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FACILITATION OF INSIGHT IN PSYCHOTHERAPY:

TECHNIQUE VARIABLES

A Thesis in

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ABSTRACT

The facilitation of client insight – broadly defined as forming new connections about one's self, others, and emotions – is viewed as a key element in many forms of psychotherapy. Despite this, relatively little empirical work has addressed what types of therapeutic techniques may facilitate or hinder insight, especially an applied setting. In this study, clients and therapists completed questionnaires following 452 sessions of psychotherapy focused on rating the extent of insight achieved by clients and the types of techniques used by therapists in those sessions. Multilevel linear modeling was used to test the hypothesis that techniques from exploratory psychotherapies would be more frequent in high-insight sessions. Counter to the hypothesis, higher exploratory techniques were associated with lower client-rated insight at both the client and session level. In addition, interaction effects (including a four-way cross-level interaction) revealed that a complex interpretation of the data was necessary. Though it was the case that therapists reported using more exploratory techniques when insight was low, the typicality of different interventions appeared to play a substantial role in determining both the strength and direction of effect between different types of techniques and insight. These findings show that while significant relationships between techniques and insight exist across clients and therapists, what specific techniques facilitate insight may vary substantially across treatments.

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CHAPTER 1: INTRODUCTION

In the last 100 years psychotherapy has emerged as a popular practice designed to induce behavior change, demonstrating effectiveness in treating a broad range of psychological problems (Lambert & Ogles, 2004). Psychotherapy encompasses a diverse collection of related systems, or orientations, each relying on distinct theories to explain the development and treatment of behavioral problems and each employing different combinations of therapeutic techniques to induce change. The sheer number of psychotherapeutic systems is staggering: Kazdin (1986), in a commonly cited count of psychotherapies, noted more than 400 variants, and the list has only lengthened in recent years. Despite this proliferation of divergent theories regarding the sources of human behavior and psychopathology, different theoretical orientations have produced interventions that, in several meta-analyses, achieve similar degrees of success (Lambert & Ogles, 2004). Though this is somewhat surprising, studies of comparative outcome have consistently found that no one theoretical orientation can claim superiority over others across many disorders and populations (e.g., Cuijpers, van Straten, Andersson, & van Oppen, 2008; Wampold, Mondin, Moody, Stitch, Benson, & Ahn, 1997).

Many researchers have drawn the conclusion, therefore, that different systems of psychotherapy may create similar effects in clients despite the dissimilar theoretical foundations and techniques (Frank & Frank, 1991). One avenue of research in this direction has been to look at what have been termed the *impacts* of psychotherapy: the effects of psychotherapy sessions on the clients (Stiles, Reynolds, Hardy, Rees, Barkham, & Shapiro, 1994). Examining psychotherapy impacts may provide clues as to what happens to clients in sessions of theoretically diverse psychotherapies, and impact research has been a helpful route for researchers to identify shared processes of change across these different forms of psychotherapy

(for reviews, see Elliott and James, 1989; Orlinsky & Howard, 1986).

Insight in Psychotherapy

One of the most frequently assumed impacts of psychotherapy is insight. In psychotherapy, insight has meant many things but generally represents the idea that improved mental health can be achieved with a client's new understanding of self and environment. After its early psychoanalytic roots (see Messer & McWilliams, 2007), the concept of insight as vehicle for change has spread to a number of theories (Brady, 1967). While not all theorists have placed equal or even substantial weight on the idea that new understandings of problems can lead to therapeutic change over the years, it has long been observed that clients in divergent psychotherapies come to new understandings and that this may be a therapeutic effect common to all psychotherapies (Frank, 1961; Frank & Frank, 1991; Goldfried, 1980; Marmor, 1964, 1979).

In a seminal contribution to the field of common factors, Goldfried (1980) proposed that creating new client self-understanding is a principle of change that cuts across therapies. In this article, Goldfried suggested that all successful therapies provide clients with a new perspective of self and others, indicating that therapists of all orientations seek to engender what many would consider insight. However, insight has proven to be a difficult construct to define and assess, and researchers of different backgrounds have approached the concept of insight in very different ways (Connolly Gibbons, Crits-Christoph, Barber, & Schamberger, 2007). For instance, some authors consider insight to be synonymous with its use in other medical fields, in which it means awareness of the existence and cause of one's problems (interestingly, this seems to be the meaning with which Freud himself used it; Messer & McWilliams, 2007). Others have considered insight to be a momentary phenomenon which clients in psychotherapy achieve when

a new understanding of events is reached, a definition which is more consistent with the term's use in the vernacular and cognitive psychology literature (e.g., Moss, Kotovsky, & Cagan, 2007). Still other researchers and theoreticians would define insight as an ability or skill: the ability to reflect on events and generate novel possible explanations; in this sense insight (or insightfulness) is similar to the construct of reflective functioning or mentalization (e.g., Levy et al., 2006).

Recently, however, a group of experts in several psychotherapeutic orientations developed a consensus definition of insight in broad terms: "A conscious meaning shift involving new connections" (Hill et al., 2006). This definition is broad enough to include virtually all instances of purported insights from other definitions and allows for specifications and elaborations according to theory and research. This is the basic definition of insight used in the present study.

Importantly, this definition accepts the idea of insight primarily as an event or process rather than a skill or achievement. To better specify insights within this definition, Hill et al. (2006) provide an additional group of variables on which insights might differ, each of which may play an important role in characterizing insight. These variables include insight complexity, intensity of arousal, salience to sense of self, suddenness, conviction of belief, manner of insight communication, pre-insight level of conscious awareness, object of insight, and quality of insight (as indicated by accuracy, coherence, consensus, and usefulness). Such an extensive list certainly indicates that insights are heterogeneous: while it is possible to define "insight" as a single entity there may well be significant variability within this category. Not all insights are created equal.

Theoretical Orientations and Conceptualizations of Insight

Three of the most widely used and recognized families of psychotherapy are

psychodynamic, cognitive-behavioral, and humanistic/process-experiential therapies. Each of these groups has a unique perspective on human behavior and change, and these differences lead to different types of therapist behaviors used within each approach. Thus, there are good reasons to think that different orientations of psychotherapy could produce differences in type and frequency of insights experienced by clients.

Psychodynamic theories, broadly speaking, are rooted in psychoanalysis and Freudian theory. As such, they tend to explain behavior in terms of early childhood experiences, relationships, and intrapersonal determinants, which means that they often focus on the past (either explicitly or implicitly) and patterns of behavior over time in psychotherapy sessions. Though considerable heterogeneity exists among these theories, they commonly assume that change follows a conscious recognition of the source of a problem and the implied improvement in self-understanding. Because client conscious change is integral to therapeutic change in these theories, they use a number of techniques designed specifically to encourage client self-exploration and to increase self-understanding (e.g., transference interpretations; *cf.* Luborsky, 1984). Insights in these theories by definition involve insights into self (Hill & Knox, 2008), sometimes involve expression of emotion (but not essentially), and is sometimes seen (especially within psychoanalytic theory) as a superordinate goal, above and beyond symptomatic improvement (Messer & McWilliams, 2007).

Cognitive-behavioral theories, on the other hand, generally explain behavior in terms of learning processes (e.g., Bandura, 1986) and the focus of these interventions is typically specific and current maladaptive thoughts and actions, rather than the past. Prototypically, these theories assume that change occurs when the current maladaptive behaviors and/or thought patterns are corrected, not when better self-understanding is achieved. The techniques used in these therapies

are generally designed to move relatively quickly from an assessment and didactic stage, in which insights likely occur, into skill-building and problem-solving phases. In these later stages the goal is not to create different cognitions in clients but to support and build on already-developed and adaptive cognitions (see Beck, 1976 for example). Insight, to many of these theorists, is synonymous with cognitive change, and is consistent with an early or intermediary stage of change in psychotherapy. In cognitive-behavioral theory, insights about both self and others can be therapeutic (Hill & Knox, 2008), and emotions are viewed as potentially helpful for creating cognitive change but not necessary (Grosse Holtforth, Castonguay, Boswell, Wilson, Kakouros, & Borkovec, 2007).

Broadly defined, humanistic theories (including person-centered psychotherapy, existential psychotherapy, and process-experiential psychotherapy among others) explain behavior in terms of the client's phenomenological experience. Typically, these therapies focus on deepening experience - they endeavor to understand clients from the clients' own perspective and encourage the client to explore their own experiences to their core (Misiak & Sexton, 1973). The general assumption of these therapies is that positive change occurs as one becomes more in touch with their natural, inherent emotions and inclinations toward agency; thus the intention is to expand clients' subjective experience, not to replace or alter it directly. These therapies have developed several techniques to increase client emotional arousal and moment-by-moment experiencing (see Gendlin, 1981 and Greenberg, 2002 for examples). Insights, in these theories encompass both the more "conceptual" insights about causes of past or current events, and also more "experience-near" insights, which involve increased awareness of perceptual and emotional experiences in the moment and are the more emphasized insights (Pascual-Leone & Greenberg, 2007).

What Causes Insight in Psychotherapy? Theoretical Distinctions

Conventionally, some systems of psychotherapy have been characterized as "insight-oriented" if they attempt to explore the clients' experience in depth, allow for more non-directive exploration in session, and emphasize introspection as a key to success. In its most strict definition, "insight-oriented" has meant only psychoanalytic psychotherapy (Frank, 1993; cited in Messer & McWilliams, 2007), but a more common and inclusive definition includes psychodynamic, person-centered, process-experiential and interpersonal therapies and may be better termed "evocative" therapies because they all focus on exploration of internal experiences as agents of change (Frank & Frank, 1991; see Pascual-Leone & Greenberg, 2007 for discussion of experiential therapies' use of insight). It must be noted, however, that few if any modern psychotherapists would espouse the idea that insight is necessary and sufficient for creating therapeutic change, but insight-oriented therapies do prioritize and value the attainment of insight more than others (Brady, 1967; Roback 1974).

