

BEYOND BRAND NAMES OF PSYCHOTHERAPY: IDENTIFYING EMPIRICALLY SUPPORTED CHANGE PROCESSES

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There is considerable debate about which empirical research methods best advance clinical outcomes in psychotherapy. The prevailing tendency has been to test treatment packages using randomized, controlled clinical trials. Recently, focus has shifted to considering how studying the process of change in naturalistic treatments can be a useful complement to controlled trials. Clinicians self-identifying as psychodynamic treated 17 panic disorder patients in naturalistic psychotherapy for an average of 21 sessions. Patients achieved statistically significant reductions in symptoms across all domains. Rates of remission and clinically significant change as well as effect sizes were commensurate with those of empirically supported therapies for panic disorder. Treatment gains were maintained at 6-month follow-up. Intensive analysis of the process of the treatments revealed that integrative elements

characterized the treatments: Adherence to cognitive-behavioral process was most characteristic, adherence to interpersonal and psychodynamic process, however, was most predictive of positive outcome. Specific process predictors of outcome were identified using the Psychotherapy Process Q-Set. These findings demonstrate how process research can be used to empirically validate change processes in naturalistic treatments as opposed to treatment packages in controlled trials.

Keywords: panic disorder, psychotherapy process and outcome, psychodynamic psychotherapy, change processes

Much attention has been paid recently to the conflict between those who favor the empirically supported treatment (EST) movement and those who are skeptical of this model. It is beyond the scope and not the intention of this paper to review the specifics of this complicated argument. This study, however, represents an attempt to bridge the gap between these warring factions. As has been suggested (Ablon & Jones, 2002; Ablon & Marci, 2004; Westen, Novotny, & Thompson-Brenner, 2004) highlighting the significant limitations of controlled clinical trials does not mean that empirical research has nothing to offer the practice of psychotherapy. Likewise, assuming that empirical methods can contribute to advancing clinical outcomes does not mean that experienced practitioners do not know how to practice effectively. On the contrary, many researchers have argued that a focus on empirically validat-

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ing change processes in naturalistic treatment would be a fruitful complement to controlled trials (Garfield, 1998; Goldfried & Wolfe, 1996; Howard et al., 1996). This study represents one attempt to shift the focus on prescriptive treatment packages to studying intensively what a group of experienced clinicians do when treating patients with shared diagnoses and presenting problems. As such, the treatments we studied might be best described as representing “treatment as usual” in the community. Assuming that experienced clinicians might help their patients achieve symptomatic improvement, we used empirical methods to identify the change processes present in a naturalistic treatment so that we could learn how and why patients improved. If empirically validated change processes could be identified, we would have an empirical basis from which to develop or amend clinically relevant treatments.

Our previous research (see Ablon & Jones, 1998, 2002) has demonstrated the dangers of drawing conclusions about why a treatment is effective without studying process correlates of outcome. Even under tightly controlled conditions, treatments often share significant elements of process borrowed from other theoretical approaches. Interestingly, these borrowed elements can be the ingredients that predict positive outcomes for patients. In this study, we asked clinicians who self-identified as psychodynamic in their primary theoretical orientation to treat a group of patients with panic disorder as they normally would in their clinical practices while we studied the process and outcome of the treatments. We chose psychodynamic therapists and panic disorder patients because psychodynamically oriented clinicians frequently treat patients with panic disorder despite the fact that psychodynamic psychotherapy is not an EST for panic disorder and ESTs do exist for this population (e.g., Panic Control Therapy, see Barlow et al., 1989) that have been well tested in the laboratory. We briefly describe the background of psychotherapeutic treatment of panic disorder below before detailing the methods used.

Because of the tremendous and incontrovertible psychological, emotional, and social costs of living with panic disorder (Markowitz, Weissman, & Ouellette, 1989; Swenson, Cox, & Woszezy, 1992) much effort has been dedicated to developing and implementing effective psychotherapeutic interventions for panic disorder.

Among these psychosocial interventions, cognitive-behavioral treatments (CBT) have most consistently demonstrated efficacy using the controlled clinical trial paradigm. The success of cognitive-behavioral protocols, such as Panic Control Therapy (Barlow et al., 1989), in alleviating panic patients’ symptoms is reflected in the delineation of CBT interventions as “standard treatment” by the NIH Consensus Development Conference on Panic Disorder. It is important to note, however, that most ESTs such as Panic Control Therapy have not been tested systematically against legitimate alternative psychosocial treatments or treatment as usual in the community. Rather, in controlled trials in the laboratory, treatments are usually tested against medication, wait list controls, psychoeducation, or some version of purely supportive intervention. Therefore, clinicians are often unsure as to the true efficacy of such approaches relative to other forms of treatment. In addition, ESTs for diverse clients with panic disorder have yet to be identified.

Why do clinicians continue to practice, and why should we explore the potential utility of exploratory (as opposed to prescriptive) psychotherapy for panic disorder given the high efficacy rates of cognitive-behavioral treatment (CBT)? Though CBT interventions have proven highly effective for many individuals, this approach is not effective for all patients (Craske & Barlow, 2001; Milrod et al., 2001). In closely controlled trials, investigators have reported as many as 38% of patients remain symptomatic (Milrod et al., 2001) or relapse subsequent to treatment discontinuation (Milrod & Busch, 1996). Exposure-based interventions that work well for some patients can be prohibitively overwhelming for others. Some patients also fail to or refuse to comply with the directive approaches and out-of-session work constituting the cornerstone of many cognitive-behavioral treatments (Milrod et al., 2001). For other patients, the idea of a treatment that is not based on the exploration of the personal meaning of symptoms is intellectually unsatisfying to the point that they reject the treatment. Clearly, for certain panic patients symptoms persist despite treatment with cognitive-behavioral interventions. Nonprescriptive psychotherapeutic approaches are needed to meet the treatment demands of the subset of panic patients who do not respond to prescriptive approaches or elect to pursue exploratory treatments.

