February, 2000

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Journal of Consulting and Clinical Psychology
2000, Vol. 68, No. 1, 114–124

0022-006X/00/$5.00 DOI: 10.1037//0022-006X.68.1.114

Relation of Therapeutic Alliance and Perfectionism to Outcome in Brief Outpatient Treatment of Depression

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Prior analyses of the National Institute of Mental Health Treatment of Depression Collaborative Research Program demonstrated that perfectionism was negatively related to outcome, whereas both the patient's perception of the quality of the therapeutic relationship and the patient contribution to the therapeutic alliance were positively related to outcome across treatment conditions (S. J. Blatt, D. C. Zuroff, D. M. Quinlan, & P. A. Pilkonis, 1996; J. L. Krupnick et al., 1996). New analyses examining the relations among perfectionism, perceived relationship quality, and the therapeutic alliance demonstrated that (a) the patient contribution to the alliance and the perceived quality of the therapeutic relationship were independent predictors of outcome, (b) perfectionistic patients showed smaller increases in the Patient Alliance factor over the course of treatment, and (c) the negative relation between perfectionism and outcome was explained (mediated) by perfectionistic patients' failure to develop stronger therapeutic alliances.

The role of the therapeutic relationship in psychotherapy has been of interest for many years. Recently, considerable attention has been devoted to the therapeutic alliance, which has been shown to facilitate outcome in several forms of psychotherapy (Horvath & Symonds, 1991; Luborsky, 1976). Earlier work, derived primarily from Carl Rogers's (1957) theorizing, documented the relation between outcome and the patient's perceptions of the therapist's ability to provide appropriate therapeutic conditions (Gurman, 1977). However, little is known about the mechanisms through which either the therapeutic alliance or the patient's perceptions of

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The analyses reported in this article were conducted independently from the original National Institute of Mental Health–funded (NIMH) Treatment of Depression Collaborative Research Program (TDCRP), using the publicly available data tape.

The NIMH TDCRP was a multisite program initiated and sponsored by the Psychosocial Treatments Research Branch, Division of Extramural Research Programs (now part of the Mood, Anxiety, and Personality Disorders Research Branch, Division Clinical Research), NIMH. The program was funded by cooperative agreements to six participating sites: George Washington University (MH 33762), University of Pittsburgh (MH 33753), University of Oklahoma (MH 33760), Yale University (MH 33827), Clarke Institute of Psychiatry (MH 38231), and Rush Presbyterian–St. Luke's Medical Center (MH 35017). The principal NIMH collaborators were Irene Elkin, Coordinator; Tracie Shea, Associate Coordinator (formerly at George Washington University); John P. Docherty (now at the New York Hospital–Cornell Medical Center); and Morris B. Parloff (now at American University). The principal investigators and project coordinators at the three participating research sites were Stuart M. Sotsky and David Glass (George Washington University), Stanley D. Imber and Paul A. Pilkonis (University of Pittsburgh), and John T. Watkins and William Leber (University of Oklahoma). The principal investigators and project coordinators at the three research sites responsible for training therapists were Myrna Weissman (now at Columbia University), Eve Chevron, and Bruce J. Rounsaville (Yale University); Brian F. Shaw and T. Michael Vallis (Clarke Institute of Psychiatry); and Jan A. Fawcett and Phillip Epstein (Rush Presbyterian–St. Luke's Medical Center). Collaborators in the data management and data analysis aspects of the program were C. James Klett, Joseph F. Collins, and Roderic Gillis of the Veterans Administration Studies Program, Perry Point, Maryland.

Ratings of the therapeutic alliance were collected as part of a study conducted at the Department of Psychiatry, George Washington University, with Janice L. Krupnick and Stuart M. Sotsky as investigators, Sam Simmens as statistician, and Janet Moyers as research associate.

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the therapeutic relationship influence treatment process and outcome. One way to begin to understand these mechanisms would be to examine how a positive therapeutic relationship can mitigate the impact of pretreatment factors that impede outcome or, conversely, how the effect of such factors can be explained by their association with a negative therapeutic relationship.

The extensive data from the Treatment for Depression Collaborative Research Program (TDCRP) sponsored by the National Institute of Mental Health permitted us to conduct such analyses. Patients completed the Barrett-Lennard Relationship Inventory (B-L RI; Barrett-Lennard, 1962) after the second treatment session and again at termination. The B-L RI assesses the patient's perception of the therapist's empathy, positive regard, unconditional regard, and congruence. In addition, Krupnick et al. (1996) assessed the contributions of patients and therapists to the therapeutic alliance using the Vanderbilt Therapeutic Alliance Scale (VTAS; Hartley & Strupp, 1983). The VTAS is based on ratings of videotapes of treatment sessions by trained clinical observers.

Sotsky et al. (1991) reported that the patient's pretreatment total score on the Dysfunctional Attitudes Scale (DAS; Weissman & Beck, 1978) was a predictor of poorer outcome across all four treatments in the TDCRP, as well as a differential predictor of worse outcome in cognitive–behavioral therapy (CBT) compared with a placebo (PLA) condition. Using the Perfectionism subscale of the DAS (Imber et al., 1990), Blatt, Quinlan, Pilkonis, and Shea (1995) found that pretreatment perfectionism had a significant negative impact on therapeutic outcome across treatment conditions.[1] Blatt et al. (1998) examined the temporal course of clinical improvement for patients at different levels of perfectionism. Regardless of level of perfectionism, patients showed substantial clinical improvement from intake to midtreatment. During the second half of treatment, patients low in perfectionism continued to show significant improvement, whereas those with moderate or high levels of perfectionism did not. Thus, the negative implications of perfectionism became apparent during the second half of the treatment period.

Self-criticism, which is closely related to perfectionism, has been associated with a variety of interpersonal deficits, including negative relational schemas (Mongrain, 1998; Zuroff & Duncan, 1999) and a fearful–avoidant attachment style (Zuroff & Fitzpatrick, 1995). Consequently, Blatt, Zuroff, Quinlan, and Pilkonis (1996) anticipated that perfectionism would be negatively related to patients' perceptions of the quality of the therapeutic relationship. In fact, perfectionism was uncorrelated with the B-L RI. Exploratory analyses revealed a complex interaction between perfectionism and perceived quality of the relationship in predicting outcome. Perceived quality of the therapeutic relationship was not influential in determining therapeutic outcome at low levels of perfectionism, where outcome was generally good, or at high levels of perfectionism, where outcome was generally poor. For moderately perfectionistic patients, however, low relationship quality predicted poorer outcomes and high relationship quality predicted better outcomes. Thus, the experience of a positively perceived therapeutic relationship mitigated the adverse impact of moderate levels of perfectionism.