Systems of psychotherapy that have been conventionally identified as less insight-oriented and more directive include cognitive, behavioral, and dialectical-behavioral therapies among others. These therapies tend to emphasize actions and continued practice of skills over insight as mechanisms of change, frequently based on the assumption that though self-understanding is helpful, it must be followed with training, practice, and regular implementation of new skills in order to allow substantive change to occur, and/or that behavior change can lead to increased self-awareness rather than vice-versa (Grosse Holtforth et al., 2007). In these therapies, there may be more direct information giving on the part of the therapist and assignment of behavioral homework outside of sessions. Given this, it seems that the distinction between "insight-oriented" and other therapies seems to mainly be drawn on the basis of whether

or not insight is viewed as a primary in-session goal of the therapist, rather than whether or not insights occur in psychotherapy.

It may be argued that if insight is a common effect of many or all psychotherapies (regardless of the distinction between insight-oriented and non-insight oriented therapies), insight should not be expected to be more or less common in different orientations. There are at least two ways that this could come about, if it is the case. First, it is possible that every orientation has developed specific techniques that prompt insights with similar efficiency, regardless of the theoretical importance of insight as a mechanism of change within a particular theory. For example, accurate empathy in client-centered psychotherapy and Socratic dialogue in cognitive therapy can both facilitate insight at times; perhaps these techniques serve the same therapeutic function in their respective psychotherapies and the result is approximately equal levels of insight across treatments. A second possibility is that orientation-specific techniques are not the most important contributors to the occurrence of insight. Rather, some have suggested that common factors – those environmental, interpersonal, or contextual factors found in all psychotherapies (Lambert, & Ogles, 2004) – might be directly responsible for the beneficial effects of psychotherapy (e.g., Wampold, Imel, Bhati and Johnson-Jennings, 2007).

Frank & Frank (1991) provided an influential description of several common factors, dividing them into components and functions of psychotherapy. As noted above, these authors identified "new understanding" (insight) as a common function of psychotherapy. The common components they identify include an emotional, confiding relationship with a helping person, a healing setting, a rationale or "myth" which provides a plausible explanation of the problems, and a ritual or procedure involving active participation of both participants that is believed to be the means of restoring health. Thus, one way to achieve insight from this perspective would be to

allow clients to become sufficiently relaxed and ready to receive new information by being in a

healing setting with a warm and helping person, and then engaging them in a set of procedures

that they can believe will help them make changes in line with a new and acceptable explanation

of their problems. Since all therapists seek to do this for their clients' problems, the common

techniques they use in psychotherapy sessions are a potentially important part of developing this

healing setting or promoting a healing mode in the client (see also Wampold et al., 2007).

Empirical Studies of Insight in Psychotherapy

Despite the fact that insight has been discussed extensively in theoretical literature,

empirical investigations of insight have been relatively rare (see Connolly Gibbons et al., 2007;

Hill & Knox, 2008 for reviews). However, there are at least two seemingly reliable findings of

this literature: first, that insights do seem to occur in psychotherapy, and second, that when asked

what was most helpful in psychotherapy, insight is generally among the most common impacts

reported by both clients and therapists (Elliott & James, 1989). A variety of research

methodologies have been used to explore insight in psychotherapy: insight has been assessed

using such techniques as microprocess coding (e.g., Mahrer, Dessaulles, Nadler, Gervaize, &

Sterner, 1987), therapist and client free-response with qualitative analyses (e.g., Llewelyn,

Elliott, Shapiro, Hardy, & Firth-Cozens, 1988), standardized report measures with quantitative

analyses (e.g., Elliott & James, 1989; Elliott & Wexler, 1994), and qualitative analyses of whole

psychotherapy treatments (e.g., Elliott, Shapiro, Firth-Cozens, Stiles, Hardy, Llewelyn, &

Margison, 1994).

There is some evidence to support the suggestion that insight could be an important

precursor to symptomatic therapeutic change. Evidence has suggested that large and sudden

decreases in symptom distress often follow significant client cognitive changes in sessions of

cognitive-behavioral therapy (Tang & DeRubeis, 1999; Tang, DeRubeis, Beberman, & Pham 2005). However, some additional findings have added more complexity to this issue. First, a recent qualitative study by Goodridge & Hardy (2009) has suggested that in five cases of sudden gains in cognitive therapy, significant insights occurred prior to the sudden gain, but these insights were elaborated on and only fully developed in the post-gain session. This suggests that a multi-session process may be occurring, even in the case of the sudden gains. Second, Andrusyna, Luborsky, Pham, & Tang (2006) analyzed sessions of a psychodynamic psychotherapy for depression and found that the sudden gains achieved in this treatment did not correspond to cognitive changes in pre-gain sessions. Sudden gains did, however, correspond to higher therapist interpretation accuracy in the pre-gain sessions, which suggests that different processes may occur in these different psychotherapy orientations. Interestingly, since interpretations are a prototypical insight-oriented technique, interpretation accuracy in the absence of cognitive change might suggest that while the therapist is providing a plausible opportunity for insight, the client might not fully accept it until sometime after the session has ended.

Some evidence has suggested that insights may occur at different frequencies in different treatments, while other studies have not found any differences between treatments in this regard. At least one study has found that insight occurs more frequently in a psychodynamic treatment than in CBT (Llewelyn et al., 1988) when using post-session free response forms completed by clients and coded by the researchers. However, in a more nuanced analysis, Gershefski, Arnkoff, Glass, & Elkin (1996) coded the post-treatment free response answers of treatment completers in the NIMH Treatments for Depression Collaborative Research Program (TDCRP) who were asked to report on the particularly helpful aspects of their treatments. These authors created

categories of helpful impacts that included "new learning, awareness, or understanding" of four types of information: cognitive, interpersonal, biological, and general new information that was not specific to any treatment orientation. In the general category, there were no differences between the percent of clients reporting this as a helpful impact of treatment. Interestingly, each of the categories for treatment-specific new learning were most frequently reported in the specific, predicted orientation (i.e., cognitive new learning was reported most frequently in cognitive-behavioral therapy; interpersonal therapy was associated with new learning about interpersonal information, and imipramine was associated with new biological information). This finding suggests that while general insights might be common to the psychotherapies tested in this study, the content of insights in different therapies may be different.

At the moment-to-moment level of analysis, Marmar et al. (1987) reported insights in 2% of client-identified "good moments" in experiential psychotherapy sessions (Marmar et al., 1987). This is a relatively low percentage, compared to a different study that identified insights in 15% of the "good moments" in a psychodynamic treatment (Stalikas, de Stefano, & Bernadelli, 1997). This difference (which is in line with what the specific theories of change within these orientations) may provide evidence either that specific therapies produce different kinds of insight and/or that insights may be more or less important (indicated by the presence or absence in "good moments") in certain psychotherapies. However, the difference may instead be due to a number of factors other than treatment, including client population, assessment of "good moments" and researcher bias, since the two studies were not associated with one another it is difficult to draw conclusions.

Conflicting results have been found by researchers evaluating standardized quantitative self-report post-session measures. As noted by Hill and Knox (2008), Elliott & Wexler (1994)

found higher mean ratings of insights in process-experiential treatments than did Stiles et al. (1994) in CBT and psychodynamic-interpersonal treatments combined. Caution should be taken when interpreting such comparative results across studies, though such comparisons remain the best option in the context of the small number of controlled comparisons between theoretical orientations that have been made in single studies. In summary, the findings to date suggest that insight frequency might vary as a function of treatment type, and that the content domain of the insight might vary as well.

At a more basic level, some researchers have examined the question of whether insights are simply an effect of improved symptomatic functioning in the absence of specific psychotherapy techniques or sessions, namely by examining the possibility that insights occur in psychopharmacological treatments. If insight were a byproduct or effect of the healing process more broadly, these researchers have argued, insights should be attained in the absence of a psychotherapist or regular psychotherapy sessions. However, it seems to be the case that clients in psychotherapy report more cognitive changes than clients who take psychopharmacological medications. For instance, Connolly, Crits-Christoph, Shelton, Hollon, Kurtz, & Barber (1999) found that psychodynamic psychotherapy created more self-understanding than medications for anxiety, indicating that (one definition of) insight is more likely a product of this psychotherapy rather than just a byproduct of symptom reduction. Dozois et al. (2009) reported similar findings, identifying changes in self-schema in clients in cognitive therapy, but fewer changes in a comparison group taking medication for depression. However, it should be noted that the Gershefski et al. (1996) study mentioned above found that clients in the imipramine- and placebo plus clinical management conditions reported that during their treatment they "learned something new" at equivalent rates as the psychotherapy conditions, for the category of new learning that

was not specific to any orientation. Thus, it seems that while psychotherapies do seem to be responsible for the creation of some insights, the general experience of new understanding may not be a direct or exclusive impact of psychotherapeutic techniques; in fact, improved symptomatic functioning may be associated with general new learning just as much as specific psychotherapies.

A small number of investigations have examined specific therapist interventions that may facilitate insight. However, most of these studies have been hindered by small sample sizes and involved psychotherapy analogues and, consequentially, the results have been of limited generalizability. Some of the most pertinent results are described below.

Raingruber (2000), using qualitative methods in a naturalistic sample of nurse psychotherapists, found that focusing on feelings during sessions helped clients develop self-understanding. A few separate analyses by Hill and colleagues (e.g., Hill et al., 2005) have identified open-ended questions and probes for insight as particularly likely to precede clients' disclosure of insight on a speaking-turn by speaking-turn basis, using psychotherapy analogues. However, such studies are naturally idiographic in nature and few efforts have been made to replicate or extend these studies so that results will be generalizable. Until this is done more successfully, it is difficult to confidently draw meaningful conclusions from this literature (see Hill & Knox, 2008, for further review).

