A Comparative Study of Four Forms of Psychotherapy

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Four forms of psychoanalytically oriented psychotherapy involving experienced therapists and psychiatric outpatients were compared in an outcome investigation. Patients received either individual therapy or group therapy that lasted either 6 months or 24 months. A comprehensive set of outcome scores provided by patients, therapists, and an independent assessor was monitored each 6 months including a 6-month follow-up assessment. Therapy outcome, therapy process as viewed by the therapists, and cost-effectiveness were examined. What emerged as important was the particular form of therapy received, not the general type of therapy or the general duration of therapy when considered as independent dimensions. The results favored long-term group therapy and short-term individual therapy over long-term individual therapy and short-term group therapy. Advantages and difficulties associated with each form of therapy are discussed.

After providing individual and group psychotherapy for outpatients in our unit for several years, we decided to conduct a study that compared four forms of psychotherapy. There were two types of therapy, individual and group, and two time durations, 6 and 24 months. These two main dimensions (type and duration) were combined to produce four forms of therapy: short-term individual (STI), short-term group (STG), long-term individual (LTI), and long-term group (LTG). We were interested in studying the work of experienced therapists rather than those who were inexperienced or still in training. Each therapist in our study treated one set of patients with each of the four forms of therapy. We were also interested in assessing patients after a reasonable follow-up period. Therefore, patients were assessed 6 months after treatment ended in addition to before, during, and just after treatment ended. Initial assessments began in July, 1977, and follow-up assessments ended in February, 1982.

In planning the project we were aware of several issues that have characterized the psychotherapy field. First, reviews of comparative studies (Luborsky, Singer, & Luborsky, 1975; Smith, Glass, & Miller, 1980) have made it clear that not many comparative studies contrasting individual versus group therapy or short-term versus long-term therapy have been conducted, particularly those that are strong methodologically. From existing studies reviewers have concluded that different forms of therapy have produced rather similar results. In the terminology of Luborsky and his colleagues, "tie results" characterize the box score comparisons between individual and group therapy and between time-limited and time-unlimited therapy. In the terminology of Smith and her colleagues, there is no significant relationship between type of modality and effect size or between duration of therapy and effect size. Nonsignificant results such as these usually raise more questions than they answer. In this case they leave readers wondering whether type of modality or duration makes a difference or whether other factors were responsible for the lack of significant findings.

Second, we were aware of growing interest in the development of "brief" forms of therapy. Interest has spread from the areas of behavior therapy and crisis intervention to more traditional forms of psychotherapy. A number of recent books concerning short-term therapy have emerged (Budman, 1981; Davanloo, 1978; Malan, 1976; Sifneos, 1979; Small, 1979). In support of brief therapy it has been argued that a predetermined, short-term duration accelerates the pace of work, that the most significant gains come early in the course of therapy, and that short-term therapy can lessen overdependency on the therapist. Although many of the arguments are compelling and deserve attention, the data base on which they rest resembles more a collection of convincing case presentations than a series of systematic studies.

Third, we were aware of a growing interest in developing more economical forms of treatment. In this context choices between individual and group therapy and between short-term and long-term therapy take on economic importance. The concept of cost-effectiveness has become a familiar one. The concept indicates that both cost and quality of care are important in evaluating treatment. As more economical treatments are attempted, it is reasonable to expect that at times minimal standards for quality will not be attained. Not all treatments can be expected to maintain their effectiveness in abbreviated forms. Quality of care needs to be considered as carefully as cost in studies that compare various forms of treatment.

Interest in studying our own clinical work more carefully and interest in obtaining data relevant to such issues as the relative efficacy of therapies that differ in modality and duration, the advantages and disadvantages with brief therapies, and the concept of cost-effectiveness, resulted in the current research project. The present article focuses primarily on the outcome differences among the four forms of therapy.