Problematically, to date in the literature there has been little systematic investigation of nonprescriptive treatments. There is support for the effectiveness of brief psychodynamic treatments in the form of qualitative case studies and theoretical papers (Abend, 1989; Gabbard, 1990; Milrod & Busch, 1996; Milrod & Shear, 1991; Sifneos, 1972). Studies examining the effectiveness of supportive, nondirective, and nonbehavioral treatments for panic disorder (D. F. Klein, Zitrin, Woerner, & Ross, 1983; Shear, Pilkonis, Cloitre, & Leon, 1994) offer further empirical evidence for the potential utility of exploratory treatments. However, only 2 studies have systematically examined the effectiveness of psychodynamically oriented psychotherapies for panic disorder (Milrod et al., 2001; Wiborg & Dahl, 1996). Wiborg and Dahl (1996) compared the effectiveness of 15 sessions of brief dynamic psychotherapy in conjunction with nine months of pharmacotherapy to pharmacotherapy alone. The investigators concluded that brief dynamic psychotherapy in conjunction with pharmacotherapy was a more effective form of treatment than clomipramine alone. Milrod et al. (2001) have conducted the only quantitative investigation to date in the literature examining the effectiveness of brief psychodynamic psychotherapy as a primary intervention for panic disorder. By the end of treatment, the majority of study entrants (16/21) and completers (16/17) met criteria for remission as specified by the multicenter panic study (Barlow, Gorman, & Shear, 1997). Statistically significant and clinically meaningful changes across a broad range of outcome domains including primary panic symptoms, phobic sensitivity, and overall quality of life were reported. These treatment gains were maintained at 6-month follow-up. The effect sizes reported in this study are consistent with those reported in studies of ESTs for panic disorder (Milrod et al., 2001). This study provides evidence that nonprescriptive treatment, particularly psychodynamic psychotherapy, may hold promise as a stand-alone treatment for panic disorder that could be offered as an alternative to compare to ESTs such as Panic Control Therapy in controlled trials. Given the paucity of confirmatory studies, however, a reasonable conclusion at present is not that nonprescriptive approaches are ineffective. Rather, they have yet to be tested empirically in a thorough fashion. This is concerning because it is likely that there are many psychodynamically trained

clinicians practicing psychotherapies that have not been thoroughly evaluated empirically. Furthermore, empirical studies examining change processes in nonprescriptive treatments for panic disorder do not exist to our knowledge. It is likely, however, that process predictors common to many therapies, such as the degree of therapeutic alliance fostered, are likely predictors of outcome in psychotherapy of panic disorder as well (e.g., Crits-Christoph and Gibbons, 2003).

The aims of this study are to (1) examine the degree of change associated with a naturalistic psychotherapy for panic disorder in a within-subject sample; (2) identify which prototypical treatment processes best characterize the treatments; (3) identify which prototypical processes are most predictive of positive outcome; (4) identify the most and least characteristic elements of the process of the treatments at a specific, atheoretical level; and (5) identify which specific process variables predict positive outcome. Specifically, we hypothesized that (1) naturalistic psychotherapy for panic disorder would be a highly effective treatment with gains commensurate with those achieved by prescriptive treatments; (2) that the treatments would be characterized by a high degree of psychodynamic process and significantly less by elements of interpersonal and cognitive-behavioral process; (3) that positive outcome would be predicted by the degree to which psychodynamic (rather than interpersonal and cognitive-behavioral) process was fostered; (4) that the treatments would be characterized by elements typical of psychodynamic therapy including attention to the therapeutic alliance and relationship, interpretation of defense mechanisms, identification of unconscious feelings and wishes deemed dangerous, and the linking of current symptoms, behaviors, and feelings to past experiences; and (5) that these specific variables along with a focus on facilitating emotional expression would be most predictive of positive outcome.

Method

Participants

Participants were 17 patients between the ages of 24 and 55 meeting Structured Clinical Interview for *DSM-IV* (SCID-IV) criteria for diagnosis of panic disorder at the Massachusetts General Hospital (MGH) outpatient psychiatry service in

Boston. Several different recruitment mechanisms were utilized: Advertisements in the scientific study section of a city newspaper, posters in general and psychiatric waiting rooms throughout the hospital, posters in major local universities' mental health clinics, description of the study in hospital-wide emails, and letters to psychiatrists, psychologists, and social workers affiliated with the MGH Department of Psychiatry. Prior to gathering any assessment information, the Research Coordinator explained the study, including any potential risks and benefits, to potential patients and then obtained informed consent with oversight from the Human Subjects Committee of Partners Health Care System and the Massachusetts General Hospital. Exclusion criteria for this study included current drug or alcohol abuse, bipolar disorder, psychosis, suicidality, concurrent psychotherapy or counseling, and any anticipated or actual changes to medication (dosage or type) less than 8 weeks prior to study entry.

Of the 17 patients entering treatment, 88.2% were female, 11.8% were male. Within the pool of participants, 77.8% identified themselves as Caucasian and 22.4% described themselves as Haitian, Hispanic, or Asian-Indian. The average age of participants enrolled in this study was 35. All subjects met diagnostic criteria for current panic disorder. In terms of comorbid disorders, approximately 6% of participants in this sample met diagnostic criteria for current major depression, 50.0% met criteria for past major depression, 66.7% met criteria for panic disorder with agoraphobia, 38.9% met criteria for current generalized anxiety, 11.1% met criteria for current social phobia disorder, and 5.6% met criteria for obsessive-compulsive disorder. Among study participants, 61.1% reported having previously taken some form of psychotropic medication. Seventy-six percent of the sample reported previously pursuing psychotherapy.

Since this was a naturalistic treatment, patients were allowed to continue taking psychotropic medication during the study as long as no changes were made 2 months prior to study enrollment and the patient still met criteria for panic disorder at baseline. While enrolled in the study, 52.9% ($n = 9$) of the participants were concurrently on medication (5 patients taking benzodiazepines, 2 taking a benzodiazepine and antidepressant, 1 patient taking only an antidepressant, and 1 patient taking medications belonging to multiple pharmacological classes). Patients were

asked not to make changes in medicine until termination of the study so that changes during the study period would not be confounded by medication changes. During the course of the study, however, 1 participant changed medication dosage under psychiatric supervision. After consultation with the psychiatrist, this participant was retained because the small change was not believed to represent a serious confound. While receiving treatment, 2 participants also ceased taking benzodiazepines on an as needed basis because of improvement in their functioning during the study period.

Therapists

The 7 participating clinicians were all affiliated with the Outpatient Department of Psychiatry at Massachusetts General Hospital. The group included 1 psychiatrist, 1 psychiatric resident, 2 psychologists, and 3 psychology interns/postdoctoral fellows. Clinicians averaged 12 years of clinical experience. Five of the participating clinicians were male, 2 were female, all were Caucasian. The number of patients seen by the same clinician ranged from 1 to 4. All clinicians identified their primary theoretical orientation as psychodynamic. Therapists were not asked to describe their orientation with any greater specificity because a primary aim of the study was in fact to identify empirically what type of treatment processes they fostered in actual practice using consensus based definitions from different theoretical orientations. Although not an EST for panic disorder, psychodynamically oriented clinicians often treat panic disorder patients using nonprescriptive therapies.