Further, while several studies have examined the link between therapist behaviors and impacts generally, few have explicitly examined insight while providing a detailed description and assessment of therapeutic techniques from a trans-theoretical perspective. One exception is the program of research advanced by Orlinsky, Howard, and Kolden over the last 5 decades. Orlinsky and Howard (1967) reported an early study of psychotherapy session impacts using

therapist and patient post-session ratings on the original form of the Therapy Session Report (TSR). The TSR, in its full length, assesses aspects of the process of individual psychotherapy sessions, as well as perceived session progress. In this early paper, Orlinsky and Howard demonstrated that perceived session quality (rated with a single item by both therapists and patients) varies as a function of both therapy "content" (topics of conversation and aims of the participants) and therapist "manner" (relational style of the therapist). The most helpful content of psychotherapy sessions in this study were dominated by discussions of (the clients') intimate personal relationships, and the participants approached these topics with the specific aim (rated post-session) of "attaining insight." Additionally, the manner of psychotherapy sessions was found to be similarly important: high-quality sessions were rated as "actively collaborative, genuinely warm, affectively expressive, and humanly involving" (p. 631). In the same study, patients reported "better self-understanding" in good sessions, suggesting that there may be direct or indirect relationships between session content (interpersonal), manner (warmth, collaborative, etc.), and achievement of insight (self-understanding) in such "good" sessions.

A similar study was reported by Kolden and colleagues (2000), using an updated version of the TSR, which included a new version of its impact measure, the Therapeutic Realizations Scale – revised (TRS-R). In the Generic Model of psychotherapy (Orlinsky & Howard, 1986), a theoretical framework which attempts to describe change processes across psychotherapy orientations, therapeutic realizations are nearly synonymous with session impacts: the moment-to-moment accomplishments of clients in psychotherapy. The TRS-R has four subscales: Remoralization, Unburdening, Past-focused Insight, and Present-focused Understanding. As their names would suggest, some items from the latter two subscales seem to assess constructs subsumed within the Hill et al. (2007) consensus definition of insight. In this study the authors

were able to assess what types of therapist interventions (rated post-session) were uniquely related with different kinds of client-rated therapeutic realizations (post-session). Using the TSR's technique measure, the authors found that therapists' use of past-focused interventions specifically correlated with occurrence of past-focused insight, whereas directive interventions uniquely correlated with present-focused understanding. This suggests that some identifiable therapist behaviors not only associate with insight at the session level, but that specific therapist behaviors lead to specific client insights.

However, this study had a number of limitations. The items on the TSR are based on the Generic Model of psychotherapy rather than being derived from many individual orientations. In studying naturalistic psychotherapy, such an approach is one way to assess psychotherapeutic techniques which are likely to cover a broad range of orientations, even within a single session, given a recent survey that showed that the use of interventions from therapists' non-primary orientation is commonplace (Thoma & Cecero, 2009), and previous studies using multi-theoretical technique measures which demonstrate significant overlap of techniques within sessions (McCarthy & Barber, 2009; Trijsburg, Lietaer, Colijn, Abrahamse, Joosten, & Duivenvoorden, 2004). However, using a generic model leads to loss of nuance and theoretical completeness compared to assessing several orientations of psychotherapy separately. Also, the TSR's impacts measure (the TRS) differentiates present- versus past-focused insights but does not assess much information beyond this; if a therapist makes an interpretation regarding the past it may be rated as a past-focused exploratory technique, but a present-focused interpretation might be rated as experiential or directive. This makes it difficult for clinicians and researchers to derive meaningful conclusions from these data beyond the conclusion that when clients experience past-focused insights, clinicians used past-focused exploratory interventions. This

may reflect a tendency for clients and therapists to share a past (or present) focus, regardless of whether insights occur rather than anything specific regarding technique.

In summary, it seems that insights, or new understandings (especially about oneself) tend to occur in several kinds of psychotherapy. Insights seem to occur as a product of psychotherapy rather than as part of a general healing process and the content of insights may be linked to the therapeutic orientation of the treatment and the focus of therapeutic intervention. However, it is not clear how psychotherapists promote, create or facilitate the experience of insight, and the studies on the issue to date have not provided adequate information to link any specific therapeutic orientation or technique to the occurrence of insight.

Present Study

The present study is an attempt to identify specific techniques that therapists use when clients achieve insights. Given that insight has been identified in the theoretical and empirical literature as a common impact of many therapies, and there is some evidence that it is related to improved symptomatic outcome, identifying specific therapist behaviors that co-occur with insight may provide useful information for therapists who hope to induce insight more effectively in their clients as well as for researchers who hope to better understand the process of psychotherapeutic change. Given the limitations in the insight literature at present, this study will build on the strengths of past empirical research and seek to provide more clearly interpretable results in a naturalistic setting.

The specific hypotheses of this study are first, that insight ratings will positively correlate with perceived session quality, such that sessions which clients rate as high in insight will also be sessions deemed to be better and promoting more change. Secondly, the broadly defined "insight-oriented" or evocative techniques (generally derived from psychodynamic, process-

experiential, person-centered, and interpersonal therapies) will be more strongly associated with

insights than non-insight-oriented techniques (cognitive therapy, behavioral therapy, dialectical-

behavioral therapy).

CHAPTER 2: METHOD

Participants

       Therapists. Therapists were recruited from the Clinical Psychology Ph.D. program at a large midwestern university. The only eligibility requirement for therapists was that they had to be actively conducting supervised adult psychotherapy during the 2010-2011 academic year. Of the total 20 eligible trainee therapists identified, 17 were successfully recruited to the study. One therapist joined the study but did not successfully recruit any client participants, leaving a total sample of 16 trainee psychotherapists. Therapists ranged from 24 to 34 years old, and eight therapists were female. The majority of therapists (13) identified as White/Caucasian, one self-identified as Black/African-American, and two as multi-racial.

       In this training program, students conduct supervised psychotherapy beginning in the summer after their first year. Therapists in this study ranged from less than one year to six years of psychotherapy experience, with a mean of 2.7 years. The number of face-to-face clinical hours ranged from 40-1500, with a mean of 469 hours. Therapists engage in year-long practica in the clinic, each with a different supervisor and theoretical orientation. In the 2010-2011 academic year, five practica were offered: cognitive-behavioral, psychodynamic, psychodynamic-humanistic, general outpatient psychiatric, and advanced psychodynamic.

       Clients. Clients were recruited from the adult clientele of a training clinic at a large university providing outpatient psychotherapy as a community mental health center (CMHC). Clients were recruited for this study by their treatment therapists, following IRB-approved procedures. In order to minimize interference with the operations of the clinic and the training of the therapists, therapists were allowed to select the total number of clients on their caseload they would be willing to recruit, prior to their beginning participation in the study. For therapists who

elected to recruit fewer clients than their full caseload, we randomized which of their clients would be recruited in order to minimize sampling bias. All clients in the clinic older than the age of 18 and being treated by one of the participating therapists were eligible for the study, with the exception of those patients with a diagnosed psychotic disorder, developmental disorder, or intellectual disability.

The participating therapists recruited 31 clients to the study. The client sample was highly comorbid, with an average of 2.7 diagnoses given per client. Of these, 28 clients had been given a diagnosis on Axis I and 25 had been given a diagnosis on Axis II. The most common types of Axis I disorders were mood disorders (20 clients) and anxiety disorders (17 clients), and the most common diagnosis on Axis II was Borderline personality Disorder (11 clients).

Clients were recruited by therapists on an ongoing basis, and could begin participation in this study at any point in their treatment course. At the start of their participation, clients ranged from having 2 to 144 previous sessions with their therapist. Therapists rated their clients' treatment phase at the start of participation on a 120-point ruler-like scale. Responses ranged from 0 to 91 with a mean of 46.4. This indicates that no client was much beyond 75% complete with treatment, according to their therapist, and on average this sample was just past the first third of their treatment progress.

Diagnosis

As part of routine care, prior to treatment all clients at the clinic are given a diagnostic intake procedure that includes a revised version of the Anxiety Disorders Interview Schedule (ADIS-IV; Grisham, Brown, & Campbell, 2004) and the International Personality Disorders Evaluation (IPDE; Loranger, 1995). Diagnostic inter-rater reliability within the clinic is moderate to excellent across a range of Axis I and Axis II disorders (Nordberg, McAleavey,

Castonguay, & Levy, unpublished data).

Treatment

Following diagnostic intake, clients are assigned to treatment therapists based on treatment need and availability. All treatment provided in the clinic is outpatient, and is typically once- or twice-weekly. There are no session limits for psychotherapy, and most clients in the clinic receive some form of government-subsidized healthcare assistance. Many clients in this clinic have long-term outpatient treatments, lasting 1-4 years or longer.

The 16 therapist participants and 31 client participants completed a total of 453 sessions of psychotherapy during the data collection period. The number of clients per therapist ranged from 1-4 with a mean of 2. Of these 452 sessions, 413 had complete data from both the client and therapist.

Measures

Multitheoretical List of Therapeutic Interventions (MULTI; McCarthy & Barber, 2009). The MULTI is a 60-item inventory of therapist behaviors to be completed by therapists at the end of each session. Each item on the MULTI describes a therapist behavior that may or may not have occurred in a given psychotherapy session (e.g., "I focused on the ways my client copes with his/her problems") and provides a 5-point Likert-type scale, description-anchored at 1: *Not at all typical of the session*; 2: *Slightly typical of the session*; 3: *Somewhat typical of the session*; 4: *Typical of the session*; 5: *Very typical of the session*. Items were developed based on a review of therapeutic manuals and iterative consultations with experts. The MULTI has eight subscales, each representing one of eight orientations of psychotherapy. The subscales have been found to adequately represent each theory based on face, content and criterion validities, and the overall structure of the measure has been repeatedly tested in confirmatory factor analyses. The

subscales are Cognitive Therapy (CT), Behavioral Therapy (BT), Dialectical-Behavioral Therapy (DBT), Psychodynamic Therapy (PD), Process-Experiential Therapy (PE), Person-Centered Therapy (PC), Interpersonal Therapy (IPT), and Common Factors (CF). These subscales are not orthogonal, and the MULTI includes several items that overlap on two and three subscales. These items were retained in multiple subscales due to judgments that they are theoretically consistent with multiple systems of psychotherapy.