Krupnick et al. (1996) conceptualized the therapeutic alliance as the "collaborative bond between therapist and patient" (p. 532) and trained clinicians to rate videotapes of TDCRP treatment sessions using a modified version of the VTAS. They found that the patient contribution to the alliance, but not the therapist contribution to the alliance, assessed early in therapy predicted reduction of depressed symptoms at termination. Moreover, the impact of the Patient Contribution factor on therapeutic outcome did not vary across treatment condition, including the pharmacotherapy condition. This result is consistent with other studies indicating that the therapeutic alliance is predictive of outcome in a variety of therapeutic approaches (e.g., Horvath & Symonds, 1991; Jones & Poulos, 1993).

Within the therapeutic alliance literature, several attempts have been made to distinguish components or dimensions of the alliance (Bordin, 1979; Gaston, 1990; Saunders, Howard, & Orlinsky, 1989). Gaston integrated several conceptualizations of the alliance (Bordin, 1979; Greenson, 1965; Zetzel, 1956), proposing that the alliance is composed of four relatively independent dimensions: the patient's affective bond with the therapist, the patient's capacity to engage in purposeful work in therapy, the therapist's empathic understanding and involvement in the treatment, and agreement between the patient and therapist on the goals and tasks of therapy. It appears that the B-L RI assesses primarily the first of Gaston's dimensions, whereas the VTAS assesses primarily the other dimensions. However, there is disagreement about the extent to which these dimensions of the therapeutic relationship can be empirically discriminated (e.g., Hartley & Strupp, 1983; Hatcher & Barends, 1996; Marmar, Weiss, & Gaston, 1989).

The B-L RI and the modified VTAS also differ in that the B-L RI assesses the patient's perception of the conditions provided by the therapist, whereas the modified VTAS assesses the observed behavior of patient and therapist in the treatment session. In general, measures of the therapeutic relationship based on the perspectives of the patient, therapist, and observer are modestly correlated (Horvath & Greenberg, 1994; Marziali, 1984).

Three questions were stimulated by our considering the findings concerning the therapeutic alliance together with those concerning the perceived quality of the therapeutic relationship. The first question was whether the dimensions of the therapeutic relationship assessed by the VTAS and the B-L RI are distinguishable constructs or simply different measures of one underlying variable. Because the B-L RI and the VTAS differed in both content and perspective, we expected that they would be significantly, but only modestly, correlated and that each would be an independent predictor of therapeutic outcome. We also planned to test whether the moderating influence of the B-L RI on the negative impact of perfectionism (Blatt et al., 1996) could be demonstrated with the VTAS variables, but no prediction was made because of the expected nonequivalence of the B-L RI and the VTAS.

The second question was whether perfectionism influenced the temporal course of the therapeutic relationship. Krupnick et al. (1996) found no significant changes in the patient and therapist contributions to the alliance from early to late in therapy. We planned to extend their analyses by examining whether changes in the Patient and Therapist Alliance factors varied as a function of perfectionism. On the basis of the evidence that self-criticism and

[1] A second subscale of the DAS, Need for Approval, was generally positively related to measures of outcome, but these associations were not significant (Blatt et al., 1995; Blatt, Zuroff, Bondi, Sanislow, & Pilkonis, 1998).

perfectionism impair individuals' capacities to establish satisfying relationships (Flett, Hewitt, Garshowitz, & Martin, 1997; Hill, Zrull, & Turlington, 1997; Zuroff & Duncan, 1999; Zuroff & Fitzpatrick, 1995; Zuroff, Stotland, Sweetman, Craig, & Koestner, 1995), we expected that perfectionism would be negatively associated both with increases in the Patient Alliance factor and with increases in the perceived quality of the relationship.

The third question was whether impairments in the capacity to establish or deepen the therapeutic relationship might explain the negative association of perfectionism and outcome in brief therapy for depression. In other words, might the negative relation between perfectionism and outcome be mediated by a negative influence of perfectionism on the therapeutic relationship? The multiple regression procedures developed by Baron and Kenny (1986) for identifying mediating variables provided a basis for addressing this question.

Method

The TDCRP was a carefully controlled, collaborative, randomized clinical trial in which seriously depressed outpatients were randomly assigned to one of four brief (16-week) treatments at each of three research sites. Two forms of psychotherapy (interpersonal therapy [IPT] and CBT) were compared with imipramine plus clinical management (IMI–CM) and with PLA–CM. CM consisted of nonspecific supportive interactions lasting 20 to 30 min (Elkin, Parloff, Hadley, & Autry, 1985). IMI–CM was shown to have had a more rapid therapeutic effect using both an analysis of covariance (Watkins et al., 1993) and random regression models (Elkin et al., 1995; Gibbons et al., 1993). However, because of the marked improvement experienced by patients in CBT and IPT over the second half of treatment, few differences in outcome were found among the three active-treatment conditions at termination (Elkin et al., 1989; Shea et al., 1992). Differential treatment effects have been reported at termination for mode-specific measures of outcome (Sotsky et al., 1991) and for patients with more severe depression (Elkin et al., 1989) or atypical depression (Sotsky & Simmens, in press).

Participants in the TDCRP were outpatients with nonbipolar, nonpsychotic major depressive disorders. Two hundred fifty patients were randomly assigned to the four conditions. Two hundred thirty-nine patients began treatment, and 162 were defined as completers, having received at least 12 treatment sessions over at least a 15-week period. Inclusion and exclusion criteria, sample characteristics, treatment procedures, and assessment procedures have been described in previous publications (Elkin, 1994; Elkin et al., 1989; Imber et al., 1990; Sotsky et al., 1991; Watkins et al., 1993). Patients scored 14 or higher on the 17-item version of the Hamilton Rating Scale for Depression (HRSD) and met Research Diagnostic Criteria (RDC) for a current episode of definite major depression that had been present for at least the previous 2 weeks. Among the patients who began treatment, 70% were female, 38% were definite endogenous (according to the RDC), and 64% had had one or more prior episodes of major depression. The average age was 35 years.

Because some patients dropped out or were withdrawn from treatment, the number of patients available for analysis varied at different points in the treatment process. To maintain comparability of sample across the analyses presented in this article, we focused on the 149 treatment completers for whom there were complete data on the measures described below. Where possible, we conducted additional analyses using all the available data at a given point in time from the total (or intent-to-treat) sample. The few differences that were found between the main analyses and these additional analyses are summarized in footnotes.

