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Appendix C
Vanderbilt Psychotherapy Process Scale (VPPS)

Appendix D
VPPS Factors and Item Composition

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Clinical Process Related to Outcome in Psychodynamic Psychotherapy for Panic Disorder

by

Cara F. Klein

A dissertation submitted to the Graduate Faculty in Psychology
in partial fulfillment of the requirements for the degree of Doctor of Philosophy,
The City University of New York

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Abstract

Clinical Process Related to Outcome in

Psychodynamic Psychotherapy for Panic Disorder

by

Cara F. Klein

Advisor: Professor Vera S. Paster

This study identified psychotherapeutic processes that relate meaningfully to psychotherapeutic outcome for patients with panic disorder undergoing Panic-Focused Psychodynamic Psychotherapy ([PFPP]; Milrod, Busch, Cooper, & Shapiro, 1997). Subjects were 21 patients who participated in an open clinical trial of PFPP (Milrod et al., in press; Milrod et al., 2000). Patients received 24 sessions over approximately 12 weeks. Each patient was diagnostically screened by an independent evaluator and completed a battery of outcome assessments at baseline, termination and 6-month follow up.

The present study utilized two process measures: the Interactive Process Assessment ([IPA]; Klein, Milrod, Busch, 1999), developed specifically to identify the process of PFPP; and the Vanderbilt Psychotherapy Process Scale ([VPPS]; Strupp, Hartley, & Blackwood, 1974), designed to capture nonspecific psychotherapy processes such as therapist warmth and friendliness and patient participation. Outcome measures represented a subset of those used in the open clinical trial: Panic Disorder Severity Scale ([PDSS]; Shear, Brown, Barlow, et al., 1997); Sheehan Disability Scale ([SDS]; Sheehan, 1983); and Hamilton Anxiety Rating Scale ([HARS]; Hamilton, 1969; 1959). To evaluate process-outcome relationships, partial

correlation coefficients that controlled for initial symptomatology were calculated between process factors at early, middle, and late treatment and outcome measures at termination.

The data provided mixed support for the predictions of this investigation. Results showed that the therapist's focus on the transference was associated with more positive therapy outcome when the focus occurred towards the end of these time-limited treatments. Conversely, results indicated that the therapist's focus on the transference early in treatment correlated with increased levels of non-panic specific anxiety and more impairment in quality of life functioning. In contrast to previous research, the present study suggested that therapists might wish to be cautious in adopting a warm and friendly stance too early in treatment. These findings suggest that the timing of psychotherapeutic interventions and therapist stance needs to be carefully considered. It was unclear from the present study how focusing on panic symptomatology affected the treatment. This process might be better investigated by comparing this aspect of PFPP with alternative psychotherapies.

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down and then righted it to a place I never knew it could be; her enthusiasm for each waking moment is contagious. To my in-laws and second family, the Kleins; I thank you all for your support and belief in me. A special acknowledgement to Michael, whose willingness to grapple with life's toughest issues has led him on a path similar to my own, about which I am considerably proud.

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Introduction

This study focused on a specific approach to treating panic disorder, Panic-Focused Psychodynamic Psychotherapy ([PFPP]; Milrod, Busch, Cooper, & Shapiro, 1997), and examined the relationship among process variables in this approach and outcome measures of patient's symptomatic progress. Can a relationship between process and outcome be identified, and, if so, what types of therapeutic transactions are correlated with better outcomes?

Most schools of psychotherapy claim superiority, yet many empirical studies show equivalent, largely positive outcomes among between different types of psychotherapy (e.g., Treatment of Depression Collaborative Research Program [TDCRP], Elkin et al., 1989). Despite this finding, forces such as managed care and third-party payment of mental health services continue to drive psychotherapy research toward empirical validation of specific kinds of treatments, usually manualized, via comparative outcome studies. As a result, less time has been spent investigating the question of what is therapeutic about psychotherapy. The linking of the domains of process and outcome in research renders answers from this perspective:

> ...whereas clinical theories and histories attempt to illustrate what psychotherapy *ought* to be, process research aims to determine what psychotherapy *is* and outcome studies seek to evaluate what therapy *does*. In these terms, process-outcome studies aim to identify the parts of what therapy is that, singly or in combination, bring about what therapy does (Orlinsky, Grawe, & Parks, 1994, p. 270).

Panic disorder is a chronic and debilitating condition that has generated a flurried effort to find treatments leading to rapid symptom abatement. While symptom-focused treatments, such as pharmacological and cognitive-behavioral therapies have been found to be effective in the short term, relapse remains high (Brown & Barlow, 1995; Mavissakalian & Michelson, 1986; Nagy, Krystal, Woods, & Charney, 1989; Noyes et al., 1990; Noyes, Garvey, & Cook, 1989; Noyes, Garvey, Cook, & Suelzer, 1991; Pollack et al., 1993; Rickels, Case, Downing, & Fridman, 1986; Sheehan, 1986; Tyrer, 1984; for reviews, see Milrod & Busch, 1996; Roth & Fonagy, 1996; Simon & Pollack, 2000; for alternative view, see Overholser, 2000). These unsatisfactory relapse rates in part have led to an examination of the viability of using a psychodynamic approach for panic disorder. There has been an unsubstantiated belief in clinical and academic communities that psychodynamic psychotherapies may require more time to achieve symptom relief than biological and behavioral approaches. However, clinical and case reports backed by some systematic research suggest that psychodynamic therapy for panic disorder may bring about relief as rapidly as other approaches. Additionally, it is hypothesized that psychodynamic psychotherapy may reduce relapse rates (Busch, Milrod, Cooper, & Shapiro, 1996; Milrod, 1995; Milrod et al., 2000; Milrod et al., in press; Milrod, Busch, Hollander, Aronson, & Siever, 1996; Milrod & Shear, 1991a; Renik, 1995; Stern, 1995; Wiborg & Dahl, 1996).

As empirical support grows for the use of psychodynamic psychotherapy for panic disorder, there is currently no known project designed to determine what specific components of this treatment are clinically effective. Such a process-

outcome study is essential for ascertaining how psychotherapists can utilize psychodynamic techniques both to help patients in acute crisis from panic disorder, and to reduce patients' vulnerability to panic recurrence. This knowledge has important training, research and educational implications, in terms of tailoring psychotherapeutic treatments to panic patients.

Is it therapeutically productive to explore the underlying, unconscious conflicts possibly responsible for panic symptoms? Is it helpful for therapists to offer patients a proposed link between panic symptomatology and underlying conflicts? Or is the patient's approach to psychotherapy more important than any particular therapist's intervention? Clinical theory is replete with views on these issues, yet very little empirical investigation has ensued. These are some of the questions which have been systematically approached in the present study.

Objectives of the Study

The main objective of this study was to examine what types of therapeutic transactions in dynamic psychotherapy were correlated with better outcomes for panic patients. The first step in such a process-outcome study was systematically to describe the process of psychotherapy as observed in actual treatments. A scale, the Interactive Process Assessment (IPA; Klein, Milrod, & Busch, 1999), developed specifically to measure key aspects of PFPP, was used to create a descriptive analysis of the clinical processes in 12-week psychotherapy treatments for 21 patients suffering from panic disorder, whose treatments had been recorded previously on videotapes. In addition, this study employed a second scale, the Vanderbilt Psychotherapy Process Scale (VPSS; Strupp, Hartley, & Blackwood, 1974), which is

intended to be largely neutral with respect to any particular theory of psychotherapy and be applicable to a wide range of therapeutic interventions. The VPPS measures such processes as the extent to which a patient is positively or negatively engaged in the treatment, and yields ratings of the quality of the relationship offered by the therapist.

The literature, reviewed in the following pages, supports the supposition that these process variables are related to therapeutic change. Thus, the second task of the present project was to identify the relationship between process variables, as delineated by the IPA and the VPPS, and outcome data on each subject's panic symptoms.

Literature Review

Panic Disorder

Panic disorder is characterized by the occurrence of unexpected periods of intense fear or discomfort, involving such symptoms as palpitations, sweating, shortness of breath, nausea, dizziness, and fear of losing control or of dying (*Diagnostic and Statistical Manual of Mental Disorders, 4th ed. [DSM-IV],* American Psychiatric Association, 1994). Panic disorder may be accompanied by agoraphobia, which occurs when fear of experiencing attacks leads people to avoid situations where panic may induce embarrassment or incapacity (*DSM-IV,* 1994).

Psychotherapy had traditionally been the predominant treatment for patients with panic disorder, but over the past three decades the use of medication has become the treatment of choice, alone or with adjunctive psychotherapy. Many panic patients are unwilling to take medications, however, and medical conditions or pregnancy prevent a substantial number of patients from utilizing pharmacological treatment. Moreover, the positive impact of medication appears to be short-term after discontinuation (American Psychiatric Association [APA], 1998; Brown & Barlow, 1995; Mavissakalian & Michelson, 1986; Nagy et al., 1989; Noyes et al., 1989; Noyes et al., 1990; Noyes et al., 1991; Pollack et al., 1993; Rickels et al., 1986; Sheehan, 1986; Tyrer, 1984; for reviews, see Milrod & Busch, 1996; Roth & Fonagy, 1996; Simon & Pollack, 2000).

Recent reviews of panic disorder treatment suggest that available psychotherapies are effective in the acute treatment of the disorder (APA, 1998; Roth & Fonagy, 1996). In particular, the use of cognitive-behavioral psychotherapies has

been extensively validated in empirical studies (e.g., Barlow, Gorman, Shear, & Woods, 2000). In their meta-analysis, however, Roth and Fonagy (1996) conclude that although these treatments are effective in reducing acute panic disorder, patients typically remain impaired in some way, either not reaching full recovery criteria or suffering from comorbid disorders. Relapse rates have been reported to be as high as 80% two years after termination of cognitive-behavioral treatment (Brown & Barlow, 1995; Mavissakalian & Michelson, 1986). Milrod and Busch (1996) also found that despite the demonstrated initial symptomatic relief, naturalistic follow-up studies of specific anti-panic treatment show high rates of relapse, ongoing impairment in functioning, and continued intermittent participation in psychiatric treatment, despite having experienced initial symptomatic relief from treatment in research protocols. Additionally, patients with panic disorder with agoraphobia, commonly associated with the illness, have a lower rate of success than those without agoraphobia (APA, 1998; Roth & Fonagy, 1996).

Psychodynamic psychotherapy was not included as a first line treatment in the most recent American Psychiatric Association Practice Guidelines for the Treatment of Panic Disorder (APA, 1998), nor was it recommended by Roth and Fonagy (1996) due to lack of empirical validation. Nevertheless, in 1991, Milrod and Shear found 35 cases in the literature with DSM-III-R panic disorder who had been successfully treated with psychodynamic psychotherapy or psychoanalysis alone. Since then, other successful psychodynamic treatments for patients with panic disorder have been reported (Busch et al., 1996; Milrod, 1995; Milrod et al., 1996; Milrod et al., 2000; Milrod & Shear, 1991b; Renik, 1995; Stern, 1995). These reports suggest that

psychodynamic treatment alone can bring symptomatic relief, perhaps as rapidly as psychopharmacologic or cognitive-behavioral interventions. Furthermore, Wiborg and Dahl (1996) demonstrated in a randomized controlled trial that a three-month, weekly, manualized psychodynamic psychotherapy plus clomipramine significantly reduced relapse rate over 18 months among patients with panic disorder in comparison to patients treated with clomipramine alone.

As researchers begin to subject psychodynamic psychotherapy for panic disorder to empirical study, a delineation of which factors may contribute to therapeutic change needs to be investigated. A discussion of the theory underlying how psychodynamic treatment works for panic disorder will be presented later.

Epidemiology of Panic Disorder

Epidemiologic data of panic disorder shows a lifetime prevalence rate of 1.6%-2.2%, an age of first onset in the twenties, and a twofold higher risk for females (Weissman et al., 1997). Panic disorder is most commonly not full-blown until early adulthood, although it has been described in children and adolescents (Moreau & Weissman, 1992). Agoraphobia is present in one-third to one-half of those who have panic disorder in community samples, with even higher rates in clinical samples (Weissman et al., 1997). The lifetime prevalence of comorbid major depression is 50%-60% (Lesser et al., 1989).

Family studies show that panic disorder is familial, with results from studies conducted in various countries including the U.S. showing the median risk of panic disorder to be eight times higher in first-degree relatives of probands with panic disorder than in the relatives of control subjects (Knowles & Weissman, 1995).

Results from twin studies have also suggested a genetic contribution (Kendler, Neale, Kessler, Heath, & Eaves, 1993a; Kendler, Neale, Kessler, Heath, & Eaves, 1993b).

Panic disorder is associated with high rates of medical and psychiatric utilization of services. Markowitz, Weissman, Ouellete, Lish and Klerman (1989) found that panic sufferers in the community had similar health and social consequences as people with major depression. Individuals with panic disorder reported having poor physical health, poor emotional health, a higher incidence of alcohol and drug abuse than those without a psychiatric diagnosis, and a higher incidence of attempted suicide (Rosenbaum, Pollack & Pollack, 1996; Weissman, Klerman, Markowitz, & Ouellette, 1989). Patients with panic disorder have the highest odds ratio of using general medical services compared with other groups of psychiatric patients: six or more times within six months (Simon & Van Korff, 1991; Weissman, 1991). Panic patients have the highest rate of morbidity and health care utilization relative to patients who have any other psychiatric diagnosis, or medical patients with no psychiatric diagnosis (Klerman, Weissman, Oullete, Johnson, & Greenwald, 1991). Patients with panic disorder account for 20-29% of emergency room visits (Swenson, Cox & Woszezy, 1992) and are 12.6 times as likely to visit emergency rooms as the general population (Markowitz et al., 1989).

Biological Considerations

Krystal, Deutsch and Charney (1996) review research over the past decade that suggests a neuroanatomical etiology of panic disorder. The results of "challenge studies" have suggested a network model of panic involving dysregulation of multiple neuronal systems. In these studies, panic is provoked under controlled laboratory

conditions by infusions of pharmacologic agents such as sodium lactate, caffeine, and carbon dioxide (CO_2), which mimics suffocation. According to the suffocation alarm theory (Klein, 1993), panic attacks are triggered by a hypersensitivity to CO_2, or other respiratory stimuli, which signals a shortage of available air. It is hypothesized that panic patients have a hypersensitive suffocation monitor, and any slight increase in CO_2 or related asphyxia-relevant cues such as breathing stale, stuffy air, triggers the "suffocation alarm." In challenge studies, subjects with no overt history of panic disorder show increased susceptibility to pharmacologic challenge if they have familial histories (Krystal et al., 1996).

The validity of challenge studies has been disputed, however. Critical reviews suggest that physiological responses of panic patients and normal control subjects are quite similar while their self-reported fear responses differ consistently (Margraf, Ehlers, & Roth, 1986). This finding suggests that it is the interpretation of bodily sensations after the infusion of the pharmacologic challenge which induces panic, not the substance itself. Thus, while there may be a biological contribution to the emergence of panic disorder, psychological factors are clearly evident.

From the behaviorist view, the challenge studies underscore the psychology shared by panic patients of a learned hypersensitivity to physical sensations, such as difficulty breathing (Barlow, 1988). As a result of interoceptive conditioning, the panic patient becomes vigilant to bodily sensations and reacts to these sensations anxiously, with subsequent increased physiological arousal.

Although they provide evidence of panic patients' hypersensitivity to changes in respiratory conditions, challenge studies have not verified the chronological

relationship between increased anxiety and respiratory disturbances. It remains unclear, therefore, whether panic patients suffer from excessive neuroanatomical respiratory reactions which trigger anxiety, or have learned to react hypersensitively to bodily sensations, which drives changes in breathing, or some combination of both.

Cognitive perspective

The cognitive model of panic posits misinterpretation of bodily sensations as central to the disorder. From this view, misinterpretation is catastrophic, such as believing that anxiety-induced palpitations indicate a heart attack (Clark, 1986). Panic patients report that thoughts of imminent danger accompany their attacks (Beck, 1988). The strategy of cognitive therapy is to change faulty cognitions as a means to circumvent the panic reactions. Cognitive theorists do not offer explanations for the origins of these faulty cognitions nor do they believe it is necessary to explore these origins in treatment.

Psychoanalysis and Panic Disorder

Psychoanalysts believe that unconscious conflict triggers panic attacks. While a hallmark of panic disorder is patients' reports that their attacks "come out of the blue," a study of psychodynamic interviews with panic patients revealed that meaningful life events such as divorce or death of a loved-one often preceded panic onset, and that these stressful events were linked to frightening experiences in childhood associated with relationships with important attachment figures (Busch et al., 1991). Shear, Cooper, Klerman, Busch and Shapiro (1993) further reviewing the interviews, found that panic patients experienced early life anxiety and shyness, unsupportive parental relationships, and a chronic sense of feeling frustrated and

resentful. Panic patients also have difficulty acknowledging negative affects and managing anger (Busch et al., 1991; Shear et al., 1993).[1]

These findings are consistent with Freud's observations of what he described as "anxiety neurosis." Freud noticed that individuals suffering from anxiety neurosis experienced difficulty asserting themselves, chronic anxious expectation that frightening things might happen to them or to those they love, and high levels of anxiety associated with separations from important love objects (Freud, 1895/1961).

Because "panic disorder" was only recognized as a discrete disorder in 1980 with the publication of the 3rd edition of the DSM (*Diagnostic and Statistical Manual of Mental Disorders, 3rd ed. [DSM-III]*; American Psychiatric Association, 1980), the psychoanalytic literature since Freud's theory of "signal anxiety" (1926/1961) has primarily focused on "anxiety" as underlying psychological disorders in general rather than on the type of distinct disorder first identified by Freud in 1895. Recently, however, psychoanalysts have integrated Freud's ideas into contemporary psychiatric diagnostic views concerning the discrete status of panic disorder. Silber's report (1989) of a patient seen in psychoanalysis emphasized the psychological antecedents of his patient's panic attacks and contrasted sharply with the prevailing psychiatric orientation toward panic as exclusively organic and physiological.

Like Freud's conception of anxiety neurosis (1895/1961), contemporary psychodynamic formulations of panic disorder (Busch et al., 1999; Busch, Milrod, &

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[1] Psychodynamic formulations of panic disorder, from Freud to the present, consider the contribution of biological vulnerabilities to panic. Freud (1895) cited heredity vulnerability, and contemporary psychodynamic researchers cite the neurophysiological aspects of the illness (Busch et al., 1991).

Singer, 1999; Milrod, Busch, Cooper & Shapiro, 1997; Shear et al., 1993) do not consider the syndrome separate from complex characterological issues. In clinical practice, this formulation has meant that the symptoms can be understood in the context of underlying psychological conflicts. Milrod et al. (1997) suggest that the lack of focus on underlying issues in other types of treatments, from cognitive behavioral to psychopharmacological, explains the high relapse rate of panic disorder post-treatment. Treatment strategies that consider symptoms separately from personality, according to Milrod et al., leave patients vulnerable to recurrence. The use of psychodynamic psychotherapy, therefore, with its focus on intrapsychic conflict and personality underpinnings may be uniquely suited to address panic vulnerability (Milrod et al.).

Psychodynamic Formulation of Panic Disorder

According to Freud's theory of "signal anxiety" (1926), in childhood, before the ego and its functions have fully developed, the immature psychic apparatus is overwhelmed by stimuli which can cause traumatic anxiety. As children grow older, they maintain a storage of memories which shape their understanding of reality. Meanwhile, the ego function of anticipation is developed, and the child can anticipate dangers based upon his or her understanding of reality. The ego is now equipped to give a signal of anxiety, which acts as a stimulus for its defensive operations, aimed at preventing overwhelming, traumatic anxiety. Milrod (1995) views panic disorder as a manifestation of early traumatic anxiety. The individual prone to anxiety attacks has not developed an autonomous and firmly established ego, and the signal anxiety function too readily does not function, leading to traumatic anxiety or panic attacks.

For this reason, it is hypothesized that the anxiety is often allayed by the close proximity of a love object or a phobic companion (Milrod, 1995).

Individuals suffering from panic disorder may have suffered a traumatic developmental experience which led to feelings of inadequacy and fearful dependency on others who are believed to be needed to cope with unfamiliar situations (Busch et al., 1999; Milrod et al., 1997; Shear, et al., 1993). It is hypothesized that in childhood, the individual prone to panic idealizes the caretakers on whom he (or she) depends and is quick to become angry when the caretaker falls short of his idealization. The child believes that his rageful fantasies will destroy the caretaker upon whom he depends, and his anxiety levels and fearful dependency increase. Anxiety reaches panic levels with the failure of the ego's signal anxiety function, which is unable to modulate anxiety signals. In adulthood, when threats to attachments trigger regression and these conflicts reemerge, panic attacks ensue.

In addition to pre-Oedipal attachment conflicts, recent formulations include Oedipal contributions as well (Busch et al., 1999). Pre-Oedipal dynamisms concerning conflicts over attachment intensify in the face of Oedipal longings. According to this understanding, fantasized or actual successes and sexual fantasies or acts, associated with Oedipal victories, serve as triggers for panic episodes. Unfulfilled sexual wishes become a source of severe disappointment and rage, resulting in the regressive, dependent state of panic. Busch et al. (1999) propose that this regressive state can be linked with homosexual fantasies which further frighten the panic patient, resulting in a reactive, aggressive Oedipal stance. The panic

episode, they hypothesize, represents a compromise formation as a way of dealing with these conflicts.

Milrod (1995; Milrod et al., 1997) also emphasizes sexual conflicts in panic patients. For some patients, the attacks can have an exciting and arousing quality to them which can be linked to sadomasochistic sexual conflicts. Milrod et al. (1997) suggest that this excitement can represent "a distraction from more disturbing thoughts and fantasies" (p. 45) and that such individuals are often reluctant to rid themselves of panic attacks, despite their apparent suffering. Milrod (1998) has also identified unconscious pregnancy fantasies as a dynamic organizer of panic experiences, in terms of the fantasies' inherent quality of restitution with attachment figures via a regressed identification with a baby.

Based upon these psychodynamic formulations which emphasize panic patients' difficulty with ambivalent and angry feelings towards attachment figures and significant others, Busch, Shear, Cooper, Shapiro, & Leon (1995) hypothesized that panic patients would primarily use defenses that protect the depended upon object against angry feelings and impulses, such as reaction formation, displacement, and undoing. Accordingly, in a study comparing the use of defense mechanisms in panic disordered versus dysthymic patients, Busch et al. (1995) found a heightened use of reaction formation and undoing among panic patients, although not of displacement. In this study, both panic and dysthymic patients frequently used denial and repression. While the authors of the study point out that without a comparison with subjects with no psychiatric diagnosis their findings are preliminary, the

clinician's awareness of panic patients' frequent use of specific defenses may be useful.

Panic-Focused Psychodynamic Psychotherapy ([PFFP]; Milrod, Busch, Cooper & Shapiro, 1997)

Within the frame of contemporary psychoanalysis, a set of specific recommendations for the psychodynamic treatment of individuals with panic disorder has been offered. Panic-Focused Psychodynamic Psychotherapy (PFPP; Milrod et al., 1997), based upon the clinical observations outlined above, was developed to address the particular dynamic complexities of panic disorder.

The following summary of PFPP is drawn from the *Manual of Panic-Focused Psychodynamic Psychotherapy* (Milrod et al., 1997). One major distinction of PFPP from a generic psychodynamic treatment is its authors' suggestion that the therapist maintain a sustained focus on the symptoms of panic attacks and accompanying agoraphobia. PFPP differs from cognitive-behavioral treatments, however, in its emphasis on using this symptom focus as a starting point for uncovering unconscious psychological origins of patients' panic attacks.