In the present study only therapist ratings of techniques were collected. This decision was made first to minimize experimental burden on clients and secondly because therapists may be better able to distinguish and consistently rate therapeutic interventions across several sessions. Consistent with this, McCarthy and Barber (2009) reported that therapist-rated correlations between subscales were overall smaller than client ratings and the pattern of correlations more closely resembled theoretical similarities and dissimilarities between orientations. Though this finding may partially represent therapists' expectancy biases, better discrimination of subscales is to be expected with their greater psychotherapy experience and theoretical knowledge.

When completed by therapists, the MULTI has demonstrated adequate reliability and construct validity. For all subscales the internal consistency reliabilities are moderate to very good (range: .68 - .89). The factor structure has been adequately confirmed using therapist ratings in a confirmatory factor analysis, though this factor structure was not a very parsimonious reduction of the data (RMSEA = .08, CFI = .64). Importantly, the MULTI has also demonstrated good criterion validity when completed by therapists: therapist ratings on the MULTI accurately discriminated sessions of different orientations with a total error rate between 10-13%. Of particular relevance to the present study due to the primary delivery of either CBT or psychodynamic psychotherapy in the study, 92% of CT sessions and 95% of psychodynamic

sessions were accurately classified using therapist ratings on the MULTI.

Session Impacts Scale (SIS; Elliott & Wexler, 1994). The SIS is a 17-item inventory of subjective impacts of psychotherapy sessions. In the present study, clients completed the SIS after every session in the study. The clients' perspective on this measure was thought to best represent consciously experienced insight, rather than the therapists' perspective (though a therapist version of the SIS exists). For this reason, only the client form was used. Each item on the SIS provides a brief description of an impact followed by a paragraph describing the impact in detail, and is rated on a 5-point Likert-type, adjective-anchored scale (1 = *not at all*, 2 = *slightly*, 3 = *somewhat*, 4 = *pretty much*, 5 = *very much*). Items were originally developed by content and cluster analysis of client free-response descriptions of the impacts of process-experiential psychotherapy sessions, though the impacts are not otherwise tied to or dependent on process-experiential orientation (Elliott, 1985). These initial analyses led to the development of the current Likert-type scale and scoring system which was reported initially to support both a two-factor (Helpful Impacts and Hindering Impacts) and a three-factor (Task Impact, Relationship Impacts, and Hindering Impacts) structure (Elliott & Wexler, 1994) roughly equivalently. Additionally, Stiles et al. (1994) found that a five-factor model was most appropriate after conducting a new factor analysis on the items in sessions of both cognitive-behavioral and psychodynamic-interpersonal psychotherapy. In this alternative structure, the Task Impacts subscale was separated into two factors: Understanding (3 items) and Problem Solving (2 items). The differences in factor structure observed in these studies may be partially due to the types of psychotherapy being analyzed as well as the sample.

Using the more common three factor structure, inter-item reliability has been found to be adequate for the Hindering Impacts subscale Cronbach's α = .67), and good to excellent for the

Task Impacts and Relationship Impacts subscales (Cronbach's α = .84 and .91, respectively). The SIS has shown adequate convergent and discriminant validity with another common session impact measure, the Session Evaluation Questionnaire (Stiles et al., 1994). This analysis indicated that though SIS data can be interpreted in part as client depth and smoothness evaluation of sessions, the SIS measures additional constructs of the content and type of session impacts. Further, because the SIS measures multiple and separable content-based session impacts, it provides a useful tool to discriminate between insight and non-insight impacts. In the present study, the overall structure of the measure is not necessarily of interest. The simpler question of scale reliability is, however, important for this study, so internal consistency of the insight-related items was investigated.

The Task Impacts subscale of the SIS includes five items, three of which are directly relevant to insight as defined by Hill et al. (2007) and have been identified by Stiles et al. (1994) as the Understanding subscale. They are 1: *Realized something new about myself*; 2: *Realized something new about someone else*; and 3: *More aware of or clearer about feelings, experiences*. Scores on the Understanding subscale should therefore yield a comprehensive measure of insight, with good content validity.

Session Progress Scale (SPS; Kolden, 1996). The SPS consists of four items rated on a Likert-type scale that form a single rating called "session quality." The SPS is one subscale of the longer Therapy Session Report (TSR; Orlinsky & Howard, 1967), which is a measure designed to assess individual psychotherapy sessions from the participants' perspectives immediately after sessions. While there are both therapist and patient versions of the SPS, the present study will only use the patient version. In their study, Kolden et al. (2000) found that therapists' ratings of session quality did not relate to client-reported session impacts, which they

interpreted by suggesting that the inherently private nature of session impacts may best be assessed directly from clients. The four items of the SPS have been found to assess a single factor of psychotherapy session helpfulness/impact, which is considered the single session outcome factor assessed on the TSR. Kolden (1991) reported internal consistency of the SPS at .85.

Procedure

Once a client was recruited to the study and signed the informed consent, clients and therapists completed post-session questionnaires immediately following every session of psychotherapy. Client participants completed the SIS and SPS and therapist participants completed the MULTI. Data collection continued as long as the client and therapists continued to engage in psychotherapy or until the therapists' practica would have changed at the end of the academic year.

Data Analytic Strategy

Preliminary analyses examined internal consistency of the Understanding subscale of the SIS, in order to determine whether it is psychometrically appropriate for use as the primary measure of insight in this data. Given the theoretical coherence of this impact factor and its congruence with the Penn State definition of insight – since it contains items relating to new understandings of self, others, and an emotional awareness component – it was to be used as primary if the data suggested that it has adequate internal consistency in this sample. If the internal consistency of this subscale was low (Cronbach's alpha below .7), exploratory factor analysis would have been conducted to determine an adequate measure of insight session impact. Though this is a relatively weak empirical test of the measure and does not address the overall structure of covariation among items of the SIS, the theoretical structure of this three-item

measure of insight is parsimoniously consistent with the Penn State definition and is therefore preferred a priori.

In order to test the first hypothesis that session quality will increase in sessions high in insight, multilevel models were used to assess (and as necessary, account) for nesting within therapists and clients. Significant intraclass correlation coefficients (ICCs) for these levels of variation were used to determine whether they would be included. In these analyses, the SPS total score was predicted solely by the clients' rating the primary measure of insight. Insight was entered at all significant levels of analysis and cross-level interactions were permitted in the initial model. Non-significant effects were removed from the model. All multilevel models were run in SAS PROC MIXED, using restricted maximum likelihood estimation. In all multilevel models, the highest-level effects were grand mean centered and lower effects were cluster centered prior to analysis.

To test the second hypothesis (that techniques derived from exploratory therapies, more so than techniques from directive therapies, will occur in sessions of high insight) a separate multilevel model was estimated to predict insight based on the subscale scores of the MULTI. In this model, the eight subscales of the MULTI were simplified based on empirical and theoretical reasons. Specifically, the subscale scores for Cognitive Therapy, Behavioral Therapy, and Dialectical-Behavior Therapy were aggregated to form a "Directive" technique composite score. This decision was empirically justified as these subscale scores were also highly correlated in this sample: CT and BT, $r = .931$; CT and DBT, $r = .833$; and BT and DBT, $r = .855$. The subscale scores for Psychodynamic Therapy, Process-Experiential Therapy, and Person-Centered Therapy were also aggregated to form an "Exploratory" technique composite score, because these also correlated quite strongly: PC and PD, $r = .808$; PC and PE, $r = .763$; and PD and PE, r

= .781. No other bivariate correlations among the MULTI subscales were greater than $r = .65$. In addition, the training program does not offer specific training in Interpersonal Therapy and the Clinic does not routinely conduct or supervise it as a treatment, so the IPT scale was not included in any analyses. Thus, the technique scales used in analyses were Directive, Exploratory and Common Factors (which was included in its original form). The means, standard deviations, and correlations for all variables in the analysis are included in Table 1.

Table 1: Overall means, standard deviations, and correlations between variables.

	Mean	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Session Quality	5.31	1.12	1.00										
2. Insight	3.17	1.21	0.67***	1.00									
3. Directive	2.28	0.68	0.22***	0.17***	1.00								
4. Exploratory	2.70	0.70	-0.04	-0.06	0.67***	1.00							
5. CF	3.37	0.69	0.13*	0.13**	0.48***	0.51***	1.00						
6. CT	2.43	0.78	0.21***	0.14**	0.97***	0.68***	0.44***	1.00					
7. BT	2.11	0.63	0.25***	0.16***	0.97***	0.56***	0.41***	0.93***	1.00				
8. DBT	2.28	0.72	0.17***	0.18***	0.94***	0.66***	0.53***	0.83***	0.85***	1.00			
9. PE	2.60	0.74	-0.05	-0.01	0.65***	0.91***	0.53***	0.65***	0.55***	0.64***	1.00		
10. PC	2.92	0.80	-0.00	-0.10*	0.59***	0.93***	0.46***	0.61***	0.50***	0.58***	0.76***	1.00	
11. PD	2.60	0.73	-0.06	-0.07	0.62***	0.93***	0.43***	0.62***	0.52***	0.62***	0.78***	0.81***	1.00

Note. CF: Common Factors; CT: Cognitive Therapy; BT: Behavior Therapy; DBT: Dialectical-Behavioral Therapy; PE: Process-Experiential Therapy; PC: Person-Centered Therapy; PD: Psychodynamic Therapy.

*, $p < .05$; **, $p < .01$; ***, $p < .001$

Because psychotherapy technique use is a complex construct and individual techniques'

effect could depend on the other techniques used, even complex interactions between levels of

analysis and orientation are of interest. Therefore, a "trimming" strategy was used, in which all

possible interactions were included in the initial model, and nonsignificant effects were removed

sequentially. This strategy began with all possible interactions between six distinct effects (two

levels for each of Directive, Exploratory, and CF use), up to and including the six-way

interaction. Such high-order effects are frequently not investigated due to concerns regarding

statistical power and interpretability (Cohen, Cohen, West, & Aiken, 2003), and indeed, there is

some research to suggest that four-way interactions are extremely difficult to understand and are

the most complex interactional analysis that can be understood in one conceptual step (Halford,

Baker, McCredden, & Bain, 2005). However, in the present study no a priori hypotheses were

available with which to rule out particular higher-order effects so all were investigated initially

and removed as appropriate.

