services. Training methods that improve therapist EIQ scores (or perhaps specific EI abilities, such as emotion-understanding and emotion-management) may facilitate the transfer of efficacious emotional skills into the domain of therapy. Therapist EI may constitute an important predictor of whether therapists develop therapeutic expertise over time, both during training and thereafter. However, more about EI needs to be understood. Are such skills trainable? Can different training models, theoretical orientations, treatment protocols or techniques, promote (or obstruct) the development of EI in therapists and have an impact upon their therapeutic skills? What is the relationship between EI and specific therapists capacities or skills (e.g., empathy, the ability to deal constructively with counter transference, the ability to negotiate ruptures in the therapeutic alliance)? Do specific branches of EI consistently predict changes in specific dimensions? And finally, are other models and measures of EI as relevant or more relevant to the context of psychotherapy than the MSCEIT?

REFERENCES

- Ackerman SJ, Hilsenroth MJ (2003) A review of therapist characteristics and techniques positively impacting the therapeutic alliance. *Clin Psychol Rev*. 23:1–33.
- Alexander F, French TM (1946) *Psychoanalytic Therapy*. New York (NY): Ronald Press.
- American Psychiatric Association (1994) *Diagnostic and Statistical Manual of Mental Disorders* (4th ed). Washington (DC): American Psychiatric Association.
- Appelbaum SA (1973) Psychological-mindedness: Word, concept, and essence. *Int J Psycho-Anal*, 54, 35–45.
- Bastian VA, Burns NR, Nettelbeck T (2005) Emotional intelligence predicts life skills, but not as well as personality and cognitive abilities. *Pers Individ Dif*. 39:1135–1145.
- Battle CC, Imber SD, Hoehn-Saric R, Stone AR, Nash ER, Frank JD (1966) Target complaints as criteria of improvement. *Am J Psychother*. 20:184–192.
- Barrett-Lennard G (1962) Dimensions of therapist response as causal factors in therapeutic change. *Psychol Monogr*. 76:46.
- Beck AT, Freeman AA (1990) *Cognitive Therapy of Personality Disorders*. New York (NY): Guilford Press.
- Beutler LE (1997) The psychotherapist as a neglected variable in psychotherapy: An illustration by reference to the role of therapist experience and training. *Clin Psychol Sci Pract*. 4:44–52.
- Blatt SJ, Sanislow CA, Zuroff D, Pilkonis P (1996) Characteristics of the effective therapist: Further analysis of the data from the NIMH TDCRP. *J Consult Clin Psychol*. 64:1276–1284.
- Brackett M, Mayer JD, Warner RM (2004) Emotional intelligence and its relation to everyday behavior. *Pers Individ Dif*. 36:1387–1402.
- Brackett MA, Rivers SE, Shiffman S, Lerner N, Salovey P (2006) Relating emotional abilities to social functioning: A comparison of self-report and performance measures of emotional intelligence. *J Pers Soc Psychol*. 91:780–795.
- Bradley R, Greene J, Russ E, Dutra L, Westen D (2005) A multidimensional meta-analysis of psychotherapy for PTSD. *Am J Psychiatry*. 162:214–227.
- Bruck E, Winston A, Aderholt S, Muran JC (2006) Predictive validity of patient and therapist attachment and introject styles. *Am J Psychother*. 60:393–406.
- Castonguay LG, Constantino MJ, Holtforth MG (2006) The working alliance: Where are we and where should we go? *Psychother Theory Res Pract Train*. 43:271–279.
- Cohen J (1988) *Statistical Power Analysis for the Behavioral Sciences*. Hillsdale (NJ): Lawrence Erlbaum.
- Constantino MJ, Castonguay LG, Schut AJ (2002) The working alliance: A flagship for the “scientist-practitioner” model in psychotherapy. In Tryon GS (Ed), *Counseling Based on Process Research: Applying What We Know* (pp 81–131). Boston (MA): Allyn & Bacon.
- Côté S, Miners CT (2006) Emotional intelligence, cognitive intelligence and job performance. *Adm Sci Q*. 51:1–28.
- Crits-Christoph P, Mintz J (1991) Implications of therapist effects for the design and analysis of comparative studies of psychotherapies. *J Consult Clinical Psychol*. 59:20–26.
- Dalenberg CJ (2004) Maintaining the safe and effective therapeutic relationship in the context of distrust and anger: Counter transference and complex trauma. *Psychother Theory Res Pract Train*. 41:438–447.