Treatment

In order to replicate nonprescriptive psychotherapy conducted in the community, clinicians were asked to conduct a nonprescriptive therapy as they normally would in their clinical practice. As described previously, nonprescriptive therapies are frequently used to treat panic disorder patients who cannot tolerate or do not respond to medicine or ESTs such as Panic Control Therapy. In addition, many patients seek nonprescriptive alternatives to medicine or ESTs. There were no restrictions on the kind of therapy offered other than the length of treatment. Therefore, the characteristics of the treatments provided were not

known by the investigators until after the study was completed. Thus, specific descriptions of the components of the treatments are presented in the results section of this study. Prior to the initial session, patients were told that treatment entailed one 50-minute session per week for 6 months for a total of approximately 24 sessions. The mean number of sessions in this study was 21. On average, patients were seen for a total of 7 months, but treatment length ranged from 6 to 48 weeks. Clinicians were asked to treat the patient for 22–26 sessions. This range was selected so that termination would not be completely arbitrary and clinicians would have some freedom to decide when to terminate treatment.

Outcome Measures

Outcome measures designed to assess patient functioning across a range of domains and from different perspectives (patient, therapist, independent rater) were administered at monthly intervals. Follow-up questionnaires (patient) were administered 6 months subsequent to termination. Independent raters assessed the severity and intensity of patients' panic at baseline and termination following one-to-one discussions with patients about their attacks. Certain outcome measures were selected because of their assignment as standard instruments to be used in empirical investigations of panic disorder by the 1994 NIH conference report (Shear & Maser, 1994). Other measures were chosen by virtue of their relevance to exploratory psychotherapies.

Patient Self-Report Measures

The Anxiety Sensitivity Index (ASI) (Reiss, Peterson, Gursky, & McNally, 1986) and Panic Disorder Severity Scale (PDSS) (Shear et al., 1992) were selected to assess panic symptomatology. The ASI is a self-report questionnaire with 16 items geared toward capturing fear of anxiety-related symptoms. Each item is rated on a 5-point scale. The ASI has demonstrated excellent reliability across numerous studies ranging from .82 to .91 (Peterson & Reiss, 1993). The measure has also demonstrated satisfactory test-retest reliability ranging from .71 to .75 (Peterson & Reiss, 1993) and has demonstrated both criterion and construct validity (Peterson & Reiss, 1993; Reiss et al., 1986). The PDSS is a 7-item scale. All items are rated on a 5-point scale. Questions

pertain to domains such as attack frequency and level of distress experienced. This questionnaire has demonstrated high interrater reliability with intraclass correlations of .88 and individual item reliability ranging from .73 to .87 (Shear et al., 1997). Shear et al. (1997) have demonstrated that individual items on the PDSS correlate strongly with other measures assessing similar constructs.

The Symptom Checklist-90-Revised (SCL-90-R) (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974) and Quality of Enjoyment and Satisfaction Questionnaire (Q-LES-Q) (Endicott, Nee, Harrison, & Blumenthal, 1993) were used to assess general psychological and physical functioning. The SCL-90-R consists of 9 principle symptom subscales and 3 global indices assessing general psychological distress. It is a 90-item measure. Each item is endorsed on a 1 (not at all) to 5 (extremely) scale. The SCL-90-R has demonstrated good reliability, validity, and sensitivity to psychotherapeutic change (Derogatis, 1994). The Q-LES-Q contains a total of 93 items. Ninety-one items comprise 8 scales assessing quality of life functioning across a range of domains including school, work, and physical health. The summary scales of the Q-LES-Q have demonstrated satisfactory test-retest reliability ranging from .62 to .89, satisfactory internal consistency ranging from .80 to .96, as well as concurrent validity (Endicott et al., 1993).

Clinician Measures

The Clinical Global Impression Scale (CGI) (Guy, 1976) was selected to assess subjects' panic symptomatology. The CGI scales assess degree of global improvement and severity of illness on a 1 to 7 scale. Number of symptoms, level of anxiety, avoidance, and level of functioning serve as the criterion upon which these ratings are based. The Global Assessment of Functioning Scale (GAF) (Endicott, Fleiss, & Cohen, 1976) was selected to gauge general psychological functioning. The GAF assesses psychological, social, and occupational health on a zero to one-hundred scale. Both the CGI and GAF have demonstrated satisfactory levels of reliability and validity. The Defensive Functioning Scale (DFS) (*DSM-IV*) and Social Cognition and Object Relations Scale (SCORS) (Eudell-Simons, Stein, DeFife, and Hilsenroth, 2005) were used to evaluate subjects' defensive styles and object relations. The DFS lists 7 principal levels of defensive functioning within which current coping styles can

be evaluated. Clinicians are asked to assign a level of defensive functioning at the time of assessment ranging from normal to psychotic. Two examples drawn from opposite ends of the spectrum include high adaptive level (defense mechanisms representing optimal adaptation to managing stressors including humor, affiliation, and self-assertion) and action level (defense mechanisms that rely on action or withdrawal to manage stressors [e.g., acting out and help-rejecting complaining]). The SCORS contains 8 questions assessing such dimensions as understandings of social causality and identity and self-coherence. All ratings are made on a 1 to 7 scale. The DFS and SCORS have been less widely applied in research settings and are therefore less well established psychometrically.

Independent Rater Measure

The Multi-Center Panic Anxiety Scale (MC-PAS) (Barlow et al., 1997) was used to assess the frequency and severity of participants' panic symptoms at baseline and termination. This instrument is identical in content to the previously described patient PDSS with the same psychometric properties, only completed by an independent rater as opposed to the patient.