Measures

Dysfunctional attitudes. The DAS is intended to measure cognitive vulnerability to depression. The Perfectionism and Need for Approval subscales were derived by principal-components analysis, followed by varimax rotation, of data from the TDCRP at intake. Consistent with prior factor analyses (Cane, Olinger, Gotlib, & Kuiper, 1986; Oliver & Baumgart, 1985), Imber et al. (1990) found that 11 items loaded substantially (>.40) on Need for Approval and 15 items loaded substantially on Perfectionism. The two highest loading items for Need for Approval were "What other people think of me is important" and "I can find happiness without being loved by another person." The corresponding items for Perfectionism were "If I do not do as well as other people, it means that I am an inferior human being" and "If I fail at my work, then I am a failure as a person." Summing the items with high loadings yielded composites with high internal consistency (for Need for Approval, $\alpha = .91$; for Perfectionism, $\alpha = .82$).

Zuroff, Blatt, Sanislow, Bondi, and Pilkonis (1999) found that retest correlations from intake to termination in the TDCRP were .65 (for Perfectionism) and .56 (for Need for Approval); retest correlations from termination to the 18-month follow-up were .76 (for Perfectionism) and .68 (for Need for Approval). Using a slightly different scoring system, Mongrain and Zuroff (1989) found that the DAS subscales were differentially related to ratings by undergraduates of the stressfulness of interpersonal and achievement stressors. Segal, Shaw, Vella, and Katz (1992) found that interactions between interpersonal and achievement stressors and posttreatment levels of Perfectionism and Need for Approval predicted levels of depression during a 1-year follow-up period after CBT.

The Need for Approval and Perfectionism subscales were moderately correlated at intake in the total TDCRP sample ($r = .59$, $p < .001$). In prior research, Blatt et al. (1996) created residualized versions of the subscales, in which shared variance was removed from each subscale. Blatt et al. referred to the transformed measures as "pure" variables because of the removal of overlapping, shared variance. Pure perfectionism and pure need for approval each correlated .80 with the respective original subscale. To maintain consistency with prior analyses, we report here the analyses that used the pure DAS variables.

Clinical improvement. The TDCRP included self-report and interviewer-rated measures of depression and overall functioning. Termination scores, regressed on intake scores, yielded residuals that measured clinical change. We used a composite outcome measure (Blatt et al., 1996) that combined residual scores on the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), the total score on the Hopkins Symptoms Checklist—90 (Derogatis, Lipman, & Covi, 1973), the 17-item HRSD (Hamilton, 1960), the Global Assessment Scale (Endicott, Spitzer, Fleiss, & Cohen, 1976), and the sum of the global ratings from the Social Adjustment Scale (SAS; Weissman & Paykel, 1974).[2] A factor analysis of these residual scores revealed that a single factor accounted for 76% of the variance. Scores on this factor, calculated so that higher scores represented better outcome, were used to assess clinical improvement.

Perceived quality of therapeutic relationship. The B-L RI (Barrett-Lennard, 1962) includes subscales that assess the patient's perception of the therapist's empathic understanding, level of positive regard, unconditionality of regard, and congruence, qualities said to be the necessary and sufficient conditions for therapeutic change (Rogers, 1957). Each subscale comprises 16 items rated on a 6-point scale. High levels of internal consistency and retest reliability have been demonstrated in a variety of samples for the four subscales, as well as the total score on the B-L RI (Gurman, 1977). Validity has been demonstrated in studies in which B-L

[2] The SAS global rating of marital and family functioning was omitted from the sum because the treatment conditions differed in the proportion of patients who were married.

RI scores predict outcome in psychotherapy and counseling (for reviews, see Barrett-Lennard, 1986, and Gurman, 1977).

In the TDCRP, the B-L RI was administered at the second treatment session and at termination. Blatt et al. (1996) factor analyzed the four subscales of the B-L RI from Session 2. The subscales formed a single factor, with three subscales loading above .85 and one subscale, Unconditionality, loading only .49. On the basis of these results, Blatt et al. constructed a measure of the perceived quality of the therapeutic relationship by summing scores on the three high-loading subscales: Empathy, Level of Regard, and Congruence. Cronbach's alpha for the resulting composite of the 48 items was .95. Examples of items include "...nearly always knows what I mean" (empathy), "...feels a true liking for me" (positive regard), and "...is comfortable and at ease in our relationship" (congruence).

Therapeutic alliance. Krupnick et al. (1994) developed a modified form of the VTAS by deleting seven items that were specific to psychodynamic therapy and elaborating the rating manual so that it would be applicable to all four treatment conditions in the TDCRP. Ratings were made on a 5-point scale ranging from 1 (*not at all*) to 5 (*a great deal*). Videotapes from Sessions 3, 9, and 15 were rated for all completer patients.[3] Extensive training and monitoring were undertaken to ensure that the ratings were reliable. Videotapes were rated in a random order, and raters were not informed of the session number, treatment condition, or the extent of the patient's clinical improvement. The average intraclass correlation for pairs of raters was .92 for the patient contribution to the alliance and .46 for the therapist contribution to the alliance (Krupnick et al., 1996).

A factor analysis of the modified VTAS revealed two factors (Krupnick et al., 1996). The Patient Contribution factor included both items referring to the patient's contribution to the alliance and items referring to the patient–therapist interaction. The Patient Contribution factor taps the extent to which the patient is open and honest with the therapist; agrees with the therapist about tasks, goals, and responsibilities; and is actively engaged in the therapeutic task. Sample items for the Patient Contribution factor, with loadings given in parentheses, include "Patient talks freely, openly, and honestly about himself" (.69), "Patient and therapist share common viewpoint about patient's problems" (.84), and "Patient makes effort to carry out therapeutic procedure" (.75). Sample items for the Therapist Contribution factor, with loadings given in parentheses, include "Therapist commits himself and his skills to helping patient" (.88), "Therapist conveys idea of his competence" (.82), and "Therapist acknowledges validity of patient's thoughts, feelings" (.78). Coefficient alphas for the Patient and Therapist Contribution factors at the early treatment session were .92 and .82, respectively.