- Derogatis LR (1977) *SCL-90-R: Administration, Scoring and Procedures Manual I*. Baltimore (MD): Clinical Psychometric Research.
- Derogatis LR (1983) *SCL-90-R: Administration, Scoring and Procedures Manual II*. Towson (MD): Clinical Psychiatric Research.
- Elfenbein HA, Der Foo MD, White J, Tan HH (2007) Reading your counterpart: The benefit of emotion recognition accuracy for effectiveness in negotiation. *J Nonverbal Behav*. 31:205–223.
- Elkin I, Falconnier L, Martinovich Z, Mahoney C (2006) Therapist effects in the National Institute of Mental Health Treatment of Depression Collaborative Research Program. *Psychother Res*. 16:144–160.
- Elliott R, Watson JC, Goldman RN, Greenberg LS (2004) Empathy and exploration: the core of process-experiential therapy. *Learning emotion-focused therapy: The process-experiential approach to change* (pp. 111–140). Washington, DC: American Psychological Association.
- Endicott J, Spitzer RL, Fleiss JL, Cohen J (1976) The Global Assessment Scale: A procedure for measuring overall severity of psychiatric disturbance. *Arch Gen Psychiatry*. 33:766–771.
- Engelberg E, Sjöberg L (2000) Internet use, social skills and adjustment. *Cyberpsychol Behav*. 7:41–47.

- Farber BA & Golden V (1997) Psychological mindedness in psychotherapists. In M. McCallum & W.E. Piper (Eds), *Psychological Mindedness. A Contemporary Understanding*. Mahwah, NJ: Erlbaum.
- First MB, Gibbon M, Spitzer RL, Williams JB, Benjamin LS (1997) Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I). Washington (DC): American Psychiatric Press.
- First MB, Spitzer RL, Gibbon M, Williams JB (1995) Structured Clinical Interview for DSM-IV Axis I Disorders—Patient Edition (SCID-I/P) (Version 2.0). New York (NY): Biometrics Research Department, New York State Psychiatric Institute.
- Fonagy P, Steele M, Steele H, Target M (1997) Reflective Function Manual for Application to Adult Attachment Interviews. London (United Kingdom): University College London.
- Fonagy P, Target M (1999) An interpersonal view of the infant. In A. Hurry (Ed), *Psychoanalysis and Developmental Therapy*. Madison, CT: International Universities Press.
- Gohm CL, Corser GC, Dalsky DJ (2005) Emotional intelligence under stress: Useful, unnecessary, or irrelevant? *Pers Individ Dif*. 39:1017–1028.
- Goldfried MR (1980) Toward the delineation of therapeutic change principles. *Am Psychol*. 35:991–999.
- Goldfried MR, Raue PJ, Castonguay LG (1998) The therapeutic focus in significant sessions of master therapists: A comparison of cognitive-behavioral and psychodynamic-interpersonal interventions. *J Consult Clin Psychol*. 66:803–810.
- Gratz KL, Roemer L (2004) Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure and initial validation of the difficulties in emotion regulation scale. *J Psychopathol Behav Assess*. 26:41–54.
- Greenberg LS, Elliot R, Watson JC, Bohart AC (2001) Empathy. *Psychotherapy*. 38:380–384.
- Henry WP, Strupp HH (1994) The therapeutic alliance as interpersonal process. In Horvath AO, Greenberg LS (Eds), *The Working Alliance: Theory, Research, and Practice* (pp 51–84). New York (NY): John Wiley.
- Hill SE, Kellems IS, Kolchakian MR, Wonnell TL, Davis TL, Nakayama EY (2003) The therapist experience of being the target of hostile versus suspected-unasserted client anger: Factors associated with resolution. *Psychother Res*. 13:475–491.
- Horowitz LM, Alden LE, Wiggins JS, Pincus AL (2000) Inventory of Interpersonal Problems. New York (NY): The Psychological Corporation.
- Horvath AO, Greenberg LS (1989) Development and validation of the Working Alliance Inventory. *J Couns Psychol*. 36:223–233.
- Huppert J, Bufka LF, Barlow DH, Gorman JM, Shear MK, Woods SW (2001) Therapists, therapist variables and cognitive-behavioral therapy outcome in a multicenter trial for panic disorder. *J Consult Clin Psychol*. 69:747–755.
- Kaplowitz MJ, Markowitz JC (2010) Axis II and Anxiety Disorders. In Simpson B, Neria Y, Lewis-Fernandez R, Schneier F Anxiety Disorders: Theory, Research and Clinical Perspectives. New York: Cambridge University Press.