Method

Patients

Patients were referred for outpatient therapy to the Individual and Group Psychotherapy Unit of the Allan Memorial Institute in Montreal. The patient composition consisted primarily of patients suffering from neurotic or mild-to-moderate characterological problems. They typically presented outpatient complaints concerning anxiety, depression, low self-esteem, and difficulties with interpersonal relationships. In terms of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-II; American Psychiatric Association, 1968), 66% of the patients received a diagnosis of neurosis and 30% received a diagnosis of personality disorder. Patients manifesting problems of psychosis, addiction, sexual deviation, or sociopathic behavior were excluded. The patients were discouraged from taking psychotropic medication and none was prescribed by the therapists. One hundred and six patients were accepted and began treatment with one of the four forms of therapy. Their average age was 32 years ($SD = 8.5$; range = 18 to 56). Sixty-two percent were women. Not quite half the population was single (45%), about a third was divorced or separated (32%), and about a quarter was married (23%). Eighty-five percent of the patients were employed. Their average formal education was 13.1 years.

Therapists

The therapists were three male psychiatrists who had 12, 6, and 2 years of postboard (Fellow, Royal College of Physicians, Canada) experience treating patients with individual and group psychotherapy. Each had experience with the four forms of therapy being studied. All three were psychodynamically oriented, two having received formal training from a psychoanalytic institute. For each therapist the practice of outpatient psychotherapy represented a major portion of his professional work. Each therapist served as his own control across the four forms of therapy.

Therapy

Psychoanalytically oriented psychotherapy was the treatment orientation. The techniques of clarification, interpretation, and exploration were central. The therapist attempted to clarify the patient's underlying conflicts as differentiated from his or her stated conflicts, which were often expressed in complaints about relationships and through symptoms. The therapist interpreted the patient's underlying conflicts in terms of dynamic components, that is, in terms of conflict between a wish (libidinal or aggressive), that was considered unacceptable, and mobilized anxiety that set up the operation of defenses against the wish. The therapist also attempted to explore the patient's conflicts as traced through his or her current relationships outside of therapy, his or her immediate relationship with the therapist, and the patient's past (early, parental) relationships. Short-term individual therapy, a relatively recent form of analytic therapy, followed the technique as described by Malan (1976). Individual therapy consisted of one 55-min session per week and group therapy of one 90-min session per week. Although technical manuals were not constructed, a considerable amount of time was spent prior to the project discussing the technical application of the four forms of therapy. Remainers in the long-term forms of therapy attended an average of 76 sessions and remainers in the short-term forms attended an average of 22 sessions for a ratio of 3.5 to 1.

Procedure

Patients were interviewed by a staff psychiatrist and accepted or rejected for psychotherapy. The psychiatrist rated each patient on several selection criteria including verbal skill, chronicity of problems, psychological mindedness, motivation for individual therapy, and motivation for group therapy. Patients had to be willing to accept either individual or group therapy. During the first 2 years of the project patients were told that they would be offered either LTI or LTG therapy and that a final decision would await additional assessment. During the third and fourth years of the project patients were told that they would be offered either STI or STG therapy. Patients were contacted by an independent assessor (psychologist) who obtained their informed consent and conducted a standard assessment interview and questionnaire battery concerning the outcome variables of the study. Assessor blindness to the patient's therapy assignment (individual or group) was guaranteed because the decision was made after the assessment. Patients were matched in pairs on the basis of age, sex, and the composite sum of the five selection criteria ratings into two sets of 7 or 8 patients. Patients were then randomly assigned to either the individual or group form of therapy. Thus, assignment to therapy was not completely random across the four forms, but only between LTI and LTG therapy and between STI and STG therapy. The therapists met with each patient individually for one or two sessions as the final preliminary step before treatment. Patients were re-evaluated by the independent assessor each 6 months. The last evaluation occurred 6 months after treatment ended. Dropouts (unilateral premature terminators) were replaced if they occurred within the first quarter of therapy. All therapy sessions were audiotaped.

Measures

Outcome measures were selected to cover interpersonal functioning, traditional psychiatric symptomatology, and personal target objectives. The three sources of evaluation were the patient, the therapist, and the independent assessor. The outcome scores are listed according to source in Table 1. Some measures were provided by all three sources, whereas others were unique to each source. Most were assessed as current status scores, although a few were assessed as rated benefit scores.