Results

The results are presented in three sections. First, we examined the relations between quality of the therapeutic relationship as perceived by the patients (the B-L RI) and the ratings of the patient and therapist contributions to the therapeutic alliance by independent observers (the VTAS). We also tested whether these measures were independent predictors of outcome and whether the VTAS variables moderated the link between perfectionism and poor outcome, as did the B-L RI. Second, we examined the relations between perfectionism, need for approval, and the measures of therapeutic alliance at early, middle, and late sessions. We also tested whether perfectionism was negatively related to increases in alliance and perceived relationship quality over the course of therapy. Third, we tested a mediational model in which the negative relation between perfectionism and outcome was explained by the failure of perfectionistic patients to display increases in the Patient Alliance factor.[4]

Therapeutic Alliance and Relationship Quality

The perceived quality of the therapeutic relationship (the B-L RI) at Session 2 was not significantly correlated with the Patient Alliance factor at Session 3, $r(147) = .16$, $p < .06$, and was unrelated to the Therapist Alliance factor at that session, $r(147) = .01$, *ns*. When the early B-L RI was simultaneously regressed on the early Patient and Therapist Alliance factors, the Patient Alliance factor was a significant predictor ($\beta = 0.18$, $sr^2 = .027$, $p < .05$) of the early B-L RI.[5]

Similar results were obtained using the B-L RI at termination and the late VTAS ratings. The B-L RI at termination was significantly related to the Patient Alliance factor late in treatment, $r(147) = .25$, $p < .01$, but not to the Therapist Alliance factor late in treatment, $r(147) = .16$, $p < .07$. In a multiple regression analysis, the Patient Alliance factor was a significant predictor of the B-L RI at termination ($\beta = 0.24$, $sr^2 = .042$, $p < .05$).

In light of the modest relation between the B-L RI and the Patient Alliance factor early in the treatment process, we anticipated that the B-L RI and VTAS ratings would be independent predictors of outcome. To test this possibility, we simultaneously regressed the composite therapeutic outcome measure on the early B-L RI and the early Patient Alliance factor. As expected, the two predictors were independently related to outcome; the perceived quality of the therapeutic relationship (the B-L RI) was positively related to outcome, $\beta = 0.18$, $sr^2 = .032$, $t(146) = 2.32$, $p < .05$, as was the Patient Alliance factor of the VTAS, $\beta = 0.26$, $sr^2 = .065$, $t(146) = 3.28$, $p < .01$. Together, the two predictors accounted for 12% of the variance in outcome. A second regression analysis was then conducted that included treatment condition and the interactions with treatment as predictors. Neither interaction term was significant, indicating that the nature of treatment did not moderate the relations between outcome and the B-L RI and the Patient Alliance factor.

Next, we repeated the moderator analysis conducted by Blatt et al. (1996) using the early Patient Alliance factor in place of the B-L RI. The composite outcome measure was regressed on predictors entered in the following order: marital status,[6] pure perfectionism, patient alliance, Patient Alliance × Pure Perfectionism, pure perfectionism squared, and Patient Alliance × Pure Perfectionism squared. Neither the linear nor the quadratic interaction term was significant, indicating that, unlike the perceived

[3] Krupnick et al. (1996) also rated a therapeutic session for patients who had at least two treatment sessions but who had dropped out or who were withdrawn from treatment for clinical reasons. VTAS data were available for 225 patients at Session 3, 212 at Session 9, and 182 at Session 15.

[4] No hypotheses were stated concerning the role of gender. However, when significant results were obtained, we conducted additional analyses testing for possible moderator effects of gender. None were found. Consequently, the reported results applied equally to women and men.

[5] The results were essentially unchanged when we used all of the available data ($n = 209$). The correlation between the B-L RI and the Patient Alliance factor was significant ($r = .22$, $p < .01$), whereas its correlation with the Therapist Alliance factor was not significant ($r = .09$). In a regression analysis, only the Patient Alliance factor was a significant predictor of the B-L RI ($\beta = 0.21$, $sr^2 = .04$, $p < .01$).

[6] Marital status was entered as a covariate because earlier analyses (e.g., Elkin et al., 1989) indicated that it had a significant relation to outcome.

quality of the therapeutic relationship, the early patient alliance did not moderate the negative association between perfectionism and outcome.[7]

Perfectionism, Need for Approval, and the Therapeutic Alliance

Correlations between pure perfectionism, need for approval, and the therapeutic alliance variables are presented in Table 1. Need for approval was unrelated to the Patient and Therapist Alliance factors at any of the three points in time. Perfectionism was unrelated to the therapist contribution to the alliance at any point in treatment, but perfectionism was negatively related to the patient contribution late in therapy.[8]

The next set of analyses addressed whether changes over time in the Alliance factors were influenced by the patient's pretreatment level of perfectionism. The patient alliance scores at Sessions 3, 9, and 15 were subjected to a multivariate regression analysis; this analysis was analogous to conducting a multivariate analysis of variance on the alliance measures at the three points in time, except that the predictor (pure perfectionism) was continuous rather than categorical. The multivariate tests for the effects of time and the Time × Perfectionism interaction were both significant ($p < .05$). We then conducted a univariate repeated measures analysis, using the Greenhouse-Geisser adjustment to probability values, and found a significant main effect for time, $F(2, 294) = 4.63, p < .05$, and a significant Time × Perfectionism interaction, $F(2, 294) = 4.26, p < .05$. The main effect for time reflected an overall increase in patient alliance from Session 3 ($M = 3.73$, $SD = 0.45$) to Session 9 ($M = 3.81$, $SD = 0.41$) to Session 15 ($M = 3.87$, $SD = 0.51$). The significant Time × Perfectionism interaction was attributable to a significant linear component (i.e., linear Time × Perfectionism), $F(1, 147) = 7.63, p < .01$. The quadratic component of the interaction did not approach significance. Additional analyses disclosed no significant interactions with treatment condition (i.e., the Time × Perfectionism effect was not moderated by treatment).

To interpret the interaction, we performed a median split on perfectionism and calculated mean patient alliance scores for low and high perfectionists. These means are plotted in Figure 1. Patient contribution to the alliance increased steadily over treatment among low perfectionists. In contrast, high perfectionists did not display an increase in alliance over the course of treatment.[9]

Table 1
Correlations of Pure Need for Approval and Pure Perfectionism With Ratings of Patient and Therapist Alliance

Variable	Pure NFA	Pure PFT
Patient alliance		
Early (Session 3)	−.06	.04
Middle (Session 9)	.04	−.09
Late (Session 15)	.10	−.22*
Therapist alliance		
Early (Session 3)	.10	.00
Middle (Session 9)	.06	−.04
Late (Session 15)	.04	−.02

Note. $N = 149$. NFA = need for approval; PFT = perfectionism.
* $p < .01$.