- Karlssoon R, Kermott A (2006) Reflective-functioning during the process in brief psychotherapies. *Psychother Theory Res Pract Train*. 43:65–84.
- Lambert MJ, Barley DE (2001) Research summary on the therapeutic relationship and psychotherapy outcome. *Psychother Theory Res Pract Train*. 38:357–361.
- Lopes PN, Brackett MA, Nezlek JB, Schütz A, Sellin I, Salovey P (2004) Emotional intelligence and social interaction. *Pers Soc Psychol Bull*. 30:1018–1034.
- Lopes PN, Salovey P, Côté S, Beers M (2005) Emotion regulation abilities and the quality of social interaction. *Emotion*. 5:113–118.
- Lopes PN, Salovey P, Straus R (2003) Emotional intelligence, personality and the perceived quality of social relationships. *Pers Individ Dif*. 35:641–658.
- MacCann C, Matthews G, Zeidner M, Roberts RD (2004) The assessment of emotional intelligence: On frameworks, fissures and the future. In Geher G Measuring Emotional Intelligence: Common Ground and Controversy (pp 21–52). Haupauge (NY): Nova Science.
- Main M (1990) Cross-cultural studies of attachment organization: Recent studies, changing methodologies, and the concept of conditional strategies. *Human Development*, 33, 48–61.
- Magai C, McFadden SH (1995) The Role of Emotions in Social and Personality Development—History, Theory and Research. New York (NY): Plenum Press.
- Martin DJ, Garske JP, Davis MK (2000) Relation of the therapeutic alliance with outcome and other variables: A meta-analytic review. *J Consult Clin Psychol*. 68:438–450.
- Matthews G, Emo AK, Funke G, Zeidner M, Roberts RD (2006) Emotional intelligence, personality and task-induced stress. *J Exp Psychol Appl*. 12:96–107.
- Mayer JD (2000) Emotion, intelligence, emotional intelligence. In Forgas JP (Ed), *The Handbook of Affect and Social Cognition* (pp 410–431). Mahwah (NJ): Erlbaum.
- Mayer JD, Roberts RD, Barsade SG (2008) Human abilities: Emotional intelligence. *Annu Rev Psychol*. 59:507–536.
- Mayer JD, Salovey P (1997) What is emotional intelligence? In P Salovey, DJ Sluyter (Eds), *Emotional Development and Emotional Intelligence: Educational Implications* (pp 3–31). New York (NY): Basic Books.
- Mayer JD, Salovey P, Caruso D (2002) The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT). Toronto (ON): Multi-Health Systems, Inc.
- Mayer JD, Salovey P, Caruso D (2004) Emotional intelligence: Theory, findings and implications. *Psychol Inq*. 60:197–215.
- Mayer JD, Salovey P, Caruso D, Sitarenios G (2001) Emotional intelligence as a standard intelligence. *Emotion*. 1:232–242.
- Muran JC, Safran JD, Samstag LW, Winston A (2002) A comparative treatment study of personality disorders. Paper presented at the Annual Meeting of the Society for Psychotherapy Research, June 23–27, Santa Barbara (CA).
- Muran JC, Safran JD, Samstag LW, Winston A (2004) Patient and Therapist Post-Session Questionnaires (Version 2004). New York (NY): Beth Israel Medical Center.
- Muran JC, Safran JD, Samstag LW, Winston A (2005) Evaluating an alliance-focused treatment for personality disorders. *Psychother Theory Res Pract Train*. 42:532–545.
- Muthén LK, Muthén BO (2001) Growth modeling with latent variables using Mplus [workshop]. Santa Monica (CA): Mplus Short Courses.
- Orlinsky DE, Howard KL (1986) The psychological interior of psychotherapy: Explorations with the therapy session reports. In Greenberg LS, Pinsof WM (Eds), *The Psychotherapeutic Process: A Research Handbook (Guilford clinical psychology and psychotherapy series)* (pp 477–501). New York (NY): Guilford Press.
- Parrott WG (2002) The functional utility of negative emotions. In L Feldman Barrett, Salovey P (Eds), *The Wisdom in Feeling: Psychological Processes in Emotional Intelligence* (pp 341–359). New York (NY): Guilford.
- Person JB (1989) Cognitive Therapy in Practice: A Case Formulation Approach. New York (NY): Norton.
- Pinheiro JC, Bates DM (2000) Mixed-Effects Models in S and S-PLUS (Statistics and Computing Series). New York (NY): Springer-Verlag.