CHAPTER 3: RESULTS

Preliminary analyses suggested that the three-item Understanding subscale of the SIS had acceptable internal consistency in this sample (Cronbach's alpha = 0.782). Consequently, this was used as the primary measure of insight following sessions.

Client ratings of session outcome were best modeled in this data using a two-level model, which accounted for nesting of sessions within clients. Accounting for the nesting of clients within therapists was not necessary in this data, since the therapist-level random intercept was nonsignificant, the ICC was determined to be not meaningful, $\rho = .103$, $p = ns$.[i] However, a two-level model included a significant variance component for client-level variation in SPS total score, and the resulting ICC for this level was sizeable, $\rho = .619$, $p < .01$. This indicates that approximately 62% of the total variation in session quality was stable within clients (variable between clients), and that the remaining 38% of the variation changed session-to-session within clients (session-level), presumably in relation to time-varying events and differences between sessions, in combination with measurement error.

Using insight as a predictor of session outcome, there were significant main effects for session-level insight (differences within clients between sessions in their ratings of insight achieved in those sessions), client-level insight (differences between clients, averaged across time, in their ratings of insight post-session), and the cross-level interaction between these effects. Complete results for the fixed effects in this model appear in Table 2.

Table 2. The relationship between client-rated insight and session quality: Fixed effects.

Effect	Estimate	SE	df	F	p
Session-level insight	0.400	0.048	1, 384	67.98	<.001
Client-level insight	0.661	0.114	1, 28.4	33.7	<.001
Session-level insight by Client-level insight interaction	-0.134	0.061	1, 384	4.76	0.03

Note. Intercept was significant but does not appear in this table. Values are based on a model with random intercepts for sessions and clients.

Both significant main effects were positively[ii][1] associated with session quality. That is, within clients, sessions that were rated as particularly high in insight were also likely to be rated high on session quality, and between clients, those clients who reported high levels of insight on average (compared to other clients) also were likely to report higher than average levels of session quality during the study. The interaction is plotted in Figure 1. In essence, this interaction shows that the effect of session-level insight on session quality is moderated by the client mean insight per session, such that the relationship between session insight and session quality was stronger for clients who reported lower mean levels of insight than it was for clients who reported higher mean levels of insight.

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[1] Because session quality on the SPS was originally rated such that lower scores indicate better session quality, scores on this subscale were reversed for presentation and are discussed and presented with higher scores representing better session quality. All results and discussion of this variable in the paper are consistent with this "higher is better" interpretation.

Figure 1. Client self-report Session-level and Client-level insight: Two-way cross-level interaction with relation to perceived session quality
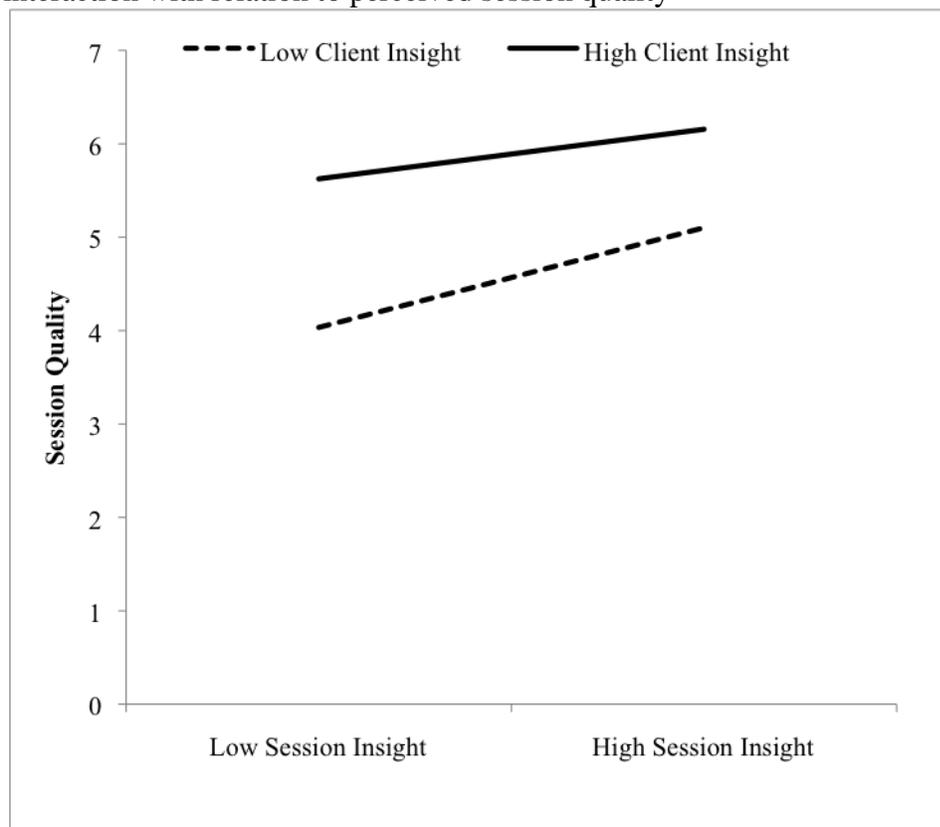

The second research question, regarding the difference between exploratory and directive techniques in relation to insight, had complex results. First, it was determined (using the same methods as above) that two levels were sufficient to model these data as well, with an ICC of $\rho =$ .65 for client-level insight. The initial model for this analysis included three technique variables (exploratory, directive, and common factors), each at both levels of analysis (client-level and session-level), and all possible interactions, up to and including the single six-way interaction term. Nonsignificant effects were removed from the model sequentially, and the resulting final model retained several significant effects including on four-way interaction between client-level Exploratory technique use, client-level Directive technique use, session-level Directive technique use, and session-level CF technique use, $F (1, 363) = 3.77, p = .05$. There were also significant main effects for session-level Exploratory technique use, $b = -.30, F (1, 358) = 7.51, p = .01,$

client-level Exploratory technique use, $b = -.92$, $F (1, 27.5)$, $p = .04$. Given the sometimes

moniker "insight-oriented" therapies for these Exploratory techniques, it was surprising that

these main effects were negative. There was also a significant two-way interaction between

session-level CF and session-level Directive technique use, $b = 1.31$, $F (1, 362) = 8.74$, $p < .01$.

All other effects in the final model were nonsignificant but were retained if they were involved in

higher-order interactions (similar to the process common for multiple regression, Cohen, Cohen,

West, & Aiken, 2003).

The interaction is plotted in Figure 2. Because the four-way interaction includes two

session-level and two client-level effects it can be interpreted as a series of two-way interactions

among session-level Directive techniques and session-level CF techniques, with different values

depending on the typical (client-level) Directive and Exploratory techniques. These plots are

provided in Figure 3a-d to aid interpretation. Each panel represents a different combination of

client-level Directive and client-level Exploratory technique use, so each panel represents the

way that session-level variations in CF and Directive techniques impact insight a different

"treatment type," as defined by the average level of these techniques provided by the therapists

(i.e., client-level differences). The term "treatment" type is used to simplify interpretation; this is

based on the therapist-reported differences in average techniques used with a given client and is

not strictly speaking a difference in treatment in the sense of theoretical orientation.

Figure 2. Directive techniques, exploratory techniques, and common factors: Four-way cross-level interaction in relation to insight.
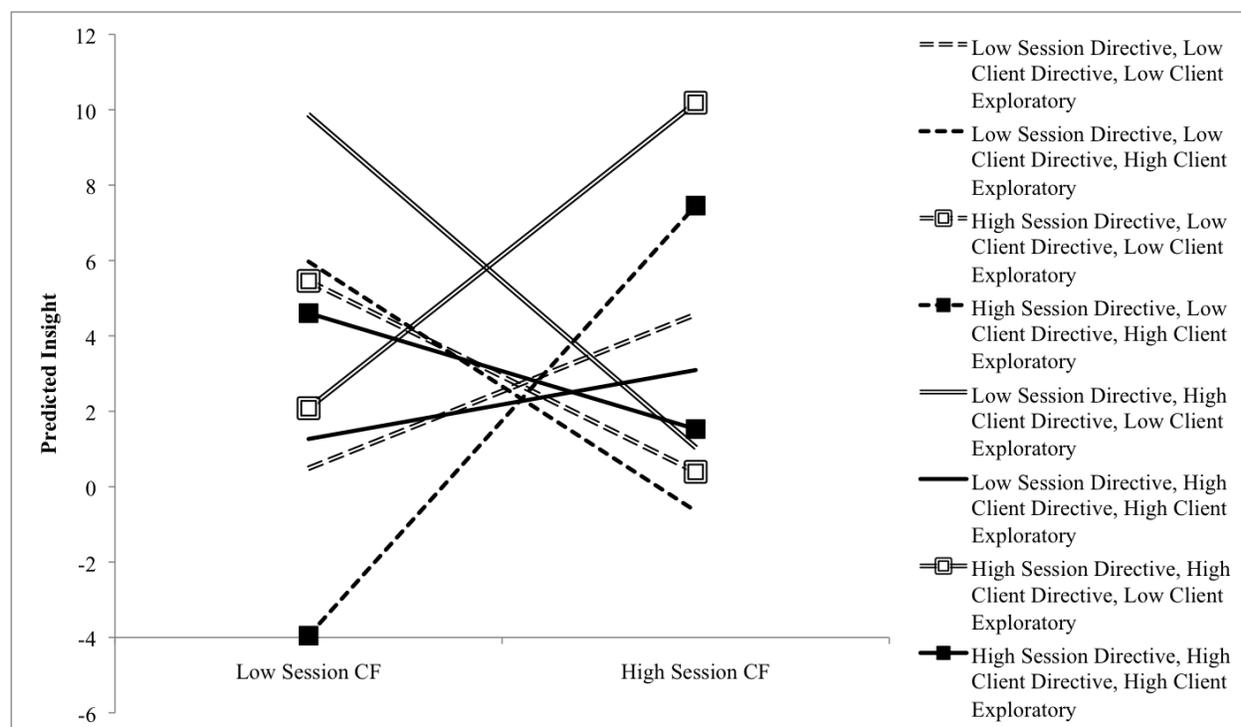
Note. CF = Common Factors. Insight range depicted exceeds observed scores due to the use of extreme technique scores for the purpose of illustration. Values of 1 and -1 for all technique variables were used to generate this interaction plot, and were chosen to be consistent across techniques and because they were close (within 0.3 points) to the observed minima and maxima of every technique variable depicted.