In contrast to other treatments for panic disorder, in PFPP anxiety is viewed as one facet of a complex array of feelings and symbolic thoughts which reveal themselves only upon dynamic exploration of an attack. Unconscious angry feelings, for example, are a frequent accompaniment to panic. Milrod et al. (1997) delineate several common themes which emerge over time in psychodynamic psychotherapy, including conflicts over separation and independence, aggression, and sexuality. The particular difficulties of promoting the working through process with panic patients are highlighted in the PFPP approach, and defense mechanisms are stressed because

of their role in anxiety management. Because panic patients commonly somatize, therapists are encouraged to investigate bodily representations with scrutiny in unconscious fantasies and dreams.

In PFPP, attention is paid to the transference. Panic and anxiety symptoms are interpreted as they arise in the context of the transference, and efforts are made to connect genetic and present relationship patterns with the transference relationship. Special issues may arise in the treatment of panic patients concerning phobic companions, who patients may initially insist be present during sessions. Even after phobic companions are forsaken, intense conflicts over issues of loss, separation and independence may emerge saliently as termination nears.

Psychotherapy Research

As contemporary researchers increasingly agree that psychotherapy is effective in the treatment of psychiatric disorders (Lambert, Shapiro, & Bergin, 1986; Seligman, 1995; Smith, Glass, & Miller, 1980), there has been a shift towards focusing on more precise questions, such as which of the over 400 different schools of psychotherapy (Kazdin, 1986) works, and for whom. Psychotherapy researchers, seeking to determine answers to these questions, have been stymied: outcome studies comparing psychotherapies consistently fail to show systematic differences in the effects of the treatments (Elkin et al., 1989; Miller & Berman, 1983; Smith et al., 1980). For example, the highly-regarded National Institute of Mental Health-sponsored Treatment of Depression Collaborative Research Program ([TDCRP]; Elkin et al., 1989), widely considered the most methodologically sound outcome

study to date, yielded few differences in effectiveness at post-treatment among four treatments, two of which were different forms of psychotherapy.

In addition to the recent TDCRP study, meta-analyses of past investigations (e.g., Lambert & Bergin, 1994) also show small to negligible differences among outcomes of different psychotherapies. While psychotherapy does appear to be significantly more effective than no psychotherapy, even placebo therapies fare better than no therapy, with a mean effect size of .48 (Lambert & Bergin, 1994).

Luborsky, Singer and Luborsky (1975) evoked the whimsical metaphor of the Dodo bird's verdict in *Alice's Adventures in Wonderland* (Carroll, 1946) to describe the dilemma of equivalent effectiveness: "*Everybody* has won and *all* must have prizes" (italics in original). Indeed, it seems that different types of treatments appear to achieve similar outcomes, and those outcomes are, for the most part, positive.

Blatt & colleagues (Blatt, Zuroff, Bondi, & Sanislow, 2000) have argued that equivalent outcomes may be the result of a restricted range of outcome variables. In a further analysis of the TDCRP data utilizing previously unexamined outcome ratings, Blatt et al. (2000) did, in fact, find differences in outcome among the four treatments. At 18-month follow-up, patients in IPT reported greater satisfaction with treatment, and patients in IPT and CBT both reported significantly greater effects of treatment on their capacity to establish and maintain interpersonal relationships and to recognize and understand sources of their depression.

Others (e.g., Garfield, 1990) assert that the dilemma of equivalent outcome underscores the inadequacy of studying outcome alone without regard to process.

Process-outcome research is the search to learn what specifically promotes therapeutic change.

Process-Outcome Research

Orlinsky and Howard (1986) defined psychotherapy "process" as "everything that can be observed to occur between, and within, the patient and the therapist during their work together." Capturing the essence of this process has proved to be an ongoing challenge for psychotherapy researchers. Linking the processes of psychotherapy to outcome has presented another formidable task. Traditionally, the study of the efficacy of psychotherapy did not include a consideration of process. Despite early work by Carl Rogers (e.g., 1954) linking process and outcome, psychotherapy process research and psychotherapy outcome research have had separate histories marked by debate over substantiating methodologies and putative empirical evidence. Criticisms emanated from within each field and were directed toward the other. Outcome researchers saw little value in studying process without regard to outcome. They complained about the use of nonempirical methods by process researchers (Beutler, 1990). At the same time, process researchers pointed to the inability of outcome research to inform clinicians of which factors or variables produced results (Garfield, 1990). During the past two decades, some in each camp have begun to see the relative value in the other's work (e.g., Bergin & Garfield, 1994; Greenberg & Pinsof, 1986).

The study of process in relation to outcome is still an evolving field. Researchers have developed numerous methods to capture the range of processes considered meaningful in relation to therapeutic change. Process-outcome research

efforts vary greatly in approach, from examining linguistic units of speech in a single session (e.g., Hoelzer, Mergenthaler, Pokorny, Kaechele, & Luborsky, 1996) to examining the overall relationship between therapist and patient in an entire treatment (e.g., Safran, Crocker, McMain, & Murray, 1990). Identified processes usually coincide with researchers' theoretical inclinations, as attempts are made to validate clinical hypotheses.

The fusing of outcome and process research has generated valuable data which neither emphasis could produce alone. Stiles (Stiles, 1999; Stiles, Shapiro, & Elliot, 1986), referring to the similarity in outcome across treatments, observes that we have an "equivalence paradox"—"the apparently equivalent effectiveness of different therapies in contrast to the apparent nonequivalence of their processes." When Stiles' assertion about the "nonequivalence of [therapy] processes," has been empirically examined, however, researchers have found surprising similarities between psychotherapy processes across different treatments.

Ablon and Jones (1999) analyzed the process of two therapies from the TDCRP data and, as expected, found that there were important areas of differences between the interpersonal psychotherapy (IPT) and cognitive-behavioral psychotherapy (CBT). IPT was characterized by more focus on interpersonal, love, and romantic relationships. Memories or reconstructions of infancy and childhood were also more frequently topics of discussion. CBT focused more on cognitive themes and homework for the patient to perform outside of session. Important areas of overlap were also identified, however, in therapist activity as well as patient response. Notably, some process variables which seemed related to outcome

overlapped in the two psychotherapies. Processes related to outcome in both CBT and IPT were largely patient characteristics, such as feeling helped, achieving a new insight, and commitment to psychotherapy (Ablon & Jones, 1999).

Thus, studying process alone yielded important information about what went on in the two different therapies. Such findings, without further analyses in relation to outcome, might have suggested that future efficacy research ought to be more stringent in adhering to one particular type of treatment and excluding characteristics of any other. By linking process to outcome, Ablon and Jones' (1999) were able to identify overlapping processes essential to outcome in both modalities. Using this information, clinical researchers can then seek to tailor treatments to achieve these goals; for example, if achieving a new insight is productive, then how can a therapist best help the patient to achieve such an insight, regardless of theoretical orientation?

Efforts to categorize the growing body of disparate research variables in process-outcome investigations have yielded varying perspectives on what constitutes "psychotherapy." In their comprehensive review of the process-outcome literature, Orlinsky & Howard (1978; 1986) constructed a "Generic Model of Psychotherapy." As described, this model contained five conceptual elements which comprise the "active ingredients" in the psychotherapeutic process: the therapeutic contract; therapeutic interventions; the therapeutic bond or alliance; patient self-relatedness (the ability to absorb the impact of therapeutic interventions and the therapeutic bond); and therapeutic realizations (insight, catharsis, etc.) (Orlinsky & Howard, 1986, p. 312).

In an updated version of this comprehensive review, the authors (Orlinsky, Grawe, & Parks, 1994) amend the Generic Model of Psychotherapy to include aspects of psychotherapy highlighted by more recent research. The updated generic model, which is an attempt to describe psychotherapy process on a higher conceptual level, identifies six therapy process elements: a formal aspect (therapeutic contract): a technical aspect (therapeutic operations); an interpersonal aspect (therapeutic bond); an intrapersonal aspect (self-relatedness); a clinical aspect (in-session impacts); and a temporal aspect (sequential flow) (Orlinsky et al., 1994, p. 279).

The present review includes findings germane to psychodynamic psychotherapy. A comprehensive bibliographic resource on the relation of process to outcome can be found in Orlinsky and Howard's 1986 review.

Psychodynamic Psychotherapy and Process-Outcome Research

Traditionally, psychoanalysis and psychoanalytically-oriented or psychodynamic psychotherapies have not been guided by experimental studies looking at group differences. However, recently a small but growing body of empirical studies on various aspects of these therapies has appeared. Recent research that explores central tenets of psychodynamic therapy includes studies of transference interpretation and psychodynamic formulation, as well the study of the therapeutic alliance (Henry, Strupp, Schacht, & Gaston, 1994).

Transference and Psychodynamic Formulation

Early research focusing on the transference examined the importance of interpreting the transference as frequently as possible (Malan, 1976; Marziali, 1984). The idea was based upon Freud's (1912/1958) notion of the analysis of the

transference as curative. Malan (1976) and Marziali (1984) showed a significant correlation between the frequency of transference interpretations and positive outcome. However, both Malan and Marziali's research have been criticized for methodological problems (Frances & Perry, 1983; Piper, Debbane, de Carufel, & Bienvenu, 1987), and their findings have not been replicated (Piper et al., 1987; Silberschatz, Fretter, & Curtis, 1986). In fact, some studies have suggested that frequent transference interpretations can lead to patients' feeling criticized and withdrawing prematurely from treatment (Piper, Azim, Joyce, & McCallum, 1991).

Weiss and colleagues at the Mount Zion Psychotherapy Research Group (Weiss, Sampson, and the Mount Zion Psychotherapy Research Group, 1986; Weiss, 1993) suggest that psychotherapy is a process in which the patient works to disconfirm his or her pathogenic beliefs with the help of the therapist, and that this process is worked out in the transference. The psychotherapy in this research emphasized the transference relationship as an opportunity for a "corrective emotional experience" (Alexander, 1950).

Weiss et al.'s (1986) first attempt to validate empirically their "control-mastery theory" centered on a detailed examination of a single patient's psychoanalysis that continued for over a decade. The psychoanalyst in this case had not previously been exposed to Weiss et al.'s theory, and the case formulation was generated retroactively by two groups of experienced clinicians, one a group of classically oriented analysts, and another a group of clinicians familiar with control-mastery theory. Weiss et al.'s group postulated that the patient, Mrs. C., would "work to change her pathogenic beliefs about her exaggerated sense of responsibility for

others and about her fear of hurting them...She would struggle (especially in relation to the analyst) to change the pathogenic beliefs underlying her separation guilt, survivor guilt, and Oedipal guilt" (Weiss et al., 1986, p. 162). They hypothesized that her progress in psychotherapy would be predicated upon the analyst's ability to pass the patient's tests. The classically oriented group proposed that Mrs. C would attempt to obtain gratification of central unconscious conflicts from the analyst, and that improvement was contingent upon the analyst's efforts to "frustrate" the transference demands by responding in a neutral manner.

Raters read over transcripts from the first 100 hours of the case and identified incidents that involved the patient making demands on the analysts, such as attempts to obtain reassurance, support, advice, or more active participation. The incidents were then rated by two additional groups of analysts, one which adhered to control-mastery theory and the other which adhered to the classical view, on the degree to which the treating analyst behaved in accordance with the respective theories. An objective examination was then made of improvement in relation to the incidents, measured by such in-session behavior as the quality of the patient's here-and-now experiencing, her boldness versus inhibition, her freedom and relaxation in session, and her level of fear, anxiety, love, and satisfaction. Differences between the patient's post-intervention and pre-intervention scores on each of the variables were correlated with the measures of the analyst's behavior. Four of the eight correlations were statistically significant and all correlations supported Weiss et al.'s hypothesis, i.e., that the patient's improvement was related to the analyst's apparent ability to pass the patient's tests.

In addition to this single case analysis, the Mount Zion Psychotherapy Research group has investigated their theory with brief psychodynamic therapy. For example, Silberschatz et al. (1986) studied three patients in 16-session psychodynamic psychotherapy. They compared the control-mastery theory with the hypothesis, advocated by Malan (1976), that frequent transference-focused interpretations are the key to therapeutic change. Silberschatz et al. (1986) found no evidence that frequent transference interpretations were connected to improved therapy process. They found instead that there was a strong relationship between the compatibility of the therapist's interpretations with the patient's unconscious plan for therapy and improvement in the therapy process, as shown by immediate positive response in session and better outcome at the end of treatment.

Luborsky and colleagues have also studied psychodynamic formulations (Crits-Christoph et al., 1988; Crits-Christoph, Cooper & Luborsky, 1988; Luborsky & Crits-Christoph, 1990). Based upon a traditional model of the transference, Luborsky and colleagues view the patient's expression of attitudes and behaviors in the current relationship with the therapist as derived from early conflictual relationships with significant parental figures. They have developed a systematic methodology for arriving at a structured, dynamic case formulation centering around the transference, called the Core Conflictual Relationship Theme ([CCRT]; Luborsky & Crits-Christoph, 1990). The CCRT can be used to evaluate the accuracy of therapist's interpretations.

In research, the CCRT is distilled from the content of interpersonal narratives, referred to as relationship episodes, which are extracted from therapy session

transcripts. The CCRT method identifies patterns and the relationship conflicts in the episodes in three ways: *wishes toward others, responses of others, and responses of the self.* The combination of the most frequent of these components across the narratives is designated the CCRT. The therapist's ability to accurately interpret the patient's CCRT is key to therapeutic success. Using the CCRT method, Luborsky & colleagues (Crits-Christoph et al., 1988; Crits-Christoph, Luborsky, et al., 1988; Luborsky & Crits-Cristoph, 1990; Luborksy, Crits-Christoph, Mintz, & Auerbach, 1988) have found that accurate interpretations—or interpretations which were in line with independently judged CCRT's—lead to more benefits from treatment, including decreased level of distress and positive change in overall mental health. These benefits were found to be independent of technical and relationship factors in the therapy (Luborsky et al., 1988).

The CCRT theory is similar to Weiss et al.'s (1986) control-mastery theory in its emphasis on decoding a case formulation which is taken to be "accurate" in one objective sense. According to both theories, the therapist's interventions must be in line with the case formulation; the accurate alignment can be in accordance with the patient's unconscious plan for therapy (Weiss et al., 1986), or with the patient's core conflictual relationship theme (Luborksy & Crits-Christoph, 1990). Research on the accuracy of interpretation has been criticized for relying too heavily on biased judgments of how to define "correct" in terms of a specific theoretical orientation (Garfield, 1990). Garfield (1990) points out that a "correct" interpretation according to Freudians, for example, is unlikely to be the correct "Adlerian, Jungian, or Sullivanian interpretation" (p. 276). The contrast between control-mastery theory

and the CCRT method highlights how theory can drive the dynamic formulation. Although it is clear that the formulations of Weiss and colleagues and Luborsky and colleagues are quite distinct from one another, the "accuracy" of each formulation can be empirically validated.

Garfield (1990) believes that the interpretation slated to have the most therapeutic impact is the one which is *accepted* by the patient. A study by Mendel (1964) supports this view. Four patients in intensive psychotherapy were offered six "all-purpose" interpretations, such as "You seem to live your life as though you are apologizing all the time." After receiving the same series of interpretations given about a month apart, each of the four patients responded with a drop in anxiety. Mendel (1964) draws on this finding to understand the apparent equivalency of different types of psychotherapy:

> The change that occurs in the existence when it moves from the pre-interpreted state is to a large extent the result of making sense out of nonsense, of assigning meaning to apparently meaningless sequences, and of explaining and calling by name those forces which push, pull, and drive us in many directions. We cannot alter many of these forces but we can master them by reflecting, understanding, and explaining. Perhaps the recognition of this independent aspect of interpretation can help us to understand how it is possible that so many approaches formulated from divergent conceptualizations of behavior can lead to improvement in the patient (p. 184).

The Therapeutic Alliance

The therapeutic alliance has been emphasized as an important predictor of outcome in many forms of psychotherapy (Bordin, 1979; Gaston, 1990; Gelso & Carter, 1985; Martin, Garske & Davis, 2000; Orlinsky, Grawe & Parks, 1994; Pinsof & Catherall, 1986; Safran et al., 1990). Gaston (1990) defined the therapeutic alliance

as a multidimensional construct comprising four dimensions: the patient's capacity to purposefully work in therapy; the patient's affective bond to the therapist; the therapist's empathic understanding and involvement; and the patient-therapist agreement on the treatment goals and tasks. Bordin (1979) defined the working alliance as the patient's positive collaboration with the therapist in the treatment situation, in terms of agreement of therapeutic tasks and goals, and the development of bonds of mutual trust, acceptance, and confidence between patient and therapist.

The work of Carl Rogers (1951) on the therapist's contribution to the relationship propelled the idea of a link between alliance and outcome into the forefront of psychotherapy research. Rogers believed that the therapist had to provide certain facilitative conditions in the therapy relationship, including empathy, genuineness, and warmth, in order for therapy to be successful. Empirical studies (Rogers, 1951; Rogers & Dymond, 1954) of this hypothesis appear to support this view. Over time, research broadened to include the patient's contribution to the alliance. The strength of the therapeutic alliance-outcome association has been studied across a variety of psychotherapies (Henry et al., 1994).

Many questions concerning the definition, structure, and function of the alliance remain unanswered (Henry et al., 1994). For example, the therapeutic alliance has been criticized for being a diffuse construct that can be confused with treatment process as a whole (Ablon & Jones, 1999; Frieswyk et al., 1986). Crits-Christoph & Connelly (1999) caution that despite evidence pointing towards the influence of the alliance on psychotherapy outcome, the alliance in itself may not

account for observed changes. They encourage the study of the interaction between technical factors and nonspecific relationship factors.

The Vanderbilt Psychotherapy Project

Based in large part upon Orlinsky and Howard's (1967; 1978; 1986) formulation concerning the active ingredients of psychotherapy (which, as outlined earlier, includes aspects of the therapeutic alliance and the therapist's interventions, and the patient's ability to absorb them), Strupp and colleagues at Vanderbilt University have extensively investigated the relationship of process to outcome. The Vanderbilt project consisted of two studies: Vanderbilt I compared the effectiveness of highly experienced psychotherapists to lay counselors and focused on the relative contribution of specific and nonspecific factors to therapy outcome, and Vanderbilt II sought to study the effects of training in time-limited dynamic psychotherapy on process and outcome. The Vanderbilt Psychotherapy Project yielded the development of the Vanderbilt Psychotherapy Process Scale (VPPS; Strupp et al., 1974), a measure intended to assess the process variables expected to facilitate or impede progress in therapy.

Strupp and colleagues (Suh, Strupp, O'Malley, 1986) cite the work of various authors, in addition to Orlinsky and Howard, in the conceptualization of their process variables. The inclusion of patient process variables, which will be detailed below, is based upon work by psychodynamic theorists, who emphasize patient willingness and capacity for being involved in therapy exploration, as well as work by Frank (1973), who places more importance on the "nonspecific factor" of patient involvement, rather than on such specific factors as therapist technique. Psychodynamic theorists

emphasize exploratory process as being a major determinant of therapeutic outcome (e.g., Bibring, 1954; Langs, 1973), while Rogers (1951) stresses the importance of the relationship offered by the therapist in producing therapeutic change.

In developing the VPPS, Strupp and colleagues were particularly interested in the therapeutic relationship. Hartley & Strupp (1983) emphasize five aspects which they consider to comprise the therapeutic alliance: the real relationship between the patient and the therapist; the working alliance; the patient's contribution to the alliance; the therapist's contribution of the alliance; and the contribution of the therapeutic situation. The VPPS dimensions of patient involvement and therapist-offered relationship are considered to be related to the therapeutic alliance.

The Vanderbilt I study was designed to compare the effectiveness of highly experienced psychotherapists to lay counselors, college professors who were selected for their ability to form warm and empathic relationships with their students (Strupp & Hadley, 1979). The surprising finding of equivalent outcomes pointed towards the need to investigate the salient aspects of the therapeutic dyad. It should be noted, however, that a subsequent reappraisal of the data (Suh & Strupp, 1982, cited in Suh et al., 1986) contradicted the first analysis, finding that professional therapists were more effective than the untrained college professors. Using the VPPS, the research team found that varying theoretical orientations of therapists could be distinguished (Gomez-Schwartz & Schwartz, 1978).

The Vanderbilt team sought to identify those aspects of psychotherapy that were predictive of outcome. Using data from the same study, Gomes-Schwartz (1978) subjected the VPPS to a principal components factor-analysis from which

seven subscales were derived, but one of them (Therapist Directiveness) did not correlate with outcome. A later factor analysis of VPPS items by O'Malley, Suh, & Strupp (1983) yielded the following seven factors: a) Patient Exploration, b) Therapist Exploration, c) Patient Participation, d) Patient Hostility, e) Therapist Warmth and Friendliness, f) Negative Therapist Attitude, and g) Patient Psychic Distress. These subscales were combined into three broad process dimensions: a), b) and g) combined into *exploratory processes*, c) and d) into *patient involvement*, and e) and f) into *therapist-offered relationship*. Gomes-Schwartz (1978) performed multiple regression analyses on each of these three process dimensions in relation to outcome. In her analysis, patient involvement was the most robustly related to outcome, while exploratory processes and therapist-offered relationship predicted outcomes as well, but weakly.

O'Malley et al. (1983) utilized the revised version of the VPPS to investigate the predictive relationship of the three process dimensions identified by Gomez-Schwartz's (1978) factor analysis. The authors sought to ascertain which of the beginning three sessions of treatment best predicted outcome. They found that the third session of therapy was the most valuable in predicting outcome, and that the process dimension of patient involvement again correlated most robustly with outcome. This study suggests that important aspects of the therapy relationship are established very early in treatment. However, the study also shows that it takes approximately three sessions for these aspects of the therapy relationship to develop (as the results showed the absence of a predictive relationship in the first and second session). Thus, it appears that the VPPS dimension of "patient involvement" taps the

development of this involvement via the relationship rather than as a static characteristic of the patient (Suh, et al., 1986).

In order to investigate how the therapists were contributing to outcome, Suh & O'Malley (1982, reported in Suh et al., 1986) examined the data from O'Malley et al.'s study (1983) with a different emphasis. The authors divided the patients into low and high outcome groups as well as into favorable and unfavorable prognostic categories. Prognostic categories were based upon process ratings on the VPPS Patient Participation subscale from the first session. Then, they grouped the patient sample on two dimensions—predicted outcome and actual outcome—hoping to study the therapist variables in those cases with a significant discrepancy between their expected outcome and their actual outcome. In this way, for example, the authors could examine what the therapist might have done to help facilitate therapeutic change with patients who achieved high outcomes despite unfavorable prognoses. Outcome measures consisted of target complaint ratings from therapist, patient, and independent evaluator's perspectives, overall improvement ratings made by therapists and evaluators, and residualized Minnesota Multiphasic Personality Inventory (MMPI) maladjustment change scores from the patients. No measures of DSM psychiatric diagnoses were included.

When the VPPS therapist scale scores were examined according to these four prognosis-outcome categories, differences in therapist characteristics were observed. For patients who had a favorable prognosis and a high outcome, therapist behavior was characterized by increases in Therapist Warmth and Therapist Exploration across sessions. Only two out of seven patients who were marked as having a favorable

prognosis had a low outcome. These two patients' therapists had high initial levels of Negative Therapist Attitude, which increased across sessions, as well as decreased levels of Therapist Warmth and Therapist Exploration across sessions. For the patients who achieved a high outcome despite an unfavorable prognosis, the therapists showed an increase in Therapist Warmth and Therapist Exploration across sessions. Three out of four patients also showed large increases in Patient Participation across sessions concomitant to the increase in therapist characteristics just described. Therapists for patients with unfavorable prognosis who had low outcomes showed high levels of Negative Therapist Attitude initially, and a decrease in Therapist Warmth over sessions. These findings, although based upon a small sample, suggest that the therapist can effect a change in the relationship over time which can help facilitate better outcomes.