The therapist alliance scores at Sessions 3, 9, and 15 were also subjected to a multivariate regression analysis. Neither the multivariate effect of time nor the Time × Perfectionism interaction was significant.[10]

Finally, scores for the B-L RI at Session 2 and termination were subjected to a repeated measures analysis. Patients' perceptions of the therapeutic relationship were significantly more positive at termination ($M = 27.24$) than at Session 2 ($M = 22.19$), $F(1, 147) = 43.89, p < .001$. However, the Time × Perfectionism interaction was not significant, indicating that the increase in perceived relationship quality was not moderated by pretreatment perfectionism. Additional analyses including treatment and interactions with treatment as predictors showed no moderating effect of treatment on the increase in perceived relationship quality.

Patient Contribution to the Alliance as a Mediator of the Relation Between Perfectionism and Outcome

We regressed the Patient Alliance factor late in treatment (Session 15) on the Patient Alliance factor early in treatment (Session 3) and used the residuals as measures of increase in alliance. Table 2 displays correlations of perfectionism, need for approval, early patient alliance, increase in patient alliance, and the aggregate measure of clinical improvement. Clinical improvement was neg-

[7] Similar analyses were conducted using the Therapist Alliance factor in place of the Patient Alliance factor. No moderator effects were obtained.

[8] The correlations in Table 1 were also computed using all of the participants with data at Session 3 ($n = 225$), Session 9 ($n = 212$), and Session 15 ($n = 182$). The results were unchanged. None of the correlations between need for approval and the alliance measures were significant, and all were below .10 in magnitude. None of the correlations with perfectionism were significant, except for the patient's contribution late in treatment ($r = -.18, p < .05$).

[9] Means were also examined for low, medium, and high levels of perfectionism, defined by dividing the sample into thirds. The results were consistent with those obtained using a median split. Patient alliance scores increased for low perfectionists and failed to increase among high perfectionists. The slope of the line for medium perfectionists was in between those of the low and high perfectionism groups.

[10] The relation between perfectionism and change in alliance was reexamined using random regression models (RRMs). RRMs included all of the available data, rather than restricting analyses to those participants with complete data (see Elkin et al., 1995, and Gibbons et al., 1993, for applications of RRM to the TDCRP). These analyses were conducted using Version 6.10 of the program PROC MIXED (SAS Institute, 1996). Time was coded as 3, 9, or 15, and perfectionism was standardized. The model included a random parameter for time and an autoregressive (AR [1]) parameter. Analyses were conducted first for the patient contribution and then for the therapist contribution. In contrast to the regression analyses using the completer sample, the main effect for time was not significant in the RRM (i.e., there was no overall increase in patient alliance). However, there was a significant interaction between perfectionism and time, $F(1, 378) = 5.03, p < .05$. The interaction reflected the same pattern found in the completer sample. When perfectionism was high (1 *SD*), the Patient Alliance factor showed no increase over the course of treatment. When perfectionism was low (−1 *SD*), the slope was positive (i.e., there was an increase in patient alliance over the course of treatment). There were no significant effects in the RRM for the Therapist Alliance factor.

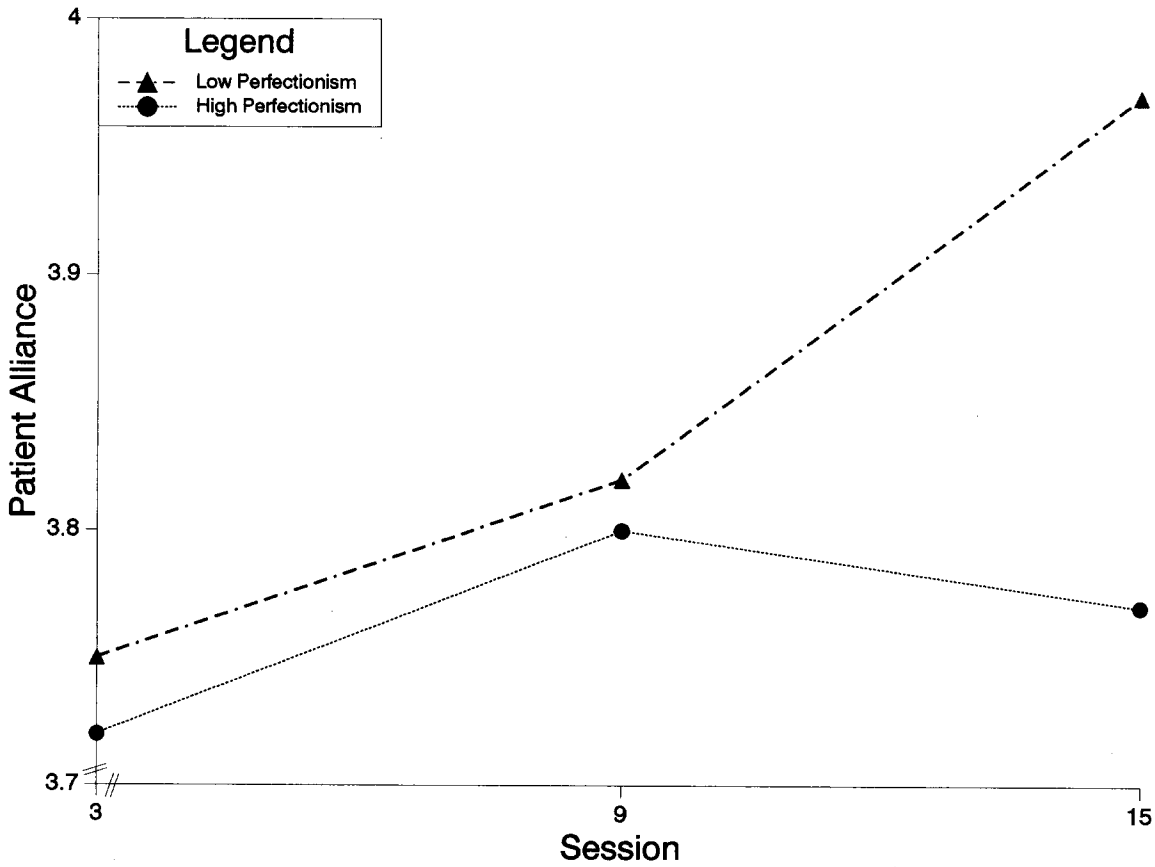

Figure 1. Mean patient alliance scores at early, middle, and late therapy sessions for low and high levels of pure perfectionism. Groups of low and high perfectionists were defined by a median split on pure perfectionism. Patient alliance score increased for low perfectionists but failed to increase for high perfectionists.