The first two scores provided by the patient were derived from the Interpersonal Behavior Scale (IBS), a 30-item questionnaire, which focuses on the degree to which the patient engages in a number of positive behaviors with people he or she interacts with regularly (Piper, Debbane, & Garant, 1977). The first score (IBSP) represents the patient's perception of his or her present level of functioning and the second score (IBSD) represents the discrepancy between the patient's present level and preferred level. The third score (CAT) was Cattell's H Scale, a 13-item subscale of the Sixteen Personality Factor Questionnaire that focuses on social shyness and inhibition (Cattell & Eber, 1956). The fourth score (COR) was the total score of the Cornell Index, a 100-item symptom checklist heavily represented by psychosomatic content (Weider, Wolff, Brodman, Mittleman, & Wechsler, 1948). The fifth through eighth scores concern the patient's target objectives. The patient, with the assistance of the independent assessor, attempted to

formulate a written set of several, clear, realistic, and non-overlapping objectives. The average rating of severity of disturbance (TSP) and the average rating of change (TCP) for the objectives were calculated. In addition, because the patient also rated the relative importance of each objective, ratings of severity (TSPI) and change (TCPI) for the most important objective were also used as scores. The ninth score was a global rating of the overall usefulness of therapy (OUP).

The therapist was given the written list of target objectives and was also asked to provide severity of disturbance and change ratings. A parallel set of four scores were calculated (TST, TSTI, TCT, TCTI). The therapist also provided his global rating of the overall usefulness of therapy (OUT). Nine scores were provided by the independent assessor. The first two scores were parallel ratings of severity of disturbance for the target objectives (TSIA, TSIAI). The third score (DA) was the Depression–Anxiety subscale of the Psychiatric Status Schedule (Spitzer, Endicott, & Cohen, 1967), which was presented as a structured interview, audiotaped, and then rated. Two independent raters achieved an average interrater reliability of 89.4% perfect agreement for 20 randomly chosen patients (range = 75% to 100%). The fourth through ninth scores were the subscale scores and the average of the subscale scores for a modification of the Structured and Scaled Interview to Assess Maladjustment (SSIAM), a structured interview that assesses interpersonal functioning in five areas: work–school (W), friends (FR), family of origin (FO), partner–children (PC), and sexual adjustment (SA; Gurland, Yorkston, Frank, & Fliess, 1972). This interview was also audiotaped and rated. Pearson product-moment correlations were calculated for the ratings of two independent raters for the same set of 20 randomly chosen patients. The average correlation was .85, with a range from $r(18) = .59$, $p < .01$, to $r(18) = .98$, $p < .001$. Prior to conducting the major statistical analyses with the 23 outcome scores, a correlation matrix was conducted with the remainers' pre- to end-of-therapy change scores or end-of-therapy postscores depending on the measure. Only a relatively small number of the correlations was high ($r > .50$), and these involved scores that were intuitively similar in content. On the basis of this preliminary correlation matrix it was concluded that about 10 relatively independent outcome variables were represented by the 23 outcome scores. The 10 variables were best represented by IBSD, CAT, COR, TSP, OUP, TST, TCT, DA, SSIAM, and TSIA. Thus, when multivariate outcome analyses were conducted only these 10 were entered, and when interpreting univariate outcome analyses the notion of 10 relatively independent variables rather than 23 was emphasized.

