Psychotherapy Volume 35/Fall 1998/Number 3

EXAMINING THE ALLIANCE USING THE PSYCHOTHERAPY PROCESS Q-SET

PAULINE B. PRICE ENRICO E. JONES
University of California at Berkeley

The alliance between therapist and patient was investigated using the Psychotherapy Process Q-Set (PQS), an instrument that quantitatively describes therapy sessions in a manner that captures the complexity of the therapy process. More specifically, the PQS was used to examine the treatment processes being assessed by observer ratings on the California Psychotherapy Alliance Scales (CALPAS). Three PQS factors were found to be associated with alliance: Patient–Therapist Interaction, Patient Capacity/Commitment, and Therapist Countertransference. In multiple regression analyses with scales constructed from these three factors, Patient–Therapist Interaction was found to predict alliance ratings, while the other two aspects of the treatment process did not account for any significant additional variance in the alliance ratings. Results suggest that Patient–Therapist Interaction plays a defining role in the alliance construct, as assessed by the observer version of the CALPAS.

Introduction

The study described here investigates alliance, an extensively studied component of change in psychotherapy. The alliance, which might be generally defined as the collaborative, positive relationship between therapist and patient, is one of the few process variables in psychotherapy for which there is substantial research evidence of a positive association with treatment outcome. The alliance is considered an important common factor in psychotherapy—that is, operating across the various kinds of psychotherapy and not specific to any particular theoretical orientation—and may play a central role in patient change in psychotherapy (Henry, Strupp, Schacht, & Gaston, 1994). A meta-analysis of 24 studies, incorporating a variety of alliance measures and types of treatment, revealed an overall alliance-outcome effect size of .26 (Horvath & Symonds, 1991). Horvath (1994b) notes that this effect size is similar in magnitude to the size of the total patient gains associated with psychotherapy. Krupnick et al. (1996), analyzing data from the National Institute of Mental Health (NIMH) Treatment of Depression Research Program, found that alliance accounted for more of the variance in outcome than did treatment modality.

Unfortunately, the usefulness of the alliance construct has been limited by confusion and controversy regarding the nature of the alliance. Researchers have defined the alliance in a variety of ways and, reflecting this diversity in conceptualization, have developed multiple instruments for assessing it. A number of researchers have noted the problematic lack of a "single, clear definition" of the alliance (Henry et al., 1994), which impedes progress in understanding the role of the alliance in psychotherapy (Frieswyk et al., 1986) and leaves in doubt the validity of the alliance concept (Gaston & Marmar, 1994).

Variety of Alliance Conceptualizations and Measures

There are at least 11 different alliance scales in use (Horvath & Luborsky, 1993), and five "families" of "historically and conceptually" related scales have been identified by Horvath and Symonds (1991). Underlying these scales or families of scales are a variety of conceptualizations

Correspondence regarding this article should be addressed to Enrico E. Jones, University of California, Berkeley, Department of Psychology, 3210 Tolman Hall #1650, Berkeley, CA 94720-1650.

of the alliance. The authors of the California Psychotherapy Alliance Scales (CALPAS; Marmar, Gaston, Gallagher, & Thompson, 1989), used in the present study, attempt to address some of the confusion surrounding the alliance by incorporating into the CALPAS several of the different conceptualizations of the alliance currently in the field. They view the varying alliance conceptualizations that are found in the field as "each reflecting a relatively independent dimension of the alliance" (Gaston & Marmar, 1994). The scales of the CALPAS are thus to some extent each intended to reflect one of the various conceptualizations found in the field and together are thought to represent the overall alliance. These four scales are (a) Patient Working Capacity, the patient's "ability to work actively and purposefully in treatment," for example, "Patient explores own contribution to problems"; (b) Patient Commitment, the patient's attachment to therapy and therapist, for example, "Patient views therapy as important"; (c) Working Strategy Consensus, the consensus between therapist and patient regarding "goals and strategies," for example, "Patient and therapist share sense about how to proceed"; and (d) Therapist Understanding and Involvement, for example, "Therapist is understanding of patient's suffering and subjective world" (Gaston & Marmar, 1993, 1994).

Overlap in Alliance Conceptualizations and Measures

Broadly speaking, two categorization systems seem to underlie the alliance conceptualizations and measures. First, often evident is a hypothesized distinction between the emotional bonds or affective connection between patient and therapist, on the one hand, and the effective, participatory work done by patient (or therapist) in the therapy, on the other (e.g., Bordin, 1994, and Greenson, 1965, 1967, as cited by Hatcher & Barends, 1996; Gaston & Marmar, 1994; Greenson, 1965, 1967). A similar distinction is drawn by Orlinsky, Grawe, and Parks (1994) between the "task-instrumental side" of the alliance and the "social-emotional side" of the alliance. This distinction is evident, for example, in the CALPAS scale of Patient Commitment, intended primarily to reflect "affective aspects of the patient's collaboration," versus the Patient Working Capacity scale, reflecting the "skillful aspects of the patient's collaboration" (Gaston & Marmar, 1994). Second, conceptualizations and measures of alliance frequently involve the three elements of patient contributions, therapist contributions, and the therapist–patient interaction (e.g., Hartley & Strupp, 1983; Henry et al., 1994, discuss the need to better understand therapist versus patient contributions to the alliance). Although these dimensions are not referred to explicitly by the CALPAS developers, the CALPAS clearly consists of two scales representing patient contributions (Patient Working Capacity and Patient Commitment), one scale representing primarily interactional aspects (Working Strategy Consensus), and one scale representing therapist contributions (Therapist Understanding and Involvement). Several studies that examine the correlations between ratings on different alliance instruments (e.g., Hatcher & Barends, 1996; Safran & Wallner, 1991; Tichenor & Hill, 1989) provide preliminary evidence that, when taken from a consistent perspective (i.e., patient, therapist, or independent observer), at least some of the alliance measures assess similar constructs at the level of overall alliance score (rather than subscale).