atively related to pure perfectionism and positively related to both early patient alliance and increase in patient alliance.[11]

Because perfectionism was related to increase in patient alliance, but not to early patient alliance, only increase in patient alliance was a plausible mediator of the relation between perfectionism and outcome. We conducted mediational analyses following the sequential strategy described by Baron and Kenny (1986). The first step was to demonstrate a relation between the dependent variable (clinical improvement) and the distal predictor variable (pure perfectionism). Perfectionism was indeed a significant predictor of poorer clinical outcome, $\beta = -0.31$, $sr^2 = .093$, $t(147) = -3.89$, $p < .001$. The second step was to demonstrate that the predictor was related to the putative mediator (increase in patient alliance). As required, pure perfectionism was significantly negatively related to increase in patient alliance, $\beta = -0.24$, $sr^2 = .057$, $t(147) = -2.98$, $p < .01$. The final step was to regress the dependent variable on both the predictor and the mediator, which, ideally, should demonstrate that the effect of the mediator remains significant but that the effect of the predictor variable is markedly reduced. Table 3 summarizes this analysis. The results are also presented graphically in Figure 2. As required, increase in patient alliance was a significant predictor of outcome even when perfectionism was controlled, but controlling for the mediator weakened the effect of pure perfectionism. The effect of pure perfectionism, although reduced, remained significant, suggesting that its influence was only partly explained by the mediator.

Mediational models can also be evaluated by testing the significance of the indirect path from distal predictor to outcome variable. The indirect effect is the product of the regression coefficients for the two constituent paths. Baron and Kenny (1986) provided a formula for the approximate standard error of the indirect effect, which can be used to calculate a z score. In the present case, the indirect path from perfectionism to increase in patient alliance to outcome was significant ($z = 2.61$, $p < .05$).

Yet another way to evaluate the mediational model is to compare the proportion of variance in outcome uniquely predicted by perfectionism in the unmediated (9%) and mediated models (4%).

[11] Because increase in patient alliance was a residual score, it was uncorrelated with early patient alliance and the two variables were of necessity independent predictors of outcome. When clinical improvement was regressed on early patient alliance, increase in patient alliance, and the product term representing their interaction, each main effect was significant, but the interaction did not approach significance ($p < .50$). Thus, increase in patient alliance was an equally important predictor of outcome across levels of early alliance. The patient alliance variables accounted for 28% of the variance in clinical improvement, independent of type of treatment.

Table 2
Correlations of Pure Perfectionism, Pure Need for Approval, Patient Alliance, and Clinical Improvement

Variable	1	2	3	4	Clinical improvement
1. Pure PFT	—	−.59**	.04	−.24*	−.31**
2. Pure NFA		—	−.06	.12	.07
3. Early patient alliance			—	.00	.29**
4. Increase in patient alliance				—	.44**

Note. PFT = perfectionism; NFA = need for approval.
* $p < .01$. ** $p < .001$.

Including the mediator as a predictor reduced the proportion of variance attributable to perfectionism by more than half, from 9% to 4%, which we interpret as support for the mediational model. However, the association of perfectionism and outcome was not fully explained, suggesting that other mediators might be involved.

We repeated the mediational analyses, including treatment and interactions with treatment as predictors. No interaction term was significant, suggesting that the mediational model was equally applicable to the four treatment conditions.

Discussion

Three principal questions were addressed: (a) How were the therapeutic alliance variables related to perceived quality of the therapeutic relationship? (b) Did the Patient and Therapist Alliance factors change over the course of therapy, and were those changes dependent on patients' levels of perfectionism? and (c) Could the negative relation between perfectionism and outcome be explained by a negative influence of perfectionism on the therapeutic alliance? We discuss each question and then consider limitations on the generalizability of the results.

Therapeutic Alliance and the Perceived Quality of the Therapeutic Relationship

The B-L RI and the Patient Alliance factor of the VTAS were not significantly correlated, were independent predictors of outcome, and did not moderate the association of perfectionism and poor outcome in the same fashion. The B-L RI and the Therapist Alliance factor were uncorrelated. These results are more concordant with analyses that consider the therapeutic relationship as having several distinct dimensions (e.g., Gaston, 1990) than with those that favor a global, unidimensional conceptualization (e.g., Hatcher & Barends, 1996). The item content of the B-L RI suggests that it primarily assesses the affective and cognitive reactions of the patient to the therapist (i.e., the degree to which the client feels accepted and valued in the relationship). In contrast, the Patient and Therapist Alliance factors of the VTAS are primarily behavioral in focus. It is conceivable, however, that the crucial difference between the B-L RI and the VTAS may be the source of the data (patient vs. observers) rather than content (Marziali, 1984). It would be desirable in future studies to examine the relations between perfectionism, the B-L RI, and ratings of the therapeutic alliance from the perspectives of patient, therapist, and observer.

Perfectionism and Change in the Therapeutic Alliance

Among patients who completed treatment, the Patient Alliance factor increased across all of the treatment conditions (i.e., patients became increasingly involved in a constructive, cooperative, collaborative relationship with their therapists). The temporal increase was moderated by perfectionism. Increases in alliance were larger among those low in perfectionism and smaller or absent among those high in perfectionism. Perfectionism served to attenuate the overall increase in patient alliance, and it may be that this attenuation prevented some previous studies, which possessed less statistical power than the TDCRP, from detecting increases in alliance.[12]

Blatt et al. (1996) found that perfectionism was not related to the perceived quality of the therapeutic relationship (the B-L RI) early in treatment. The analyses reported here show that perfectionism was also unrelated to increases in the B-L RI and that it was unrelated to the Patient Alliance factor early in treatment. Thus, perfectionism was specifically associated with the failure of patients to increase their contribution to the alliance as therapy progressed. There are several possible explanations for perfectionistic patients' inability to become more fully involved in therapy, even though they felt no less accepted and valued by their therapists than did other patients. First, perfectionistic patients may have limited capacities for developing open, collaborative relationships, and even by Session 3, they may have been as closely engaged with their therapists as they could tolerate. Another possibility is that perfectionistic patients are capable of establishing stronger therapeutic alliances, but it takes an extended period of time for them to do so. It is noteworthy that Blatt and Ford (1994) found that, in long-term treatment, patients who were predominantly introjective (perfectionistic and self-critical) had generally better outcomes than patients who were predominantly anaclitic (concerned with abandonment and loss).