Process Measure

The Psychotherapy Process Q-Set (PQS). Therapeutic process was examined using the PQS (Jones, 2000). The PQS is an instrument consisting of 100 items describing actions, behaviors, and thoughts of both therapist and patient in individual as well as dyadic terms. Several characteristics of the PQS speak to its strengths as a measure. It has demonstrated reliability and validity across a variety of different treatment samples including archived treatments of psychodynamic, cognitive-behavioral, client-centered, gestalt, rational-emotive, and interpersonal therapies (Ablon & Jones, 1999, 2002; Jones, Cumming, & Horowitz, 1988; Jones, Hall, & Parke, 1991; Jones & Pulos, 1993). The interrater reliability across all 100 PQS items has consistently yielded alpha coefficients between .83-.89 per rater pair. Reliability analyses for individual Q-items have also yielded acceptable values (between .50 and .95) across samples. The measure's construct and discriminant validity has been demonstrated across studies (Jones et al., 1988, 1991;

Jones, Krupnick, & Kerig, 1987; Jones & Pulos, 1993).

The PQS utilizes a fixed distribution to ipsatively describe most and least characteristic elements in a psychotherapeutic hour. By enforcing a fixed normal distribution, the measure ensures multiple evaluations of items and attenuates rater biases such as response sets and halo effects. Different from other process measures in the field which typically examine segments of the therapeutic hour, the PQS uses an entire hour as the unit of analysis thereby facilitating a much more representative view of the hour. The PQS's pantheoretical orientation enables comparisons between different treatment orientations.

Prototypes of ideal psychotherapeutic process have been developed using the PQS for a range of theoretical perspectives. Previous research has demonstrated how correlating process ratings with the prototypes can provide an empirical measure of the degree to which a treatment adheres to the theoretical principles of a given orientation (see Ablon & Jones, 1998, 2002 for more information on the development of the prototypes). Prototypes of interpersonal, psychodynamic, and cognitive-behavioral process were used in this study.

A pool of 8 research-oriented psychologists and master's level graduate students in clinical psychology, trained in use of the PQS, completed ratings of audiotapes from this study. For the purposes of this study, Session 12 (the midpoint of most treatments) was selected as a representative hour to be Q-sorted. For each session, independent ratings were completed by at least 2 judges. A composite Q-rating for both raters was then calculated for each item. If reliability between raters was below $r = .50$, a 3rd rater was added. To counter rater drift, periodic calibration meetings were conducted. The average alpha coefficient reliability for raters completing Q-sorts of therapy sessions in this sample ($n = 17$) was .85. This far surpasses the generally acceptable criterion (.70) used to determine acceptable reliability in therapy process and outcome research (Orlinsky & Howard, 1986).

Several methods were used to analyze the PQS process data. The process ratings were correlated with the prototypes of ideal treatment process to determine the degree to which the treatments adhered to the prescriptions of each theoretical orientation. Adherence to the prototypes was also correlated with outcome.

The most and least characteristic items of the treatments were listed to describe the overall process. Finally, individual process items were correlated with outcome.

Results

Outcome: Is Naturalistic Psychotherapy an Effective Treatment for Panic Disorder?

Treatment gains across time points were calculated using multiple statistical methods (Lambert & Hill, 1994). Table 1 reports pre and posttreatment means on questionnaires administered to patients, clinicians, and independent raters. Statistical significance and effect size represent the change between these time-points. Paired-sample *t* tests were used to detect statistically significant mean differences between pre and posttreatment. From pre to posttreatment, patients reported statistically significant decreases in both the anticipation and experience of anxiety (Anxiety Sensitivity Index & Panic Disorder Severity Scale) as well as significant increases in overall functioning (Symptom Checklist & Quality of Life Enjoyment and Satisfaction Questionnaire).

Consistent with the patients' perspectives, clinicians and independent raters reported a statistically significant decrease in panic and anxiety from baseline to endpoint. Clinicians

and raters reported decreases in the severity of patients' panic attacks as well as improvement in general functioning (Clinical Global Impression, Multicenter Panic Anxiety Scale & Global Assessment of Functioning). From clinicians' perspectives, patients demonstrated no statistically significant change in defensive functioning from pre- to posttreatment. Clinicians, however, did report statistically significant change ($p < .05$) in aspects of object relations including patients' emotional investment in values and moral standards ($p = .02$) and changes in self-esteem ($p = .02$).

Effect sizes were calculated as another index of change by subtracting posttreatment means from pretreatment means and dividing by pretreatment standard deviation. The effect sizes suggest substantial improvement in outcome from baseline to endpoint. Fifty-three percent of patients achieved remission according to a criterion used in several other studies in the literature (Milrod et al., 2001; Otto, Pollack, Penava, & Zucker, 1999). Clinically significant change was also calculated using a stringent method suggested by Jacobson and Truax (1991). This method involves using mean scores for the "normal" population (i.e., adults with no Axis I psychiatric disorder) as well as the "dysfunctional" population (i.e., in this case adult patients diagnosed with panic disorder). Patients were said to achieve clinically significant change only if their posttreatment means were closer to the normal mean than the dysfunctional mean. This calculation was completed for the 2 measures for which population means were available. Sixty-four percent and 70% achieved clinically significant change on the Symptom Checklist and Anxiety Sensitivity Index, respectively. Outcome analyses were also calculated after stratifying by medication status. Patients not concurrently taking medication achieved equivalent or better outcomes at termination across all measures. Analyses of the 6-month follow-up data revealed no statistically significant changes from endpoint to follow-up. In other words, patients maintained treatment gains across all outcome measures 6 months after termination. Thus, our first hypothesis, that naturalistic psychotherapy would be highly effective for treating panic disorder, was confirmed.

TABLE 1. Outcome of Naturalistic Psychotherapy for Panic Disorder: Baseline to Endpoint

Measures	Pre-mean	Post-mean	Statistical significance	Effect sizes
Patient				
SCL-90-R	0.87	0.54	.01*	.74
ASI	30.30	17.60	.00*	1.30
PDSS	10.40	5.88	.00*	1.10
Therapist				
CGI	4.20	2.60	.01*	2.40
GAF	59.8	71.60	.00*	1.80
Rater				
MC-PAS	5.03	3.30	.00*	1.10

Note. Significant pre/post means were determined using within-sample *t*-tests. Effect sizes were calculated using the formula: pretreatment mean-posttreatment mean/pretreatment standard deviation. SCL-90-R = Symptom Checklist-90-Revised; ASI = Anxiety Sensitivity Index; PDSS = Panic Disorder Severity Scale; CGI = Clinical Global Impression Scale; GAF = Global Assessment of Functioning Scale; MC-PAS = Multi-center Panic Anxiety Scale. $N = 17$.

* $p \leq .01$.