Research on the Dimensionality and Characterization of the Alliance

Given evidence that certain of the alliance measures, although based on a variety of conceptualizations, measure a similar construct, researchers have turned their attention to understanding the precise nature of the construct. Evidence in support of the various hypothesized dimensions of alliance is weak. Several researchers—including those utilizing the CALPAS—have found moderate-to-high and high intercorrelations among the subscales comprising a given alliance measure (Gaston & Marmar, 1994; Horvath & Greenberg, 1989; Raue, Castonguay, & Goldfried, 1993; Salvio, Beutler, Wood, & Engle, 1992), raising doubt as to the validity of the hypothesized dimensions underlying these measures and suggesting that the alliance may be unidimensional (Gaston & Marmar, 1994; Horvath & Greenberg, 1989). Hatcher and Barends (1996), examining patient ratings on the CALPAS and two other alliance measures, found "extreme divergence" between exploratory factor analyses of ratings on each measure and the measure's conceptual model. Hatcher and Barends note that a small number of other studies investigating the dimensionality of alliance measures using factor analysis (e.g., Gaston, 1991; Gaston & Marmar, 1994; Hartley & Strupp, 1983; Marmar et al., 1989;

Marmar, Weiss, & Gaston, 1989) have had "insufficient numbers of participants" and "produced very limited evidence of subscale discrimination" (Hatcher & Barends, 1996, p. 1326). Krupnick et al. (1996), in a large-*N* study using data from the NIMH Treatment of Depression Research Program, factor analyzed ratings on a modified version of the observer-rated Vanderbilt Therapeutic Alliance Scale (VTAS; Hartley & Strupp, 1983). They identified a patient factor, which was found to significantly predict outcome, and a therapist factor, which did not. Using a different strategy to investigate the nature of the alliance, Soo-Hoo (1988) compared observer ratings on the VTAS to ratings of the Psychotherapy Process Q-Set (PQS; Jones, Cumming, & Horowitz, 1988) with a sample of patients receiving a psychodynamic treatment for stress-response syndromes. Using a stepwise multiple regression analysis, he found that 69% of the variance in VTAS ratings was accounted for by only three PQS items: "Patient does not feel understood by therapist" (negatively correlated with alliance), "Patient is committed to the work of therapy," and "Therapist is distant, aloof" (negatively correlated with alliance).

Research Question and Study Approach

The question, "What is the alliance?" (Henry et al., 1994) clearly remains a pressing one for the field. Inquiry regarding the nature of the alliance can be addressed from two perspectives: (a) Conceptually, how is the alliance best defined? (b) What precisely is being assessed by the current alliance measures? Focusing on the latter question, this study investigates what part or parts of the treatment process are being assessed by alliance measures.

The current investigation, building on Soo-Hoo's (1988) work, addressed the study question by comparing ratings on the CALPAS to ratings on the Psychotherapy Process Q-Set (PQS), an instrument that quantitatively describes therapy sessions in a manner that captures the complexity of the processes involved in psychotherapy. As explained in detail below, the PQS is comprised of 100 items, describing a wide range of patient, therapist, and interactional elements of the session. The PQS was designed as a language with which to examine and understand any number of treatment process variables (Jones et al., 1988). The CALPAS was selected for the present study's examination of alliance as one of the most prominent and representative of the various alliance measures. In their extensive review, Henry et al. (1994) identify the CALPAS as one of the recent advances in alliance measures. As previously noted, the CALPAS is designed to incorporate aspects of several of the major conceptualizations of alliance found in the field. In addition, ratings on the CALPAS generally correlate highly with ratings on other alliance measures examined (Hatcher & Barends, 1996; Safran & Wallner, 1991; Tichenor & Hill, 1989).

Method

Study Sample

This study made use of an archival sample of 30 brief psychodynamic psychotherapy treatments, obtained from the Mt. Zion Psychotherapy Research Group. This archival sample has been described in detail in previous articles (Jones, Parke, & Paulos, 1992; Jones & Pulos, 1993), summarized here. The original data set included 38 cases, of which 8 cases were excluded: 4 for reasons of confidentiality, 2 because patients terminated after 5 or 6 sessions, and 2 due to insufficient assessment data. Patients in this sample had diagnoses representing a range of "neurotic" disorders, such as depression, dysthymic disorder, and generalized anxiety disorder, as determined by intake interviews and screening tests. Mean patient age was 50 years (range, 20–81 years), and patient educational level ranged from some high school education to completed doctoral degrees. Twenty of the patients were female and 10 male. Archival records included session transcripts from hours 1, 5, and 14 of each treatment (or appropriate substitute hours, in a few cases) and treatment outcome data. Twenty-six patients had treatments of 16 sessions, and 4 had treatments of 20, 14, 13, and 11 sessions respectively. Therapists considered themselves primarily psychodynamic in theoretical orientation, and all but one had received some specialized training in brief psychodynamic psychotherapy. There were a total of 15 therapists: 5 treated 3 patients each; 5 treated 2 patients each; and 5 treated 1 patient each. Of these 15 therapists, 13 were male and 2 female; 8 were psychiatrists, 6 were clinical psychologists, and 1 was a psychiatric social worker. On average, therapists had 6 years of private practice experience (range, 1–19 years).

Treatment outcome was assessed from the perspective of therapist, patient, and independent

evaluator. The three primary outcome measures used, as cited in Jones et al. (1992), were (a) the Symptom Distress Checklist-Revised (SCL-90-R; Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974), a self-report symptom inventory completed by patients at initial evaluation and posttreatment; (b) the Brief Psychiatric Rating Scale (BPRS; Overall & Gorham, 1962), which was completed by therapists and clinical evaluators at initial evaluation and posttreatment; and (c) the Overall Change Rating (OCR), a 9-point scale indicating perceived extent of patient change (e.g., "very much worse," "very much improved"), which was completed by the therapist, patient, and independent evaluator at posttreatment. Following the data analytic strategy of Jones et al. (1992), OCR ratings from these three perspectives were combined for outcome analyses. Considering the sample as a whole, treatment was successful; the treatment outcome of this sample of patients as a group has been more fully reported elsewhere (Jones et al., 1992; Jones & Pulos, 1993). Although outcome data were collected at several points posttreatment, all analyses in the current study used data collected at termination, since this represented the most complete data set and the assessment point most relevant to an alliance-outcome association.