The Vanderbilt II study looked at the effectiveness of therapist training on therapeutic outcome. Outcome measures were the same as for the Vanderbilt I study, and included target complaint ratings from therapist, patient, and independent evaluator's perspectives, overall improvement ratings made by therapists and evaluators, and residualized Minnesota Multiphasic Personality Inventory (MMPI) maladjustment change scores from the patients. There were no measures of DSM psychiatric diagnoses.

In the Vanderbilt II study, sixteen therapists were trained in a time-limited dynamic psychotherapy. The year-long training program successfully taught therapists to follow the manualized protocol. (Henry, Butler, Strupp, Schachter & Binder, 1993). However, Henry et al. (1993) found that for poor outcome cases,

therapists deteriorated in the quality of their interpersonal interactions, despite being in line with technical aspects of the protocol. Interpersonal processes were measured by the VPPS and the Structural Analysis of Social Behavior ([SASB]; Benjamin, Giat, & Estroff, 1981). These findings show that despite achieving appropriate adherence to the manualized protocol, therapists can still differ in regards to interpersonal behaviors, and that these behaviors affect therapeutic outcome.

The Vanderbilt project involved an all-male college student population. Windholz & Silberschatz (1988) investigated whether the Vanderbilt team's findings using the VPPS could be replicated with an adult psychiatric outpatient population. Their results were similar to those by the Vanderbilt research team, with patient involvement and therapist-offered relationship correlating significantly with outcome measures.

Another study (Rounsaville et al., 1987) used the VPPS to investigate which process factors were related to outcome in Short-Term Interpersonal Psychotherapy of Depression ([IPT]; Klerman, Weissman, Rounsaville, & Chevron, 1984). Correlations of the six VPPS subscales with therapeutic outcome measures showed only one patient factor, Hostility, to be predictive of (negative) outcome. In contrast with previous findings using the VPPS to predict outcome from process, Rounsaville et al. (1987) found therapist factors were better predictors of outcome than patient variables. Specifically, they found that therapist exploration and therapist warmth and friendliness predicted improvement. Rounsaville et al. surmise that their findings may be influenced by their use of a manual-guided therapy, in which there is a high degree of focus on therapist standardization and adherence to specific technique,

which contrasts with the Vanderbilt project and its replication (Windholz & Silberschatz, 1988). In adhering to IPT technique, exploration of interpersonal relationships is highly emphasized. Although process factors such as therapist exploration and warmth and friendliness are not specific to IPT, Rounsaville et al.'s findings suggest that a psychotherapy which emphasizes these aspects of the treatment are likely to promote therapeutic change.

Because the VPPS is regarded as a well-validated scale which rates distinct process factors identified as potential contributors to therapy outcome, it was used in the present study of psychodynamic treatment of panic disorder. Additional details, including procedural, will be included in the methods section.

Common Factors

A broad explanation often given for equivalent effectiveness of psychotherapy is the power of "common" or "nonspecific" factors, such as warm support, opportunities for emotional release, reassurance, suggestion, credibility, attention, expectancy and demand for improvement (Garfield, 1974; Lambert, Shapiro, & Bergin, 1986; Luborsky, Singer & Luborsky, 1975). However, in empirical research, there has been little agreement on factors shared by different psychotherapies (Grencavage & Norcross, 1990). For example, Grencavage and Norcross (1990) reviewed 50 publications and identified 89 different proposed therapeutic commonalities, with the number of factors per publication ranging from 1 to 20.

The sheer number and diversity of "common factors" identified by different authors challenges the notion of commonality. Researcher bias may influence common factors identified (Luborsky, 1995), according to theoretical orientation. For

example, opportunity for catharsis might be heavily emphasized by psychodynamic researchers, while practicing of new behaviors might be the focus of behavioral researchers, yet both factors have been hypothesized as being "common" across treatments in various studies (Grencavage & Norcross, 1990).

While the argument for identifying "common factors" as the impetus for therapeutic change has much intuitive appeal, empirical support for this notion has been lacking.

Intermediate Process Events

Another recent focus in psychotherapy research is the investigation of intermediate process events that produce significant change throughout the course of therapy (Greenberg, 1986). The focus is on the process by which incremental outcomes during treatment are effected, such as resolution of conflicts and problematic reactions, and changes in states of mind (Greenberg, 1986). One such study (Kolden, 1996) found that the therapeutic bond (the quality of the relationship in psychotherapy) contributed to the accumulation of therapeutic realizations (e.g., the attainment of insight, problem clarification), early session progress, and a measure of intermediate outcome. Intermediate outcomes can later be examined for their contribution to the occurrence of overall therapy outcome.

Symptom Focus

Psychotherapy outcome studies often place great emphasis on patient diagnosis, investigating, for example, whether a specific type of therapy can be helpful for patients with specific diagnoses. A recent comprehensive review from this angle by Roth and Fonagy (1996) underscores the trend in psychotherapy

research away from simply "what works" and towards "what works for whom?" (Roth & Fonagy, 1996). Process-outcome studies, in contrast, have rarely focused on diagnostic-specific treatments. This is especially true of psychodynamic process-outcome research, which has been guided by the theoretical conceptualization that repressed unconscious conflicts are at the root of one's difficulties, and that a shift in personality, through the uncovering of these unconscious conflicts, will result in symptom relief. From this viewpoint, the symptoms upon which the diagnosis is based are not the focus of therapy, while the analysis of underlying conflicts is. However, patients have often complained about years of psychodynamic treatment which had brought them much insight but little relief of symptoms (Markowitz, 1995).

Luborsky (1996) views symptoms as "opportunities" for inferring underlying conflicts, and recommends focusing treatments on the context of symptoms. His "symptom-context method" (Luborsky, 1996) highlights the symptom as it arises during session, as opposed to retrospective recollection of the experience. Whether it is necessary for the symptom to be experienced "live" during session or not, the idea behind Luborsky's method seems to recapture Freud's original view of symptoms in psychotherapy. In his theory of psychosexual development and conflict (Freud, 1905/1953), patients' symptomatic complaints were seen as an expression of the key emotional issues in their lives. As Wachtel (1987) notes, over time, Freud's original aim of symptom reduction went from being the goal of psychoanalysis brought about by the technical implementation of making the unconscious conscious, to being

secondary to the technical implementation itself; i.e., insight replaced symptom relief as the goal.

Thus, psychodynamic process-outcome research has tended to focus on how the analysis of the underlying conflict may lead to the relief of the conflict; meanwhile, the relief of whatever aggregation of symptoms a patient happened to have is secondary. In contrast, the context of many contemporary treatments, particularly research treatments, is based on diagnosis and is symptom focused.

In this light, the lack of empirical investigation into how focusing on symptoms contributes to therapeutic change is striking, considering the proliferation of symptom-focused treatments, from IPT of Depression (Klerman et al., 1984), to dialectical behavior therapy (DBT) for borderline personality disorder (Linehan, 1993). In response to Markowitz's report (1995) of patients' complaints of much insight gained with little symptomatic relief, to what extent does the psychodynamic therapist treating a patient for a specific psychiatric syndrome need to link surface symptomatology with underlying conflicts in order to achieve symptomatic relief?

As treatments for specific disorders are increasingly developed in response to current trends in psychotherapy research, future research must investigate to what extent linking techniques with diagnostic symptomatology contributes to therapeutic outcome. The present study, which relates process to outcome in a panic-focused psychodynamic psychotherapy, includes a consideration of focusing on symptoms as a process variable.

Short-Term Psychodynamic Psychotherapy

As described by Milrod et al. (1997), Panic-Focused Psychodynamic Psychotherapy (PFPP) can be used as a brief psychotherapy aimed at symptom relief, while a longer-term treatment is hypothesized to be necessary to address vulnerability to panic relapse. In the present study, PFPP was administered in a time-limited fashion in order to be more readily compared with other researched panic psychotherapies such as cognitive-behavioral therapy. Therefore, a consideration of some issues particular to short-term dynamic treatment is necessary.

The early treatments of Freud and Breuer, focusing on hysteria, were brief and symptom-focused (Breuer & Freud, 1895/1961). It was only after fostering the transference—via the analyst's neutral stance—became the chief concern in psychoanalysis that treatments became increasingly long and unfocused (Groves, 1996).

More recently, psychodynamic psychotherapy has been described as a flexible approach which can be administered in brief applications. The work of Sifneos (1972) and Malan (1976), in particular, highlight perhaps the single most controversial issue in short-term dynamic therapy, the transference. In psychoanalysis, the transference is allowed to emerge over time, while Sifneos and Malan, along with other advocates of brief dynamic therapy (e.g., Davanloo, 1978; Mann, 1973), believe the transference can be quickly stimulated by "anxiety-provoking" confrontation, for example, (Sifneos, 1972), or simply by the pressure of the limited time frame (Malan, 1976). Classical psychoanalysts would argue that insights gained through such methods are superficial, at best; there is no replacement for time in terms of the

potential for unconscious conflicts to emerge in a transference neurosis, through which the analysis of such conflicts is deepest. This view is summarized by Knight (1939. cited by Malan, 1976):

> Short psychotherapy..., based on analytical understanding, is valuable in relatively acute but not too severely sick cases in which quick help is needed and in which more prolonged, orthodox psychoanalysis is inexpedient. It should be understood that such treatment is more or less symptomatic and palliative, tends merely to relieve the distressing symptoms and does not alter to any great extent the underlying personality. It may be, however, that the insight gained by the patient from such psychotherapy may enable him to understand himself better and thus strengthen him against breaking down under the stress of similar situations in the future (p. 104).

Malan (1976) vehemently opposes such a narrow view of how psychoanalytic techniques could be of help to patients with a wide variety of illnesses, arguing that such conclusions stem from a common fallacy:

> ...We employ the standard techniques of interpretation of resistance and transference, and after a time we observe the development of the transference neurosis, and we go on to use this therapeutically in a process that is, of course, uniformly time-consuming. We do not observe exceptions to this, and reach the generalization that this is the inevitable consequence of techniques based on psychoanalysis, and a necessary condition to the patient's recovery (p. 24).

To advocates of brief psychotherapy, the crux of the argument is relapse of a disorder, while for classical psychoanalysts, the issue is the thorough analysis of character. Character or personality change, according to classical psychoanalysis, refers to the alteration of the psychic system which Freud (1923/1961) hypothesized to be made up of the ego, superego and id. As Appelbaum (1994) explains:

> 'Structural change' with reference to the ego means that a wider range of impulse, fantasy, and memory becomes reliably accessible to

> consciousness (a topographic change), while repression is maintained by more flexible, mature, adaptive defensive operations (a dynamic change). As the ego undergoes structural change, its synthetic capacity increases. It becomes more capable of monitoring and smoothly managing a wider array of data coming from within and outside the individual. More of the person's internal and external resources become available for increasingly complex, satisfying, and adaptive living. Structural change in the superego means that primitive fears and expectations of punishment for forbidden thoughts or factions are replaced by a realistic ethical assessment of one's own and other's thoughts and conduct, so that the need for repression of impulses or of reaction formations to them is diminished (p. 38).

From this perspective, it is clear how such structural change would result in the alleviation of symptoms. The endurance of symptom abatement is usually considered a measure of character change. One question which has inspired heated debate among psychodynamic theorists is how character change is effected.

Sifneos (1972), Davanloo (1978), and Mann (1973), along with Malan (1976), argue that the employment of such techniques usually reserved for long-term psychoanalytic treatments, particularly transference interpretations, leads to symptomatic relief as well as to the promotion of lasting personality changes. A more traditional view hypothesizes that the mutative interpretation in psychoanalysis is that delivered only after the full development of the transference neurosis (Strachey, 1934), and that unless this intense transference neurosis develops, any attempt at interpreting the transference is premature, and character change is, therefore, not possible.

The ideas of advocates of briefer versions of psychoanalysis were met with great resistance by classical psychoanalysts. This ideological struggle continues today. Early critics of briefer psychoanalysis could not foresee a time when the argument of classical psychoanalysis versus psychodynamic psychotherapy would be

largely marginalized by contemporary health care practices. Partially driven by economic exigencies and the medicalization of mental health, advocates for all types of psychotherapy (versus medication) have had to make a case for its usefulness. Absorbed by internal debate over classical versus flexibly applied psychoanalysis, adherents to the belief in the unconscious neglected to provide empirical support for psychodynamic treatment. As a result, there is currently a misconception held in clinical communities that treatments concerned with character change, such as psychodynamic therapies, may not be sufficient to achieve symptom relief.

Milrod and colleagues have worked to correct this misconception (Busch, Milrod et al., 1996; Busch et al., 1999; Milrod, 1995; Milrod et al., 1996; Milrod et al., 1997; Milrod et al., 2000; Milrod & Shear, 1991a; Milrod & Shear, 1991b; Shear et al., 1993), but they have not forsaken the idea that personality change takes time, and that such change is necessary to reduce vulnerability to relapse of psychological disorders (Milrod et al., 1997). The present study investigates some of the aspects of PFPP that may contribute to symptom relief as well as to improvement of social impairment. The investigators do not hypothesize that subjects' character is altered by this treatment and no measure of personality was included.

Statement of Hypotheses:

The clinical process of psychodynamic psychotherapy for panic disorder will be examined in relation to outcome. It is hypothesized:

Hypothesis 1: The presence of therapist interventions that link panic symptomatology with underlying psychological issues will be correlated with positive therapy outcome.

Hypothesis 2: The occurrence of therapist interventions that focus on the transference will be correlated with positive therapy outcome.

Hypothesis 3: Therapeutic relationship factors will correlate with outcome.

a) The VPPS assesses the patient's willingness and motivation to be involved in the therapy (Patient Involvement dimension). In the present study, it is hypothesized that patient involvement will correlate with symptomatic improvement.

b) The VPPS taps the extent to which the therapist offers his or her relationship to the patient. This variable includes a consideration of the warmth and friendliness of the therapist versus an authoritarian stance. It is hypothesized that the Therapist-Offered Relationship will correlate with a reduction in symptoms at treatment end.

Hypothesis 4: It is hypothesized that within the framework of the time period of psychotherapy studied (12 weeks), stronger associations between the patient's exploratory processes and outcome will be evident in the late session examined for each patient (session 21) than in the two earlier sessions (session 4 or 12).

Hypothesis 5: PFPP treatments will focus on the theme of anger to a greater extent than other themes.

Definitions

Outcome - A clinical concept signifying some degree of improvement or deterioration in the patient's condition, as judged from some observer's perspective by some value criterion (Orlinsky et al., 1994, p. 227).

Panic-Focused Psychodynamic Psychotherapy - An exploratory psychotherapy that brings about therapeutic change through the examination of unconscious conflicts (Milrod et al., 1997).

Panic Disorder - A DSM-IV diagnosis that is characterized by recurrent unexpected panic attacks about which there is persistent concern (American Psychiatric Association, 1994).

Process – Everything that can be observed to occur between, and within, the patient and the therapist during their work together (Orlinsky & Howard, 1986).

Psychodynamic – A psychological theory that emphasizes the importance of the unconscious and developmental experiences in understanding human behavior.

Psychodynamic Psychotherapy - Any approach to psychotherapy that is based on the psychodynamic theoretical orientation.

Psychotherapy - The use of a verbal technique or procedure that may have palliative or curative effects upon mental, emotional, or behavioral disturbances.

Therapeutic Alliance - The collaborative relationship between patient and therapist, established to facilitate the work of psychotherapy.

Transference - The displacement of feelings or attitudes applicable toward other persons, especially genetic relations, onto a psychotherapist.

Methods

Participants

This study used data from a research project at the New York Presbyterian Hospital-Weill College of Medicine at Cornell University in New York City (Milrod et al., 2000; Milrod et al., in press). The study is an open clinical trial of Panic-Focused Psychodynamic Psychotherapy (PFPP). Participants were patients who met the *Diagnostic and Statistical Manual, Fourth Edition* ([DSM-IV]; American Psychiatric Association, 1994) criteria for a primary diagnosis of panic disorder with or without agoraphobia. They were recruited through the outpatient department of psychiatry at The Payne Whitney Clinic of the New York Presbyterian Hospital as well as by word of mouth to medical and psychiatric clinicians in the area, and through advertising. All participants gave informed written consent (see Appendix A). All participants received study treatment without charge and agreed to have their treatments videotaped.

General inclusion and exclusion criteria for patients were as follows: (a) age between 18 and 50; (b) primary DSM-IV panic disorder, or agoraphobia with panic attacks; (c) no active co-morbid substance abuse, schizophrenia or organic mental syndromes; (d) subjects were required to discontinue their psychotropic medication and/or ongoing psychotherapy from assessment to 6-month follow up.

Intake assessment interviews were conducted by a clinical psychology graduate student who had undergone extensive training with instruments. Participants underwent a clinical interview as well as a semi-structured interview, the Anxiety Disorders Interview Schedule-IV-L ([ADIS-IV-L]; DiNardo, Brown, &

Barlow, 1995). Participants completed self-report scales and participated in semi-structured interviews during the pre-treatment and post-treatment assessments (see Outcome Assessments section below).

Subjects were 21 patients who participated in the open clinical trial of PFPP, including four who dropped out of treatment prior to completion of 24 sessions (two dropped at the beginning of treatment, and two dropped mid-treatment). Table 1 summarizes the demographic characteristics of the sample: the 21 patients had a mean age of 31.81 years (SD = 7.76); there were twice as many females as males (14:7); 47.7% (n = 10) were married or cohabiting, 42.9% (n = 9) were single, and 9.5% (n = 1) were separated or divorced; the majority of participants did not have children (66.7%; n = 14) and most participants were employed (95.2%; n = 20); approximately 66.7% (n = 14) of participants had a 4-year college or graduate level degree; over three quarters of the sample was Caucasian (76.2; n = 16), 19% (n = 4) were African American, and one individual was Asian.

Treatment

Panic-Focused Psychodynamic Psychotherapy (PFPP) is a 24-session, manualized psychodynamic psychotherapy, delivered twice-weekly over 12 to 14 weeks, with leeway allowing for vacations. Sessions lasted for 45-50 minutes. PFPP is a modified form of psychodynamic psychotherapy based upon the psychodynamic principles of the importance of unconscious mental dynamisms and fantasies, free association, and the centrality of the transference. The therapist focuses attention on these processes as they connect to the patient's experience of panic. Psychodynamic issues hypothesized to be common to panic patients, such as difficulty with and

Table 1

Demographic Characteristics of the Sample (N = 21)

Characteristic	n	%
Gender		
Female	14	66.7
Male	7	33.3
Marital Status		
Single/never married	9	42.9
Married	9	42.9
Cohabitating	1	4.8
Divorced	1	4.8
Separated	1	4.8
Have Children		
Yes	7	33.3
No	14	66.7
Currently Employed		
Yes	20	95.2
No	1	4.8
Education Level Completed		
High School	5	23.8
Trade/Technical School after HS	1	4.8
Two Year College	2	9.5
Four Year College	8	38.1
Graduate School	4	19.0
Religion		
Catholic	5	23.8
Jewish	6	28.6
Buddhist	1	4.8
Baptist	1	4.8
Other	3	14.2
No Religion	5	23.8
Ethnicity		
Caucasian	16	76.2
African American	4	19.0
Asian	1	4.8
	Mean	SD
Age	32.0	7.76

expression of anger are used to inform interpretive efforts.

Therapists

Six therapists participated in this study: 4 female and 2 male. All study therapists were faculty members in the department of psychiatry at the Joan and Sanford I. Weill Medical College of Cornell University and graduates of American Psychoanalytic Association accredited institutes. Study therapists underwent extensive training in the study protocol and participated in ongoing supervision with the principal investigators, via multiple clinical examples as well as videotapes of PFPP treatments prepared prior to the study. Treatment adherence was monitored by rating videotaped sessions with the PFPP Adherence Rating Scale developed by the first author of the study manual and colleagues (Milrod et al., 1997). A score of 4 or higher (out of possible 6) on at least 5 (of 7) adherence items was required and achieved by all study therapists. Additional supervision would have been provided had therapists not met adherence criteria. Therapists also participated in individual and monthly group supervisions.

Measures

Outcome Assessments (Dependent Variables; see Appendix B):

Panic Disorder Severity Scale ([PDSS]; Shear et al., 1997). The PDSS is a brief, clinician-rated scale for the assessment of symptoms of panic disorder. The PDSS is a 7-item comprehensive measure which considers all of the essential domains of panic disorder. The PDSS has been shown to have excellent interrater reliability, moderate internal consistency, and favorable levels of validity and sensitivity to change (Shear et al., 1997). The intraclass correlation coefficient

reflecting interrater reliability was .88 (df=2, 23, p<.001); interrater reliability on individual scale items ranged from .74 to .87. The internal consistency (Cronbach's coefficient alpha) of the whole scale was .65. In addition, individual items show good convergent and discriminant validity (Shear et al.). The PDSS was significantly correlated with the Anxiety Disorders Interview Schedule-Revised (ADIS-R), r = .55, N = 145, p < .0001.

Sheehan Disability Scale ([SDS]; Sheehan, 1983). The SDS addresses the impact of symptomatology on work, social, and family functioning. The validity of using the SDS with panic patients is well established (Leon, Shear, Portera. & Klerman, 1992). In an evaluation of the scale using the data from two studies of patients with panic disorder, the Cross National Collaborative Panic Study, Phase I (1988) and the Panic Depression Study (Keller & Lavori, unpublished, cited in Leon et al., 1992), the internal consistency of the SDS, measured using Cronbach's coefficient alpha, ranged from .56 to .83 (Leon et al., 1992). The factor structure of the items showed high loadings for each of the variables (>.65). Construct validity was demonstrated by establishing the sensitivity to change of the SDS composite from pre- to post-treatment (Leon et al.). In addition, the criterion-related validity was substantiated by the significant relationship between symptomatology and impairment, whereas more severe symptomatology was associated with greater functional impairment as measured by the SDS (Leon, et al.).

Hamilton Anxiety Rating Scale ([HARS; HAM-A]; Hamilton, 1959; 1969). The HARS serves as a dimensional measure of non-panic related anxiety (i.e. how generally aroused and anxious the patient is in situations not linked to panic attacks).

Internal consistency has been established at .83, using Cronbach's coefficient alpha (Riskind, Beck, Brown & Steer, 1987). Riskind et al. (1987) reported intercorrelation (Pearson r) of .15 (n=60) between the Hamilton Anxiety Rating Scale and the Hamilton Depression Rating scale (Hamilton, 1960), showing good discriminant validity. However, higher intercorrelation between the two scales (r = .61, n = 358) have been reported (Morass et al., 1992) indicating some overlap.

Process Rating Scales (Independent Variables):

Vanderbilt Psychotherapy Process Scale (VPSS; Strupp et al., 1974). The VPPS (see Appendix C) is a general multi-purpose instrument designed to assess both positive and negative aspects of the patient's and therapist's behavior and attitudes that are hypothesized to facilitate or impede progress in therapy. Sixty items are scored on a Likert-type scale ranging from 1 ("not at all") to 5 ("a great deal"). While built on general assumptions of psychotherapy as an interpersonal process, it is intended to be largely neutral with respect to any particular theory of psychotherapy, and to be applicable to a wide range of therapeutic interventions. Specific subscales of the instrument tap characteristics such as level of exploration occurring during the session as well as the patient's active engagement in the process of psychotherapy, his or her emotional stance, and the level of negativism displayed.