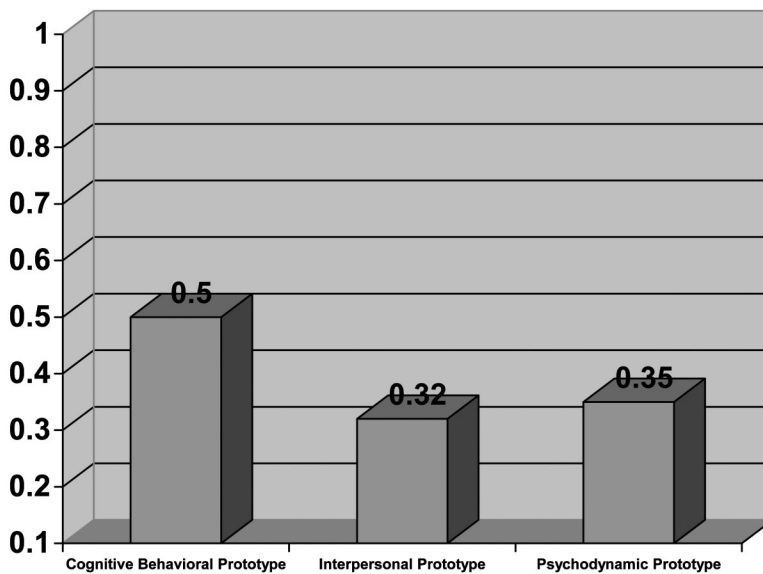
Adherence to Prototypes: Were the Treatments Characterized Mostly by Psychodynamic Process?

To measure adherence to prototypes of ideal therapeutic process as stipulated by expert panels, prototypes were correlated with the Q-sort ratings of the actual treatment sessions. For every patient, the composite Q-rating of each PQS item was correlated with each item's factor score from the corresponding prototype (refer to Ablon & Jones, 1998, 2002 for a more in-depth discussion of prototype methodology). Pearson correlations were transformed to *z-scores* using Fisher *r* to *z* transformations. Figure 1 displays the correlations with the 3 prototypes. The correlations with the CBT prototype (*z score M* = .50, *SD* = .14) were the strongest followed by the psychodynamic (*z score M* = .35, *SD* = .16) and interpersonal prototypes (*z score M* = .32, *SD* = .09), respectively. There was a statistically significant difference in adherence to the cognitive-behavioral versus psychodynamic and interpersonal prototypes ($t = -2.4, df = 16, p < .05; t = 6.2, df = 16, p < .001$). No statistically significant difference in adherence to the psychodynamic versus interpersonal prototypes emerged

($t = .70, df = 16, p = .496$). Our second hypothesis, that the treatment would be best characterized by prototypical psychodynamic process, was not confirmed.

Prototype—Outcome Correlations: Did the Degree of Psychodynamic Process Fostered Best Predict Positive Outcome?

Table 2 contains partial correlation coefficients representing the degree to which adherence to each prototype predicted outcome on the main outcome measures (Symptom Checklist, Anxiety Sensitivity Index, & Panic Disorder Severity Scale). Partial correlations were used to control for pretreatment level of severity. Positive correlations reflect outcome in the desired direction. Adherence to the psychodynamic prototype was significantly associated with positive outcome on 1 (Symptom Checklist) of the 3 outcome measures. Adherence to the interpersonal prototype was significantly associated with positive outcome on two (Symptom Checklist, Anxiety Sensitivity Index) of the three outcome measures. Adherence to the cognitive-behavioral prototype was not associated with positive outcome. Thus,



Note. Difference in adherence to the cognitive behavioral versus other prototypes is statistically significant. The difference in adherence to the interpersonal versus psychodynamic prototype is not statistically significant.

FIGURE 1. Adherence to prototypes of ideal treatment process.

TABLE 2. Prototypes Correlated with Outcome in a Naturalistic Psychotherapy for Panic Disorder

Outcome measures	Cognitive behavioral prototype	Interpersonal prototype	Psychodynamic prototype
SCL-90-R	-.18	.62**	.50*
ASI	-.03	.64**	.22
PDSS	-.39	.22	.03

Note. Positive correlations reflect favorable associations with outcome. All Pearson correlations are partial correlations controlling for pretreatment scores. *N* = 17. SCL-90-R = Symptom Checklist-90-Revised; ASI = Anxiety Sensitivity Index; PDSS = Panic Disorder Severity Scale.

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

our third hypothesis that stated that the degree of prototypical psychodynamic process fostered would be the best predictor of positive outcome was only partially confirmed.

Most and Least Characteristic Elements of Process: Were the Treatments Best Characterized by Elements Typical of Psychodynamic Therapy?

The most and least characteristic aspects of the therapeutic process were calculated using Q-item means. As depicted in Table 3, means ranged from a high of 8.06 to a low of 1.47 on a scale ranging from 1 to 9. In order to identify the 10 most and least characteristic items of treatment for the purposes of highlighting the most descriptive processes, Q-items were rank ordered according to their means. The Q-item numbers in the text correspond to the items in the table. R (reversed) indicates items where content was inverted to maintain narrative consistency.

According to observer ratings, certain thematic similarities emerged across this group of treatments. Patients' current or recent life situations (Q 69) as well as their interpersonal relationships (Q 63) emerged as frequent topics of discussion. Generally speaking, dialogue between patients and therapists tended to have a specific focus (23). As judged by raters, the stance most characteristic of clinicians was one in which clinicians were empathic and sensitive to patients' feelings (Q 6), responsive and affectively involved (Q 9, r), tactful (Q 77 r), nonjudgmental (Q 18), and not condescending or patronizing (Q 51).

Possibly in response to these therapist behav-

iors, raters agreed that clients generally felt understood by their therapists (Q 14), accepted their therapist's comments and observations (Q 42, r), were trusting and secure (Q 44, r), as well as compliant and deferential (Q 20 r). In addition, patients were viewed as active in the therapy (Q 15, r), having little difficulty beginning the hour (Q 25, r), and as understanding therapists' comments (Q 5, r).