Process Ratings

To maintain independence of ratings, none of the independent observers used for the PQS ratings of the sample were involved in ratings on the CALPAS. For both instruments, judges made their ratings after studying a transcript of the entire session. As described in more detail below, PQS ratings had been obtained prior to the current study. CALPAS ratings were produced for the current study for Sessions 5 and 14 of each treatment. Session 5 was chosen in view of substantial research evidence (Horvath & Symonds, 1991) that early alliance is predictive of treatment outcome. Session 5 was selected over Session 1 to allow for some development of the alliance, again following a suggestion in the literature that the development of critical aspects of the alliance occurs over the first few sessions of treatment (e.g., O'Malley, Suh, & Strupp, 1983). Session 14 represented an hour toward the end of therapy but generally not the actual termination session.

Alliance Ratings

Alliance was assessed by independent observers, using the rater version of the California Psychotherapy Alliance Scales (CALPAS). Use of the observer version of the CALPAS was judged appropriate given evidence that observer-rated alliance, in addition to patient-rated alliance, shows a robust association with outcome (Horvath & Symonds, 1991). As described above, the CALPAS-R is comprised of four scales; each of these consists of six items rated on 7-point Likert scales. The score of each of these four scales is obtained by taking the mean of the six items, after reversing item scores where appropriate; similarly, the overall alliance score is the mean of the four scales. The CALPAS-R has demonstrated high reliability in previous studies (reviewed in Gaston & Marmar, 1994). CALPAS-R ratings used in this study were by a postbaccalaureate student with some prior clinical experience, trained to reliability with the first author. Training involved careful review of the CALPAS training manual (Gaston & Marmar, 1993) and ratings of a number of sessions not used for study data, followed by discussion of discrepancies in ratings. Periodic calibration meetings were held to prevent rater drift, and reliability between the rater and the first author on a sample of the transcripts was determined as a measure of reliability.

The Psychotherapy Process Q-Set (PQS; Jones, 1985)

As described previously, the PQS is comprised of 100 items describing a wide range of treatment aspects. These items are sorted by a judge into nine categories, ranging from most characteristic of the therapy hour to least characteristic of the therapy hour, to form a normal distribution. Each item thus has a number between 1 and 9 associated with it, indicative of how characteristic of the session the item was, relative to the other items. The PQS items have been clearly defined in a manual (Jones, 1985), require relatively low levels of inference on the part of the judges, and are anchored in behavioral and linguistic cues. Reliability and validity of the PQS have been demonstrated in several studies, making use of a variety of treatment samples (see Jones, Cumming, & Pulos, 1993). The usefulness of the PQS in revealing therapy processes has been demonstrated in a number of studies that have successfully used the PQS to identify process correlates of outcome with a variety of kinds of psychotherapy and patient populations (Jones et al., 1988; Jones et al., 1993; Jones, Hall, & Parke, 1991; Jones & Pulos, 1993). As described by Jones et

al. (1992), sessions on this sample were rated by a pool of 10 judges trained on the PQS. Judges included both research-oriented clinicians and predoctoral graduate students in clinical psychology and represented a range of theoretical perspectives. Two judges independently rated each session, and their ratings were composited. When agreement between the judges was less than .50, a third rater was added. Interrater reliability of PQS ratings, determined using Pearson product-moment correlation coefficients, averaged .84.

Data Analysis

Analyses comparing CALPAS-R ratings to PQS ratings (and analyses conducted in preparation for these comparisons) made use of the full sample size of 60 sessions—30 Session 5 ratings and 30 Session 14 ratings. This strategy was based on the assumption that the relationship of PQS items to alliance would be relatively stable; thus, even if Session 14 alliance tended to differ from Session 5 alliance (and it was, of course, expected that alliance would differ across cases for a given time in treatment), each of the 60 sessions would be expected to contribute information regarding the relationship of PQS ratings to alliance ratings. In addition, separate analyses of each subsample (Session 5 ratings and Session 14 ratings) were generally not judged useful in the sequence of analyses conducted because of the small size of the subsamples. In particular, separate factor analyses of PQS ratings for the two subsamples were not considered appropriate in view of the small subsample sizes relative to the demands of the analyses. Where possible, the appropriateness of combining treatment hour subsamples in this way was confirmed, as is reported below.

Results

CALPAS-R Reliability and Scale Characteristics

The CALPAS-R rater was found to be highly reliable with the first author on a sample of 13% of the transcripts (8 sessions). Reliability of ratings (intraclass coefficient [2,2]; calculated according to Shrout & Fleiss, 1979) for the overall alliance score was .90, and ranged from .83 to .92 for the four scales. The CALPAS-R overall score and individual scale means of the full sample (N = 60) approached the midpoint of the 7-point Likert scale, and the scales had adequate variability: Patient Working Capacity, M = 4.68, SD = 1.26, range from 1.5 to 7.0; Patient Commitment, M = 4.20, SD = 1.09, range from 1.2 to 6.7; Working Strategy Consensus, M = 4.43, SD = 1.40, range from 1.5 to 7.0; Therapist Understanding and Involvement, M = 5.15, SD = 1.20, range from 2.7 to 7.0; overall alliance score, M = 4.61, SD = 1.01, range from 2.2 to 6.7. Internal consistency of the subscales and total scale, examined using Cronbach's alpha coefficients, were uniformly quite high: Patient Working Capacity, .93; Patient Commitment, .90; Working Strategy Consensus, .95; Therapist Understanding and Involvement, .94; and overall alliance score, .96.

The four scales correlated substantially with each other and with the total alliance score, as indicated in Table 1.

The magnitude of these intercorrelations, and the relatively smaller intercorrelations found here between the Therapist Understanding scale and the two patient scales, were in keeping with those reported elsewhere (Gaston & Marmar, 1994; Gaston, Piper, Debbane, Bienvenu, & Garant, 1994). Given the study's goal of exploring the

TABLE 1. CALPAS-R Scales and Total Score (N = 60) Pearson Product-Moment Correlations

	Patient Working Capacity	Patient Commitment	Working Strategy Consensus	Therapist Understanding
Overall Alliance	.80	.78	.92	.76
Patient Working Capacity		.52	.63	.44
Patient Commitment			.69	.36
Working Strategy Consensus				.65

Note. All correlations are significant: Patient Commitment with Therapist Understanding and Involvement $p < .005$; all other correlations, $p < .001$.

nature of the alliance overall and the generally substantial intercorrelations between subscales, all subsequent analyses were conducted using solely the overall CALPAS score. This strategy also allowed for more possible generalizability of results, since overall alliance scores across alliance measures are often highly related, while the association between subscales across measures is much less consistent.