A final possibility is based on the observation that strains and fluctuations inevitably occur in the therapeutic alliance. Patients go

[12] An RRM, using the entire sample rather than the completer sample, demonstrated no main effect for time, although an increase in patient alliance was detected at low levels of perfectionism. Krupnick et al. (1996) also observed stability in alliance scores when analyzing all of the available data. If increase in patient alliance is an important contributor to therapeutic gain, it would be expected that the increase would be smaller in the total sample, which included some patients who were unsuccessfully treated and therefore either dropped out or were withdrawn from treatment.

Table 3
Regression Analysis Predicting Clinical Improvement From Pure Perfectionism and Increase in Patient Alliance

	Pure perfectionism				Increase in patient alliance		
Dependent variable	R^2	β	sr^2	$t(146)$	β	sr^2	$t(146)$
Clinical improvement	.24	−0.21	.042	−2.85*	0.39	.147	5.31**

* $p < .01$. ** $p < .001$.

through periods of feeling less well understood by their therapists, less able to engage in the work of therapy, or less in agreement concerning the tasks and goals of therapy. Working through alliance "ruptures" eventually strengthens the alliance and contributes to positive outcomes (Horvath & Marx, 1991; Safran, 1993; Safran & Muran, 1996). It is possible that perfectionistic patients are less able to respond constructively to disruptions in the treatment process and therefore fail to develop stronger therapeutic alliances and to engage in increasing therapeutic work.

The clinical implication of these findings is that therapists working with perfectionistic patients need to be alert to alliance issues throughout the treatment process, especially in the latter half of brief treatment. Furthermore, a positively perceived therapeutic relationship is unlikely to be sufficient, by itself, to engage perfectionistic patients in brief therapy. Rather, therapists may need to use therapeutic strategies specifically designed to reduce perfectionism and to encourage the patient's active involvement in the therapeutic process.

In light of the difficulties in treating perfectionistic patients, it is important to note the lack of any significant relation between perfectionism and the therapist contribution to the alliance early in treatment or to change in the Therapist Alliance factor. The therapists in the TDCRP, who were experienced clinicians and carefully trained in the manualized treatment procedures, were no less able to contribute to establishing and maintaining a therapeutic alliance with highly perfectionistic patients than they were with less perfectionistic patients. Further research is needed to explore the impact of patients' perfectionism in nonmanualized therapy and with less experienced therapists.

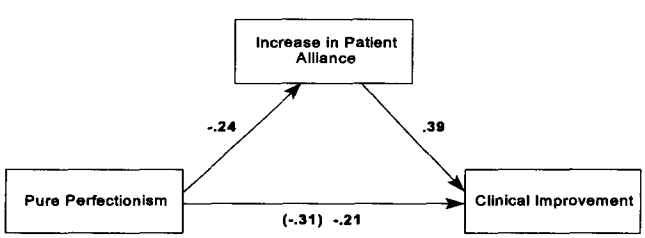

Figure 2. Summary of mediational analyses. All values are standardized regression coefficients (βs). All βs were statistically significant. The value given in parentheses is the β for the regression of clinical outcome on pure perfectionism (i.e., the unmediated relationship). The β for this path decreased when the indirect path through the patient alliance variable was included in the regression equation. Thus, the negative relation between perfectionism and outcome was partly explained by the negative relation between perfectionism and the mediating variable, increase in patient alliance.

Patient Contribution to the Therapeutic Alliance as a Mediator

The mediational analyses indicated that the negative relation between perfectionism and outcome was partly explained by the failure of perfectionists to develop stronger therapeutic alliances as therapy progressed. Importantly, these results cannot be attributed to shared method variance because the distal predictor (perfectionism) was measured by self-report, the mediating variable was based on ratings of videotapes, and the dependent variable was a composite of self-report and interviewer-rated outcome measures.

Previously, Blatt et al. (1996) demonstrated that a positive perception of the therapeutic relationship (the B-L RI) mitigated the tendency of perfectionistic patients to experience poorer outcomes. In Baron and Kenny's (1986) terminology, the B-L RI moderated the relation between perfectionism and outcome. Thus, it appears that different dimensions of the therapeutic relationship have different implications for treatment outcome. The negative relation between perfectionism and outcome is *moderated* by a positive emotional bond with the therapist, but it is *mediated* by the patient's behavior—by the perfectionistic patient's inability to become an increasingly active collaborator in therapy.

Baron and Kenny (1986) emphasized that mediational effects will be underestimated when the mediator is measured with less than perfect reliability. Because we had only one measure of increase in the Patient Alliance factor, we were not able to use latent variable methods to correct for the attenuating effect of imperfect reliability. It is likely that our analyses underestimated the explanatory power of the negative influence of perfectionism on the Patient Alliance factor. Still, we doubt that the relation between perfectionism and outcome is entirely explained by perfectionism's influence on the alliance.

What other variables might explain the relation of perfectionism to outcome? Both cognitive and interpersonal/contextual factors warrant investigation. Perfectionistic attitudes may be more resistant to modification than other depressogenic cognitive factors. Perfectionism and self-criticism also have an array of negative interpersonal correlates that may interfere with recovery. Highly self-critical individuals report more frequent stressful events (Mongrain & Zuroff, 1994; Moskowitz & Zuroff, 1991), and stress generation by perfectionistic depressed patients might impede their recovery (Hammen, 1991). Similarly, self-criticism has been associated with less social support (Mongrain, 1998) and more chronic life difficulties (Moskowitz & Zuroff, 1991) that could contribute to perfectionistic patients' slow recovery and need for extended treatment (Blatt et al., 1998).

Finally, it is important to remember that mediational analyses cannot demonstrate causality; at best, they can demonstrate that the

data are consistent with a causal model. Consequently, other possible causal models must be considered. Depression is associated with a wide range of interpersonal difficulties (Gotlib & Hammen, 1992), and it is conceivable that the lifting of patients' depression could lead to an increase in their capacities to contribute to the therapeutic alliance. However, the relation of early alliance to outcome is difficult to interpret as an effect of clinical improvement on alliance; rather, it suggests a causal influence of alliance on outcome (Krupnick et al., 1996). Consequently, we doubt that the relation between clinical improvement and increase in alliance is entirely explainable in terms of a unidirectional influence of depression on alliance. It is more likely that there is a bidirectional influence between depression and patient contribution to the alliance. Unfortunately, the data available in the TDCRP do not allow us to resolve this issue.