Briefly, two distinct patterns of technique-insight relationships can be discerned in Figure 3. In Figure 3a (which depicts a treatment in which therapists typically use high Directive but low Exploratory interventions, High-Low) and 3b (in which therapists typically use low Directive but high Exploratory techniques, Low-High), session-level increases in Directive techniques were associated with higher insight only when session-level increases in Common

Factors were also present. Conversely, in these same "treatment" types, session-level decreases in Directive techniques were associated with higher insight only when session-level decreases in Common Factors were also present. The opposite is true in Figure 3c (which depicting treatments low in both Directive and Exploratory interventions, Low-Low) and 3d (high Directive and high Exploratory treatments, High-High): session-level increases in Directive techniques were associated with higher insight only when session-level decreases in Common Factors were also present. In addition, the interactions appear to be less prominent in these latter two treatments, reflected by the relatively flatter lines in Figures 3c and 3d.

Figure 3. Four-way interaction depicted as a series of two-way Session-level interactions.
Figure 3a.
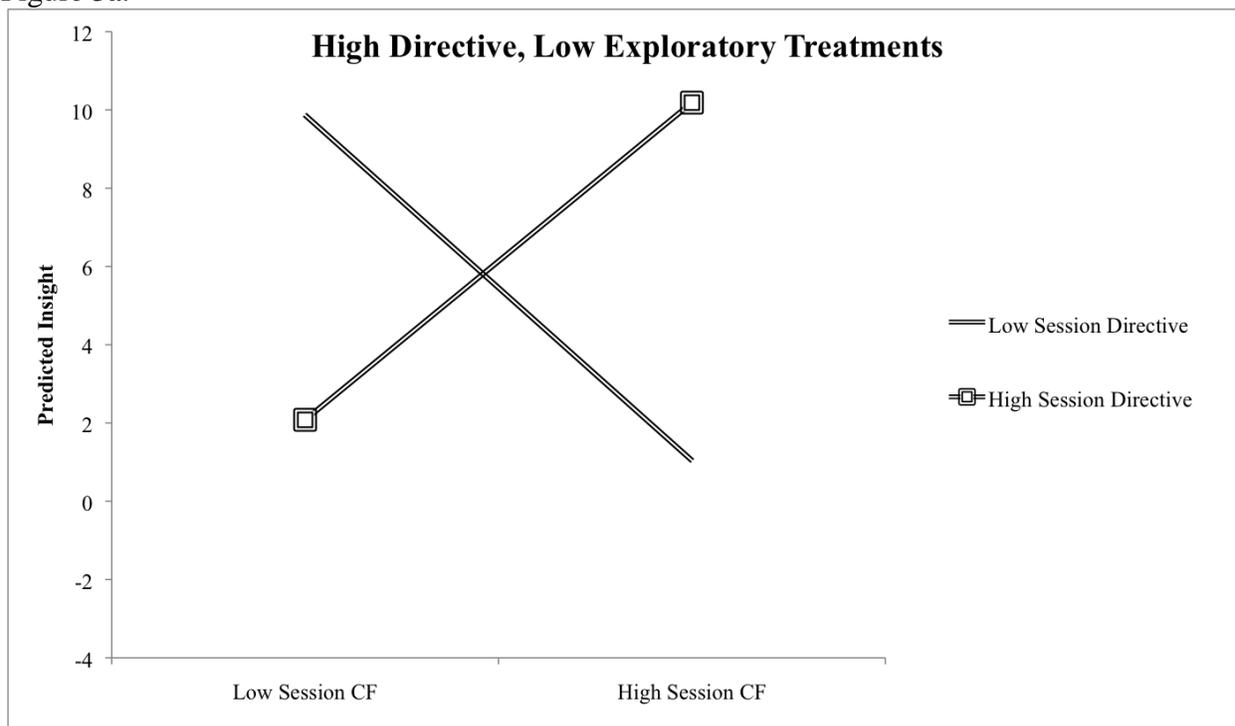
Figure 3b.
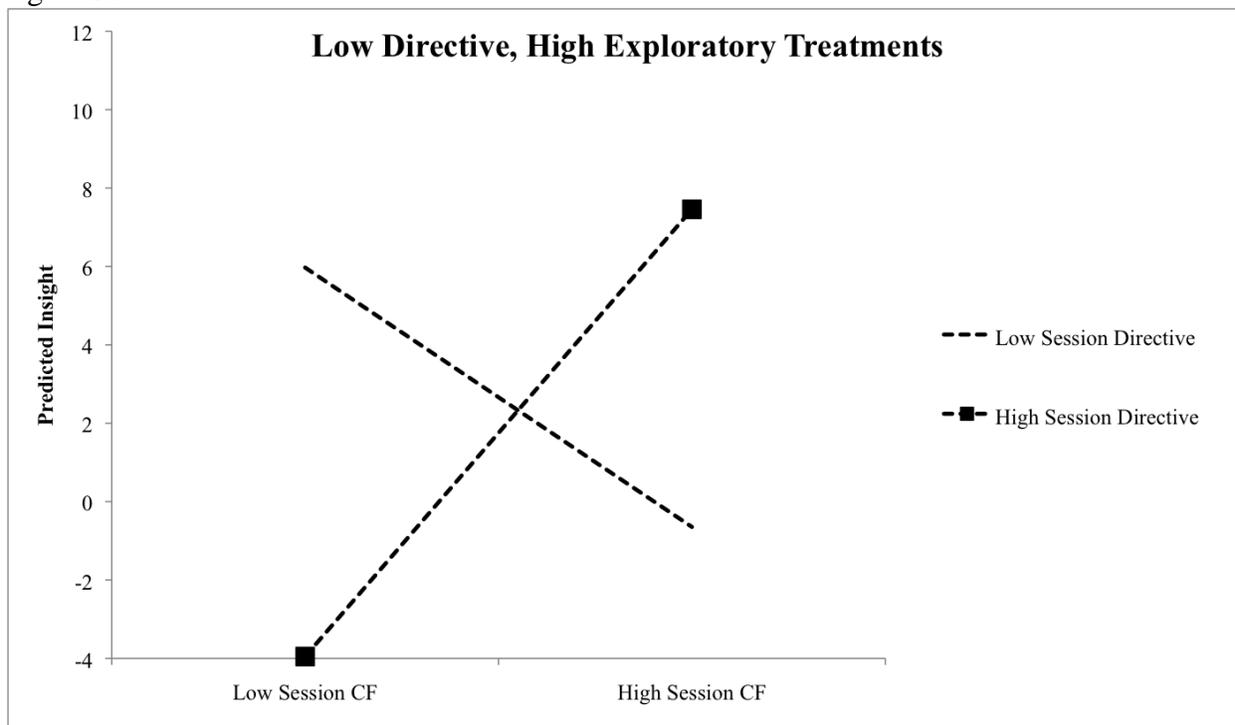
Figure 3 continued.
Figure 3c.

Low Directive, Low Exploratory Treatments

Y-axis: Predicted Insight (12, 10, 8, 6, 4, 2, 0, -2, -4)

X-axis: Low Session CF, High Session CF

Legend: Low Session Directive, High Session Directive

Figure 3d.

High Directive, High Exploratory Treatments

Y-axis: Predicted Insight (12, 10, 8, 6, 4, 2, 0, -2, -4)