The association of Session 5 total alliance scores and Session 14 total alliance scores was examined and found to be not significant (Pearson product-moment correlation $r = .27$, $p = .07$, 1-tailed significance). Means and standard deviations of the four scales and overall score for each treatment time, displayed in Table 2, appeared equivalent, with perhaps some trend toward smaller scores in Session 14. Paired t tests indicated no significant differences in the means between these two samples. Overall, in summary, it appeared that these two subsamples showed at most a small dependency and, at least tentatively, that they were drawn from the same or a similar population.

Relationship to Outcome

The relationship of alliance to outcome was then examined to ascertain whether these alliance data were consistent, with regard to alliance-outcome association, with data obtained in other studies. Given clear evidence from a number of investigations that early alliance is predictive of outcome (e.g., Horvath & Symonds, 1991), and the lack of clarity regarding the course of the alliance after it has been established (e.g., Hartley & Strupp, 1983; Klee, Abeles, & Muller, 1990), only Session 5 ratings were used in analyses comparing CALPAS-R ratings to outcome. Partial correlations were used in comparisons of Session 5 alliance ratings to each of the 3 symptom measures to control for initial level of symptomatology. Pearson product-moment correlation was used to examine the association of alliance with the Overall Change Rating. The alliance-outcome correlations are reported in Table 3. No associations reached statistical significance.

Correlations between PQS Items and Alliance Ratings

Predictions were made as to which PQS items would be expected to have an association with the alliance and in which direction, based on the CALPAS authors' conceptualization of the alliance (e.g., Gaston & Marmar, 1993). Predictions were made by the study authors, on the basis of face validity, and were confirmed in discussions with a research team of graduate students and clinicians. Selected from the 100 PQS items were all those items that directly reflected any of the four dimensions represented by the CALPAS scales; these dimensions were interpreted broadly to allow for the inclusion of PQS items relevant to the various alliance conceptualizations in the field. For example, the PQS item "Patient is introspective, explores thoughts and feelings" (Q97) taps the patient's capacity to work in the therapy; "P is committed to the work of therapy" (Q73) captures the patient's commitment; "There is a competitive quality to the relationship" (Q39) negatively reflects the working strategy consensus; and "Therapist is distant, aloof (versus responsive and affectively involved)" (Q9) negatively reflects the therapist's understanding and involvement.

A total of 33 PQS items were predicted to relate to the alliance. All items directly reflecting the patient's ability to work in the therapy, the patient's attitude or feelings toward the therapy or therapist, the relationship between therapist and patient, and the therapist's understanding of and involvement in the therapy work were included. Items involving therapist techniques (e.g., "Therapist identifies a recurrent theme in the patient's experience or conduct," Q62), topics of discus-

TABLE 2. CALPAS-R Means and Standard Deviations: Session 5 ($n = 30$) and Session 14 ($n = 30$)

	Overall Alliance Score	Patient Working Capacity	Patient Commitment	Working Strategy Consensus	Therapist Understanding
Session 5:	4.79 (1.08)	4.85 (1.28)	4.34 (1.03)	4.74 (1.44)	5.21 (1.24)
Session 14:	4.44 (.92)	4.51 (1.23)	4.05 (1.14)	4.11 (1.30)	5.09 (1.19)

Note. Means are followed by standard deviations, displayed in parentheses.

TABLE 3. Alliance-Outcome Correlations

	BPRS-Therapist† (N = 19)	BPRS-Evaluator† (N = 23)	GSI of SCL-90-R† (N = 30)	OCR (N = 30)
CALPAS-R Overall Score	.22	.33	.03	.17

Note. Partial correlations controlling for pretreatment scores are used for symptom measures; Pearson correlations are used for Overall Change Rating (OCR). Sample size for each analysis is indicated; size varies due to missing data. BPRS = Brief Psychiatric Rating Scale; GSI of SCL-90-R = Global Severity Index of Hopkins Symptom Checklist-Revised; OCR = Overall Change Rating, averaged therapist/evaluator/patient ratings.

† Negative correlations on these symptom measures have been reversed to reflect positive association with outcome.

sion (e.g., "Patient's aspirations or ambitions are topics of discussion," Q35), and emotional states and attributes of the patient (e.g., "Patient is self-accusatory; expresses shame or guilt," Q71) not directly relevant to the patient–therapist relationship were not used as predictors. Although conjectures might be made that some of the excluded items would show some degree of relationship with alliance (e.g., that certain therapist techniques might be more or less likely to lead to a good alliance or might be attempted when a good alliance was present), such items were not included, as they would not be considered definers of alliance.

Pearson product-moment correlations were then determined for CALPAS ratings and ratings of the PQS items that were predicted to correlate with alliance. Statistical significance used in these analyses was one-tailed, since the direction of the correlation was being predicted. PQS item predictions and the obtained associations with alliance ratings are reported in Table 4 (predictions in a positive direction) and Table 5 (predictions in a negative direction). It should be noted that

TABLE 4. Alliance Ratings and PQS Ratings: Pearson Correlations for Predictions of Positive Correlation

Q95 P feels helped	.40****
Q55 P conveys positive expectations about therapy	.38***
Q32 P achieves a new understanding or insight	.37***
Q73 P is committed to the work of therapy	.36***
Q97 P is introspective, readily explores inner thoughts and feelings	.36***
Q72 P understands the nature of therapy and what is expected	.27*
Q88 P brings up significant issues and material	.25*
Q46 T communicates with patient in a clear, coherent style	.24*
Q78 P seeks T's approval, affection, or sympathy	.23*
Q45 T adopts supportive stance	.22*
Q6 T is sensitive to P's feelings, attuned to P; empathic	.21*
Q28 T accurately perceives the therapeutic process	.19
Q86 T is confident or self-assured (vs. uncertain or defensive)	.14
Q18 T conveys a sense of nonjudgmental acceptance	.13
Q10 P seeks greater intimacy with T	.05
Q53 P is concerned about what T thinks of him or her	(−.06)

Note. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .005$. **** $p \leq .001$.
Significance is one-tailed.