Generalizability of the Findings

The TDCRP was a trial of time-limited, manualized brief therapies offered to a population of depressed individuals seeking treatment as part of a controlled clinical trial. Any of these characteristics could have influenced the results. It is possible that perfectionism would be differently related to clinical outcome or to dimensions of the therapeutic alliance in depressed patients receiving open-ended therapy, nonmanualized therapy, or longer term therapy. The presence of comorbid personality disorders also needs to be taken into account.

We found no evidence that the results reported here were moderated by treatment condition. In other words, the roles of perfectionism and the therapeutic alliance were not demonstrably different in the CBT, IPT, and IMI–CM or PLA–CM conditions. The failure to reject the null hypothesis cannot, of course, be taken as proof of the truth of the null hypothesis. Researchers should continue to examine the possibility that personality and relationship factors are more or less influential determinants of outcome in different types of treatment or perhaps contribute to outcome through different processes in different therapies.

Attrition in the TDCRP was substantial and could further limit the generalizability of the results. Patients were lost to the study primarily because they failed to improve and withdrew from or were withdrawn from treatment or because they improved rapidly and discontinued treatment. Both nonresponders and rapid responders who withdrew from treatment might have differed from the sample of completers. For example, rapid responders in the IMI–CM condition might have responded primarily to the pharmacological properties of IMI, and had they remained in treatment, increases in the Patient Alliance factor might have turned out to be a less important determinant of outcome for them than for other patients. Conversely, slow responders to CBT who terminated prematurely or were withdrawn might have been strongly influenced by increases in the therapeutic alliance, had they remained in treatment. Potential biases associated with attrition are difficult to evaluate empirically but are important to consider when interpreting results for the completer sample.

Research is also needed to examine the generalizability of the results to related constructs and measures. The TDCRP included the Perfectionism subscale of the DAS. One wonders whether similar results would be obtained with other measures of perfectionism (e.g., Hewitt, Flett, Turnbull-Donovan, & Mikail, 1991), with the Self-Criticism scale of the Depressive Experiences Questionnaire (Blatt, D'Afflitti, & Quinlan, 1976), or with a measure of Beck's construct of autonomy (e.g., Robins et al., 1994). Although these constructs are related to one another, they are not interchangeable (Blaney & Kutcher, 1991; Zuroff, 1994), and it would be a mistake to assume that what is true of the DAS Perfectionism subscale is necessarily true for other members of this family of constructs. Similarly, results need not generalize to other measures or dimensions of the therapeutic alliance. We think that it is especially important to determine whether similar results would be obtained with measures of the therapeutic alliance from the patient, therapist, and observer's perspectives and with more differentiated conceptualizations of the alliance.

The negative associations reported in this article between perfectionism and the patient contribution to the alliance and therapeutic outcome are generalizable in at least one important way—they extended across all four treatment conditions in the TDCRP. Our analyses demonstrated that there is a great deal to be learned about outcome in therapy, regardless of school or technique, by examining the impact of theoretically relevant personality characteristics on the interpersonal processes that unfold during treatment.

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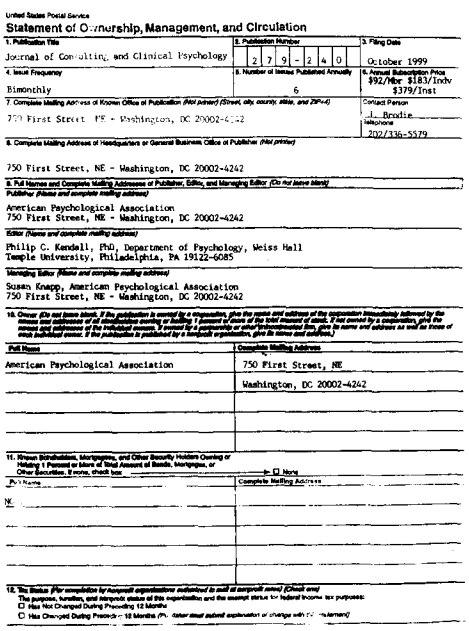
Received September 9, 1998
Revision received February 2, 1999
Accepted February 12, 1999 ■



United States Postal Service
Statement of Ownership, Management, and Circulation

1. Publication Title: Journal of Consulting and Clinical Psychology	2. Publication Number: 2 7 9 - 2 4 0	3. Filing Date: October 1999
4. Issue Frequency: Bimonthly	5. Number of Issues Published Annually: 6	6. Annual Subscription Price: $92/Nbr $183/Indv $379/Inst
7. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4): 750 First Street NE - Washington, DC 20002-4242		Contact Person: J. Brodie; Telephone: 202/336-5579

8. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer)
750 First Street, NE - Washington, DC 20002-4242

9. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Do not leave blank)
Publisher (Name and complete mailing address)
American Psychological Association
750 First Street, NE - Washington, DC 20002-4242
Editor (Name and complete mailing address)
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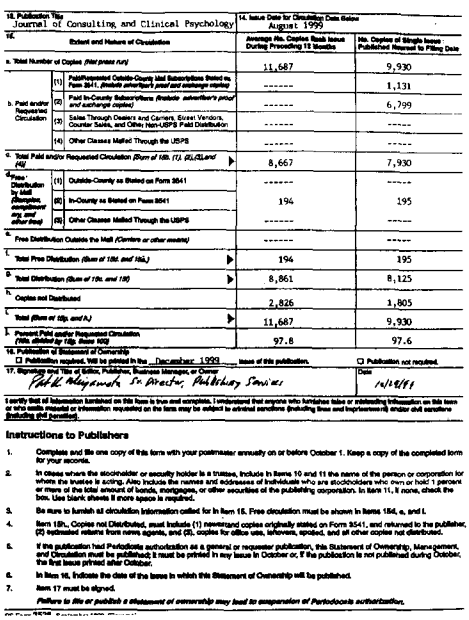

13. Publication Title: Journal of Consulting and Clinical Psychology	14. Issue Date for Circulation Data Below: August 1999	
15. Extent and Nature of Circulation	Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date
a. Total Number of Copies (Net press run)	11,687	9,930
b. Paid and/or Requested Circulation (1) Paid/Requested Outside-County Mail Subscriptions Stated on Form 3541. (Include advertiser's proof and exchange copies)	------	1,131
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f. Total Free Distribution (Sum of 15d. and 15e.)	194	195
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j. Percent Paid and/or Requested Circulation (15c. divided by 15g. times 100)	97.8	97.6

16. Publication of Statement of Ownership
☐ Publication required. Will be printed in the December 1999 issue of this publication. ☐ Publication not required.

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