The original version of the VPPS had 80 items, but in the interest of rater economy, only 57 items previously found to be related to outcome were used in the present study (item numbers from the complete scale have been maintained). A

factor analysis of VPPS items by O'Malley et al. (1983) yielded seven subscales (see Appendix D). The following subscale information is adapted from Suh et al., (1986):

1. Patient Participation taps the extent to which the patient is positively engaged in the therapeutic interaction. Low scores on this subscale characterize patients whose behavior is restrained and tentative. High scores portray patients who are actively involved and relate freely with their therapists.

2. Patient Hostility taps the negative end of patient participation and focuses on blatantly negative aspects of the patient's behavior and attitudes (in contrast to more subtle evidence of disengagement derived from low scores on Patient Participation subscale).

3. Patient Psychic Distress gauges the patient's feeling state, particularly feelings of discouragement. Suh et al. (1986) report that relatively high correlations between this subscale and Patient Exploration and Therapist Exploration suggest that these feelings are associated with the exploratory processes of therapy.

4. Patient Exploration monitors the patient's level of examination of feelings and experiences.

5. Therapist Exploration measures the therapist's attempts to examine the patient's feelings and behaviors. Therapist Exploration has been found to be moderately correlated with Patient Exploration (Suh et al., 1986).

6. Therapist Warmth and Friendliness measures the therapist's display of warmth and emotional involvement. Scores on this subscale represent a continuum of the quality of the relationship offered to patients. For example, for the item "involved," high ratings are given if the therapist appeared engaged in the patient's

experience, while low ratings indicate therapist detachment from the patient's experience or inattention to the patient's concerns.

7. Negative Therapist Attitude (in contrast with Therapist Warmth and Friendliness) monitors the therapist's attitudes which might intimidate or threaten the patient, such as appearing to be judgmental, or defensive and confronting the patient in a negative manner.

These subscales can also be analyzed across three broad dimensions: (a) Patient Involvement (Patient Participation and Patient Hostility); (b) Therapist-Offered Relationship (Therapist Warmth and Friendliness and Negative Therapist Attitude); and (c) Exploratory Processes (Patient Psychic Distress, Patient Exploration, and Therapist Exploration).

The psychometric properties of the VPPS have been well-documented (Gomes-Schwartz, 1978; Gomes-Schwartz & Schwarz, 1978; O'Malley et al., 1983; Strupp & Hadley, 1979; Windholz & Silberschatz, 1988). The VPPS can be used reliably by multiple raters. Pearson correlation coefficients showing interrater reliability have been reported as ranging from .79 for Negative Therapist Attitude to .94 for Therapist Exploration (Suh et al., 1986). Internal consistency as measured by Cornbach's coefficident alpha has ranged from .82 for Negative Therapist Attitude to .96 for both Patient Exploration and Therapist Exploration subscales (Suh et al., 1986). The VPPS has been shown to have good predictive validity (Gomes-Schwartz, 1978; Gomes-Schwartz & Schwarz, 1978; O'Malley et al., 1983; Strupp & Hadley, 1979; Windholz & Silberschatz, 1988). Two process variables in particular, Patient Involvement and Therapist-Offered Relationship, have consistently been

found to be predictive of outcome, as measured by therapist's ratings of overall improvement and target complaints (Gomes-Schwartz, 1978; Windholz & Silberschatz, 1988).

Interactive Process Assessment ([IPA]; Klein, Milrod, & Busch, 1999; see Appendix E). The IPA is a 20-item scale created specifically for the present investigation to measure key aspects of psychodynamic process and monitor central themes as they emerged in the treatment. The IPA was devised by the principal investigator (Klein) in consultation with two of the authors of the PFPP manual, Dr. Barbara Milrod and Dr. Fredric Busch. The IPA was created because no process measure previously existed to identify psychodynamic therapy techniques targeted toward particular diagnostic conditions, such as panic disorder. The IPA was designed to analyze the content of Panic-Focused Psychodynamic Psychotherapy (PFPP). The constructs were developed from widely accepted theoretical propositions from psychodynamic psychotherapy and a panic-specific psychodynamic understanding of treatment.

The IPA is an observer-rated process measure designed to be rated from either audiotapes or videotapes of psychotherapy sessions by unbiased, external observers (in the present study, videotapes of sessions were available). Raters are asked to score quantitative items on a Likert-type scale ranging from 0 ("Not at all"), 1 ("Present), to 2 ("Major focus in the session"). Raters also record qualitative items, such as central themes according to suggested variables or open-ended prompts (e.g., "anger"; "separation"; "abandonment"; "other").

The observer-rated procedure is not uniform in psychotherapy process research; process measures have been designed for assessment from different perspectives: therapist, patient, or both, as well as by independent observers. Central differences in procedure involve the measurement of subjective reactions and perceptions by each member of the dyad, i.e., by therapist/patient raters, versus the external assessment of characteristics of the participants and their transactions, i.e., by observer raters (Orlinsky & Howard, 1986.) The rationale for using observer-rated process measures in the present study is based upon: (a) their use is supported by the existing literature (Orlinsky & Howard, 1986); (b) the availability of videotaped sessions of PFPP, which lend themselves to observer-rated procedures.

Development of the IPA took place in several stages:

(1) The authors of the IPA systematically reviewed the PFPP manual to locate descriptors of therapeutic interventions as well as specific clinical process events within therapy sessions noted by the authors as significant; (2) The authors reviewed videotaped sessions of two different psychotherapies from the open clinical trial of PFPP with different study therapists to verify the presence of these processes across therapists; (3) A review of the psychotherapy process research literature was conducted next to determine previously-described connections between process and outcome; (4) A preliminary draft was submitted to the authors of the PFPP manual (Milrod et al., 1997); (5) Their suggested changes were incorporated into the final version of the IPA manual.

These procedures resulted in the final version of the IPA. An a priori content analysis of the process dimensions of the IPA that were hypothesized to be predictors

of therapy outcome resulted in the identification of six factors, described below:

1. Panic Focus (item 1) taps the extent to which the therapist focuses on panic symptoms and dynamisms.

2. Transference Focus (items 2, 3, 4, and 5) measures the therapist's focus on the transference relationship. Scores represent a broadly-defined focus on the transference, from encouraging the patient to express ideas and fantasies about the therapist, to interpreting transference experiences in relation to the patient's earlier relationships with parents and significant figures during childhood.

3. Early Relationships Focus (items 6, 7, and 9) monitors the therapist's focus on genetic relationships, (i.e., earlier relationships in the patient's life, such as with parent or significant figures during childhood). Items include therapist exploration of earlier relationships as well as interpretations connecting genetic relationships with panic symptoms.

4. Present Relationships Focus (items 8 and 10) taps the therapist's focus on present relationship patterns other than the transference. Aspects explored and/or interpreted include relationships with spouses or with family members in the present.

5. Ego Defenses Focus (items 11, 12, and 13) measures therapist focus on patient use of ego defenses to avoid frightening affects and fantasies. This factor includes the use of ego defenses in relation to panic symptoms as well as in general, and does not refer to the use of panic itself as a defense. Ego defenses include denial, isolation of affect, somatization, undoing, displacement, projection, rationalization, reaction formation, and repression.

6. Patient Exploration (items 12, 14, 15, 16, and 17) taps the extent to which the patient appears engaged in the therapeutic interaction. High scores on this factor characterize patients whose behavior demonstrates such aspects as a willingness to explore underlying feelings and thoughts associated with panic episodes, as well an ability to elaborate in response to therapists' comments during session.

Although the sample was too small for a definitive factor analysis, one was conducted for exploratory purposes. A principal components factor analysis with varimax rotation was conducted on the final data set to support the previously identified factors. Rotated factors with eigenvalues greater than 1.0 were retained. Item loadings were greater than |.40| on the anticipated dimensions. These factors were used in analyses correlating process with outcome.

After the IPA was created, the authors created a "master videotape" to be used for training the raters for IPA. This tape was of a 45-minute psychotherapy PFPP session, not used in the process study. Three raters, two psychology graduate students and one M.D. psychiatry resident, met for IPA training 3 hours each week for 12 consecutive weeks for a total of 36 hours of training. The principal investigator led each of these training sessions. The training was concluded at the end of the 12 weeks when each rating of the master videotape corresponded perfectly with ratings determined by the authors of the IPA. The raters next coded videotaped psychotherapy sessions that were not included in the current study. Ratings were initially conducted through consensus to ensure that each rater was correctly rating the IPA. Each rater then independently rated other therapy sessions. The independently rated sessions were examined for interrater reliability by producing

intraclass correlations (ICC), which ranged from .82 to .96, indicating acceptable levels of interrater reliability (Orlinsky & Howard, 1986). The description of rater process and determination of interrater reliability for the actual study is detailed in the next section.

Procedures

General Procedures:

Twenty-one subjects were recruited through the outpatient department of psychiatry at New York Presbyterian Hospital-Weill College of Medicine at Cornell University in New York City, as well as through word of mouth to the medical and psychiatric clinicians in the area, and through advertising. Eligible subjects were between the ages of 18 and 50 who met DSM-IV criteria for panic disorder, or agoraphobia with panic attacks. Subjects were excluded if they had active substance abuse, schizophrenia, or organic mental syndromes, or were unable to discontinue psychotropic medications. Participants agreed to stop psychotropic medication and/or ongoing psychotherapy from at least 4 weeks prior to beginning treatment through the six-month follow up. Subjects gave written informed consent to participate in the study (see Appendix A) before being assessed by a master's level clinical psychology doctoral student who had undergone extensive training in assessment instruments. During the initial assessment, subjects underwent a clinical interview as well as a semi-structured interview, the Anxiety Disorders Interview Schedule-IV-L ([ADIS-IV-L]; DiNardo, Brown, & Barlow, 1995). Pre- and post-treatment, subjects completed self-report scales and participated in semi-structured interviews. Subjects agreed to be videotaped before beginning the treatment protocol.

Data includes the four subjects who dropped out of the study. Of these four, two dropped out within the first 2 sessions, one because of scheduling difficulties and dislike of her study therapist's approach, the other because of intolerable panic experienced while attempting to get to his therapist's office. This latter patient had a history of opiate dependence and had tapered himself off an ineffective benzodiazepine prior to study entry. Two dropouts occurred after session 13. Both late dropout patients had tapered themselves off ineffective combinations of medications including benzodiazepines two months before study entry.

Subjects were randomly assigned to one of six study therapists: 4 female and 2 male. All study therapists were Weill College of Medicine Department of Psychiatry faculty members and graduates of American Psychoanalytic Association accredited institutes. Study therapists underwent extensive training in the study protocol and participated in ongoing supervision with the principal investigators. All therapists gave written consent to be videotaped and evaluated with adherence and competence measures. During the course of the study, videotaped sessions from each therapist with multiple subjects were reviewed by the principal investigators to ensure adherence to treatment protocol. In addition, sessions were randomly selected and scored for adherence by independent raters using the PFPP Rating Scale, designed to measure the use of exploratory techniques and the therapist's ability to stay focused on panic-related phenomena in the course of an individual session. Failure to achieve adequate adherence to technique would have resulted in additional training and intensified supervision. However, all study therapists adhered to the treatment and no additional training was required.

Patients participated in a 24-session, twice-weekly psychotherapy. Every effort was made to reschedule missed sessions. Psychotherapy was conducted in the offices of study therapists. Study therapists were responsible for videotaping sessions. Videotapes were stored in a locked cabinet maintained by the principal investigator in the Department of Psychiatry at Weill College of Medicine. Subjects were offered a summary of the study results upon completion.

Rating Procedures:

Three raters were trained in the use of both the IPA and the VPPS to ensure the reliability of observations made using the measures. Raters were two advanced clinical psychology graduate students and one psychiatry resident. Raters were trained by the principal investigator (Klein) and supervised by a psychoanalyst (Busch), who provided hands-on consultation to the rater group.

The use of clinical psychology doctoral students (and psychiatry residents with some clinical experience) as raters is supported by the literature. O'Malley and Gomes-Schwartz (cited in Suh et al., 1986) found that graduate students with minimum clinical experience can use the VPPS reliably. Strupp and colleagues (Suh et al., 1986) attribute this finding to the minimum level of inference involved in making judgements on the VPPS. The IPA was designed with the same intention of minimizing inference by providing adequate description. In addition, researchers validating the use of other observer rated scales have investigated the question of level of training with similar conclusions. For example, Kiesler (1970) compared ratings on the Experiencing Scales (Klein, Mathieu, Gendlin, & Kiesler, 1969) of four Ph.D.s, three of whom were clinical psychologists and one of whom was a counseling

psychologist, with ratings by clinically naïve raters. The reliabilities were extremely high for both groups, with experienced raters attaining only slightly higher or equivalent reliability levels for different rating systems (i.e., modal ratings, .94 vs. .91; peak ratings, .92). Because the IPA deals with unique psychodynamic principles such as the transference, it was necessary for raters to have a basic understanding of psychodynamic psychotherapeutic theory and technique.

In the current study, three sessions chosen from approximately equal time intervals in the 24-session treatment (i.e., one from first third of treatment, session #4; one from mid-third, session #12; and one from final third, session #21) represented the rated process of a completed PFPP psychotherapy treatment. The process ratings from randomly chosen sessions from the beginning, middle, and end of treatment were to determine the interrater reliability between the three raters on the VPPS subscales and IPA factors. Entire videotaped sessions were rated by the three raters under the premise that global ratings of certain aspects of the interaction (e.g., patient attitude, affective response, and the degree to which a therapist's intervention is a major focus in a session) might be compromised if shorter segments of sessions were used. Although the literature supports the use of smaller unit lengths and sampling within sessions (Suh et al., 1986), because of the complexities of psychodynamic treatment, the use of the entire session was expected to yield more accurate results.

Each rater viewed an entire 45-minute session and immediately rated the session using both process measures, the IPA and the VPPS. Three sessions with 17 patients and their therapists, plus two sessions from two mid-treatment dropouts and one session each from two early-treatment dropouts, yielded a total of 57 rated

sessions. After establishing interrater reliability on 10% of the sessions ($n = 6$), the remaining 90% of the sessions were divided equally among the three raters to rate independently.

Results

Preliminary Analyses

Preliminary analyses were conducted to examine the psychometric properties of the process measures. The psychometric properties of the IPA and VPPS were examined in the following ways: (a) interrater reliability of the three raters, (b) internal consistency among the items comprising the IPA and VPPS factors, (c) concurrent validity between the IPA and the VPPS.

Reliability Analyses

To assess interrater reliability, intraclass correlations coefficients (ICC) were obtained across three raters for just over 10%, or 6 sessions, of the 57 total sessions included in the study. The ICC represents a statistically adjusted score intended to reflect the degree of agreement that can be expected when the scale is used by a random sample of k judges with similar training (Shrout & Fleiss, 1979). Intraclass correlation coefficients of $\geq .70$ are considered to represent acceptable interrater reliability in psychotherapy process research (Orlinsky & Howard, 1986). As stated by Lambert and Hill (1994, p. 92), "for intraclass correlations, .70 is generally considered a standard cutoff for high reliability (with higher estimates expected for judgments requiring low inference)".

To assess internal consistency, Cronbach's coefficient alphas were calculated. Table 2 summarizes the ICC and coefficient alphas for the IPA factors. Interrater reliability ranged from a low of .01 for the Therapist Focus on Present Relationships factor to a high of .52 for the Patient Exploration factor. Thus, ICC for the IPA factor ratings all fell below the .70 level. Cronbach's coefficient alphas of the IPA factors

Table 2

Intraclass Correlation (ICC) and Cronbach's Coefficient Alphas for the Interactive Process Assessment (IPA) Process Measure

	ICC	Cronbach's Coefficient Alpha		
Factor		Early	Mid	Late
Therapist Focus on Transference	.27	.92	.95	.61
Therapist Focus on Early Relationships	.16	.72	.44	.71
Therapist Focus on Ego Defenses	.25	.76	.42	.83
Therapist Focus on Present Relationships	.01	.76	.69	.86
Therapist Focus on Panic Dynamics	.06	--	--	--
Patient Exploration	.52	.67	.07	.72

Note. Therapist Focus on Panic Dynamics only had one item.

ranged from .67 to .92 at early treatment, from .07 to .95 at mid treatment and from .61 to 86 at late treatment. With the exception of the Therapist Focus on Transference Factor, all IPA factors demonstrated their lowest internal consistency at mid treatment. Overall, these results indicate respectable homogeneity for the IPA factors but poor interrater reliability.

Table 3 summarizes the ICC and coefficient alphas for the VPPS subscales and dimensions. Among the subscales, interrater reliability ranged from a low of .04 for the Patient Exploration subscale to a high of .70 for the Patient Psychic Distress subscale. Although the Therapist Warmth and Friendliness subscale had a ICC coefficient of .64, the remaining subscales' interrater reliability coefficients were .38 or below. The VPPS has previously been examined for internal consistency and was chosen for this study in part because of demonstrated high scores, with coefficient alphas ranging from .82 to .96 (O'Malley et al., 1983). In the current study, coefficient alphas across the VPPS subscales ranged from .49 to .89 at early treatment, from .65 to .90 at mid treatment, and from .52 to .92 at late treatment. The Patient Exploration factor demonstrated consistently low internal consistency across all three time periods.

In sum, ICC ratings were lower than expected for both process measures. This may have been in part due to the lack of extreme cases in the data set. That is, individual ratings on the IPA (0, 1, or 2) and the VPPS (1 to 5) tended to cluster around the mean. The tendency to make clinical judgments around a central mean has been previously noted (Fried, Crits-Christoph, & Luborsky, 1992; Parducci & Perrett, 1971) and reflects a central tendency bias among the raters in the current

Table 3

Intraclass Correlation (ICC) and Cronbach's Coefficient Alphas for the Vanderbilt Psychotherapy Process Scale (VPPS) Process Measure

	ICC	Cronbach's Coefficient Alpha		
VPPS Process Factor		Early	Mid	Late
Patient Participation	.24	.77	.84	.78
Patient Hostility	.31	.87	.84	.52
Patient Psychic Distress	.70	.89	.90	.85
Patient Exploration	.04	.67	.65	.64
Therapist Exploration	.38	.49	.83	.74
Therapist Warmth and Friendliness	.64	.89	.92	.92
Negative Therapist Attitude	.18	.54	.89	.79

study. Because ratings had been accomplished at the time of data analysis, analyses were conducted using these factor scores despite low interrater reliability. Because low reliability tends to deflate correlations (Tabachnick & Fidell, 2001), it is possible that the associations reported below underestimate the true associations.

Validity Analyses

To examine the convergent validity of the IPA, Pearson correlations were produced between the IPA factors and the VPPS subscales at early, middle, and late treatment. These coefficients are shown in Tables 4, 5, and 6, respectively.

The IPA factor Therapist Focus on Transference was significantly correlated with VPPS Negative Therapist Attitude in late treatment, $r(19) = .54$, $p < .05$, in which a greater focus on transference was associated with a greater negative therapist attitude. This finding seems to suggest that in those sessions that raters noted a therapist focus on the transference, the therapist was perceived as having a negative attitude. The VPPS Negative Therapist Attitude scale would be elevated when raters noted the following: therapist negatively confronted patient, therapist is intimidating, authoritarian, lecturing, defensive, or judgmental. Thus, it appears that when the therapist focused on the transference, raters did not perceive of this intervention as exploratory, but rather as more of a confrontation. No other associations were statistically significant. However, of note were the inverse moderate associations between the IPA Therapist Focus on Transference and the VPPS Patient Participation, $r(19) = -.39$, $p < .10$, and Patient Exploration, $r(19) = -.41$, $p < .10$, subscales at early treatment.

Table 4

Pearson Correlations among VPPS Factors and IPA Factors at Early Treatment

	VPPS patient factor				VPPS therapist factor		
IPA factor	Participation	Hostility	Exploration	Psychic Distress	Exploration	Warmth and Friendliness	Negative Therapist Attitude
Therapist Focus on Transference	-.39 +	-.09	-.41 +	-.31	-.03	.30	-.24
Therapist Focus on Early Relationships	.12	.31	.31	.28	.33	.17	.34
Therapist Focus on Ego Defenses	.10	-.06	.26	-.21	.14	-.12	.13
Therapist Focus on Present Relationships	.48 +	-.14	.33	-.11	-.08	.09	-.21
Therapist Focus on Panic Dynamics	.29	-.05	.35	.02	.40 +	.33	.23

+ $p < .10$. * $p < .05$. ** $p < .01$.

Table 5

Pearson Correlations among VPPS factors and IPA factors at Middle Treatment

	VPPS patient factor				VPPS therapist factor		
IPA factor	Participation	Hostility	Exploration	Psychic Distress	Exploration	Warmth and Friendliness	Negative Therapist Attitude
Therapist Focus on Transference	-.12	.00	-.19	-.15	.05	-.36	-.01
Therapist Focus on Early Relationships	-.08	.28	.14	.49 *	.30	-.25	.17
Therapist Focus on Ego Defenses	.44	-.09	-.05	-.44 +	.10	.38	-.26
Therapist Focus on Present Relationships	.24	-.39	.26	-.12	-.41 +	.38	-.42 +
Therapist Focus on Panic Dynamics	.24	-.13	.32	-.16	.14	-.22	.28

+ $p < .10$. * $p < .05$. ** $p < .01$.

Table 6

Pearson Correlations among VPPS Factors and IPA Factors at Late Treatment

	VPPS Patient Factor				VPPS Therapist Factor		
IPA Factor	Participation	Hostility	Exploration	Psychic Distress	Exploration	Warmth and Friendliness	Negative Therapist Attitude
Therapist Focus on Transference	-.16	-.04	.05	-.35	.02	-.01	.54 *
Therapist Focus on Early Relationships	-.02	.45 +	.13	.26	.46 +	.07	.60 *
Therapist Focus on Ego Defenses	.21	.09	.25	.02	.52 *	.39	.40
Therapist Focus on Present Relationships	.18	.07	.57 *	.19	.42 +	.61 **	.26
Therapist Focus on Panic Dynamics	.11	.22	-.07	-.06	.55 *	.02	.26
Patient Exploration	.47 +	.00	.38	-.04	.35	.26	.34

+ $p < .10$. * $p < .05$. ** $p < .01$.

The IPA factor Therapist Focus on Early Relationships was not correlated with any of the VPPS subscales at early treatment (ps > .10), but was positively correlated with Patient Psychic Distress during mid treatment, $r(19) = .49$, $p < .05$, and with Negative Therapist Attitude during late treatment, $r(19) = .54$, $p < .05$. During late treatment, this IPA factor was also moderately positively associated with VPPS Patient Hostility, $r(19) = .45$, $p < .10$, and Therapist Exploration, $r(19) = .46$, $p < .10$. This finding suggests that patients experienced distress during sessions when therapists focused on genetic relationships. In late treatment, therapists may have appeared to be confronting the patient in their attempts to focus on early relationships, and that perhaps patients did not appear ready to explore these relationships.

The IPA factor Therapist Focus on Ego Defenses was not significantly correlated with any of the VPPS subscales during early treatment (ps > .10) and mid treatment (ps > .10), but was significantly correlated with The VPPS Therapist Exploration subscale at late treatment, $r(19) = .52$, $p < .05$. At mid treatment, this scale also evidenced a moderate, but nonsignificant, negative association with Patient Psychic Distress, $r(19) = -.44$, $p < .10$.

At early treatment, the IPA factor Therapist Focus on Present Relationships was moderately correlated with the VPPS Patient Participation subscale, $r(19) = .48$, $p < .10$, but was not significantly correlated with any other VPPS subscales at early treatment (ps > .10). This IPA factor was significantly positively correlated with Patient Exploration, $r(19) = .57$, $p < .05$, and Therapist Warmth and Friendliness, $r(19) = .61$, $p < .01$, at late treatment. Additionally, this IPA factor was moderately, but not significantly, correlated with Therapist Exploration, $r(19) = -.41$, $p < .10$, and Negative Therapist Attitude, $r(19) =$

-.42, $p < .10$, at mid treatment and Therapist Exploration, $r(19) = .42$, $p < .10$, at late treatment.