TABLE 5. Alliance Ratings and PQS Ratings: Pearson Correlations for Predictions of Negative Correlation

Q42 P rejects (vs. accepts) T's comments and observations	−.64****
Q58 P resists examining thoughts, reactions, or motivations related to problems	−.55****
Q5 P has difficulty understanding T's comments	−.52****
Q1 P verbalizes negative feelings (e.g., criticism, hostility) toward T (vs. makes approving or admiring remarks)	−.50****
Q14 P does not feel understood by T	−.50****
Q44 P feels wary or suspicious (vs. trusting and secure)	−.47****
Q39 There is a competitive quality to the relationship	−.39****
Q49 P experiences ambivalent or conflicted feelings about T	−.37***
Q34 P blames others, or external forces, for difficulties	−.31**
Q56 P discusses experiences as if distant from his or her feelings	−.29**
Q24 T's own emotional conflicts intrude into the relationship	−.26*
Q9 T is distant, aloof (vs. responsive and affectively involved)	−.23*
Q52 P relies upon T to solve his or her problems	−.22*
Q51 T condescends to, or patronizes, P	−.09
Q25 P has difficulty beginning the hour	−.02
Q8 P is concerned or conflicted about his or her dependence on T (vs. comfortable with dependency, or wanting dependency)	−.02
Q15 P does not initiate topics; is passive	(.17)

Note. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .005$. **** $p \leq .001$.
Significance is one-tailed.

dividing these items into two lists is for convenience of understanding only, given that each item, whatever the tone of its wording, can be rated as either characteristic or uncharacteristic of a session.

Factor Analyses

Principle-components factor analysis was conducted using the PQS items that correlated significantly with alliance in the previous analyses. This analysis was exploratory in nature in view of the small sample size ($N = 60$). Three of the 24 PQS items showing a significant association with alliance were excluded from these and all additional analyses, as more accurately representing in-session evidence of treatment outcome than representing the alliance construct per se. These were "Patient achieves a new understanding or insight" (Q57), "Patient feels helped" (Q95), and "Patient conveys positive expectations about therapy" (Q55; especially a potential indicator of outcome when rated in the 14th session). Researchers have recently become sensitive to this issue and have begun to remove from their analyses those items that would particularly confound alliance scores with in-session evidence of improvement (e.g., Crits-Christoph, Barber, & Kurcias, 1994). As a precaution, factor analytic procedures parallel to those described below were also run with all 24 PQS items; these analyses resulted in a similar pattern of factor loadings to that described below.

Examination of the scree plot following principle-component analysis with the 21 remaining PQS items suggested a 3-factor solution. Factors were clarified using orthogonal (varimax) rotation; oblique (oblimin) rotation, conducted for confirmation purposes, showed a highly similar pattern of factor loadings. The loadings were indicative of a fairly simple factor structure, with no item loading over .5 (or under −.5) on more than 1 factor. Three factor scales were then constructed on the basis of these factor loadings, such that all items loading above .5 (or below −.5) on a factor were assigned to the scale. The term *scale* is used here for purposes of convenience; however, there is no intention to imply that the precise composition of each factor will necessarily generalize across studies. There were no differences between the varimax and oblimin rotations with regard to item inclusion on these scales. Cronbach's alpha coefficients and mean interitem correlations were calculated for each factor scale; two items identified as slightly lowering the alpha coefficients and mean interitem correlations of their scales were excluded.

For each factor, scores associated with treatment sessions were then calculated by finding the

mean of the factor scale's PQS items for each session, after reversing the ratings of items that were negative indicators. The 3 factors (scales) are shown in Table 6, with the items' factor loadings from varimax rotation. The two items removed from the factor scales and not included in the scores are displayed in parentheses. In both Table 6 and in the discussion section below, items for which ratings were reversed are indicated with an "R" following the item number (however, each item's content is still presented in original form; that is, an item's wording has not been changed to reflect a rating reversal). Table 6 also displays each factor scale's descriptive label, mean and standard deviation, and Cronbach's alpha and mean interitem correlation. Examination of the item contents and the mean of each factor reveals that overall the process for this therapy sample, as described by these factors, was positive: noncompetitive, positive interaction was characteristic; the patient's being introspective and committed was in the neutral/somewhat characteristic area; and overall it was uncharacteristic for the therapist's emotional conflicts to intrude into the relationship.

Pearson product-moment correlations of these factors were as follows: Patient–Therapist Interaction with Patient Capacity/Commitment, $r = .61$ ($p < .001$); Patient–Therapist Interaction with Therapist Countertransference, $r = -.47$ ($p < .001$); Patient Capacity/Commitment with Therapist Countertransference, $r = -.35$ ($p < .005$).

Multiple Regression Analyses

Comparisons between these three PQS factors and alliance were conducted to better understand their relationship. Pearson product-moment correlations of each factor and alliance were as follows: Patient–Therapist Interaction, $r = .63$ ($p < .001$); Patient Capacity/Commitment, $r = .47$ ($p < .001$); and Therapist Countertransference, $r = -.34$ ($p < .005$). Multiple regression analyses were then conducted with the three factors as the independent variables and alliance as the dependent variable, to examine which of the factors accounted for variance in the alliance ratings. All three factors were entered in one step, in recognition of the exploratory nature of this work. Results of this analysis are shown in Table 7. Patient–Therapist Interaction significantly predicted the alliance score, while Factors 2 and 3 did not add significantly to its prediction.

It might be noted that although the intercorrelations of these three factors were on average only slightly smaller than those of the alliance subscales,