From the perspective of observers completing

TABLE 3. Rank Ordering of PQS Item Means in Naturalistic Psychotherapy for Panic Disorder

PQS #	Psychotherapy Process Items	Mean
<i>10 Most Characteristic Items</i>		
69	Patient's current or recent life situation is emphasized in discussion.	8.06
31	Therapist asks for more information or elaboration.	8.03
6	Therapist is sensitive to the patient's feelings attuned to the patient; empathic.	8.00
65	Therapist clarifies, restates, or rephrases patient's communications.	7.97
23	Dialogue has a specific focus.	7.94
62	Therapist identifies a recurrent theme in the patient's experience or conduct.	7.56
18	Therapist conveys a sense of non-judgmental acceptance.	7.50
63	Patient's interpersonal relationships are a major theme.	7.41
81	Therapist emphasizes patient feelings in order to help him or her experience them more deeply.	7.35
92	Patient's feelings and perceptions are linked to the past.	7.03
<i>10 Least Characteristic Items</i>		
9	Therapist is distant, aloof (vs. responsive and affectively involved).	1.47
77	Therapist is tactless.	1.59
51	Therapist condescends to, or patronizes the patient.	1.65
14	Patient does not feel understood by the therapist.	1.76
5	Patient has difficulty understanding the therapist's comments.	2.44
42	Patient rejects (vs. accepts) therapist's comments.	2.59
15	Patient does not initiate topics; is passive.	2.65
44	Patient feels wary or suspicious (vs. trusting and secure).	2.79
25	Patient has difficulty beginning the hour.	3.12
20	Patient is provocative, tests limits of the therapy relationship.	3.18

Note. PQS = Psychotherapy Process Q-set. Ratings range from 9 (most characteristic) to 1 (least characteristic). *N* = 17.

ratings, therapist interventions constituted salient aspects of the therapeutic process. Therapists asked for more information or elaboration (Q 31) as well as clarified, restated, or rephrased patient's communications (Q 65). They identified recurrent themes in the patient's experience or conduct (Q 62). Therapists also tended to emphasize patients' feelings in order to help them experience these feelings more deeply (Q 81) as well as link patients' feelings or perceptions to the past (Q 92).

Our fourth hypothesis was that the treatments would be characterized by elements typical of psychodynamic therapy. This was not strongly supported when examining the most and least characteristic items of the treatments.

Specific Process Correlates of Outcome: Were the Elements Typical of Psychodynamic Therapy Predictive of Positive Outcome?

In order to ascertain the specific aspects of the therapeutic process that were strongly associated with positive outcome, partial correlations (controlling for pretreatment) between Q-sort items and patients' outcome scores on the Symptom Checklist were calculated. Given the relatively small sample size, effect size rather than significance level was used to identify process correlates of outcome. A moderate correlation of $r > .3$ was chosen as a cutoff point to identify robust process correlates of outcome. The importance of decreasing the probability of Type II error at the risk of increasing the probability of Type I error influenced the selection of this value based on Cohen's estimates (Cohen, 1988).

Table 4 lists the 28 PQS items emerging as process correlates of outcome on the Symptom Checklist. Of these, roughly the same number of items described patient ($N = 11$) and therapist ($N = 10$) within session characteristics, experiences, and qualities. Several items described the nature of the interaction between the two ($N = 7$). Some of the process-correlate items appeared to be thematically related.

Several items reflecting a focus on feelings and negative emotion by patients and therapists were associated with positive outcome: The patient being self-accusatory/expressing shame and guilt (Q 71), verbalizing negative feelings toward the therapist (Q 1), the therapist focusing on patient's feelings of guilt (Q 22), drawing attention to

TABLE 4. Individual Item Process Correlates of Outcome

PQS #	Psychotherapy Process Items	Effect Size
81	Therapist emphasizes patient's feelings to deepen them	.70
74	Humor is used	.52
1	Patient verbalizes negative feelings toward therapist	.50
97	Patient is introspective, explores inner thoughts/feelings	.49
73	Patient is committed to the work of therapy	.49
8	Patient is concerned/conflicted about dependence on the therapist	.49
72	Patient understands the nature of therapy, what is expected	.47
75	Termination of therapy discussed	.47
50	Therapist draws attention to feelings patient regards unacceptable	.43
28	Therapist accurately perceives therapeutic process	.42
11	Sexual feelings and experiences are discussed	.40
96	Discussion of scheduling or fees	.38
32	Patient achieves a new understanding or insight	.37
71	Patient is self-accusatory expresses shame, guilt	.37
22	Therapist focuses on patient's feelings of guilt	.34
6	Therapist is sensitive to the patient's feelings, attuned, empathic	.34
12	Silences occur during the hour	.32
92	Patient's feelings/perceptions are linked to the past	-.45
38	Discussion of activities/tasks to do outside session	-.47
25	Patient has difficulty beginning the hour	-.37
30	Discussion centers on cognitive themes, ideas, beliefs	-.36
76	Therapist suggests patient accept responsibility for problems	-.34
45	Therapist adopts supportive stance	-.33
37	Therapist behaves in a teacher-like (didactic) manner	-.33
48	Therapist encourages independence of action/opinion	-.32
52	Patient relies upon therapist to solve his/her problems	-.54
35	Patient's self-image is focus of discussion	-.62
85	Therapist encourages patient to try new ways of behaving with others	-.67

Note. Positive correlations reflect favorable associations with outcome on the SCL-90-R. PQS = Psychotherapy Process Q-set; $N = 17$.

feelings regarded as unacceptable by the patient (Q 50), and emphasizing patients' feelings in an effort to deepen them (Q 81).

Another group of items describing common factors contributing to a strong therapeutic alli-

ance emerged as robust predictors of positive patient outcome on the Symptom Checklist: Humor being used (Q 74), the patient being introspective (Q 97), committed to the therapeutic work (Q 73), and understanding the nature and the expectations of the therapy (Q 72), the therapist accurately perceiving the therapeutic process (Q 28), adopting a supportive stance (Q 45), and being sensitive to the patient's feelings, attuned and empathic (Q 6).

Patients feeling conflicted about dependence on the therapist (Q 8) was an additional item correlating with positive outcome. Two other items generally characteristic of a psychodynamic viewpoint emerged as strongly associated with positive outcome: Sexual feelings are discussed (Q 11), and termination is discussed (Q 75). The following items were also correlates of positive outcome: Silences occur during the hour (Q 12), discussion of scheduling or fees occurs (Q 96), and patient has difficulty beginning the hour (Q 25).

Many of the process correlates associated with negative outcome also shared thematic similarities. Several of these items reflected hallmark aspects of psychodynamic and cognitive-behavioral approaches to treatment: Discussion of activities/tasks to do outside session (Q 38), discussion centers on cognitive themes (Q 30), and patient's feelings/perceptions are linked to past (Q 92). Other items associated with negative outcome reflected therapists' actions: Therapist suggests that patient accept responsibility for problems (Q 76), therapist behaves in a teacher-like (didactic) manner (Q 37), therapist encourages independence of action/opinion (Q 48), therapist encourages patient to try new ways of behaving with others (Q 85). The following items were also correlated with negative outcome: patient relies upon therapist to solve his/her problems (Q 52), and patient's self-image is a focus of discussion (Q 35).