The IPA factor Therapist Focus on Panic Dynamics was not significantly correlated with any of the VPPS subscales at early ($ps > .05$) and mid treatment ($ps > .10$), but was significantly positively correlated with Therapist Exploration at late treatment, $r(19) = .55$, $p < .05$. Nonsignificant moderate associations were found, however, with VPPS Therapist Exploration at early treatment, $r(19) = .40$, $p < .10$.

Lastly, the IPA factor Patient Exploration evidenced statistically significant positive associations with VPPS Patient Participation at early, $r(19) = .49$, $p < .05$, and mid, $r(19) = .62$, $p < .01$, treatment. Similarly, significant associations were found with VPPS Patient Exploration at early, $r(19) = .68$, $p < .01$, and mid, $r(19) = .51$, $p < .05$, treatment. This IPA factor was not statistically correlated with any other VPPS subscales at any of the treatment periods. This IPA factor was moderately correlated with the VPPS Patient Participation subscale at late treatment, however, $r(19) = .47$, $p < .10$.

Overall, findings were partially supportive of the convergence between the IPA and VPPS factors. Surprisingly, the IPA factor Therapist Focus on Transference did not correlate with VPPS Therapist Exploration, but did correlate with VPPS Negative Therapist Attitude. These findings suggest that when therapists focus on the transference, these efforts seem less exploratory than challenging; therapists appear to be intervening in a confronting manner.

Hypothesis Testing

Hypothesis #1:

It was first hypothesized that therapist interventions that linked patients' panic symptoms with their underlying psychological issues would correlate positively with therapy outcome.

To assess this hypothesis, partial correlation coefficients that controlled for initial symptomatology were calculated between the IPA factor Panic-Focus and outcome measures. IPA factors were measured at early, middle, and late treatment and outcome measures were obtained at treatment end (12 weeks). Results, presented in Table 7, show that the null hypothesis could not be rejected at any of the three time periods of psychotherapy. The therapist focus on panic dynamics did not significantly correlate with the alleviation of panic symptoms, as shown by the Panic Disorders Severity Scale (PDSS; $\underline{r}s < .17$, $\underline{p}s > .54$), or related symptomatology, such as non-panic related anxiety as shown by the Hamilton Anxiety Rating Scale (HARS; $\underline{r}s < .25$, $\underline{p}s > .58$). Panic focus did not correlate significantly with the impact of symptomatology on work, social, and family functioning, as measured by the Sheehan Disability Scale (SDS; $\underline{r}s < .22$, $\underline{p}s > .42$).

Hypothesis #2:

Hypothesis 2 predicted that a therapeutic focus on the transference relationship would be correlated with positive therapy outcome.

Table 7 also presents findings supporting a significant relationship between these dimensions after controlling for initial symptomatology, but these associations were not

Table 7

Partial Correlation Coefficients at Early, Middle, and Late Treatment among IPA Therapist Focus on Panic, Therapist Focus on Transference, and Outcome Variables Controlling for Initial Symptomatology

IPA Factor	PDSS	SDS	HARS
Therapist Focus on Panic Dynamics			
Early (n=21)	.16, p = .54	-.02, p = .94	-.09, p = 75
Middle (n=19)	.08, p = .76	-.21, p = .43	.25, p = .58
Late (n=17)	.09, p = .74	.17, p = .54	.09, p = .75
Therapist Focus on Transference			
Early (n=21)	.35, p = .18	.47, p = .07 +	.59, p = .02 *
Middle (n=19)	.30, p = .27	.37, p = .16	.11, p = .70
Late (n=17)	-.63, p = .01 *	-.32, p = .22	-.14, p =.60

Note. PDSS = Panic Disorders Severity Scale; lower scores at treatment end indicate improvement. SDS = Sheehan Disability Scale; lower scores at treatment end indicate improvement. HARS = Hamilton Anxiety Rating Scale; lower scores at treatment end indicate improvement. – sign indicates positive associations with improvement as measured at treatment termination. + $p < .10$. * $p < .05$.

always in the predicted direction. A focus on the transference in early sessions (e.g., session 4 in a 24-session treatment), which was measured by this IPA factor, was moderately, but not significantly, correlated with an increase in SDS scores, $r(19) = .47$, $p=.067$, but was significantly correlated with an increase in HARS scores, $r(19) = .59$, $p < .05$. A focus on transference was not significantly correlated with PDSS scores ($p > .18$) at early treatment.

In the middle of treatment, focusing on the transference did not significantly correlate with any of the outcome measures ($rs < .38$, $ps > .15$). A focus on the transference in later sessions (e.g., session 21), however, was strongly negatively correlated with PDSS scores, $r(15) = -.63$, $p < .01$. SDS and HARS scores were not correlated with a focus on the transference in later sessions ($rs < .33$, $ps > .21$). In sum, these findings indicate that a focus on transference early in treatment increased anxiety at treatment end, while a focus on transference late in treatment decreased panic symptomatology at termination.

Hypothesis #3:

Hypothesis 3 predicted that therapeutic relationship factors would correlate with outcome. As shown in Table 8, the VPPS Patient Involvement dimension was not significantly correlated with any of the outcome measures at early ($rs < .32$, $ps > .25$) and mid ($rs < .26$, $ps > .34$) treatment. However, in later sessions, (e.g., session 21) Patient Involvement was moderately and nearly significantly correlated with SDS scores, $r(15) = -.48$, $p = .06$, and HARS, $r(15) = -.50$, $p = .05$, at treatment end in the predicted direction. Patient Involvement late in treatment, however, was not significantly correlated with PDSS scores ($p = .64$) but was in the predicted direction ($r = -.13$).

The VPPS Patient Involvement dimension combines two subscales, Patient Participation and Patient Hostility. As shown in Table 8, elevated Patient Participation scores in mid-treatment (e.g., session 12) were not significantly correlated with PDSS or SDS scores (ps > .56) but were moderately correlated with HARS scores, $r(17) = -.44$, $p = .09$, in the negative direction, indicating that increased patient participation late in treatment was associated with a reduction of anxiety symptoms at treatment end. Elevated Patient Hostility scores at early or mid treatment were not correlated with outcome measures. At late treatment, increased patient hostility showed a moderate association with a decrease in social functioning, $r(17) = .46$, $p = .08$, and correlated significantly with an increase in anxiety, $r(17) = .56$, $p = .03$. These findings suggest that if patients react negatively to therapists towards the end of treatment (e.g., hostile, frustrated, defensive), anxiety may increase and symptoms may affect social functioning. Alternately, these findings might indicate that for patients who were still experiencing symptoms towards the end of treatment, there was frustration and disappointment directed towards therapists.

Although findings were not particularly strong, the patterns that emerged provided support for hypothesis 3a. It appears that by mid to late treatment, patients' willingness to be involved with the therapy predicted a decrease in symptoms. As expected, an increase in patient hostility, especially towards treatment end, was associated with increased anxiety and decreased social functioning. Patient hostility did not, however, appear to be associated with an increase in panic symptoms.

Hypothesis 3b predicated that if the therapist offered a relationship in a warm and friendly way to patients, symptoms would decrease at end of treatment. Table 8 shows

only one significant correlation. The therapist-offered relationship early in treatment appeared to be associated with an increase in anxiety at treatment termination, $r(21) = .56$, $p = .02$, after controlling for initial symptomatology.

The VPPS Therapist Offered Relationship dimension was created by combining two subscales, Therapist Warmth and Friendliness and Therapist Negative Attitude. Table 8 shows partial correlations between these two subscales and outcome. The VPPS Therapist Warmth and Friendliness subscale early in treatment was not significantly correlated with any of the three outcome measures ($rs < .44$, $ps > .05$), but one moderate association did emerge. Therapist Warmth and Friendliness early in treatment correlated with increases in HARS scores at end of treatment, $r(19) = .44$, ($p = .09$), indicating that more warmth and friendliness on the part of the therapist early in treatment resulted in moderate increases in anxiety at treatment end.

At mid treatment, moderate negative correlations were found between VPPS subscale Therapist Warmth and Friendliness and each outcome measure ($rs = -.41$ to $-.46$). Although none of these correlations were statistically significant at the .05 level, two (i.e., SDS and HARS) did show trends in the predicted direction at the .10 level (SDS scores, $r = -.46$, $p = .08$; HARS, $r = -.46$, $p = .08$). None of the outcome measures were significantly correlated with Therapist Warmth and Friendliness at late treatment, and all correlations were relatively small in magnitude ($rs < .25$, $ps > .36$).

Negative Therapist Attitude factor was inversely associated with post PDSS scores during the late treatment phase, $r(19) = -.50$, $p = .05$, indicating that the more negative the therapist attitude was late in treatment, the less panic symptoms individuals reported at the end of treatment. No other associations with this factor, however, were

Table 8

Partial Correlation Coefficients at Early, Middle, and Late Treatment among VPPS Patient Participation, Patient Hostility, Therapist Warmth and Friendliness, and Outcome Variables Controlling for Initial Symptomatology

	PDSS	SDS	HARS
VPPS Dimension			
Therapist-Offered Relationship			
Early (n=21)	-.13, p = .63	.29, p = .27	.56, p = .02 *
Middle (n=19)	-.27, p = .31	-.13, p = .64	-33, p = .22
Late (n=17)	.05, p = .85	-.09, p = .73	.14, p = .60
Patient Involvement			
Early (n=21)	-.20, p = .46	-.31, p = .25	.19, p = .47
Middle (n=19)	-.11, p = .68	-.24, p = .37	-.25, p = .35
Late (n=17)	-.13, p = .64	-.48, p = .10 +	-.50, p = .05 +
VPPS Factor			
Therapist Warmth and Friendliness			
Early (n=21)	-.01, p = .71	.33, p = .22	.44, p = .09 +
Middle (n=19)	-.41, p = .11	-.46, p = .08 +	-.46, p = .08 +
Late (n=17)	-.24, p = .37	-.01, p = .72	.12, p = .66
Negative Therapist Attitude			
Early (n=21)	-.24, p = .37	-.09, p = .75	-.29, p = .28
Middle (n=19)	-.13, p = .64	-.01, p = .97	.26, p = .33
Late (n=17)	-.50, p = .05*	-.04, p = .88	-.10, p = .70
Patient Participation			
Early (n=21)	-.48, p = .06 +	-.27, p = .32	.01, p = .72
Middle (n=19)	-.37, p = .16	-.38, p = .15	-.44, p = .09 +
Late (n=17)	-.12, p = .66	-.29, p = .27	-.21, p = .44
Patient Hostility			
Early (n=21)	.06, p = .82	.22, p = .42	-.17, p = .53
Middle (n=19)	-.06, p = .82	.15, p = .58	.16, p = .57
Late (n=17)	-.08, p = .77	.46, p = .08 +	.56, p = .03 *

Note. PDSS = Panic Disorders Severity Scale; lower scores at treatment end indicate improvement. SDS = Sheehan Disability Scale; lower scores at treatment end indicate improvement. HARS = Hamilton Anxiety Rating Scale; lower scores at treatment end indicate improvement. – sign indicates positive associations with improvement as measured at treatment termination. + $p < .10$. * $p < .05$.

statistically significant. Although not intuitive, this result will be discussed later.

Hypothesis #4:

Hypothesis 4 predicted that patient exploration measured late in treatment would show stronger correlations with treatment outcome than those processes measured earlier in treatment.

Both the VPPS and the IPA tapped patient exploratory processes, as shown by individuals' ability and willingness to examine feelings and experiences. To examine this hypothesis, VPPS and IPA Patient Exploration scales at both early and late treatment were correlated with the PDDS, SDS, and HARS outcome measures. These coefficients are summarized in Table 9. Z tests for dependent correlations were calculated to compare the correlation coefficients at early treatment with those at late treatment.

When examining the VPPS scale, all correlations between Patient Exploration and the outcome variables were nonsignificant at the .05 level. The correlation between Patient Exploration and PDDS scores were not significantly different between late, $r(19) = -.36$, $p = .17$, and early treatment periods, $r(15) = -.36$, $p = .17$, $z = .01$, $p = .99$.

The correlation with VPPS Patient Exploration and SDS was somewhat higher at late treatment, $r(19) = -.46$, $p = .08$, compared with the correlation at early treatment, $r(15) = -.26$, $p = .34$, but this difference was not statistically significant, $z = .69$, $p = .49$. The correlation between VPPS Patient Exploration and HARS scores was lower at late treatment, $r(19) = .01$, $p = .99$, than it was at early treatment, $r(15) = -.21$, $p = .44$, but this difference was also not statistically significant, $z = -.62$, $p = .54$.

When examining these associations for the IPA Patient Exploration factor, a similar pattern of nonsignificant results emerged. The correlation between IPA Patient

Table 9

Partial Correlation Coefficients at Early, Middle, and Late Treatment among VPPS and IPA Patient Exploration Factors with Outcome Variables Controlling for Initial Symptomatology

	PDSS	SDS	HARS
VPPS Factor			
Patient Exploration			
Early (n=21)	-.36, p = .17	-.26, p = .34	-.21, p = .44
Middle (n=19)	-.27, p = .32	.00, p = .10	-.20, p = .45
Late (n=17)	-.36, p = .17	-.46, p = .08 +	.01, p = .99
IPA Factor			
Patient Exploration			
Early (n=21)	-.29, p = .28	-.33, p = .21	-.10, p = .72
Middle (n=19)	-.14, p = .59	-.13, p = .64	-.22, p = .42
Late (n=17)	-.25, p = .35	-.27, p = .32	-.13, p = .65

Note. PDSS = Panic Disorders Severity Scale; lower scores at treatment end indicate improvement. SDS = Sheehan Disability Scale; lower scores at treatment end indicate improvement. HARS = Hamilton Anxiety Rating Scale; lower scores at treatment end indicate improvement. – sign indicates positive associations with improvement as measured at treatment termination. + $p < .10$.

Exploration and PDDS scores at late treatment, $r(19) = -.25$, $p = .35$, were somewhat lower than the correlation between these variables at early treatment, $r(15) = -.29$, $p = .28$, but not significantly so, $z = -.13$, $p = .90$. The correlation with IPA Patient Exploration and SDS was also lower at late treatment, $r(19) = -.27$, $p = .32$, compared to the correlation at early treatment, $r(15) = -.33$, $p = .21$, but this difference was not statistically significant, $z = -.23$, $p = .82$. The correlation between IPA Patient Exploration and HARS scores was slightly higher at late treatment, $r(19) = -.13$, $p = .65$, than at early treatment, $r(15) = -.10$, $p = .72$, but this difference was not statistically significant, $z = .08$, $p = .94$. This pattern of results failed to support Hypothesis 4.

Hypothesis #5:

The fifth and last hypothesis predicted that PFPP treatments would focus on the theme of anger to a greater extent than on other themes.

Frequency data from the classified themes provided support for this hypothesis (see Table 10). Approximately 68.4% of the 57 sessions focused on the theme of anger, while other themes were present to a lesser extent. Themes of dependency versus autonomy was the focus in 49.1% of rated sessions, abandonment in 35.1% of rated sessions, mourning and loss in 29.8%, shame and guilt in 15.8%, sexual excitement in 10.5%, intimacy versus isolation was in 8.8%, and other themes (e.g., fear or disappointment) were in 17.5% of the rated sessions.

Table 10

Percentage of Identified Themes Across All 57 Sessions

Theme	%
Anger	68.4
Dependency vs. Autonomy	49.1
Abandonment	35.1
Mourning and Loss	29.3
Shame and Guilt	15.8
Sexual Excitement	10.5
Other Themes	17.5

Note: Percentages add up to greater than 100 per cent because multiple themes were rated for each session.

Post hoc Analyses

After testing the hypotheses, the same analyses used to assess Hypotheses 1 through 4 were conducted on the IPA and VPPS factors that were not addressed by the hypotheses. Table 11 summarizes the partial correlations of the IPA and VPPS factors at early, middle, and late treatment with outcome measures. The IPA Therapist Focus on Early Relationships was not significantly correlated with any of the outcome measures at any of the treatment periods. A moderate positive correlation between this factor and SDS scores in the late treatment period approached statistical significance, $r(15) = .47$, $p = .067$. This general trend indicated that when the therapist focused on the patient's experiences of his or her early relationships during the later part of treatment, the patient's quality of life functioning deteriorated at treatment end.

When examining the partial correlations of the IPA Therapist Focus on Ego Defenses factor with the outcome measures, this factor demonstrated a large, statistically significant correlation with PDSS scores at mid treatment, $r(17) = -.52$, $p = .039$. This indicated that at mid treatment, the more the therapist focused on ego defenses, the greater the panic symptom improvement was experienced at the end of treatment.
The IPA Therapist Focus on Present Relationships factor demonstrated a statistically significant partial correlation with post-treatment PDSS scores when this factor was assessed early in treatment, $r(19) = -.53$, $p = .036$. Although this association was not statistically significant at mid or late treatment, it approached statistical significance at the late treatment period, $r(15) = -.45$, $p = .08$. This pattern of results indicated a general trend toward less panic symptoms at the end of treatment when therapists focused on

Table 11

Partial Correlation Coefficients at Early, Middle, and Late Treatment of IPA and VPPS Factors with Outcome Variables Controlling for Initial Symptomatology

	PDSS	SDS	HARS
IPA Factor			
Therapist Focus on Early Relationships			
Early (n=21)	-.07, p = .80	-.03, p = .91	-.13, p = .63
Middle (n=19)	-.36, p = .17	.21, p = .44	.05, p = .86
Late (n=17)	-.18, p = .50	.47, p = .07 +	.30, p = .27
Therapist Focus on Ego Defenses			
Early (n=21)	-.10, p = .72	-.19, p = .49	-.27, p = .31
Middle (n=19)	-.52, p = .04 *	-.31, p = .24	-.32, p = .23
Late (n=17)	-.36, p = .17	-.34, p = .20	.02, p = .95
Therapist Focus on Present Relationships			
Early (n=21)	-.53, p = .04 *	-.21, p = .43	.05, p = .85
Middle (n=19)	-.39, p = .13	.03, p = .91	-.27, p = .32
Late (n=17)	-.45, p = .08 +	-.03, p = .92	.05, p = .87
VPPS Factor / Dimension			
Therapist Exploration			
Early (n=21)	.11, p = .68	-.10, p = .73	-.01, p = .98
Middle (n=19)	-.25, p = .36	.07, p = .79	.27, p = .32
Late (n=17)	.07, p = .81	.16, p = .57	.32, p = .23
Patient Psychic Distress			
Early (n=21)	.11, p = .70	-.18, p = .52	-.21, p = .45
Middle (n=19)	-.02, p = .95	-.32, p = .22	.31, p = .25
Late (n=17)	-.21, p = .43	.27, p = .32	.59, p = .02 *
Exploratory Processes			
Early (n=21)	-.00, p = .99	-.16, p = .56	-.27, p = .31
Middle (n=19)	-.13, p = .62	-.20, p = .47	.28, p = .29
Late (n=17)	-.01, p = .96	-.04, p = .90	.48, p = .06 +

Note. PDSS = Panic Disorders Severity Scale; lower scores at treatment end indicate improvement. SDS = Sheehan Disability Scale; lower scores at treatment end indicate improvement. HARS = Hamilton Anxiety Rating Scale; lower scores at treatment end indicate improvement. – sign indicates positive associations with improvement as measured at treatment termination. + $p < .10$. * $p < .05$.

patients' present relationships. No other associations with the other outcome measures were significant.

The VPPS Therapist Exploration factor was not significantly associated with any of the outcome measures at any of the treatment periods (ps > .23). However, several significant associations with the outcome measures emerged when examining the remaining VPPS factors (see Table 11). The Patient Psychic Distress factor during the late treatment phase evidenced a statistically significant partial correlation with HARS scores, $r(15) = .59$, $p = .02$, indicating that, as expected, the more patients experienced psychic distress at the end of treatment, the higher their anxiety. No other associations with this factor were statistically significant.

The VPPS Exploratory Processes dimension was not significantly correlated with any of the outcome measures. The correlation between this dimension at late treatment and HARS scores approached statistical significance, however, $r(15) = .46$, $p = .06$, indicating a general trend toward increased anxiety as scores on Exploratory Process increased.

Description of PFPP Process

The next analyses examined the differences between the IPA factors at early, mid, and late treatment. Three one-way within-subject analyses of variance (ANOVAs) were conducted to compare the mean ratings across the IPA factors for each time period: (a) early treatment, middle treatment, and late treatment. Figures 1, 2, and 3 depict the ratings of IPA factors at the early, middle, and late courses of treatment, respectively. A statistically significant and large difference between the six IPA factors was found at early treatment, $F(5, 100) = 31.18$, $p < .0001$, $n^2 = .61$. Statistically significant

differences were also observed at mid, $F(5, 90) = 9.86$, $p < .0001$, $\eta^2 = .35$, and late, $F(5, 80) = 7.50$, $p < .0001$, $\eta^2 = .32$, treatment, indicating that the IPA was able to differentiate between a number of unique processes occurring in the observed PFPP sessions.

Least Significant Difference planned comparisons revealed that ratings of the IPA Transference factor were significantly lower than all other factors at early and middle treatment ($ps < .01$). At late treatment, Transference ratings were significantly lower than all other factors ($ps < .05$), except for the Early Relationships factor ($p = .07$). Overall, the pattern of mean differences for Transference indicates that early in treatment, therapists focused little on the transference, but progressively focused more attention on transference as the treatment continued, $F(2, 32) = 7.77$, $p < .01$, $\eta^2 = .33$. Additionally, at all stages of treatment, the Panic Dynamics factor had the highest score compared to the other factors ($ps < .01$) indicating that therapists tended to focus more intensely on panic dynamics than on the other issues.