TABLE 6. PQS Factors

Factor 1: Patient–Therapist Interaction	*Loading*
Q44-R P feels wary or suspicious (vs. trusting and secure)	.78
Q14-R P does not feel understood by T	.76
Q1-R P verbalizes negative feelings (e.g., criticism, hostility) toward T (vs. makes approving or admiring remarks)	.73
Q49-R P experiences ambivalent or conflicted feelings about T	.69
(Q45 T adopts supportive stance	−.65)
Q42-R P rejects (vs. accepts) T's comments and observations	.62
Q5-R P has difficulty understanding T's comments	.60
Q39-R There is a competitive quality to the relationship	.55
Mean = 6.57, *SD* = 1.20, Cronbach's alpha coefficient = .89; Mean interitem correlation = .53	
Factor 2: Patient Capacity/Commitment	*Loading*
Q97 P is introspective, readily explores inner thoughts and feelings	−.82
Q88 P brings up significant issues and material	−.79
Q58-R P resists examining thoughts, reactions, or motivations related to problems	.74
Q72 P understands the nature of therapy and what is expected	−.64
(Q56-R P discusses experiences as if distant from his or her feelings	.63)
Q73 P is committed to the work of therapy	−.63
Mean = 5.56, *SD* = 1.14; Cronbach's alpha coefficient = .85; Mean interitem correlation = .53	
Factor 3: Therapist Countertransference	*Loading*
Q24 T's own emotional conflicts intrude into the relationship	.67
Q6-R T is sensitive to P's feelings, attuned to P; empathic	−.60
Q46-R T communicates with P in clear, coherent style	−.58
Q52 P relies upon T to solve his or her problems	.55
Mean = 3.97, *SD* = .81; Cronbach's alpha coefficient = .59; Mean interitem correlation = .27	

TABLE 7. Multiple Regression

Dependent variable: Alliance	
Factor 1: Patient–Therapist Interaction	$B = .44^a$
	($SE\ B = .12$)
Factor 2: Patient Capacity/Commitment	$B = .12$
	($SE\ B = .12$)
Factor 3: Therapist Countertransference	$B = -.07$
	($SE\ B = .15$)
	$N = 60$
	$R^2 = .41^b$

Note. $^a p < .0005$. $^b p < .0001$.

the separate PQS factors were retained for further analyses in keeping with the primary purpose of this study, namely, to identify what treatment processes are being reflected in alliance ratings in terms of the Psychotherapy Process Q-Set.

For purposes of confirming the appropriateness of the full sample, these regression analyses were repeated for Session 5 ratings ($n = 30$) and Session 14 ratings ($n = 30$) separately, with similar results. For each subsample, Patient–Therapist Interaction accounted for a significant amount of the variance in alliance while the other two did not add significantly to the prediction of alliance.

Discussion

The trends in alliance-outcome association in this study are consistent with the associations reported in the literature, suggesting that the alliance ratings in this study are representative of those obtained in other research. Horvath and Symonds (1991), using meta-analytic techniques, found an average alliance-outcome effect size of .26. The associations reported here, although not reaching significance, ranged from .33 to .03 and averaged .19. It has been suggested that to some degree the wide variation in alliance-outcome association across studies is ascribable to the different kinds of outcome measures being used (Horvath, Gaston, & Luborsky, 1993), a hypothesis for which the range of results reported here may provide some tentative support.

Results of the first set of analyses using the PQS to examine the alliance indicate that CALPAS ratings do reflect the kinds of processes that they are intended to assess. Predictions regarding which PQS items would relate to alliance, and in what direction, were frequently confirmed. Of the 33 PQS items predicted to correlate with alliance, 24 items were found to have a significant association with alliance, and all but 2 items correlated with outcome in the predicted direction.

Results from exploratory factor analysis of the PQS items that were hypothesized to be potentially defining of alliance and that showed significant correlation with alliance suggest that a positive alliance is associated with three aspects of the treatment process. These three factors might be seen as roughly corresponding to the three dimensions that in part define the structure of several alliance measures, namely patient contributions, therapist contributions, and patient–therapist interaction. As will be described, however, the factors found here give a focused, differentiated characterization of each of these aspects.

Although Patient–Therapist Interaction on first sight seems to represent patient contributions to the treatment process, upon inspection it becomes clear that this factor reflects interactional aspects of the treatment. Two items loading highly on this factor reflect aspects of the relationship that are explicitly not patient-centered: "There is a competitive quality to the relationship" (Q39-R) and "T adopts supportive stance" (Q45; excluded from the factor score). Several items that might be considered patient-focused, in that the patient's experience is central (the patient is the subject of the item), also refer to the therapist and have a strongly interactional quality, for example, "P does not feel understood by T" (Q14-R), "P verbalizes negative feelings toward T" (Q1-R), and "P has difficulty understanding T's comments" (Q5-R). That is, these items could reflect processes resulting from the patient's mode of interaction, the therapist's mode of interaction, or some combination. Even the item, "P wary or suspicious, vs. trusting and secure" (Q44-R), may also be related to the patient–therapist interaction, compared, for example, to the more solidly patient items in Patient Capacity/Commitment, such as "P is introspective, readily explores inner thoughts and feelings" (Q97). Hatcher and Barends (1996) similarly note that certain items in alliance measures seem at first glance to reflect patient contributions to alliance but are actually worded in a way that "evokes a lively sense of the therapeutic relationship."

Thus Factor 1 can be seen as reflecting the quality of the patient–therapist interaction, perhaps with somewhat more emphasis on the patient's position with regard to the interaction. Specifically, it seems to reflect the extent to which

the patient and therapist are successfully communicating: the patient feels understood by the therapist, the patient understands the therapist's comments, the patient is open to and accepting of what the therapist offers, and both work collaboratively rather than competitively. Although capturing the general sense of collaborativeness in the therapy work that is often emphasized by current alliance theorists (e.g., Horvath & Greenberg, 1994), this factor stands in contrast to specific conceptualizations of alliance (e.g., as described by Horvath, 1994a) that seem to focus more narrowly on the extent of therapist–patient agreement regarding the therapeutic work itself (i.e., agreement on the therapy tasks and goals) as the important, effective, work-related component of alliance.

In contrast to Patient–Therapist Interaction, Patient Capacity/Commitment might be seen as reflecting a more purely patient dimension of the treatment process. As would be expected given their content, these two factors correlate substantially in this sample. The items in the second factor, however, are less evocative of the patient–therapist interaction than those patient-centered items in the first factor. Rather, this factor seems to reflect the extent to which the patient is able and willing to work productively in therapy. For example, the patient is introspective (Q97); brings up significant issues (Q88); does not resist examining thoughts, reactions, or motivations (Q58-R); understands what is expected in therapy (Q72); and is committed to the work of the therapy (Q73).