Results

Overall, there were 79 remainers (75%) and 27 dropouts (25%). The numbers and percentages for each form of therapy are presented in Table 2. Chi-square analyses indicated no significant differences in number of dropouts within the main dimensions of type of therapy, duration of therapy, therapist, or within form of therapy. Remainers did not significantly dif-

Table 1
Outcome Score Means at the Three Assessment Times

Score	Short-term individual			Short-term group			Long-term individual			Long-term group		
	Pre	Post	FU	Pre	Post	FU	Pre	Post	FU	Pre	Post	FU
Patient												
IBSP[a]	125.2	130.3	128.0	123.0	125.5	119.2	127.4	131.4	124.6	108.9	124.5	123.7
IBSD	41.3	35.7	37.6	42.3	36.4	40.3	37.8	32.8	37.5	49.4	32.8	31.4
CAT[a]	24.8	26.8	27.0	20.6	22.3	23.8	24.6	25.6	25.3	21.4	26.2	25.7
COR	26.7	20.8	19.5	29.0	24.6	21.9	22.2	16.6	15.2	30.7	19.2	18.6
TSP	3.8	2.8	2.6	4.0	3.4	2.6	3.5	2.8	2.3	3.9	2.2	2.2
TSPI	4.1	3.0	3.0	4.1	3.6	2.7	3.6	3.4	2.6	4.3	2.2	2.3
TCP[a]		8.6	8.7		7.9	8.1		8.3	8.6		9.0	9.0
TCPI[a]		8.6	8.8		7.8	8.0		8.4	8.5		9.1	9.0
OUP[a]		5.0	5.2		3.6	3.3		4.6	4.4		5.0	4.7
Therapist												
TST	3.9	3.3		4.3	3.9		3.9	3.4		4.3	3.7	
TSTI	4.1	3.3		4.4	3.9		3.8	3.5		4.4	4.0	
TCT[a]		8.8			7.0			8.8			8.4	
TCTI[a]		9.0			6.9			9.0			8.4	
OUT[a]		4.2			2.6			3.8			3.5	
Independent assessor												
TSIA	4.4	2.2	2.5	4.4	3.3	2.7	4.2	2.3	2.0	4.4	2.6	1.5
TSIAI	4.3	2.6	2.5	4.6	3.4	2.7	4.3	2.4	2.2	4.4	2.6	1.4
DA	13.4	8.8	9.0	12.3	11.2	8.5	10.6	9.2	7.7	12.4	8.7	7.3
W	3.7	3.2	3.1	4.2	4.1	3.2	3.5	3.4	3.2	3.9	3.4	3.1
FR	3.8	3.5	2.6	3.8	3.9	3.2	3.7	3.5	3.0	4.8	4.5	3.1
FO	3.4	3.6	3.2	3.1	3.8	3.8	3.9	3.4	3.4	3.0	3.3	3.6
PC	5.5	4.3	3.0	4.8	4.6	3.6	4.6	3.6	2.9	4.2	2.9	2.5
SA	4.0	3.4	3.6	3.9	3.8	3.1	4.2	3.4	3.3	4.7	4.0	2.9
SSIAM	3.9	3.6	3.4	3.8	3.9	3.4	3.9	3.4	3.2	4.1	3.8	3.1

Note. IBSP = Interpersonal Behavior Scale (present functioning); IBSD = Interpersonal Behavior Scale (discrepancy between present and ideal functioning); CAT = Cattell's H Scale; COR = Cornell Index; TSP, TSPI = severity for all target objectives and most important objective; TCP, TCPI = change for all target objectives and most important objective; OUP = overall usefulness of therapy; TST, TSTI = severity for all target objectives and most important objective; TCT, TCTI = change for all target objectives and most important objective; OUT = overall usefulness of therapy; TSIA, TSIAI = severity for all target objectives and most important objective; DA = depression–anxiety subscale; W, FR, FO, PC, SA, SSIAM = work, friends, family of origin, partner–children, sexual adjustment, and mean subscale scores for Structured and Scaled Interview to Assess Maladjustment (SSIAM), respectively. Pre = prescore, Post = postscore, FU = follow-up.
[a] High scores are desirable.

fer from dropouts on the five demographic characteristics of age, sex, marital status, employment, and education. The overall design of the project was also well-balanced on these five demographic characteristics. Statistical analyses (chi-square; analysis of variance, AN-OVA; and t test) revealed no significant differences within the main dimensions of type, duration, and therapist, or within form of therapy. This was true for all 106 patients who started therapy and for the 79 remainers on whom the outcome analyses were based.