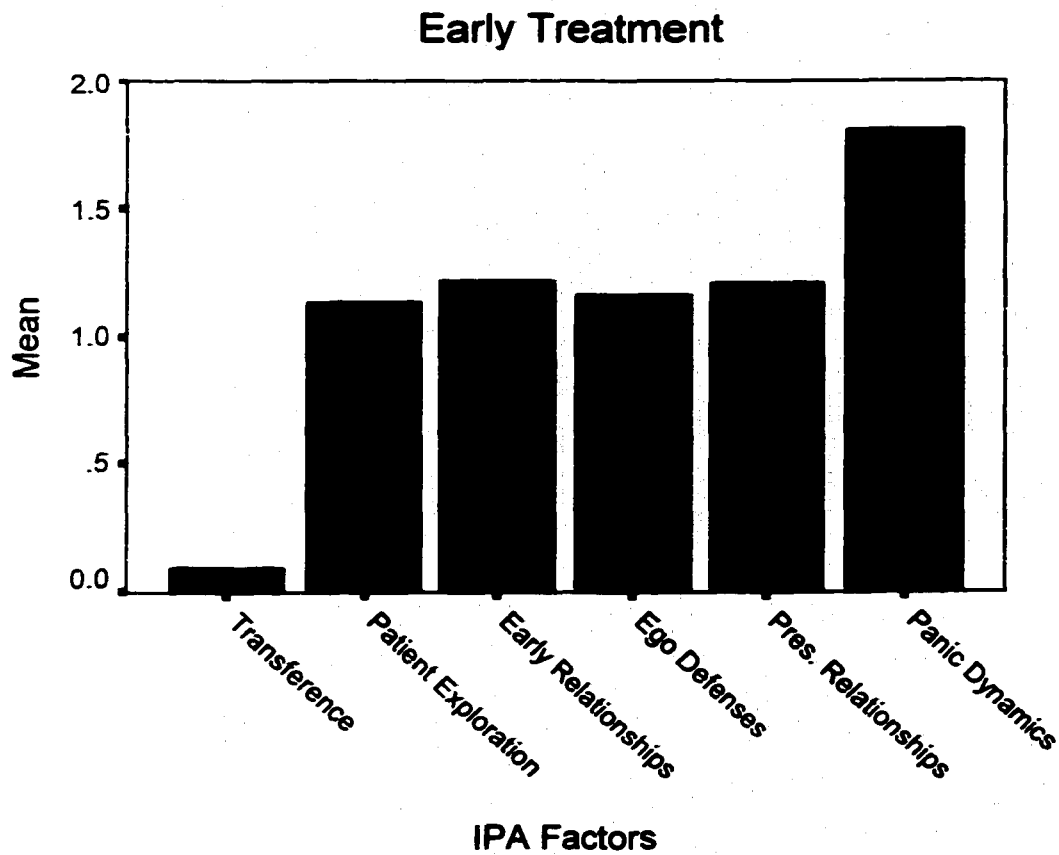

Figure 1. *Mean ratings of Interactive Process Assessment (IPA) factors at early treatment.*

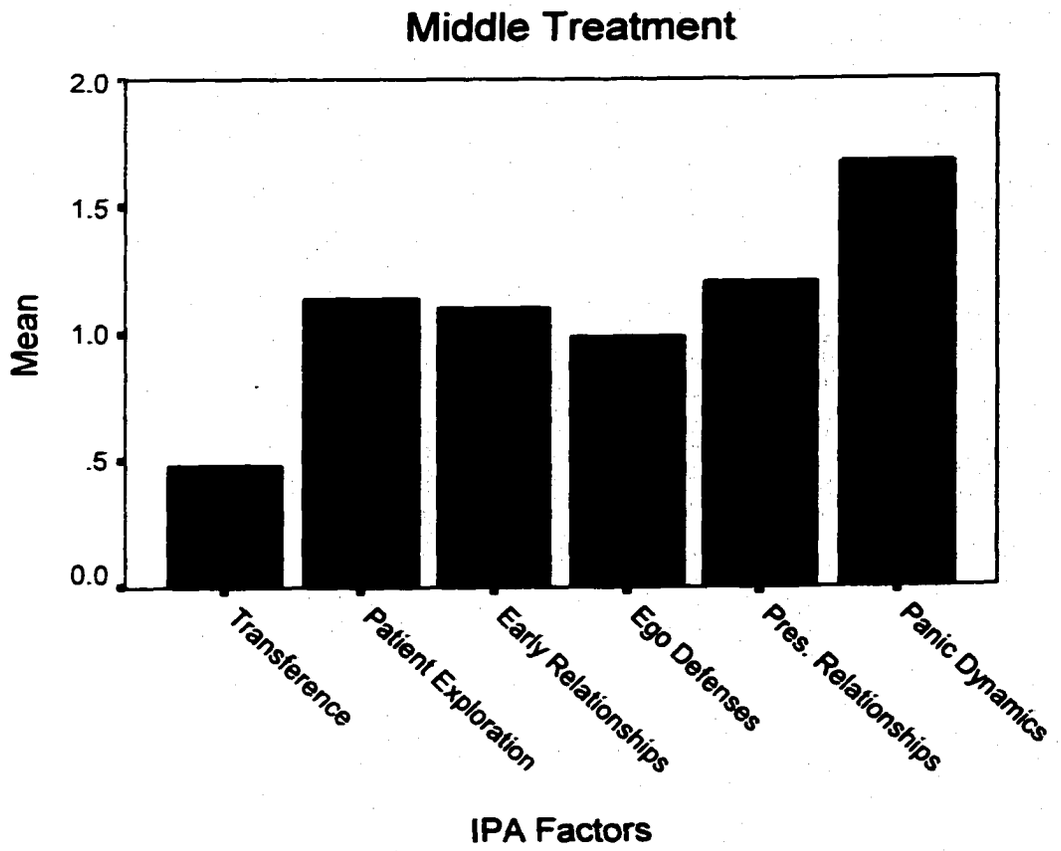

Figure 2. *Mean ratings of Interactive Process Assessment (IPA) factors at middle treatment.*

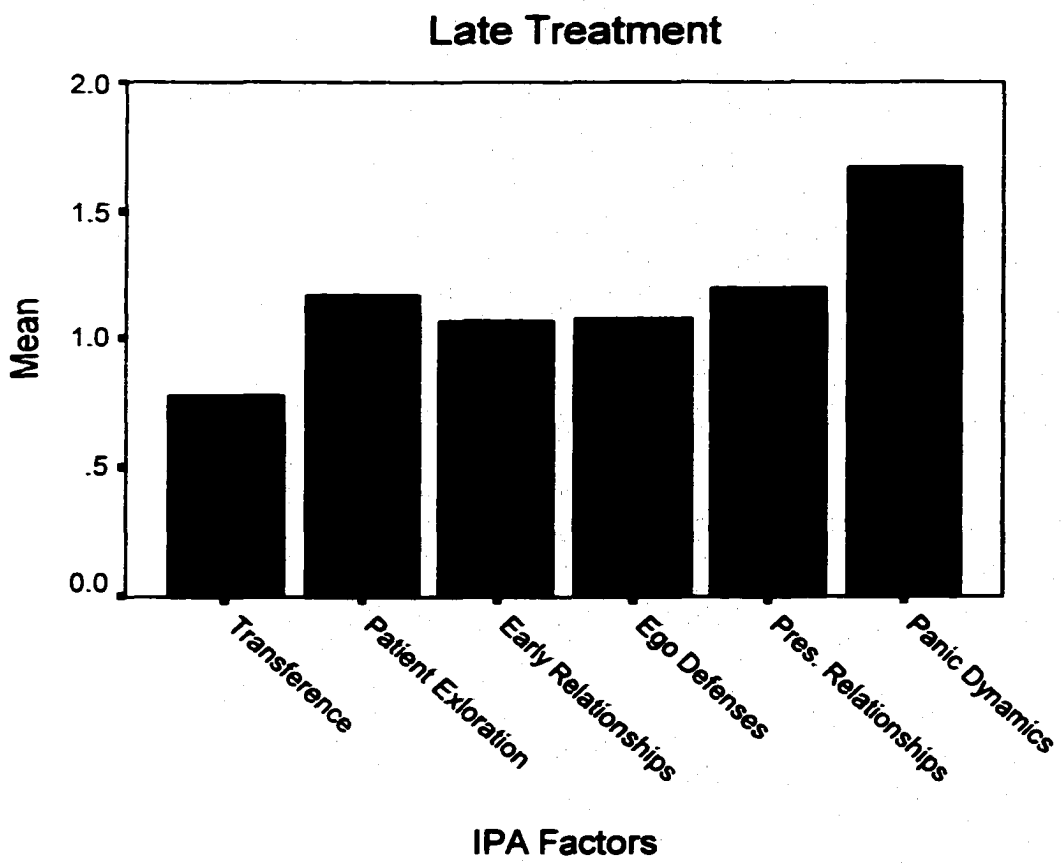

Figure 3. *Mean ratings of Interactive Process Assessment (IPA) factors at late treatment.*

Discussion

Summary of the Findings

This study was designed to assess the relationship between therapeutic process and clinical outcome in a sample of individuals being treated for panic disorder with Panic-Focused Psychodynamic Psychotherapy (PFPP). A process rating scale, the Interactive Process Assessment (IPA), was used to examine specific processes occurring in PFPP at multiple time periods throughout a 24-session, approximately 12-week treatment. A second process rating scale, the Vanderbilt Psychotherapy Process Scale (VPPS), served to further describe the process of PFPP. Process ratings were correlated with outcome measures of symptomatic improvement.

In discussing the findings from the current study, many associations mentioned were not statistically significant but reveal interesting trends that were worth noting and are worthy of future study. In clinical research, statistical significance may not always be the most interesting focus for evaluation of the findings. Statistical significance refers to the probability that the differences and associations in the observed pattern of results are not best explained by chance. Reaching statistical significance is heavily influenced by sample size, in that the larger the sample, the easier it is to obtain statistical significance (Cohen, 1988), as well as by the stability of the measures, and the variability of the results. Because the present study had a small sample size, the associations had to be relatively large to demonstrate statistical significance.

Rosenthal (1995) has argued that clinical psychology has been too stringent with respect to the interpretation of results and so has often underestimated the significance of

research findings. He maintains that results from clinical studies are more encouraging when distinguishing effect size estimation from significance testing, clarifying the interpretation of nonsignificant results, and evaluating the practical importance of obtained effect size. In Rosenthal's view, "...10 p's of .10 are stronger evidence ... than 5 p's of .05 [given that the effect is in the predicted direction]" (p. 146). With this consideration, nonsignificant results are discussed here if they were clinically interesting, with some statistical support, defined as a moderate magnitude of effect (i.e., $\underline{r} = .30$; Cohen, 1988).

The data provided mixed support for the predictions of this investigation. Results suggested that focusing on the transference relationship appears to be related to outcome, but that it might be better to wait to address it until later in treatment, even within a 12-week time frame. Focusing on the transference too early in the therapy may be associated with increased levels of anxiety at termination. Although traditional psychoanalysts would suggest waiting much longer than 12 weeks to address transference issues, it appears that for panic patients, addressing the transference towards the end of a short-term treatment might be beneficial. Interestingly, in those sessions in which therapists addressed the transference, raters perceived them as having negative attitudes. Contrary to past studies using the VPPS, in the present study outcome was not adversely affected by what was rated as negative therapist attitude. This suggests that external raters might have misidentified negative therapist attitude, or that such an attitude might not be harmful in the context of productive therapeutic work, such as transference interventions.

In contrast to previous research, the present study suggested that therapists might

wish to be cautious in adopting a warm and friendly stance too early in treatment. After the passage of some time in therapy, however, (here, 6 weeks), it appears that therapist warmth and friendliness can be beneficial.

It was unclear from the present study how focusing on panic symptomatology affected the treatment. A study which compares the process of PFPP with a generic psychodynamic psychotherapy, in which focusing on symptoms is not encouraged, might yield insight into how this process relates to therapy outcome. This study also did not indicate whether patients' ability and willingness to explore in psychotherapy was a helpful ingredient. There was little variability in levels of patient exploration, and meaningful process-outcome correlates could not be generated.

While a hallmark of psychodynamic psychotherapy is to focus on early, genetic relationships, the current study did not demonstrate that this process is related to outcome. However, in their meta-analysis of process-outcome findings, Orlinsky, Grawe, & Parks (1994) found evidence that focusing on "core personal relationships (e.g., families of origin) is associated with improvement in individual psychodynamic therapy, particularly as judged from an external rater's process perspective" (p. 292). Interestingly, Orlinsky et al. (1994) cite the work of Luborsky and colleagues (Luborsky, Crits-Christoph, & Mellon, 1986), among others, to support their analysis. Luborsky's focus has been on the transference, which involves an understanding of early relationship patterns. The current study's failure to find a relationship between focusing on genetic relationships and therapy outcome may be due to the lack of scatter in the measurement of this technique.

Anger was a major theme in the observed psychotherapy sessions. This finding

was consistent with current psychodynamic conceptualizations of panic disorder (e.g., Milrod et al., 1997), which suggest that panic might be connected with largely unconscious angry fantasies and impulses. However, this finding might simply be indicative of therapists' adherence to the PFPP manual, in which therapists are directed towards focusing on anger as a component of panic disorder.

Interpretation of the Findings

In considering how psychotherapy process relates to outcome in the present study, it is important to note that therapeutic outcome was excellent overall (Milrod, et al., in press). Thus the range of outcome was narrow, limiting the strength of associations with process variables. Of 17 patients who completed treatment (out of 21), 16 achieved remission of panic attacks and preoccupation with panic, as well as reduction of related anxiety symptoms (e.g., high levels of resting anxiety, general arousability). In addition, improvements in quality of life were attained, indicating a better ability to function in daily activities (Milrod et al., 2000; in press). Table 12 summarizes clinical ratings of panic symptomatology at baseline and treatment termination. Findings show that at week 0 (pre-treatment), patients' mean score was 12.80 on the PDSS (SD = 3.10); the mean score on the SDS was 15.40 (SD = 7.60); and on the HARS, the mean score was 18.30 (SD = 6.20). At week 16 (post-treatment), patients' mean score on the PDSS was 5.00 (SD = 3.50); the SDS mean score was 6.94 (SD = 5.10); and the mean score on the HARS was 8.50 (SD = 5.10). The within-group effect size (Cohen's d) for the PDSS was 2.08, $p < .001$; for the SDS, it was 1.55, $p < .001$; and for the HARS, it was 1.72, $p < .001$.

Table 12

Clinical Ratings at Pre- and Post-Treatment for 21 Patients Treated with Panic-Focused Psychodynamic Psychotherapy

	Pre-Treatment Week 0 (n = 21)		Post-Treatment Week 16 (n = 17)		Pre- versus Post-Treatment Comparison	
Measure	Mean	SD	Mean	SD	Effect Size [a]	p [b]
PDSS	12.80	3.10	5.00	3.50	2.08	< .001
SDS	15.40	7.60	6.94	5.10	1.55	< .001
HARS	18.30	6.20	8.60	5.10	1.72	< .001

a Within-group effect size (Cohen's d)
b From Wilcoxon paired-rank sum tests; Bonferroni adjusted level = .006

Note. PDSS = Panic Disorders Severity Scale; lower scores at treatment end indicate improvement. SDS = Sheehan Disability Scale; lower scores at treatment end indicate improvement. HARS = Hamilton Anxiety Rating Scale; lower scores at treatment end indicate improvement.

Psychodynamic psychotherapy for panic disorder has not previously been studied empirically, and the present study did not test the efficacy of this modality for panic disorder (no comparison treatment was included). Cognitive-behavioral therapy (CBT) has been shown to be an effective psychotherapy for treating panic disorder, but despite reductions in panic attacks, patients often remain symptomatic in areas of general anxiety and avoidance (Roth and Fonagy, 1996). For example, in two controlled clinical trials (Barlow, Craske, Cerney, & Klosko, 1989; Klosko, Barlow, Tassinari, & Cerney, 1990) using CBT for panic disorder, 87% and 85%, respectively, of patients receiving therapy alone (without adjunct medication) were panic-free at treatment termination, but patients remained symptomatic on measures of general anxiety (Hamilton Anxiety Rating Scale). Few studies have considered broader quality of life aspects to treatment response.

In addition, patients treated in the present study achieved substantial recovery despite the fact that they appeared to have been more symptomatic from panic disorder and agoraphobia than those treated in recent controlled trials (Milrod et al., 2000; e.g., Barlow, Gorman, Shear, & Woods, 2000). Almost half of this group had comorbid major depression or dysthymia, a population of panic patients that tends to respond more poorly to all studied psychotherapeutic treatments (Noyes, Holt, Woodman, 1996).

Thus, psychodynamic psychotherapy appears to be a promising treatment for panic disorder, and the present process-outcome study was designed to understand what makes that so. Process-outcome correlates reported here are relative to the degree of outcome, however; poorer outcomes were still relatively favorable, considering that 16 of

17 completers substantially improved clinically and statistically.[2] Thus, results are to be interpreted with caution.

Orlinsky, Grawe & Parks (1994; p. 270) describe process-outcome research as that which "represents an empirical strategy for determining which aspects and modes of therapeutic process are particularly helpful or harmful to patients." Perhaps in response to the need to differentiate itself from psychotherapy outcome research, or in being careful not to purport to be studying therapy efficacy, process-outcome research has not generally tended to report on overall outcome (how well did patients do in the psychotherapy studied?). Reports of process-outcome studies using the Vanderbilt Psychotherapy Process Scale ([VPPS]; O'Malley et al., 1983; Suh & O'Malley, 1982, reported in Suh et al., 1986; Henry et al., 1993; Winholz & Silberschatz, 1988; Rounsaville et al., 1987) may make reference to "poor" versus "good" outcome, but no indication of how well patients actually did in therapy overall is found.[3]

This trend is problematic, however, in that a consideration of psychotherapy process in relation to outcome is influenced by the degree to which patients have recovered. The strengths of the pilot outcome study using psychodynamic psychotherapy for panic disorder, in which there were largely homogenous outcomes, limited the interpretability of process-outcome correlates in the present study.

Therapist Focus on Panic Dynamics

Contrary to expectations, therapist interventions that linked patients' panic

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[2] Data analyses did not compare dropouts (N=4) and completers (N=17) because of limited statistical power (Milrod et al., in press).

[3] Some process-outcome studies (e.g., Ablon & Jones, 1999), of course, are based upon effectiveness research extensively reported upon elsewhere (e.g., Elkin et al., 1989).

symptoms with their hypothesized underlying psychological issues were not related to patients' therapy outcome. All associations were small, indicating very little shared variability between therapists' focus on panic dynamics and patient outcome. This failure to demonstrate the therapeutic benefit of exploring the underlying, unconscious conflicts responsible for panic symptoms contrasts with much common wisdom throughout the history of psychoanalysis (e.g., Freud, 1905/1953; 19261959; Luborsky, 1996).

More likely the present study's finding reflects the limitations of the IPA as utilized here, as well as the limited spread in the data set. Almost uniformly high process ratings of focus on panic dynamics reflect the high level of therapist training and adherence (Milrod et al., 2000; in press) to a treatment meant to be "panic-focused." Given this, meaningful process-outcome associations regarding focusing on panic symptoms could not be generated. This process might be better investigated by comparing this aspect of PFPP with alternative psychotherapies.

Therapist Focus on Transference

The strongest associations found in this study concerned the factor that appeared to vary the most over the course of treatment as measured by the IPA, namely, the focus on transference (see Figures 1-3). Process-outcome correlates suggest that the constellation of patients' panic symptoms at treatment termination improved in proportion to therapists' focus on transference in the last third of these 24-session psychotherapies. In contrast, the more that therapists focused on transference in the early stages of treatment, the higher were levels of (non-panic) anxiety at treatment termination, as measured by the HARS. This suggests that a focus on transference too early may actually have had a negative impact on symptoms as measured at the end of

treatment.

It may equally be true that a greater focus on transference early in these brief treatments was a marker for more intense and disruptive relationships with therapists, such as might be seen in patients with severe borderline or narcissistic personality characterological styles. In other words, therapists may have been more likely to focus on what might have been disruptive transference relationships early in treatment with more impaired patients, which led to an observed association with greater symptomatology. Kernberg has noted that "the sicker the patient and the more distorted the total interpersonal interaction in the psychotherapeutic relationship, the easier it is to diagnose primitive object relationships in the transference" (Kernberg, Selzer, Koenigsberg, Carr, & Appelbaum, 1989, p. 51).

In a meta-analysis of outcome studies using cognitive-behavioral treatment for panic disorder (Mennin & Heimberg, 2000), personality psychopathology was noted for its detrimental effect on psychotherapy outcome. In the present study, patient characteristics such as personality disorders were likely to have been important, but this possibility was not tested, as no measure of personality disorder, such as the SCID-II, was performed on this sample.

Nonetheless, the present study did include diagnoses of comorbidity, which offered some opportunity to explore the possible relationship between additional symptomatology and transference interventions. In a qualitative post-hoc analysis of comorbidity, comorbid diagnoses were examined for those patients for whom transference was a focus of the session in early treatment, which included 3 of 21 subjects. Of these 3 patients, one had an additional diagnosis of a specific phobia and had

dropped out of treatment in the first third of the 12-week therapy, one had comorbid bipolar disorder and post-traumatic stress disorder, and another had comorbid obsessive-compulsive disorder. Interestingly, bipolar disorder, PTSD, or OCD were not found to be comorbid disorders for other patients, suggesting that perhaps this subset of patients was more impaired. Other comorbid diagnosis included specific phobias, social phobias, generalized anxiety disorder, and depression.

A subset of 8 of the 21 subjects who participated in the study met DSM-IV criteria for either major depressive disorder or depressive disorder NOS. Therapists did not address the transference in the beginning of treatment in any of the rated sessions for the 8 depressed patients. For all but 1 of the depressed 8 patients, therapists exclusively addressed the transference in the rated session from late treatment, which was consistent with the general trend of increased focus on the transference in late treatment for all patients (see Figures 1-3). Thus, it does not appear that a diagnosis of depression influenced the timing of transference interventions.

At the most basic level, the present study's findings that a focus on the transference correlates with outcome may provide support for the common psychoanalytic wisdom about mutative aspects of the interpretation of the transference (Brenner, 1955; Freud, 1912/1958; Gill, 1979; Racker, 1968; Stone, 1967; Strachey, 1934). In this view, the analysis in the therapeutic relationship of the patients' dynamics resulting from past relationships ultimately leads to greater insight and conflict resolution. Clearly, the present study is limited in its ability to clarify in which ways therapeutic focus on the transference might have been beneficial.

The finding that focus on the transference early in treatment can increase anxiety

is consistent with many analysts' views about the negative impact of premature interpretation of the transference (Strachey, 1934), who believe that the transference should only be interpreted after it has developed and intensified over a lengthy psychoanalysis. Likewise, many traditional psychoanalysts would find any mention of transference phenomena within the confines of a 24-session treatment to be premature. Others (Davanloo, 1978; Malan, 1976; Mann, 1973; Sifneos, 1972) have argued that transference interpretations early in treatment are beneficial. Recent psychotherapy research (e.g., Bond, Banon, & Grenier, 1998; Hoglend, 1996; Winston, McCullough, & Laikin, 1993) has suggested that, at least for more disturbed patients, transference interpretations are best reserved for after the development of a strong working relationship, but more precise guidelines have yet to be established.

The present study may support an intermediate position on timing of transference focus in psychodynamic psychotherapies: that transference interpretations may lead to greater symptomatic relief if timed in the middle or toward the end of a 24-session treatment. This timing may give ample opportunity for the development of a positive working alliance that may allow the patient to benefit from interpretations.

The present findings, however, may be particularly reflective of working in a time-limited treatment with panic patients. The time-limited aspect of the study treatment may have influenced the timing of transference interpretations, in that transferential fantasies and phenomena all telescoped in these fairly intense, brief treatments. It has been hypothesized (Milrod et al., 1997) that individuals with panic disorder tend to become anxious around separation (phobic companions, for example, are not uncommon). Psychodynamic formulations of panic disorder highlight threats to

attachments as triggers for regression resulting in panic (e.g., Milrod et al., 1997). In these treatments, the greater transference work towards the end of treatment often reflected the interpretation via the transference of separation issues. The association with superior outcome, therefore, might suggest that termination interpreted via the transference allows panic patients to begin to master early traumatic anxiety and separation fears.

The Therapeutic Relationship

The prediction that therapeutic relationship factors would be positively related to patient outcome was not strongly supported, but there was some evidence for this pattern. Results suggested that patient involvement in therapy in the later session might help alleviate symptoms at the end of treatment. Previous studies using the VPPS (Gomes-Schwartz, 1978; O'Malley et al., 1983; Windholz & Silberschatz, 1988) have found patient involvement to be the best predictor of outcome. Again, the lack of strong findings in the present study may be related to limitations in variability of the data and the small sample size.

In addition, the VPPS has not previously been used to investigate the process of psychotherapy with patients suffering from panic disorder. The Vanderbilt I and II studies (Gomes-Schwartz, 1978; O'Malley et al., 1983) examined male college students and did not highlight diagnoses. Windholz and Silberschatz (1988) studied 38 adult outpatients undergoing a 16-session psychodynamic psychotherapy. Although exclusion criteria were similar to those of the present study (e.g., psychosis, organic brain syndromes, or substance abuse), the authors did not note diagnoses beyond that all patients suffered from "neurotic and/or character disorders" (p. 57).