X-axis: Low Session CF, High Session CF

Legend: Low Session Directive, High Session Directive

Endnotes
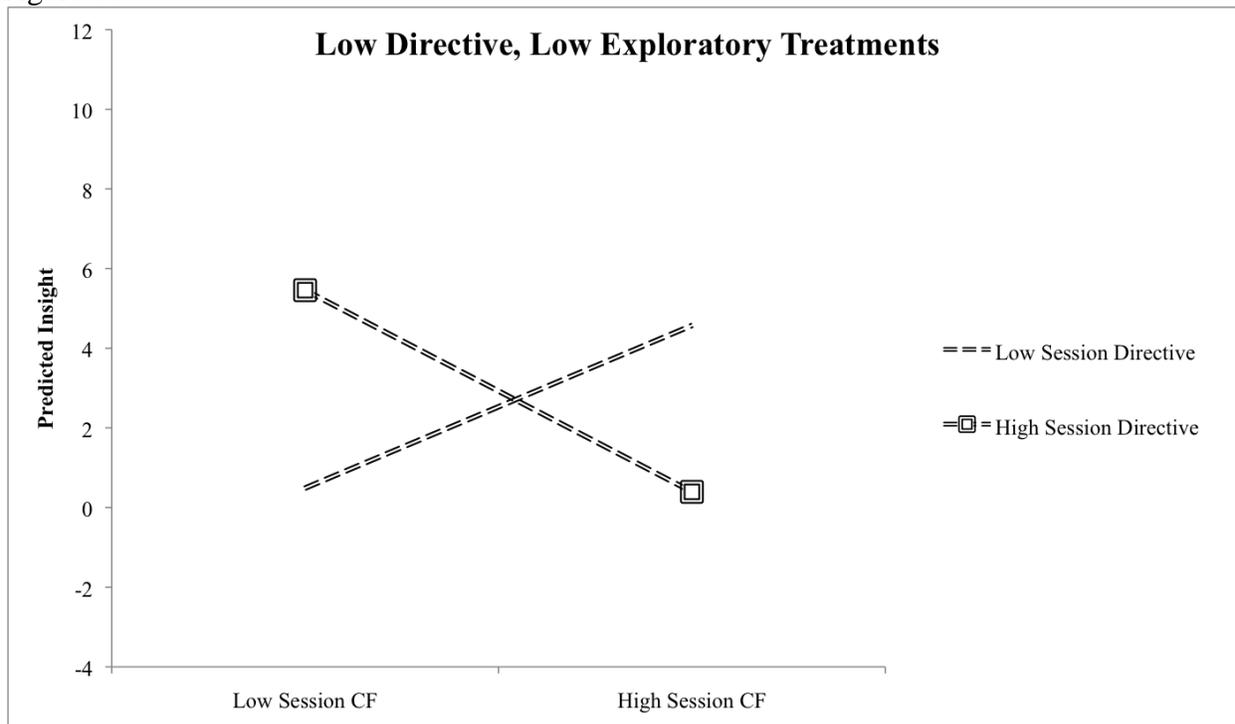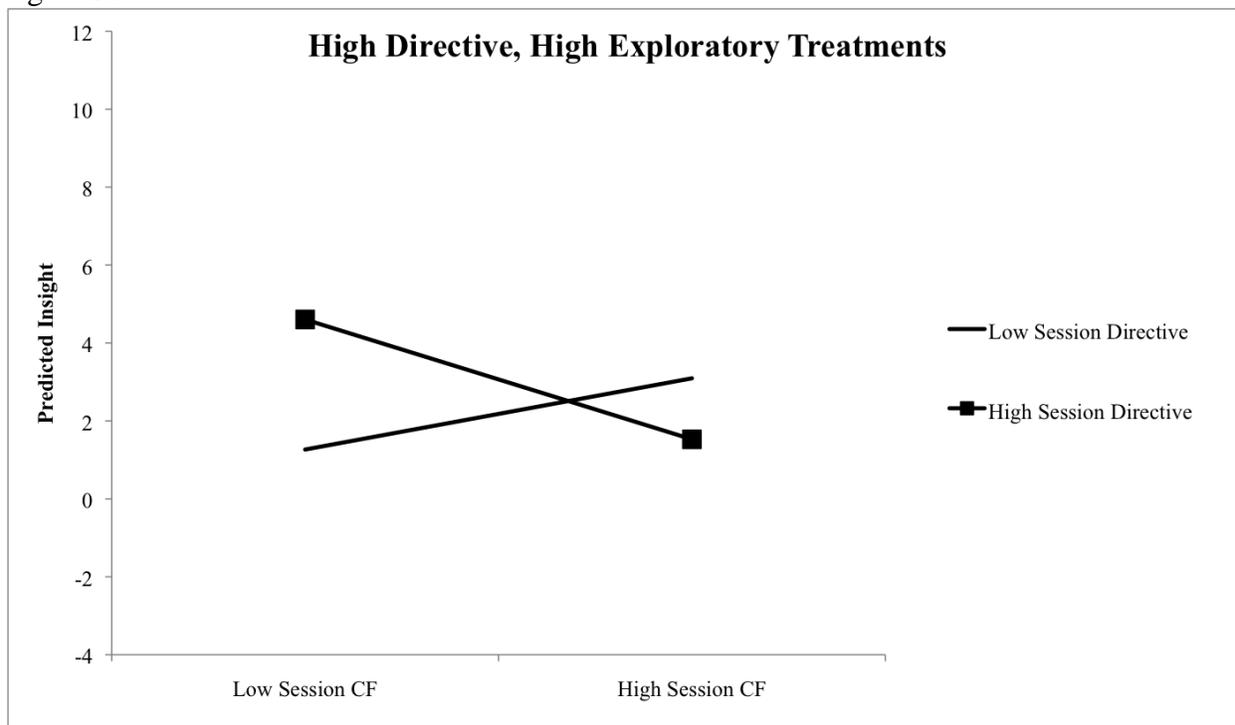
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[i] This does not mean that there were no differences between therapists, merely that in these data, those differences were not significant. This is in part to be expected due to the low number of therapists in the study and the fact that several therapists were included in analyses despite only recruiting one client to the study. Theoretically, it would be possible to "account" for nesting at the third level with these data; however, the nonsignificant ICC indicates that it is not necessary and possibly misleading to do so, particularly without removing therapists with fewer than three clients each. It should also be noted that there is no universally agreed-upon procedure for determining the significance of these effects, but the non-significance of a variance component suggests that there is no meaningful variation to model.

[ii] Because session quality on the SPS was originally rated such that lower scores indicate better session quality, scores on this subscale were reversed for presentation and are discussed and presented with higher scores representing better session quality. All results and discussion of this variable in the paper are consistent with this "higher is better" interpretation.

CHAPTER 4: DISCUSSION

The results of this study support the notion that insight can be assessed in a theoretically meaningful way from clients' post-session self-report, and clients perceive that insight as a helpful event in psychotherapy on average. In addition, the study found that techniques used by therapists were significantly related to clients' reported levels of insight. However, the relationship between techniques and insight found in this sample is quite complex, suggesting that the impact of a given technique on a client in a given session is dependent on the larger mixture of techniques and treatment as a whole, rather than just one intervention operating in seclusion.

Insight and Session Quality

The first main question of this study was whether insight is a positive event in psychotherapy, as perceived by clients. The results of this study support the contention that insight and session quality are closely related, with more insight (both between and within clients) being positively related to session quality. The client-level main effect suggests that clients who experience new understandings of self, others, and emotion in general report better overall sessions. The session-level effect suggests that for any client, sessions that promoted insight (relative to the client's average session) were also likely to be perceived as higher-quality sessions.

In addition, session-level insight was particularly related to session quality for those clients who reported less insight on average than other clients. One way to interpret this interaction is as evidence for the diminishing returns of insights when they are frequent across sessions: clients who reported the highest levels of insight (relative to other clients) reported a smaller change in session quality in sessions of high insight than did other clients. I could be that

for these clients treatment is proceeding very well in general and when they do not experience new understandings, other therapy variables (such as the presence of a helping relationship) provide enough help that the session overall is still good. As a corollary, for clients who reported low average levels of insight (relative to other clients), the level of insight in a session was a stronger predictor of session quality. For these clients, a session in which they reported less insight than usual was in fact predictive of sessions that were rated below the midpoint of the session quality measure. For these clients, insight was rare, but when it occurred it was more likely to occur in good sessions. This suggests that insight is a particularly important part of treatment for these individuals, even though it is rare.

Several alternative explanations could be provided for this as well, including the possibility that it may be due to a ceiling effect of the measures: clients who experienced a high degree of session quality in their typical session could not have very large increases in session quality when they had particularly helpful sessions. However, very few sessions were rated at the extreme of the session quality scale, so this likely would not explain the entire effect. It is also possible that the effect is essentially a contrast effect or a therapeutic "shock," in that when insight is rare it may serve as an important and invigorating therapeutic experience, and so be more related to session quality. It is also important that clients with low client-level insight in low-insight sessions reported markedly lower session quality than the other conditions. These low predicted scores could potentially be a marker of clients that are at-risk of dropout, in that they typically report low impact of sessions, and are reporting worse sessions than usual. While the cause of this decrement in session quality cannot be identified in this study, it could represent therapist nonresponsiveness to the client's desires for deeper exploration, to name just one example.

Techniques and Insight

The results of the interaction between different types of therapeutic techniques clearly suggests that the relationship between techniques is complex, and that when specific outcomes are of interest, the particular mixture of techniques in a given session as well as their typicality over the course of a treatment may be more important for prediction, in sum, than any particular technique. In addition, while some findings of this study are readily interpretable based on existing evidence and theory, others were quite surprising.

One surprising finding was the significant main effects for Exploratory techniques, both at the client and session levels, that were negatively associated with insight. Given that exploratory psychotherapies are often considered "insight-oriented," this may be counter-intuitive. While this does not necessarily mean that the use of these techniques inhibited insight (though that is one possibility) since the direction of causation cannot be determined in this data, it does suggest that these techniques were a reliable marker of lower insight achieved in a given session and also differentiated between clients in terms of their typical levels of insight across sessions. This is consistent with other studies that have suggested that frequency of psychodynamic interventions is not positively associated with treatment success (Piper, Azim, Joyce, & McCallum, 1991; Schut et al., 2005). This negative association could be due to the affectively-charged nature of these techniques, in that when therapists employ them in excess, clients have difficulty processing the material. That is, it is possible that when these techniques are frequent in sessions or across sessions, they have the potential to leave clients overwhelmed, which creates some resistance on the part of the client. In fact, certain authors have suggested that therapist use some of these techniques carefully in order to avoid eliciting negative reactions from clients. In one example, Clarkin, Yeomans, and Kernberg (2006) offer several suggestions

for using interpretations successfully, including that the therapist must be aware of "what within the patient's internal world is intolerable to [the patient] (p. 99)." They go on to specify four guidelines for competent interpretation in their psychodynamic therapy, which are aimed at helping to minimize resistance to the interpretive process.

One alternative possibility is that increases in these techniques may represent increases in therapist rigidity. There are times in psychodynamic therapy when the client rejects an interpretation. Both Schut et al. (2005) and Piper et al. (1991) have found that when therapists persist in their interpretation rather than flexibly adjusting to the client's reaction, negative outcomes (e.g., dropout) are more likely. Other alternate explanations are possible. For instance, the negative main effects could be found because the therapists used these techniques more when clients were not achieving insight (when they might have had the sense that their clients were stuck and in need of developing a new understanding), in an effort to help them do so, but the intended effects were not achieved, without requiring rigidity on the part of the therapist. Another possibility, related to Stiles' (1990) responsiveness problem in psychotherapy research, is that once insights are achieved in a session (through whatever mechanisms may be), therapists begin to decrease their insight-oriented technique use, which could account for these post-session reports. Given these plausible alternatives, as well as some additional experimental findings suggesting that at least certain exploratory techniques can increase occurrence of insight (Høglend et al., 2006; Johansson et al., 2010), future research is needed before appropriate conclusions can be drawn beyond the fact that exploratory techniques served as a good marker of lower insight across sessions and clients.

The significant interactions between different types of techniques in predicting insight provide only one clear interpretation: the relationship between techniques and insight is complex.

It appears that the typical techniques of a particular treatment set an important context for determining the impact that session-to-session differences in techniques are likely to have. Directive techniques in particular seem to have context-dependent effects: a session including more directive techniques than usual is associated with increased insight in some cases, but is also associated with decreased instances of insight in others. First, I will describe and explore each "treatment" type in Figure 3 individually, then offer broader interpretations.