Therapist Countertransference seems primarily to reflect therapist aspects of the treatment process, particularly negative countertransference reactions. For example, the therapist's emotional conflicts may intrude into the relationship (Q24) and the therapist may not be sensitive to the patient's feelings, attuned to the patient, or empathic (Q6-R). The item indicating that the therapist was not communicating in a clear, coherent style (Q46-R) might also reflect difficulties due to the presence of negative countertransference reactions. This factor has a somewhat interactive flavor, although to a lesser degree than the first, in that the last item brings in the patient again: "P relies upon T to solve his or her problems" (Q52). The next highest-loading item on Therapist Countertransference is "P blames others, external forces, for difficulties" (Q34), loading at .46 on this factor, .00 on Patient–Therapist Interaction, and .21 on Patient Capacity/Commitment. Possibly, then, certain patient behaviors, for example, dependence or externalizing, are likely to be associated with negative countertransference responses.

With regard to the posited distinction, discussed above, between affective, bond elements of the relationship and more working-related elements, it might be noted that each of the three factors identified in this study are comprised both of items reflecting affective aspects of the interaction and of items reflecting effective, productive work. Patient–Therapist Interaction, for example, reflects both the extent to which the patient is able to understand the therapist's comments (Q5-R), perhaps indicative of working-related aspects of communication, and the extent to which the patient expresses positive feelings toward the therapist (Q49-R), reflecting affective elements of their interaction. Similarly, Therapist Countertransference includes both "T's own emotional conflicts intrude into relationship" (Q24), highlighting an affective process, and "T communicates in clear, coherent style" (Q46-R), reflecting a work-related element. Although the emphasis of Factor 2, Patient Capacity/Commitment, seems to be on what researchers (e.g., Gaston & Marmar, 1994) might consider the patient's working capacity or the patient's *ability* to do the work of therapy, the item "P is committed to the work of therapy" (Q73) suggests that this factor also represents an affective component of the relationship. This merging, within factors, of affective and working-related aspects of the process suggests that these two elements are highly interrelated and not easily separable in the context of alliance. (It is generally understood that they are related; e.g., Gaston & Marmar, 1994). Hatcher and Barends (1996), examining patient assessment of alliance, similarly found evidence that these two elements are closely linked, and noted that the patient–therapist bond can develop as a result of effective therapeutic work.

The multiple regression analyses conducted here indicate that Patient–Therapist Interaction primarily accounts for the variance in alliance ratings predicted by PQS factors (accounting for slightly less than 40% of the variance), while the other 2 factors do not account significantly for any additional variance in the alliance ratings. This result suggests that Patient–Therapist Interaction plays a defining role in the alliance construct, possibly representing the core of the alliance construct or, more specifically, what is being

most directly assessed by raters using the CALPAS-R. In contrast, dimensions of the treatment process reflective of purely patient contributions, such as capacity and commitment, and therapist contributions, such as countertransference responses, are closely related to alliance ratings but are not in themselves central to the assessment of strength of alliance. These results suggest that the alliance in substantial part represents the quality of the patient–therapist interaction, a view compatible at a general level with many current conceptualizations of the alliance. The interactive process described by this factor is in keeping with current interactional models of the therapy relationship—constructs such as intersubjectivity, role responsiveness, and repetitive interaction structures—that emphasize the reciprocal, mutually influencing interaction between patient and therapist (Jones, 1997; Jones & Price, 1998). That is, the alliance, as viewed from the perspective of the PQS data and described particularly by Factor 1 of the PQS ratings, is directly determined less by patient or therapist aspects than by the way these mutually influence each other to determine the quality of the patient–therapist interaction. The interaction described by the alliance, as captured by this factor, reflects the successfulness of the patient–therapist communication, including both affective and working-related elements of that communication.

The conclusions drawn here are preliminary, in view of methodological limitations such as the relatively small sample size and lack of cross-validation. In addition, a portion of the variance in alliance remains unaccounted for in these analyses; whether this portion is due to random "noise" or reflects the need for additional clarity remains a question for future investigation.

References

Bordin, E. S. (1994). Theory and research on the therapeutic working alliance: New directions. In A. O. Horvath & L. S. Greenberg (Eds.), *The working alliance: Theory, research, and practice* (pp. 13–37). New York: John Wiley.

Crits-Christoph, P., Barber, J. P., & Kurcias, J. S. (1994). The accuracy of therapists' interpretations and the development of therapeutic alliance. *Psychotherapy Research, 3*, 23–35.

Derogatis, L. R., Lipman, R. S., Rickels, K., Uhlenhuth, E. H., & Covi, L. (1974). The Hopkins Symptom Checklist (HSCL): A self-report symptom inventory. *Behavioral Science, 19*, 1–5.

Frieswyk, S. H., Allen, J. G., Colson, D. B., Coyne, L., Gabbard, G. O., Horwitz, L., & Newsom, G. (1986). Therapeutic alliance: Its place as a process and outcome variable in dynamic psychotherapy research. *Journal of Consulting and Clinical Psychology, 54*, 32–38.

Gaston, L. (1991). Reliability and criterion-related validity of the California Psychotherapy Alliance Scales–patient version. *Psychological Assessment, 3*, 68–74.

Gaston, L., & Marmar, C. R. (1993). *Manual of California Psychotherapy Alliance Scales (CALPAS)*. Unpublished manuscript. Montreal, Canada: McGill University.

Gaston, L., & Marmar, C. R. (1994). The California Psychotherapy Alliance Scales. In A. O. Horvath & L. S. Greenberg (Eds.), *The working alliance: Theory, research, and practice* (pp. 85–108). New York: John Wiley.

Gaston, L., Piper, W. E., Debbane, E. G., Bienvenu, J., & Garant, J. (1994). Alliance and technique for predicting outcome in short- and long-term analytic psychotherapy. *Psychotherapy Research, 4*, 121–135.

Greenson, R. (1965). The working alliance and the transference neurosis. *Psychoanalytic Quarterly, 34*, 155–181.

Greenson, R. (1967). *The technique and practice of psychoanalysis* (Vol. 1). New York: International Universities Press.

Hartley, D. E., & Strupp, H. H. (1983). The therapeutic alliance: Its relationship to outcome in brief psychotherapy. , In J. Masling (Ed.), *Empirical studies of psychoanalytic theories* (Vol. 1, pp. 1–37). Hillsdale, NJ: Analytic Press.

Hatcher, R. L., & Barends, A. W. (1996). Patients' view of the alliance in psychotherapy: Exploratory factor analysis of three alliance measures. *Journal of Consulting and Clinical Psychology, 64*, 1326–1336.