Our fifth and final hypothesis was that elements of psychodynamic process along with a focus on facilitating emotional expression would be most predictive of positive outcome. This was only partially confirmed in that the active ingredients did include a focus on helping patients to recognize, experience and express negative or disavowed emotions, sexual desires, and fears of dependence, but did not include linking patient's feelings and perceptions to the past or significant focus on defense or transference interpretations.

The active ingredients also included a supportive working alliance and the absence of a prescriptive stance taken by the therapist.

Discussion

Outcome of Naturalistic Psychotherapy for Panic Disorder

As predicted, patients receiving a nonmanualized, exploratory, naturalistic psychotherapy for panic disorder demonstrated statistically significant improvements in their anticipation and experience of anxiety as well as their social and relational functioning from baseline to endpoint and from baseline to follow-up. Improvements also extended to the realms of physical health, quality of feelings, quality of social relations, quality of general activities, and overall life satisfaction. Independent ratings of patients' severity and frequency of panic attacks were reduced on average by half from baseline to endpoint. Effect sizes for patient, clinician, and observer completed measures all tended toward the same direction. However, consistent with the literature, clinician effect sizes were approximately double those for patients and independent raters. The magnitude of the effect sizes in this pilot study ranged from slightly less to roughly equal those reported in studies employing similar outcome measures (Milrod et al., 2001; Otto et al., 1999). As might be expected, the remission rates in this study were higher than those reported after group cognitive-behavioral therapy with "inadequately medicated" patients and lower than those reported with "adequately treated" patients (Otto et al., 1999). At both endpoint and follow-up, patients' levels of symptomatology and sensitivity toward anxiety were closer to the mean of the normal population than the mean of adults diagnosed with panic disorder. The fact that this nonmanualized, naturalistic, exploratory treatment was associated with statistically and clinically significant change from baseline to endpoint warrants further exploration of similar naturalistic treatments for panic disorder.

Adherence to Theoretical Models in Naturalistic Psychotherapy

Contrary to what one might expect, the treatments were characterized most highly by the presence of cognitive-behavioral process despite

the fact the clinicians all self-identified as psychodynamic in orientation. Correlations with the prototypes did indicate moderate adherence to prototypes of psychodynamic and interpersonal process as well but to a significantly lesser degree than adherence to the CBT prototype. Several factors may account for these curious findings. One explanation may center on the divide separating theory from practice. As practitioners in the field frequently note, the reality of “what works” with a given patient often requires a mixing of technique, intervention, and therapeutic stance. In naturalistic settings where patients present with comorbidities and multiply determined problems, clinicians frequently report drawing on different kinds of interventions from various schools of thought as the specifics of the case dictate. Previous research using the same process measure has indicated that, for instance, psychodynamic clinicians tend to employ a diverse range of interventions when conducting brief psychotherapy, fostering as much of a cognitive-behavioral process as a psychodynamic process (Ablon & Jones, 1998). Also, the nature of panic disorder itself, which is heavily characterized by somatic and physiological symptoms, may have been more consistent with interpersonal and cognitive-behavioral models of intervention. These two approaches have traditionally been more symptom-focused than psychodynamic approaches. In addition, the level of activity of the therapists may have been due to patients’ inability to put their emotions into words, resulting in therapists’ appropriate active exploration and questioning in order to assist with this specific task. Finally, the fixed duration of the study combined with clinicians’ awareness of the study objective to gauge pre/post treatment change, may have influenced clinicians to behave in a more structuring and active fashion than they would have otherwise in a non time-limited dynamic treatment. Nonetheless, it is significant that a group of experienced psychodynamic therapists, conducting therapy without constraints imposed by a research protocol on their approach, provided a highly effective treatment by fostering a process most characterized as cognitive-behavioral. Given that the process findings suggest that the treatments could not be characterized accurately as psychodynamic treatment of panic disorder, it might be more accurate to describe them as “treatment as usual” in the community.

Prototype Correlates of Outcome

In terms of predicting outcome, adherence to the interpersonal and to a lesser degree psychodynamic process predicted positive outcome. The fact that the process characterizing these treatments as a whole (cognitive-behavioral) was not reflected in the aspects of process predicting positive outcome (interpersonal and psychodynamic) has a precedent in the empirical literature. Results from a programmatic line of research indicate that the most prevalent aspects of therapeutic process are not necessarily the components predicting outcome (Ablon & Jones, 1998, 2002). Taken together, one implication of these findings may be that the conceptualization of therapeutic interventions as “purely” one orientation or another may in the end be more of a conceptual than clinical reality. Another important implication might be that focusing on the predominant aspects of process alone can be misleading when it comes to the active ingredients of a treatment.

Given the above findings, both the theoretical orientation of the therapists and the most characteristic elements of the process did not offer much useful information about what helped patients get better and, it could be argued, were misleading in the absence of a fine-grained analysis of process correlates of outcome. Fortunately, we also identified process correlates of outcome irrespective of theoretical orientations and brand names. Positive outcome was most robustly predicted by a focus on identifying and expressing (particularly negative) emotion and feelings. The link between focusing on emotion and positive outcome that emerged in this study resonates to varying degrees with different theoretical perspectives. Shear’s Emotion Focused Treatment (EFT) (1995) for panic disorder rests on the notion that poorly articulated emotionality fuels the sense of helplessness underlying panic disorder. In EFT, clinicians and patients successfully explore unexplained emotional reactions by identifying response patterns (shame, guilt, fear and anger) to situations eliciting panic attacks. Clarifying emotional reactions and identifying possible negative emotional triggers is considered therapeutic because it decreases patients’ sense of helplessness and increases their sense of self-efficacy and mastery.

The important role of emotion/feeling in panic disorder is also present in Milrod’s delineation of unidentified anger as a primary dynamic under-

lying the disorder. According to Milrod's conceptualization, patients' fear of their angry feelings and the conscious and unconscious fantasies this spawns can trigger attacks (Milrod, Busch, Cooper, & Shapiro, 1997). Milrod emphasizes that the expression of anger in many patients with panic disorder fosters feelings of abandonment, the internal experience of losing the love of the object or loss of the capacity to evoke the positive image of the object at whom anger was directed. Additionally, some patients can become quite guilt-ridden and experience retribution anxiety reactive to the expression of anger at important objects or those representing important objects. Patients feeling conflicted about dependence on the therapist and discussing sexual feelings and termination were also all associated with positive outcome in our analysis. Milrod has hypothesized that core dynamics for panic disorder patients often involve fears of separation and fear of expressing and pursuing sexual desires.