Rounseville et al. (1987), using the VPPS to study patients suffering from depression, found that therapist process factors were better predictors of patient outcome than patient process factors. In that study, therapist exploration predicted improvement in depression, and greater levels of warmth and friendliness were associated with improved social functioning (as measured by the Social Adjustment Scale [SAS]), as well as with the patient's perception of improvement. The authors hypothesized that the lack of consistency between their findings and those of past studies using the VPPS was related to the type of therapy used, Interpersonal Psychotherapy of Depression (IPT); IPT therapists are trained to focus on the therapy relationship. It is similarly possible that in the present study, the type of therapy and patient diagnosis influenced findings.

The therapist-offered relationship has also been shown to be a predictor of positive outcome, although to a lesser extent than patient involvement (Gomes-Schwartz, 1978; O'Malley et al., 1983; Windholz & Silberschatz, 1988). In contrast, in the present study the VPPS dimension Therapist-Offered Relationship was associated with an increase in anxiety at the end of treatment. An examination of the subscales that comprise this dimension reveals an interesting pattern. Elevated levels of Therapist Warmth and Friendliness during the early sessions tended to be associated with a moderate increase in anxiety at treatment end, while higher levels in the middle of treatment had the opposite effect. In addition, higher levels of therapist warmth and friendliness mid treatment was associated with a decrease in social functioning at treatment end.

Although correlations were not significant, indicating weak associations, the findings appear to suggest that therapists' appearing warm and friendly too soon might

lead to increases in anxiety, but in the middle of treatment this warmth and friendliness might be beneficial. Rounseville et al. (1987) found that greater levels of warmth and friendliness were significantly correlated with patient-rated change and improved social functioning at treatment end, but that study did not correlate process and outcome by time period in therapy. Gomes-Schwartz (1978) found that trained psychodynamic therapists were not as warm and friendly as untrained counselors, but that this variable was not related to outcome.

Previous studies have not hypothesized about how the timing of this process in treatment might influence outcome. It is possible that the present study highlights a drawback to therapists exhibiting attributes of warmth and friendliness too soon in therapy. Light may be shed on this by Gill's (1979) assertion that patients' actual experiences of the therapist in the "here-and-now" have meaning with respect to past experiences. Thus, the perception of the therapist as being warm and friendly may be a complicated experience for a panic patient who is primed to expect a chronic sense of feeling frustrated, resentful and unsupported (Busch et al., 1991; Shear et al., 1993). Confronted with too much warmth and friendliness early in treatment may result in an increase in symptoms, as the patient's conflicts about feeling love for an object to whom something frightening might occur (Freud, 1895/1961) are activated in the new relationship before the patient has had the time to gain understanding into these conflicts. Lovern (1991) has also noted that patients with low self-esteem perceive therapists as inauthentic if they are seen as being too positive too soon.

While previous studies (Gomes-Schwartz, 1978; O'Malley et al., 1983; Windholz & Silberschatz, 1988) have suggested that the VPPS subscale measuring negative

therapist attitudes might adversely influence outcome, the present study found the opposite to be true. The finding that negative therapist attitude late in treatment correlated with a decrease in panic symptoms at the end of treatment might be related to technical factors. It was found that the occurrence of transference interventions increased in late sessions (see Figure 3) and that during this time period the IPA transference subscale was correlated with the VPPS Negative Therapist Attitude factor (see Table 6). Therapists characterized as having negative attitudes were perceived by raters as being either intimidating, authoritarian, lecturing, defensive, judgmental, or negatively confronting patients (see VPPS Factor and Item Composition, Appendix D).

It is possible that there was a manner in which therapists delivered transference interpretations that appeared confronting in a negative or intimidating way. It would be interesting to ascertain the patient or therapist perspective on this issue. Did the patients themselves perceive therapists negatively in sessions in which the transference was explored? Were therapists aware of experiencing discomfort or acting in a manner that could have been perceived of as authoritarian and defensive by an external rater? It is clear that patient and therapist perspectives would have been valuable in the present study.

Patient Exploration

The prediction that increased levels of patient exploration later in treatment would be related to positive therapy outcomes was not supported. The degree to which patients were willing to examine their feelings and experiences at both early and late treatment demonstrated fairly equal and nonsignificant relationships with outcome measures.

As psychodynamic psychotherapy is an exploratory treatment, it is likely that

nonsignificant findings in this study were related to the limitations of the IPA and VPPS to measure specific exploratory processes that may have been related to outcome. It is possible that the IPA Patient Exploration subscale may have been too broad a construct in the present study, as it included patient variables that might better have been examined separately and in more detail (e.g., willingness to explore underlying dynamics; verbal elaboration in response to therapists' comments). Likewise, the VPPS Patient Exploration factor may not have accurately captured this therapy process. Gomes-Schwartz (1978), O'Malley et al. (1983), and Windholz and Silberschatz (1988) all found weak associations between outcome and the VPPS measure of both patient and therapist exploratory processes.

Anger as a Focus of PFPP

The last prediction in the current study was that Panic-Focused Psychodynamic Psychotherapy would focus on the theme of anger more so than any other theme and this is exactly what was found. In approximately 68% of the sessions, anger emerged as an important theme. The theme of dependency vs. autonomy (49%) and abandonment (35%) were the next most common themes.

The finding that anger was the predominant theme in most sessions provides support for the proposed focus in Panic-Focused Psychodynamic Psychotherapy on anger. Several authors (e.g., Busch et al., 1999; Milrod et al., 1997; Shear, et al., 1993) have proposed that individuals with panic disorder become angry when their caretakers inevitably do not meet their endless need for protection. In addition, it is proposed that they feel narcissistically injured that they need their caretakers in this way, resulting in aggressive fantasies of destroying their love objects. Fears of losing the objects they

require for survival are proposed to cause traumatic levels of anxiety that eventually culminates in panic attacks. These conflicts are believed to reemerge in adulthood when threats to attachment are encountered. These views suggest that panic patients would primarily use defenses that protect ambivalently needed objects from largely unconscious angry fantasies and impulses.

Although themes were rated based upon patients' narratives during sessions, rather than upon therapists' focus or interpretations, further research is needed to understand how session themes were generated. It could simply be that therapists, trained in the PFPP model to understand anger as a key aspect to panic disorder, encouraged patients to focus frequently on this theme. Without an analysis of patient-therapist interactions in moment or session sequences, it is not possible to know the extent to which therapists directed patients towards certain themes. This finding, therefore, may be equally indicative of therapist adherence to PFPP as of anger being an underlying dynamic of panic disorder.

Implications of the Findings

The present investigation provides insight into the processes involved in Panic-Focused Psychodynamic Psychotherapy (PFPP), as well as how these processes relate to patient outcome. This information may prove useful in training individuals in the PFPP protocol. The present study provides a preliminary blueprint of the structure of PFPP and identifies facets of this treatment, perhaps unavailable elsewhere.

The results imply that in treating patients with panic disorder, therapists should be made aware that their focus on the transference could have important consequences on patients' outcome from treatment. Therapists using PFPP should be advised not to focus

on transference early in the treatment because this may adversely influence treatment outcome. Later in treatment, focus on the transference is related to better outcome; therapists might be encouraged to focus on the transference as therapy progresses.

It should be noted that patient characteristics, such as personality disorders and additional DSM-IV Axis I diagnoses, may have interacted with psychodynamic technique in determining outcome. However, no measure of personality was used in the present study. While a similar pattern of transference interpretations were found within the subset of depressed patients as with the sample as a whole, a larger sample of patients with varied comorbid diagnoses may yield insight into how diagnosis and technique interact. Finding that personality disorders and comorbidity influence the process of psychotherapy would have important implications for the practice of Panic-Focused Psychodynamic Psychotherapy.

The fact that anger was observed as a major theme in Panic-Focused Psychodynamic Psychotherapy suggests a need to prepare therapists about the salience of this issue when training them in the protocol. Oedipal and pre-Oedipal issues that pertain to anger should be explored judiciously.

Limitations of the Study

Although the present investigation provides important insights into the therapeutic processes involved in Panic-Focused Psychodynamic Psychotherapy, the findings from this study must be interpreted in light of its limitations. The current study had several methodological problems that may have influenced the results. The first of these issues is the small sample size used. The use of such few participants potentially limits the generalizability of these findings to the population of patients seeking treatment for panic

disorder. The larger the sample, the greater confidence in the accuracy of observed phenomena (Sedlmeier & Gigerenzer, 1997). Still, experts on methodology (e.g., Torabi, 1990) argue that the primary concern in selecting study samples should not necessarily be sample size, but rather the generalizability of the sample to the population.

In addition to affecting the generalizability of the study, the small sample size also adversely affects statistical analyses by lowering statistical power (Torabi, 1990). In the current study, however, nonsignificant findings all had relatively small effect sizes, suggesting that nonsignificance was due to actual lack of associations rather than a failure to detect meaningful associations.

Although individuals in the current sample were mostly in their mid-thirties, which is documented to be a common time for the onset and treatment of panic disorder (American Psychiatric Association, 1994), it was overrepresented by Caucasian females. While this may limit the generalizability of these findings to males and other ethnic groups, it should be noted that panic populations are known to be predominately female.

In addition, the present sample was limited to a subset of patients with panic disorder: those not seeking medication treatment or those willing to stop their ineffective medications. Also, the study was limited to those able to participate in a twice-weekly psychotherapy and well enough to tolerate a 3-week pre-treatment monitoring phase.

A limitation of the current study is that the interrater reliability of the IPA and VPPS measures was largely inadequate. Although interrater reliability was adequately established during the training portion of the study, the consistency of the ratings among the raters dropped substantially when evaluating the actual session data. It is likely that interrater reliability would have been strengthened by frequent recalibration sessions

during the rating phase of the study as well as by having multiple raters on a larger subset of sessions.

One possible explanation for the low interrater reliability is that the calculation of the interrater reliability coefficients was based only on 10% of the sample of sessions. It is possible that this 10% represented the portion of protocols that were most inconsistently rated; the other 90% may have had greater consistency among the raters. Nevertheless, because the increase in error variance of measures tends to attenuate relationships (Ghiselli, Campbell, & Zedeck, 1981), it is possible that the poor interrater reliability of these measures contributed to a deflation of the correlations observed.

In addition, there is some evidence that the number of levels for each item in a scale has a bearing on reliability (Finn, 1972), in that a 7-point Likert like scale appears to be the optimum number. The limited 3-point scale on the IPA meant that raters might have agreed that a given process was present, but had little room to differentiate between degree of presence, especially when processes had limited variability. This limitation was most evident, for example, on the Panic Focus subscale, which showed that although raters each assessed high therapist focus on panic symptoms and dynamisms in almost all rated sessions (see Figures 1, 2, and 3), ICC ratings were unable to reflect rater agreement (ICC = .06). A 7-point Likert like scale may have been more sensitive to variability and agreement among raters (Finn, 1972).

A related limitation was the restricted ranges that occurred on the IPA and VPPS in that most ratings were in the center of the distributions. This occurrence likely reflects one of two possibilities. First, it is possible that these scores reflect a central tendency bias by the raters (Fried et al., 1992; Parducci & Perrett, 1971). They may have been

more inclined to give a "safe" response by rating in the center of the distribution. Another explanation, however, is that the sample contained very few extreme cases and thus left little opportunity to rate at the scale extreme. Therapists all achieved a high level of training and adherence to the PFPP protocol (Milrod et al., in press), as well as being highly trained psychoanalysts. In addition, treatment outcomes were almost uniformly excellent for all patients involved in the study. Because of this lack of variability in the cases evaluated, the range of measurement was restricted, and thus correlations were smaller, possibly spuriously so.

Suggestions for Future Research

This current investigation began to explore some of the therapeutic processes involved in Panic-Focused Psychodynamic Psychotherapy, but more research is needed to further elucidate these processes. Any research that helps to determine what factors are effective in this form of therapy will greatly enhance its application.

A first logical step for research in this area is to improve upon the limitations of the current study. Of the salient issues, future research should use a larger sample size than that used here and should be careful to obtain better interrater reliability. Additionally, the literature on this topic would greatly be enhanced using randomized controlled trials that would help increase the variability obtained on measures.

Before further research can be done, however, the IPA requires refinement. In particular, the results of the present study suggest that the IPA might be improved by focusing on behavioral factors that can better be described by observation. Removing the subjectively from rating the factors in the IPA will most likely improve interrater reliability of this measure. In addition, reconstructing the measure on a 7-point Likert

like scale would possibly improve interrater reliability ratings.

Future researchers may benefit from consideration of patient characteristics as potential factors in the process and outcome of psychotherapy. It has been hypothesized (e.g., Kernberg et al., 1989; Ogrodniczuk and Piper, 1999) that personality disorders need to be considered in the timing of certain interventions, particularly transference interpretations. In addition, the psychotherapy of panic patients with comorbid depression and other diagnoses may require different conceptualization and techniques (Rudden et al., in press). A consideration of diagnosis might provide a further understanding of how diagnosis-specific technique affects both the process and outcome in psychodynamic psychotherapy.

Psychodynamic researchers (e.g., Milrod et al., 1997) posit that resolving underlying unconscious conflicts related to panic might prevent or diminish symptom recurrence. A future study could examine follow-up outcome data (e.g., 6-months, 1 year post-termination) in relation to process. Such a study would provide insight into which psychotherapy processes help to inoculate patients against relapse of panic disorder or, conversely, are associated with a return of symptoms.

The interesting finding in the present study on the relationship between negative therapist attitude and transference interpretations underscores the value of including patient and therapist perspectives in examining psychotherapy process. External raters surely can capture only some of what occurs in a psychotherapy session. Future researchers may wish to consider including additional measures from multiple perspectives.

It is notoriously difficult to capture psychodynamic process and to identify which

processes help to alleviate patients' distress. Although the current study employed quantitative approaches to operationalizing the therapeutic processes, the literature may benefit from conducting several case studies to help gain insights into these processes. The disadvantage of quantitative approaches such as those used in the present study is that they narrowly isolate the focus of study. By conducting qualitative investigations, insights may be gained about which factors should be examined in future quantitative studies. Although there are a variety of qualitative methods that could be used to this end, semi-structured interviews using a grounded theory approach would most likely yield rich data on understanding what helps to reduce panic and anxiety in patients with panic disorder.

Conclusions

This study identified therapeutic processes that relate meaningfully to therapeutic outcome for patients with panic disorder undergoing Panic-Focused Psychodynamic Psychotherapy. While panic disorder has been the focus of clinical research investigating the effectiveness of a variety of treatments, studies have not previously examined how the process of psychotherapy for panic patients might be related to outcome. Process-outcome studies attempt to address the issue of what is effective about psychotherapy.

The present study utilized two process measures, one developed specifically to identify the process of Panic-Focused Psychodynamic Psychotherapy and another designed to capture nonspecific therapy processes such as therapist warmth and friendliness and patient participation. Despite its limitations, this study yielded some interesting findings.

The results of this study have shown that certain processes in Panic-Focused

Psychodynamic Psychotherapy are beneficial for achieving relief from panic and panic-related symptoms. However, additional questions remain about how specific PFPP variables, such as focusing on panic symptoms during each session, and how comorbid diagnoses, including personality disorders, affect treatment outcome. In addition, the current study demonstrated no benefit to focusing on early, genetic relationships, which is a core component to psychodynamic treatment. However, focusing on the transference towards the end of treatment was shown to be beneficial, and transference interventions involve focusing on genetic relationships. Future process-outcome research is necessary to generate insight into how psychodynamic psychotherapy can help patients suffering from panic disorder.

Appendix A: Patient Informed Consent Form

New York Presbyterian Hospital-Weill Medical College of Cornell University

Consent Form for Clinical Investigation

Project Title: Psychodynamic Treatment of Panic Disorder

Investigator: Barbara Milrod, M.D.

A. You are invited to participate in a treatment study of panic disorder, or agoraphobia with panic attacks. Physicians at the New York Hospital and Cornell Medical Center hope to determine the efficacy of psychodynamic psychotherapy in the treatment of panic disorder and agoraphobia with panic attacks. You were selected as a possible participant in this study because you have been determined to have "Panic Disorder" or "Agoraphobia with Panic Attacks". If you are in treatment at the New York Hospital, your therapist's permission for your participation in this study will be sought prior to your enrollment.

B. If you decide to participate, you will be treated in psychodynamic psychotherapy in twice-weekly sessions for three months. At the start of the study and at the time of treatment termination, you will be asked to answer a battery of questions that will take two to three hours, and to fill out forms that will take two to three hours in order to monitor your symptomatic progress. You will be interviewed by a mental health professional on three occasions, for 2-3 hours each time: at study entry, at treatment termination, and at six-month follow-up. You will be asked to complete self-report diaries of panic attack/ limited symptom attack frequency and intensity throughout the active treatment phase of the study, and again for three weeks at six-month follow-up. Six months after treatment termination, you will be contacted for a one hour interview and to fill out forms to find out how you have been feeling and functioning.

C. Your participation in the project involves the following risks: 1) You agree to discontinue any psychotropic medication you may be taking, and you agree not to participate in any other psychotherapy treatment during the time of the treatment, or during the six-month follow-up period. If you feel the need for anti-panic or anti-anxiety treatment during the six month follow-up period, you agree to contact your study therapist, who will provide you with the ongoing treatment you require. Outpatient treatment during the follow-up period will be free of charge. 2) It is possible that your panic disorder or agoraphobia with panic attacks may not respond to the study treatment. It is possible that by accepting the study treatment, you will delay receiving some other form of treatment(s) that might be beneficial to you.

D. If doctors from this study believe that you need a medical work-up prior to enrollment in the study, you will be responsible for the costs. Once you enter the study, for the three

months of study treatment, there will be no cost to you other than transportation to your doctor's office.

E. Your panic disorder or agoraphobia with panic attacks may respond to this treatment. We cannot promise that you will receive any benefit from participation in this study. If you do not respond, you will be offered alternative appropriate psychiatric treatment.

F. Known effective treatments for panic disorder that have been subjected to prospective studies include medication and cognitive-behavioral therapy.

G. Any information obtained during this study and identified with you will remain confidential and will only be disclosed with your permission.

H. The doctor in charge of the study can remove you from the study without your consent if in her judgement your medical care could be improved by another therapy, if you fail to follow the study schedule, or if she otherwise deems that it is appropriate.

I. All treatment sessions will be videotaped and reviewed to make sure that your therapist is providing the study treatment. Videotapes will be kept under locked, confidential conditions during the study and then will be erased when they are no longer needed for research purposes. You must consent to videotaping if you wish to participate in the study.

J. Your decision whether or not to participate in this study will not prejudice your future relations with the New York Presbyterian Hospital-Weill Medical Center. If you decide to participate, you are free to stop at any time.

K. In accordance with Federal regulations, we are obliged to inform you about the Medical Center's policy in the unlikely event physical injury occurs. If as a result of your participation you experience physical injury from known or unknown risks of the research proceedures as described, immediate medical care and treatment, including hospitalization if necessary, will be available. No monetary compensation is available, and you will be responsible for the costs of such medical treatment, either directly or through your medical insurance and/or other forms of medical coverage. Further information can be obtained by calling (212)-746-6026.

L. If you have any questions about your rights as a research subject or concerning a research related injury, call (212)-746-6026.

M. If you have any questions, please ask us. If you have questions later, Dr. Barbara Milrod, The New York Presbyterian Hospital-Weill Medical Center, 445 East 68th Street, Suite 3N, New York, N.Y. 10021 (212) 746-5868 will be pleased to answer them.

N. You will be offered a copy of this form to keep.

You are making a decision as to whether or not to participate. Your signature indicates that you have read the information provided above and have decided to participate. You may withdraw at any time without prejudice after signing this form should you choose to discontinue participation in this study.

Signature of Subject	Date	Time
Signature of Investigator	Date	Time
Signature of Witness	Date	Time

Appendix B: Outcome Assessments

PANIC DISORDER SEVERITY SCALE (PDSS)

Script for conducting ratings:

All items should be rated over a 2-week period.

1. Frequency of panic attacks

   How often are you experiencing full panic episodes, the kind with at least four symptoms? How many panic attacks did you have in the past week? Two weeks? How often are you experiencing limited symptoms episodes (LSE's)?

   Note: Patients may or may not identify LSE's. Especially on post-treatment or follow-up evaluations, the interviewer should probe for these symptoms.

   Examples of possible probes for limited symptoms:

   Have there been times when you experience one or two panic like sensations, even mild ones?

   Which are the most bothersome symptoms you have during a panic episode? Are you having any [name the symptom, e.g., heart palpitations, feelings of unreality, etc.] without it developing into a full panic? How often is this occurring?

   Frequency of panic attacks
   0 = None.
   1 = Mild (panic-like sensations or limited symptom attacks or less than one full panic a week).
   2 = Moderate (one or two full panic attacks a week).
   3 = Severe (daily attacks or more than two a week).
   4 – Extreme (attacks occur more than once a day).

2. Distress during panic attacks:

   How much distress are your panic attacks causing you? How upset or uncomfortable do you feel during an attack? How fearful do you feel DURING the attack? (If there have been multiple episodes, rate the average amount of distress per episode).

   Note: The rating of distress is meant to be a measure of discomfort caused by panic episodes themselves. This may or may not be related to the degree of anticipatory anxiety related to panic.

   Distress during panic attacks
   0 = None.
   1 = Mild, infrequent and not too intense.

2 = Moderate, regular and intense, but still manageable.
3 = Severe, very frequent and intense.
4 = Extreme distress with all attacks.

3. Severity of Anticipatory Anxiety:

How much do you worry or feel fearful about when your next panic attack will occur? How intense is this worry? How often do you worry?

Note: Sometimes anticipatory anxiety is related to the meaning of the panic attack, rather than to the panic episodes themselves. For example, a patient may find the panic episodes manageable but may not worry about the implications for his or her mental health if they become very frequent. Therefore, a probe should be used if the patient is not worried, or only mildly worried about having a panic episode.

Examples of probes for anticipatory anxiety:

What worries you most about having panic attacks? How much are you worried about [name the concern, e.g., losing control of your life]? How often do you worry about this?

Anticipatory Anxiety (worry about future attacks)
0 = None
1 = Mild, occasional worry about when next panic will occur.
2 = Moderate, frequent worry about next attack.
3 = Severe, preoccupied with very disturbing worry about next attack.
4 = Extreme, near constant and disabling worry.

4. Agoraphobic fear and avoidance:

Are you afraid of having a panic episode in a place where it may be difficult to get help? In a place where you would feel you could not easily leave? Situations like public transportation, tunnels, bridges, going to the theater? Anything else? Are you afraid of having a panic attack when you are alone? How often do you experience fear of these situations? How intense is the fear? Do you avoid any of these situations? Do you always avoid? Will you enter these situations with someone you trust or someone with whom you feel comfortable?

Note: This is a composite rating of fear and avoidance of agoraphobic situations. However, in order to achieve a moderate or higher score, there must be some regular avoidance. Ratings of 2 and 3 are differentiated by both pervasiveness of fear and avoidance and degree of modification of lifestyle.

Panic-related Phobic Avoidance of particular situations (usually agoraphobic situations: public transportation, being alone, crowds, bridges, tunnels, shopping malls, etc.)