Henry, W. P., Strupp, H. H., Schacht, T. E., & Gaston, L. (1994). Psychodynamic approaches. In A. E. Bergin & S. L. Garfield (Eds.), *Handbook of psychotherapy and behavior change* (4th ed., pp. 467–508). New York: John Wiley.

Horvath, A. O. (1994a). Empirical validation of Bordin's pantheoretical model of the alliance: The Working Alliance Inventory perspective. In A. O. Horvath & L. S. Greenberg (Eds.), *The working alliance: Theory, research, and practice* (pp. 109–128). New York: John Wiley.

Horvath, A. O. (1994b). Research on the alliance. In A. O. Horvath & L. S. Greenberg (Eds.), *The working alliance: Theory, research, and practice* (pp. 259–286). New York: John Wiley.

Horvath, A., Gaston, L., & Luborsky, L. (1993). The therapeutic alliance and its measures. In N. E. Miller, L. Luborsky, J. P. Barber, & J. P. Docherty (Eds.), *Psychodynamic treatment research* (pp. 247–273). New York: Basic Books.

Horvath, A. O., & Greenberg, L. S. (1989). Development and validation of the Working Alliance Inventory. *Journal of Counseling Psychology, 36*, 223–233.

Horvath, A. O., & Greenberg, L. S. (1994). Introduction. In A. O. Horvath & L. S. Greenberg (Eds.), *The working alliance: Theory, research, and practice* (pp. 1–9). New York: John Wiley.

Horvath, A. O., & Luborsky, L. (1993). The role of therapeutic alliance in psychotherapy. *Journal of Consulting and Clinical Psychology, 61*, 561–573.

Horvath, A. O., & Symonds, B. D. (1991). Relationship between working alliance and outcome in psychotherapy: A meta-analysis. *Journal of Counseling Psychology, 38*, 139–149.

Jones, E. E. (1985). *Manual for the Psychotherapy Process Q-set*. Unpublished manuscript. Berkeley, CA: University of California.

Jones, E. E. (1997). Modes of therapeutic action. *International Journal of Psychoanalysis, 78,* 1135–1150.

Jones, E. E., Cumming, J. D., & Horowitz, M. J. (1988). Another look at the nonspecific hypothesis of therapeutic effectiveness. *Journal of Consulting and Clinical Psychology, 56,* 48–55.

Jones, E. E., Cumming, J. D., & Pulos, S. M. (1993). Tracing clinical themes across phases of treatment by a Q-Set. In N. E. Miller, L. Luborsky, J. P. Barber, J. P. Docherty (Eds.), *Psychodynamic treatment research: A handbook for clinical practice* (pp. 14–36). New York: Basic Books.

Jones, E. E., Hall, S. A., & Parke, L. A. (1991). The process of change: The Berkeley Psychotherapy Research Group. In L. E. Beutler & M. Crago (Eds.), *Psychotherapy research: An international review of programmatic studies* (pp. 98–106). Washington, DC: APA.

Jones, E. E., Parke, L. A., & Pulos, S. M. (1992). How therapy is conducted in the private consulting room: A multidimensional description of brief psychodynamic treatments. *Psychotherapy Research, 2,* 16–30.

Jones, E. E., & Price, P. B. (1998). Interaction structure and change in psychoanalytic therapy. In R. Bornstein & J. Masling (Eds.), *Empirical studies of the therapeutic hour* (pp. 27–62). Washington, DC: APA.

Jones, E. E., & Pulos, S. M. (1993). Comparing the process in psychodynamic and cognitive-behavioral therapies. *Journal of Consulting and Clinical Psychology, 61,* 306–316.

Klee, M. R., Abeles, N., & Muller, R. T. (1990). Therapeutic alliance: Early indicators, course, and outcome. *Psychotherapy, 27,* 166–174.

Krupnick, J. L., Sotsky, S. M., Simmens, S., Moyer, J., Elkin, I., Watkins, J., & Pilkonis, P. (1996). The role of the therapeutic alliance in psychotherapy and pharmacotherapy outcome: Findings in the National Institute of Mental Health Treatment of Depression Collaborative Research Program. *Journal of Consulting and Clinical Psychology, 64,* 532–539.

Marmar, C. R., Gaston, L., Gallagher, D., & Thompson, L. W. (1989). Alliance and outcome in late-life depression. *Journal of Nervous and Mental Disease, 177,* 464–472.

Marmar, C. R., Weiss, D. S., & Gaston, L. (1989). Toward the validation of the California Therapeutic Alliance Rating System, *Psychological Assessment, 1,* 46–52.

O'Malley, S. S., Suh, C. S., & Strupp, H. H. (1983). The Vanderbilt Psychotherapy Process Scale: A report on scale development and a process-outcome study. *Journal of Consulting and Clinical Psychology, 51,* 581–586.

Orlinsky, D. E., Grawe, K., & Parks, B. K. (1994). Process and outcome in psychotherapy—Noch Einmal. In A. E. Bergin & S. L. Garfield (Eds.), *Handbook of psychotherapy and behavior change* (4th ed., pp. 270–376). New York: John Wiley.

Overall, J., & Gorham, D. (1962). The Brief Psychiatric Rating Scale. *Psychological Reports, 10,* 799–812.

Raue, P. J., Castonguay, L. G., & Goldfried, M. R. (1993). The working alliance: A comparison of two therapies. *Psychotherapy Research, 3,* 197–207.

Safran, J. D., & Wallner, L. K. (1991). The relative predictive validity of two therapeutic alliance measures in cognitive therapy. *Psychological Assessment: A Journal of Consulting and Clinical Psychology, 3,* 188–195.

Salvio, M., Beutler, L. E., Wood, J. M., & Engle, D. (1992). The strength of the therapeutic alliance in three treatments for depression. *Psychotherapy Research, 2,* 31–36.

Shrout, P. E., & Fleiss, J. L. (1979). Intraclass correlations: Uses in assessing rater reliability. *Psychological Bulletin, 86,* 420–428.

Soo-Hoo, T. (1988). *An empirical investigation of the therapeutic alliance construct.* Unpublished doctoral dissertation, University of California, Berkeley.

Tichenor, V., & Hill, C. E. (1989). A comparison of six measures of working alliance. *Psychotherapy, 26,* 195–199.