The role of emotion/feelings in panic disorder has also been considered from cognitive-behavioral perspectives. Barlow (2000) suggests that panic patients often constrict the range of their emotions in an attempt to evade the experience of threatening somatic symptoms. The empirical connection between alexithymia (characterized by difficulty recognizing and verbalizing feeling, a paucity of fantasy life, concrete speech and thought closely tied to external events) and panic disorder supports this assertion.

As would be expected, items reflecting common factors contributing to positive therapeutic alliance (e.g., patient being introspective, patient committed to work, patient understanding expectations of therapy, therapist being supportive, therapist accurately perceiving process, and therapist being sensitive to patients feelings) were associated with positive outcome. This trend is consistent with literature highlighting the important connection between therapeutic alliance and positive outcome across a range of different psychotherapies (Frieswyck et al., 1986; Krupnick, Sotsky, Elkin, Watkins, & Pilkonis, 1996).

That focusing on cognitive themes emerged as a negative process correlate of outcome deserves consideration. Shear's emotion-centered framework offers a potential explanation for this trend. Cognitive themes may be too far removed from the more proximate role of emotions to be associated with positive outcome. In Shear's emotion focused conceptualization, therapeutic gains are

predicated on the identification and exploration of emotional reactions specifically. The link to negative outcome could also be explained if patients used cognitive themes as a way of intellectualizing and defending against troubling thoughts and feelings. Support for this hypothesis exists at a descriptive level as evidenced by the fact that clinicians assigned over half of the patients in the sample to the level of defensive functioning characterized by compromise formation (including intellectualization and isolation of affect). Items reflecting the suggestive influence of the therapist also tended to be negatively correlated with outcome.

The results of this study illustrate the value of being able to examine therapeutic process on both a macro (mean adherence to prototypes across the sample) as well as a micro (item by item analyses of individual components contributing to process) level. To make the point metaphorically, in order to better identify better the salient characteristics of the specimen on the slide (i.e., what kind of therapy is actually being employed), the resolving power on the microscope must be turned higher. The ultimate goal underlying process-outcome research is to identify aspects of the psychotherapeutic process contributing to positive and negative outcomes. The results of this study suggest that effective treatment for panic disorder focuses on helping patients to recognize, experience and express negative emotions, sexual desires, and fears of dependency and separation all in the context of a supportive working alliance in the absence of a prescriptive stance from the therapist.

Limitations

The results of this study must be considered in light of the methodological limitations that are involved when conducting naturalistic research. This pilot study was an open design without random assignment to a comparison group. Causal statements about the relationship between the intervention and outcome, therefore, cannot be made because this study utilized a correlational design. In addition, future studies of naturalistic psychotherapy for panic disorder could include a more even distribution of the number of clinicians per patient, an increased number of patients in the sample, and a greater diversity of patients both in terms of ethnicity and gender. The generalizability of the findings is certainly

limited by the sample size and the demographic characteristics of the sample. Our sample consisted of 89% women and 78% Caucasian patients. Clearly, these methods could be expanded to assess such treatment with a more heterogeneous sample. Also, although consistent with the literature, the fact that the effect sizes of clinicians' ratings of improvement far surpassed those of patients or independent raters deserves further exploration. Finally, some critics of the prototype method using the PQS have doubted the ability of the 100 Q-set items to comprehensively assess process from certain theoretical perspectives (e.g., Markowitz, 2003), despite the fact that measure has continued to successfully identify significant predictors of outcome across a range of different treatment modalities.

Implications and Future Directions

The treatments described in this study appear to represent an effective form of what might best be described as "treatment as usual" in the community. Although the term "treatment as usual" itself seems to connote a degraded version of more effective treatment offered somewhere else than in the community, our results suggest that when clinicians are left to their own devices to treat complicated patients, they can produce excellent results! A plausible next step would be to use the design of a randomized, controlled clinical trial to compare ESTs for panic disorder (such as Panic Control Therapy) to viable alternative treatments (such as Milrod's psychodynamic psychotherapy) and treatment as usual (such as the treatments provided in this study). Such a comprehensive study would provide more clarity as to the true relative efficacy of various forms of treatment for panic disorder.

Although the standard procedure for evaluating treatments is to test them as packages of intervention under controlled conditions before "exporting" them to clinical practice outside the laboratory, the results of this study also suggest the intriguing possibility that the reverse may make more sense. Our results demonstrate the utility of studying what clinicians are actually doing in clinical practice that is associated with patient change before building treatments around these specific components and testing them under controlled conditions. Having assumed that clinicians might learn how to conduct effective treatments through experience with hypothesis testing

in clinical practice, we studied what experienced clinicians did when left to their own devices to treat patients as they normally do outside research protocol. We learned that clinicians were highly effective but that their self-identified primary orientation was not necessarily reflective of the predominant therapeutic processes they fostered with their patients. We also learned that the most predominant process was not necessarily the most important one. In other words, without careful examination of process at multiple levels, we could have erroneously labeled the treatment as psychodynamic (due to the clinician's orientations) or cognitive-behavioral (due to the most prominent features of process). Furthermore, neither label would have contributed much to our understanding of how to help patients improve. Much like diagnoses, which in many instances do not guide treatment, brand names of orientations and therapies leave much to be desired when it comes to understanding what specifically promotes therapeutic change and likely often contribute to faulty assumptions about why patients got better.

In this study, by focusing on an atheoretical analysis of process, we were able to identify empirically derived change processes. These change processes are ones that could be used to build effective and clinically relevant treatments specifically for panic disorder patients. Another unique advantage afforded by reversing the typical steps involved in testing treatments is that treatments constructed around empirically validated change processes practiced by experienced clinicians would be embraced by practitioners to a greater degree than manualized treatments developed by researchers in laboratories. Thus, the sizable obstacle of generalization to practitioners' offices would not be the issue it is for manualized treatments. This study is an example of a research paradigm that is a useful complement to randomized, controlled trials of ESTs. It exemplifies how process researchers and experienced clinicians can learn from each other by empirically validating change processes in naturalistic treatments.

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