0 = None.
1 = Mild, occasional fear and/or avoidance of certain situations because of fear of having a panic attack. (Fear or discomfort and/or desire to avoid at least one situation. Will confront or endure situation under most circumstances.)
2 = Moderate, regular fear and/or avoidance of certain situations because of fear of having a panic attack, but still manageable. (Fear or discomfort and/or desire to avoid several situations. Will regularly avoid two or more situations but may confront if accompanied by a trusted companion. There is evidence of some modification in lifestyle because of avoidance.)
3 = Severe, pervasive fear and/or avoidance of certain situations because of fear of having a panic attack. (Fear or discomfort and/or a desire to avoid four or more situations, with regular avoidance of several and marked modification of lifestyle.)
4 = Extreme, disabling fear and/or avoidance of certain situations because of fear of having a panic attack. (Fear or discomfort and/or desire to avoid many situations. There are severe and disabling modifications in lifestyle because of avoidance.)
9 = Therapists do not rate this item unless information spontaneously report by patient. / NA

5. Fear and avoidance of physical sensations:

Are there any sensations which make you uncomfortable because they remind you of what you experience during a panic episode or because you fear they may trigger a panic attack? For example, exercise like jogging, playing sports or vigorous walking, working in the garden, sexual activity, sitting in the sun or taking a sauna? Do you feel uncomfortable if you drink coffee? Do you feel uncomfortable in situations like exciting sports events or frightening movies or having an argument? Do you avoid physical exertion, drinking coffee or other activities or any situation where you may experience uncomfortable sensations?

Note: This rating is also a composite rating of fear, discomfort, and avoidance of situations and activities which provoke physical sensations. Rating is similar to item 4, in that avoidance is required for the higher ratings and ratings take into consideration pervasiveness of symptoms and degree of modification of lifestyle.

Panic-related Phobic Avoidance of Sensations
0 = None.
1 = Mild, occasional fear and/or avoidance of physical sensations. (Fear and/or discomfort with one or more physical sensations. Will endure sensations under most circumstance.)

2 = Moderate, regular fear and/or avoidance of physical sensations, but still manageable. (Fear and/or discomfort with and desire to avoid experiencing several physical sensations. Has reduced certain activities to limit sensations.)
3 = Severe, pervasive fear and/or avoidance of physical sensations. (Fear and/or discomfort with and experiencing physical sensations. Consistently avoids any activities to prevent experiencing sensations and/or avoidance leads to marked constriction of lifestyle.)
4 = Extreme, disabling fear and/or avoidance of physical sensations. (Fear or discomfort and/or desire to avoid many activities. There are severe and disabling modifications in lifestyle because of avoidance.)
9 = Therapists do not rate this item unless information is spontaneously reported by patient. / NA

6. Work Impairment/Interference:

How much do your panic attacks (and/or LSE's, anticipatory anxiety, phobic avoidance) interfere with your ability to work, and/or carry out responsibilities at home? Have your symptoms interfered with your ability to get things done as quickly and effectively? Have you noticed there are things you are not doing because of your anxiety? (Assess if anxiety is causing patient to take short cuts or request assistance to get things done.)

Impairment/Interference in work functioning due to panic disorder symptoms
0 = None.
1 = Mild, slight interference with occupational activities, but overall performance not impaired.
2 = Moderate, definite interference with occupational performance but still manageable.
3 = Severe, causes substantial impairment in occupational performance.
4 = Extreme, incapacitating.

7. Social Impairment/Interference:

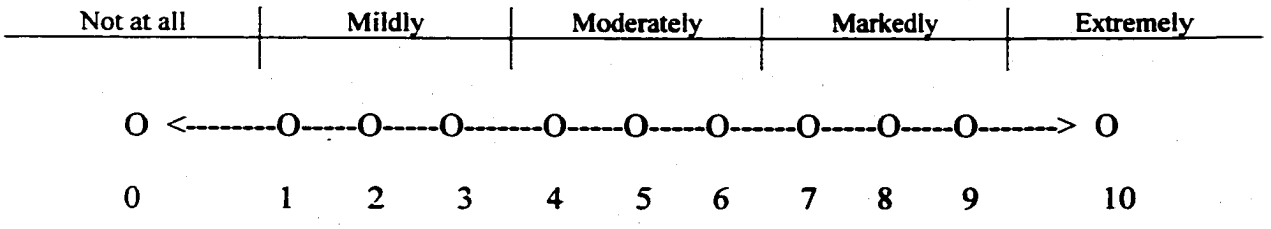
How much do your panic attacks (and/or LSE's, anticipatory anxiety, phobic avoidance) interfere with your social life? Are you spending less time with friends and relatives than you used to? Do you turn down requests of opportunities to socialize? Are there certain restrictions in your social life about where or how long you will socialize?

Impairment/Interference in social functioning due to panic disorder symptoms
0 = None.
1 = Mild, slight interference with social activities, but overall performance not impaired.
2 = Moderate, definite interference with social performance but still manageable.
3 = Severe, causes substantial impairment in social performance.
4 = Extreme, incapacitating.

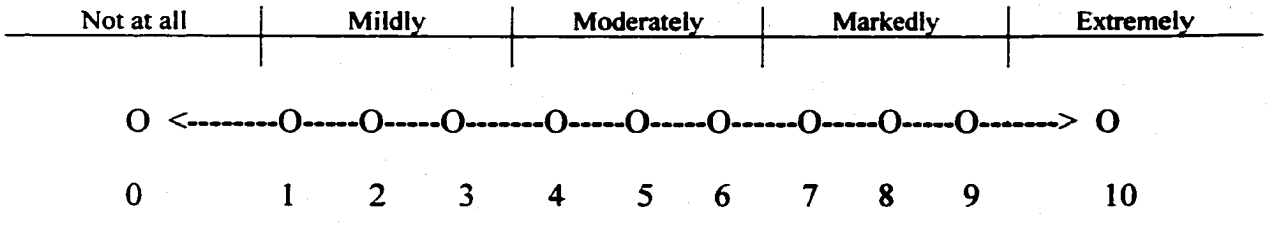
SHEEHAN DISABILITY SCALE

Please fill ONE circle for each of the following three scales:

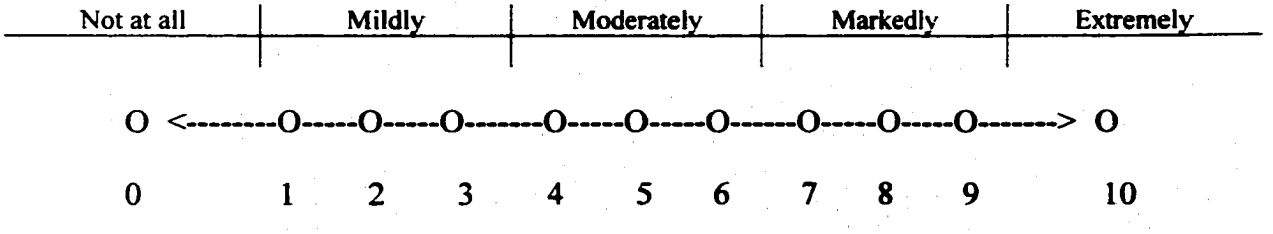
1) To what extent have emotional symptoms disrupted your work in the last month:



2) To what extent have emotional symptoms disrupted your social life in the last month:



3) To what extent have emotional symptoms disrupted your family life/home responsibilities in the last month:



HAMILTON ANXIETY RATING SCALE

Instructions: This checklist is to assist the doctor in evaluating each patient with respect to degree of anxiety and pathological condition. Please fill in the appropriate rating.

0 None
1 Mild
2 Moderate
3 Severe
4 Very severe, incapacitating

Item	Ratings		
Anxious Mood Worries, anticipation of the worst, fearful anticipation, irritability.			
Tension Feelings of tension, fatigability, startle response, moved to tears easily, trembling, feelings of restlessness, inability to relax.			
Fear Of dark, of strangers, of being left alone, of animals, of traffic, of crowds.			
Insomnia Difficulty in falling asleep, broken sleep, unsatisfying sleep and fatigue on waking, dreams, nightmares, night terrors.			
Intellectual (Cognitive) Difficulty in concentration, poor memory.			
Depressed Mood Loss of interest, lack of pleasure in hobbies, depression, early waking, diurnal swing.			
Behavior at Interview Fidgeting, restlessness or pacing, tremor of hands, furrowed brow, strained face, sighing or rapid respiration, facial pallor, swallowing, belching, brisk tendon jerks, dilated pupils, exophthalmos.			
Somatic (Sensory) Tinnitus, blurring of vision, hot and cold flushes, feelings of weakness, picking sensation.			

Cardiovascular Symptoms Tachycardia, palpitations, pain in chest, throbbing of vessels, fainting feelings, missing beat.			
Respiratory Symptoms Pressure or constriction in chest, choking feelings, sighing, dyspnea.			
Gastrointestinal Symptoms Difficulty swallowing, wind, abdominal pain, burning sensations, abdominal fullness, nausea, vomiting, borborygmi, looseness of bowels, loss of weight, constipation.			
Genitourinary Symptoms Frequency of micturition, urgency of micturition, amenorrhea, menorrhagia, development of frigidity, premature ejaculation, loss of libido, impotence.			
Autonomic Symptoms Dry mouth, flushing, pallor, tendency to sweat, giddiness, tension headache, raising of hair.			
Somatic (Muscular) Pains and aches, twitchings, stiffness, myoclonic jerks, grinding of teeth, unsteady voice, increased muscular tone.			
Total Score			

Appendix C: Vanderbilt Psychotherapy Process Scale (VPPS)

Score Sheet and Rater Manual

Appendix C
Vanderbilt Psychotherapy Process Scale (VPPS)

Appendix D: VPPS Factors and Item Composition

Appendix D
VPPS Factors and Item Composition

Appendix E: Interactive Process Assessment (IPA) Score Sheet and Rater Manual

Interactive Process Assessment – Score Sheet

		Not at all		Present		Major focus
	Therapist Interventions:					
1.	Therapist pursues dynamics surrounding panic and anxiety.	0		1		2
2.	Therapist encourages patient to elaborate on transference fantasies.	0		1		2
3.	Therapist offers here-and-now transference interpretation.	0		1		2
4.	Therapist connects transference to genetic material.	0		1		2
5.	Therapist connects transference to panic.	0		1		2
6.	Therapist explores/comments upon genetic relationships.	0		1		2
7.	Therapist connects genetic material to panic.	0		1		2
8.	Therapist explores/comments upon present relationship patterns.	0		1		2
9.	Therapist connects present relationship patterns to genetic material.	0		1		2
10.	Therapist connects present relationship patterns to panic.	0		1		2
11.	Therapist explores patient's use of ego defenses.	0		1		2
12.	Therapist connects patient's use of ego defenses to panic.	0		1		2

		Not at all		Present		Major
	Patient Events:					
13.	Patient understands panic as expression of conflicts.	0		1		2
14.	Patient elaborates in response to therapist's interpretations.	0		1		2
15.	Patient appears to gain insight.	0		1		2
16.	Patient has understanding of self which coincides with therapist's.	0		1		2
17.	Global level of affective response.	0		1		2

17a) If the patient appears to respond affectively, how does he respond?
Describe the response:_____

_____

The following questions ask you to ascertain additional information about processes occurring during the session.

18.	Therapist interactiveness.	0		1		2

19) Was it apparent in this session that significant unstated aspects to the transference were present?
0: No_____ 1: Yes_____
If yes, explain:

_____

_____

_____

20) Indicate which underlying themes that appear to be central were addressed during the session (circle all that apply):

a) Anger
b) Separation
c) Sexual Excitement
d) Abandonment
e) Mourning/Loss
f) Other_____

Offer a summary statement of theme(s):

_____

_____

20a) How were the theme(s) above explored? (Choose all that apply.)

1) As conflicts;
2) As underlying reason for panic;
3) Within context of transference;
4) Within context of relationship pattern;
5) Other (e.g., dream, fantasy) _____

Interactive Process Assessment (IPA)

Rater Manual

(Klein, Milrod, & Busch, 1999)

Directions: Each of the following assessment questions represents either a therapeutic intervention (Therapist Intervention; i.e., what the therapist does) or a patient process event (Patient Event; i.e., how the patient responds). The difference between a rating of 1 and 2 is based upon clinical judgment. This is not solely a matter of frequency (e.g., of a given interpretation being made), but the extent to which the therapist focuses on a particular intervention, or the extent to which a patient appears to experience a new understanding or insight.

For the therapist interventions, a rating of 1 is warranted if a Therapist Intervention is present in the session at all. A rating of 2 is reserved for when the intervention appears to be a major focus in the session, regardless of patient response to the therapist's efforts. Thus, a rating of 2 is warranted in the session in which the therapist appears to focus on a particular intervention for most of the session--no matter the response from the patient. However, a rating of 2 is also warranted even if the particular intervention does not come until the end of a session, yet it appears the therapist has attempted to relate intervening material from a major portion of the session into the interpretation. The rating is decided by considering three elements of the therapist's intervention: the frequency, the emotional intensity, and the weaving of many parts of the session into the comment or interpretation. Any or all of these elements may influence the rating.

For the patient process events, the items are rated similarly. Thus, if there is any evidence of the occurrence of the patient process event described in the item, a rating of 1 is given. A rating of 2 is reserved for when the process appears to be of major significance during the session. For example, the patient may show insight but only in some areas and not others (Item 15). For this example, a rating of 2 would only be warranted in the session in which the patient appears to have an overall understanding of the major interpretive focus, and that understanding is consistently evident throughout a major portion of the session.

In a given session, Therapist Interventions and Patient Events often occur simultaneously (e.g., the dyad could be exploring the patient's use of defenses at the same time as the patient is beginning to understand that his symptoms have a psychological meaning). Mark all items that apply in all sessions. It is not expected that all interventions and patient process events will take place in every session; some are expected to occur more frequently at the beginning of treatment, and others only towards the end.

Interventions:

PANIC FOCUS

1) The therapist pursues dynamics surrounding the patient's panic and anxiety.

0: The therapist follows the patient's free associative thoughts, commenting only on what the patient brings up, without pursuing panic symptoms or the dynamics underlying panic symptom formation in the course of the session.

1: The therapist pursues dynamics surrounding the patient's panic symptoms and episodic experience of anxiety, but does not relate them to intervening themes in the session.

2: The therapist pursues the dynamics surrounding the patient's panic symptoms/episodic experiences of anxiety and relates intervening material back to its connection with the meaning of the patient's panic/episodic anxiety symptoms.

TRANSFERENCE

2) The therapist encourages the patient to elaborate on transference ideas and fantasies (e.g., express fantasies and feelings about the therapist).

0: The therapist does not encourage the patient to elaborate on transference ideas and fantasies.

1: The therapist encourages the patient to express fantasies and feelings about the therapist, but does not make it a major focus.

2: The therapist is active in encouraging the patient to express fantasies and feelings about the therapist and makes it a major focus of the session.

HERE-AND-NOW TRANSFERENCE

3) The therapist offers an interpretation about the transference relationship in the here-and-now.

0: The therapist does not make an interpretation about the transference relationship in the here-and-now.

1: The therapist connects the patient's manifest content to the transference relationship, but does not make it a major focus.

2: The therapist connects the patient's manifest content from the throughout the session to the transference relationship in the here-and-now, and makes it a major focus of the session.

TRANSFERENCE AND GENETIC

4) The therapist elaborates on transference experiences and offers a genetic interpretation (i.e., connects with earlier relationships in the patient's life, such as parent or significant figures in childhood).

0: The therapist does not connect transference experiences with genetic material.

1: The therapist connects the transference situation with genetic material, but does not make it a major interpretive focus.

2: The therapist is active in pursuing connections between the transference situation and genetic material and makes it a major interpretive focus of the session.

TRANSFERENCE AND PANIC

5) The therapist suggests that the transference situation is connected to conflicts underlying panic symptoms and panic precipitants.

0: The therapist does not relate the transference situation to panic.

1: The therapist connects the transference situation with the patient's experiences of panic symptoms and panic precipitants, but does not make it a major interpretive focus.

2: The therapist is active in pursuing connections between the transference situation and conflicts underlying panic symptoms and panic precipitants and makes it a major interpretive focus of the session.

GENETIC RELATIONSHIPS

6) The therapist explores and comments upon perceptions and experiences of genetic relationships *during childhood* (i.e., earlier relationships in the patient's life, such as with parent or significant figures *during childhood*).

0: The therapist does not explore genetic material.

1: The therapist explores and comments upon perceptions and experiences of genetic relationships but does not make it a major interpretive focus.

2: The therapist is active in exploring and commenting upon perceptions and experiences of genetic relationships and makes it a major interpretive focus of the session.

GENETIC AND PANIC

7) The therapist relates perceptions and experiences of genetic relationships *during childhood* (i.e., earlier relationships in the patient's life, such as with parent or significant figures *during childhood*) to panic symptoms and panic precipitants.

0: The therapist does not relate genetic material to panic.

1: The therapist connects genetic material with the patient's experiences of panic symptoms and panic precipitants, but does not make it a major interpretive focus.

2: The therapist is active in pursuing connections between genetic material and conflicts underlying panic symptoms and panic precipitants, and makes it a major interpretive focus of the session.

PRESENT RELATIONSHIPS

8) The therapist explores and comments upon perceptions and experiences of present relationship patterns (other than transference). For this item, present relationships may include those with significant figures from childhood, but the material must be related to their *present* relationship.

0: The therapist does not explore perceptions and experiences of present relationship patterns.

1: The therapist explores and comments upon perceptions and experiences of present relationship patterns but does not make it a major interpretive focus.

2: The therapist is active in exploring and commenting upon perceptions and experiences of present relationship patterns and makes it a major interpretive focus of the session.

PRESENT RELATIONHIPS AND GENETIC

9) The therapist explores and comments upon perceptions and experiences of present relationship patterns (other than transference) and links are made to genetic relationships (i.e., earlier relationships in the patient's life, such as with parent or significant figures *during childhood*). For this item, present relationships may be linked with childhood relationships regarding the same figure (e.g., parent).

0: The therapist does not link perceptions and experiences of present relationship patterns with genetic material.

1: The therapist connects perceptions and experiences of present relationship patterns with genetic material, but does not make it a major interpretive focus.

2: The therapist is active in pursuing connections between present relationship patterns and genetic material and makes it a major interpretive focus of the session.

PRESENT RELATIONSHIPS AND PANIC

10) The therapist relates perceptions and experiences of present relationship patterns (other than the transference) to panic symptoms and panic precipitants.

0: The therapist does not relate perceptions and experiences of present relationship patterns to panic.

1: The therapist connects perceptions and experiences of present relationship patterns with the patient's experiences of panic symptoms and panic precipitants, but does not make it a major interpretive focus.

2: The therapist is active in pursuing connections between perceptions and experiences of present relationship patterns with conflicts underlying panic symptoms and panic precipitants and makes it a major interpretive focus.

DEFENSES

11) The therapist explores the patient's use of ego defenses to avoid frightening affects and fantasies. Ego defenses include denial, isolation of affect, undoing, displacement, projection, rationalization, reaction formation, and repression. (This item does not refer to the use of panic itself as a defense.)

0: The therapist does not acknowledge the patient's use of ego defenses.

1: The therapist acknowledges the patient's use of ego defenses concerning avoidance of frightening affects and fantasies, but does not make it a major focus of the session.

2: The therapist is active in exploring the patient's use of ego defenses concerning avoidance of frightening affects and fantasies and makes it a major focus of the session.

DEFENSES AND PANIC

12) The therapist relates the patient's use of ego defenses to panic symptoms and panic precipitants. Ego defenses include denial, isolation of affect, undoing, displacement, projection, rationalization, reaction formation, repression, and somatization. (This item does not refer to the use of panic itself as a defense; a link must be made between the use of an ego defense and panic symptoms.)

0: The therapist does not relate the patient's use of ego defenses to panic.

1: The therapist connects the patient's use of ego defenses concerning avoidance of frightening affects and fantasies to panic symptoms and panic precipitants, but does not make it a major interpretive focus.

2: The therapist is active in pursuing connections between the patient's use of ego defenses concerning avoidance of frightening affects and fantasies and conflicts underlying panic symptoms and panic precipitants, and makes it a major focus of the session.

Patient Events:

PSYCHOLOGICAL MEANING

13) The patient, by demonstrating the willingness to explore, appears to understand that panic symptoms are an expression of psychological or emotional conflicts.

0: The patient does not allow the therapist to pursue the exploration of panic episodes, either by claiming to be "blank" about what she was experiencing during the episode or by concentrating exclusively on the physical sensations and catastrophic thoughts during the attack.

1: The patient explores the feelings associated with the episode and begins to explore underlying events and thoughts accompanying the anxiety, but this does not occur consistently throughout the session, or it appears the patient is avoiding some key aspects of what the therapist focuses on.

2: The patient, by demonstrating a significant willingness to explore thoughts and feelings associated with the episode, appears to show significant understanding of how panic symptoms are an expression of psychological and emotional conflicts.

RESPONSE TO INTERPRETATION

14) The patient elaborates on material in response to the therapist's comments or interpretations.

0: The patient does not acknowledge the therapist's comments or interpretations.

1: The patient acknowledges the therapist's comments or interpretations, picking up on and expanding upon them or elaborating with associative material in response, but inconsistently throughout the session (e.g., only in response to some comments/interpretations and not others).

2: The patient picks up on, expands upon and elaborates in response to the therapist's comments or interpretations consistently throughout the session.

INSIGHT

15) The patient appears to accept the therapist's interpretations and appears to attain insight (NOTE: Insight does not necessarily appear directly following the therapist's intervention in a specific session).

0: The patient does not show any signs of attaining insight.

1: The patient appears to accept some of the therapist's interpretations and gain some insight, but not in central interpretive areas or with a lack of the overall understanding of the interpretive focus.

2: The patient clearly appears to accept the therapist's interpretations and appears to attain significant insight in the major interpretive areas or exhibits an overall understanding of the major interpretive focus.

PSYCHOLOGICAL UNDERSTANDING

16) The patient expresses or appears to have a psychological understanding of himself which coincides with that of the therapist.

0: The patient expresses or appears to have an understanding of himself which does not appear to intersect at all with that of the therapist.

1: The patient expresses or appears to have an understanding of himself which appears to coincide with that of the therapist in some major areas of focus, but not with other central areas and there is a lack of an overall congruence with that of the therapist.

2: The patient expresses an understanding of himself which appears to coincide significantly with that of the therapist in most areas of focus and exhibits an overall understanding congruent with that of the therapist.

AFFECTIVE RESPONSE

17) Global level of affective response to the therapist's interventions. Consider both the intensity and range of affect when rating this item.

0: The patient does not appear to respond affectively to the therapist's interventions.

1: The patient appears to respond affectively to the therapist's interventions, becoming saddened, for example, and thoughtful in response.

2: The patient shows high levels of affective response to the therapist's interventions, either in intensity or range of affect.

17a) If the patient appears to respond affectively, how does he respond?
Describe the response:_____
_____

The following questions ask you to ascertain additional information about processes occurring during the session.

INTERACTIVENESS

18) Therapist interactiveness. On a scale of 0 to 2, please rate the level of interactiveness of the therapist during the session.

0: The therapist is silent for most of the session, letting the patient associate freely.

1: The therapist is fairly active, asking probing questions or commenting on what the patient says.

2: The therapist is very active throughout the session, using many different exploratory techniques to elicit information from the patient and making interpretations.

19) Was it apparent in this session that significant unstated aspects to the transference were present? In other words, were there apparent and significant transference aspects which the therapist did not address?
0: No_____ 1: Yes_____
If yes, explain: _____
_____
_____
_____

20) Indicate which underlying themes that appear to be central were addressed during the session (circle all that apply):

a) Anger
b) Separation
c) Sexual Excitement
d) Abandonment
e) Mourning/Loss
f) Other_____

Offer a summary statement of theme(s): _____
_____
_____

20a) How were the theme(s) above explored? (Choose all that apply.)
1) As conflicts;
2) As underlying reason for panic;
3) Within context of transference;
4) Within context of relationship pattern;
5) Other (e.g., dream, fantasy)
_____

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