The High-Directive, Low-Exploratory client is a client whose therapist typically reports high levels of CBT-inspired interventions but low levels of psychodynamic and humanistic interventions (Figure 3a). For these clients, sessions in which their therapist reports using even more directive interventions than usual are positively associated with insight only in sessions with higher than usual common factors as well. When common factors are low, the same level of increased directiveness is associated with less insight. One interpretation of this is that common factors, representing Frank's (1961) idea of a healing environment, are essential to facilitate insight when these clients experience more directiveness than usual for them. That is, clients who typically receive more directive techniques than the average client receive even more than is usual for their treatment, a higher level of common factors than usual for them is necessary in order to produce a session high in insight. Perhaps this speaks to the potent nature of directive interventions: at such high levels, additional attention to a supportive environment may be necessary. Further, when these clients receive a lower level of directiveness from their therapist than is usual, but the therapist reported higher levels of common factors than usual (in effect replacing the usual directiveness with an increased focus on a helping environment), clients report lower insight. However, a more laissez-faire approach than usual, in which the therapist is both less directive and provides less common factors than usual, is associated with increased

insight. This seems to suggest that in this latter case, the therapist is "letting the client do the work," rather than intervening more him- or herself, and the client is able to develop insight in this context, but less so when the therapist only provides more supportive common factors. It may also suggest that sometimes, even directive therapists become less directive once a client has achieved an important insight.

A similar pattern is found for clients with an opposite average mixture of techniques: Low directive, High exploratory. For these clients (whose therapists typically reported low levels of CBT-inspired interventions but high levels of psychodynamic and humanistic interventions), however, the session-level changes represented in Figure 3b may reflect importantly different processes than for those clients in Figure 3a. As in the High-directive, Low-exploratory clients, an increase over the typical level of directive technique use for these clients was only indicative of insight when common factors were also higher than usual, and otherwise were associated with lower levels of insight. However, in these high-directive sessions, the absolute level of directive techniques is likely lower than the accompanying point in Figure 3a, and the absolute level of exploratory interventions used is higher, due to the typical levels of techniques applied with these clients. One interpretation of this is that for these clients, directive techniques are somewhat foreign, and require specific attention to basic supportive common factors simultaneously in order to provide higher levels of insight. In contrast, sessions for these clients that were unusually low in directive techniques as well as common factors were also high in insight. If technical factors are facilitating the insight in these sessions, it would likely be that it is the high level of exploratory techniques that are typically provided to these clients are producing their intended effect, perhaps in part because a more "pure" form of the therapy is being applied. Indeed, there is some evidence (though inconsistent) to suggest that treatment

adherence and purity, rather than technical integration, can be beneficial (e.g., Luborsky, McLellan, Woody, O'Brien, & Auerbach, 1985). This also suggests that despite the negative main effects suggesting otherwise, there are clearly times when high levels of exploratory interventions are positively associated with insight, at least on the client level.

A client who typically receives equally low levels of both Directive and Exploratory techniques relative to other clients (Figure 3c) would seem to be engaging in a potentially supportive psychotherapy, but it is likely that the therapist is less active, generally, than other therapists (or less active with that client than they are usually). This may be similar to a Supportive Listening (see Borkovec & Costello, 1993) or so-called placebo therapy, in which the main task of the therapist is to not interfere with the client, but provide a listening ear. In this context, it seems that insight can be facilitated in at least two types of sessions. First, sessions especially low in directiveness but higher than usual in common factors are higher in insight, which may reflect the therapist providing simple helping skills and a warm, helping environment but not shaking the boat with additional techniques. The second situation is the opposite: high directive, low common factors sessions seem to facilitate insight for these clients as well. This could reflect a therapeutic "shock" to the system, in which the therapist provides the client with unexpected, explicit feedback or skill, say, by focusing on a specific problem in the client's life, but does not spend the usual time managing the relationship. This could be the equivalent of a good friend delivering negative feedback in a particularly blunt way: it may provide enough impetus to get the client thinking about their situation in new ways.

The most prominent feature of the High directive, High Exploratory interaction plot (Figure 3d) is that it is much flatter than the other plots. This suggests that the session-level differences in technique use – what the therapist could be changing in response to the situation –

are less important to creating insight when the average level of techniques is high. It could be the case that the high levels of diverse techniques on average creates a more consistent (less variable) experience of insight for the client, or that when techniques are this frequent, the variability may just be due to other therapeutic factors not assessed here (e.g., the therapeutic alliance). One type of psychotherapy that may sometimes fall in this category is Gestalt therapy (Perls, Hefferline, & Goodman, 1977), in which the therapist is very active and directive, but also exploratory (Beutler et al., 1991). In this treatment, the therapist intervenes quite frequently, often quite directively, and at times the therapeutic atmosphere can take on the air of an "argument" (Perls, Hefferline, & Goodman, 1977). In this treatment, this is a theoretically productive kind of session, and potentially provides more of the theorized necessary interventions. This may help explain why for these clients, sessions that were even higher than usual in directive, but lower than usual in common factors were associated with higher levels of insight: this is effectively a theoretically "pure" session.

A few observations can be made about this four-way interaction in more general terms. One interesting difference can be observed between those treatment types that were typically imbalanced with regard to Directive and Exploratory techniques versus those treatment types that were balanced. That is, both the high client-level Directive, low client-level Exploratory (High-Low; Figure 3a) and low client-level Directive, high client-level Exploratory (Low-High; Figure 3b) were similar to each other and different from both the Low-Low (Figure 3c) and High-High (Figure 3d) treatments. The imbalanced treatments (High-Low and Low-High) have steeper interaction lines, indicating that the interaction between session-level Directive techniques and session-level Common Factors was particularly important for predicting insight for these clients, whereas the flatter lines in the more balanced treatments (Low-Low and High-High) suggest that

it was relatively less important. It may be the case that when a client receives more evenly balanced directive and exploratory techniques, such that neither seems out of place to the client, the session-level changes in techniques have less of an impact. Perhaps for these clients, neither type of intervention is provocative enough to facilitate new understandings. Conversely, when a client is accustomed to a particular style of therapy, either directive or exploratory, session-level changes can have dramatic effects. Thus, it may be the case that more is "at stake" with deviations from either of these basic types of intervention: clients may get more insight or considerably less than usual. Therapists who are using a relatively "pure" intervention with a client (that is, using almost entirely either directive or exploratory techniques) would be advised to be cautious when using different interventions than usual, as this could either help or hinder an insight process.

Interestingly, in general, increases in both Common Factors and Directive techniques by therapists in a given session (compared to an average session with a particular client) are sometimes associated with more insight, and sometimes indicative of less. While it might have been expected that increases in directive techniques could be either positively or negatively associated with insight, it is surprising that common factors, which generally can be said to be the provision of the "helping" environment, are not always positively related to insight. Based on this, it would seem that therapists should not always seek to increase the level of these common factors that they are providing to a client, but rather that there are times when doing so can be associated with lower levels of new understanding. This finding appears to run counter to the prevailing notion of many common factors as essential conditions of change

It is also particularly interesting that the effect of increases and decreases in common factor use are dependent on the concomitant increases and decreases in directive technique use –

in some cases, the two seem to be synergistic, such that insight is achieved when both are used together, and in some cases providing one or the other can be facilitative of insight, but providing both may inhibit its development. This interaction between common and more orientation-specific techniques implies that the two sets of techniques are intrinsically related, rather than isolatable. This suggests that future research should attempt to account for both unique and common sources of interventions when investigating processes of change in psychotherapy.

Limitations and Future Directions

There are a few important limitations to this study. First, the observational nature of this design precludes inferences of causality. This is particularly important with regard to the relationship between techniques and ratings of insight and session quality, because in psychotherapy theory, manuals, and many published studies, the goal is to identify interventions that will promote therapeutic experiences. It is important to note that many of the effects found in this study may be explained through other mechanisms than the few suggested in this discussion, and that it may not be possible to fully capture the complexity of these results in any text. However, this rich information could also prove to be fertile ground for developing new, alternate hypotheses to the assumed causal path. In fact, the results reported here likely reflect the real complexity of psychotherapy techniques, and it may be difficult or impossible to replicate all of these findings with controlled and randomized experimental designs. However, experimental studies will be required to address these issues.

Additionally, based on these data, we cannot know that insight is universally a positive therapeutic event, particularly as assessed via client self-report. While post-session self-report may be likely to be sensitive to small shifts in clients' understanding that would be unavailable to other perspectives, it may also be insensitive to insights that are helpful in the long-term, but

unpleasant or difficult to understand within the therapy hour. Further research employing observer ratings of insight depth may be especially helpful in this regard. However, we also cannot say that a *lack* of insight is always *un*productive. In fact, it may be useful in psychotherapy to have "maintenance" sessions, in which the client does not achieve new understandings, but may solidify earlier beliefs and/or devise new plans for continuing progress.

There are many ways that this research can be extended. One potential set of future analyses could examine potential moderators of the technique-insight relationship. Such moderators may include phase of treatment, as it has been hypothesized that insights would be more or less important at different phases of treatment (e.g., Hill & Knox, 2008; Prochaska & DiClemente, 2003). Other moderators may include client variables (e.g., diagnosis, age, psychological mindedness), therapist variables (e.g., experience, competence, theoretical orientation), and relationship variables (e.g., therapeutic alliance, therapeutic presence). It would also be valuable to examine how insight and techniques relate to symptom reduction in time, which could address the question of whether insight occurs prior to or following successful symptom reduction, and what role techniques may play in this sequence as well. Though these and many other questions remain to be answered regarding the role of insight in psychotherapy as it relates to psychotherapeutic techniques, this study shows that clients in psychotherapy view insight as a positive session impact, and that therapists use a complex combination of different types of psychotherapeutic techniques in sessions high in insight. Because of this, the particular tools that a therapist might use to promote insight in clients will likely depend on they type of treatment being offered to each individual client.

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