- Pinheiro JC, Bates DM, DebRoy S, Sarkar D; the R Core Team (2008) nlme: Linear and Nonlinear Mixed Effects Models. R package version 3.1–90. Available at: <http://cran.fhcrc.org/web/packages/nlme/index.html>. Retrieved January 26, 2009.
- R Development Core Team (2009) *R: A Language and Environment for Statistical Computing* (ISBN 3-900051-07-0). Vienna (Austria): R Foundation for Statistical Computing. Available at: <http://www.r-project.org>. Retrieved January 26, 2009.
- Rivers S, Brackett A, Salovey P, Mayer JD (2007) Measuring emotional intelligence as a set of mental ability. In Matthews G, Zeidner M, Roberts R, (Eds), *The science of emotional intelligence: Knowns and unknowns* (pp. 230–257). New York: Oxford University Press.
- Roberts DR, Zeidner M, Matthews G (2001) Does emotional intelligence meet traditional standards for intelligence? Some new data and conclusions. *Emotion*. 1:196–231.
- Rogers CR (1980) *A Way of Being*. Boston (MA): Houghton Mifflin.
- Rosenthal R (1991) *Meta-Analytic Procedures for Social Research*. Newbury Park (CA): Sage.
- Rubin RS, Munz DC, Bommer WH (2005) Leading from within: The effects of emotion recognition and personality on transformational leadership behavior. *Acad Manage J*. 48:845–858.
- Safran J, Muran C (2000) *Negotiating the Therapeutic Alliance: A Relational Treatment Guide*. New York (NY): The Guilford Press.
- Safran J, Muran C (2006) Has the concept of the therapeutic alliance outlived its usefulness? *Psychother Theory Res Pract Train*. 43:286–291.
- Safran JD, Muran JC, Samstag L, Stevens C (2002) Repairing alliance ruptures. In Norcross JC (Ed), *Psychotherapy Relationships That Work* (pp 235–254). New York (NY): Oxford University Press.
- Safran JD, Muran JC, Samstag L, Winton A (2005) Evaluating alliance-focused intervention for potential treatment failures: A feasibility study and descriptive analysis. *Psychother Theory Res Pract Train*. 42:512–531.
- Safran JD, Reading R (2008) Mindfulness, metacommunication and affect regulation in psychoanalytic treatment. In Hick S, Bien T (Eds), *Mindfulness and the Therapeutic Relationship*. New York (NY): Guilford.
- Salovey P, Hsee CK, Mayer JD (1993) Emotional intelligence and the self-

- regulation of affect. In Wegner DM, Pennebaker JW (Eds), *Handbook of Mental Control* (pp 258–277). Englewood Cliffs (NJ): Prentice Hall.
- Salovey P, Mayer JD (1989/1990) Emotional intelligence. *Imagin Cogn Pers.* 9:185–211.
- Schore AN (2003) *Affect Dysregulation and Disorders of the Self*. New York (NY): WW Norton & Co.
- Singer JD, Willett JB (2003) *Applied Longitudinal Data Analysis: Modeling Change and Event Occurrence*. New York (NY): Oxford University Press.
- Skovholt TM, Jennings L (2004) *Master Therapists: Exploring Expertise in Therapy and Counseling*. Boston (MA): Pearson.
- Snijders TA, Bosker RJ (1999) *Multilevel Analysis: An Introduction to Basic and Advanced Multilevel Modeling*. London (NY): Sage Publishers.
- Tracey TJ, Kokotovic AM (1989) Factor structure of the Working Alliance Inventory. *Psychol Assess.* 1:207–210.
- Trinidad DR, Johnson CA (2002) The association between emotional intelligence and early adolescent tobacco and alcohol use. *Pers Individ Dif.* 32:95–105.
- Turner AE, Muran JC (1992) *Cognitive Behavioral Therapy for Personality Disorders: A Treatment Manual*. San Diego (CA): Social & Behavioral Documents.
- Vocisano C, Klein DN, Arnow B (2004) Therapist variables that predict symptom change in psychotherapy with chronically depressed outpatients. *Psychother Theory Res Pract Train.* 41:255–265.
- Wallin DJ (2007) *Attachment in Psychotherapy*. New York (NY): Guilford Press.
- Wampold BE (2001) *The Great Psychotherapy Debate: Models, Methods and Findings*. Mahwah (NJ): Erlbaum.
- Wierzbicki M, Pekarik G (1993) A meta-analysis of psychotherapy dropout. *Prof Psychol Res Pr.* 24:190–195.