Before-Therapy to End-of-Therapy Analyses

A three factor (2 × 2 × 3) analysis of covariance (ANCOVA) or ANOVA was conducted with all but one of the 23 outcome scores. The three factors were type of therapy (type), duration of therapy (term), and therapist (ther). The sample size used in the analysis for the therapist factor was the number of patients, not the number of therapists. It is common in therapy outcome research to find significant linear relationships between prescores (before

Table 2
Number and Percentage of Remainers and Dropouts

Therapist	Short-term individual		Short-term group		Long-term individual		Long-term group		Subtotal	
	R	D	R	D	R	D	R	D	R	D
1	8	1	7	0	7	5	6	3	28	9
2	8	2	7	1	6	3	7	2	28	8
3	5	3	5	3	7	2	6	2	23	10
Subtotal	21	6	19	4	20	10	19	7	79	27
%	78	22	83	17	67	33	73	27	75	25

Note. R = remainers; D = dropouts.

therapy) and postscores (end of therapy). This was the case for 12 of the 17 outcome measures that had both prescores and postscores. For 11 of these scores an ANCOVA was conducted using the prescores as covariates and the postscores as dependent scores. In the case of the 12th score (FO) the slopes of the regression equations for the four forms of therapy were not homogeneous. Therefore a four-factor repeated-measures ANOVA was conducted where the fourth factor was the prescore–postscore dimension. For the other five measures that had prescores and postscores an ANOVA was used with the postscores because there were no significant relationships between prescores and postscores. For the remaining six measures that were assessed only as postscores ANOVAs were conducted. One other question that was addressed prior to performing the major analyses was whether there were significant pre-

score differences on the outcome scores among the four forms of therapy. A series of one-factor (forms) ANOVAs on the 17 prescores revealed that only one was significant at $p <$ .03. This was the TSIAI score, which was analyzed with an ANCOVA. In addition to the univariate analyses, a three-factor multivariate analysis of variance (MANCOVA) was conducted on the subset of 10 outcome scores that were found to be independent. The multivariate results are presented in Table 3.

In interpreting the major analyses several conventional guidelines were followed. In the case of a score that had both a significant main effect and a significant interaction effect that included the main effect factor, the interaction effect was always emphasized. In examining outcome scores for a given effect, the number of significant ($p = $ .05) scores that one could expect due to a Type I error, was considered as well as the corresponding MANOVA effect. Finally, the absolute level of each outcome score was considered by examining where the mean ratings were located on the rating scales and by examining prescore to postscore t tests.

Evidence for interaction effects. There was no significant evidence for a triple (Type × Term × Ther) interaction effect at either the univariate or multivariate levels of analysis. In contrast, there was significant evidence for a Type × Term interaction effect. This effect represents the importance of the form of therapy. Three of the nine patient-rated scores were significant, CAT, $F(1, 66) = 4.59$, $p < $ .04; TSPI, $F(1, 67) = 3.95$, $p = $ .05; OUP, $F(1, 63) = 5.42$, $p < $ .03, and one approached significance, TCP, $F(1, 67) = 3.15, p < $ .09. Three of the five therapist-rated scores were signifi-

Table 3
MANOVA for Before-Therapy to End-of-Therapy Outcome Scores[a]

Effect	F[b]	df	p
Type	3.31	10, 45	.01
Term	0.68	10, 45	ns
Ther	1.98	20, 92	.02
Type × Term	1.89	10, 45	.08
Type × Ther	1.43	20, 92	ns
Term × Ther	1.83	20, 92	.03
Type × Term × Ther	0.94	10, 45	ns

[a] The ten scores entered were IBSD, CAT, COR, TSP, OUP, TST, TCT, TSIA, DA, and SSIAM. (For an explanation of these abbreviations see the note to Table 1.) Ther = therapist.
[b] Pillais approximate F.

cant, TCT, $F(1, 66) = 8.64$, $p < .01$; TCTI, $F(1, 66) = 7.82$, $p < .01$; and OUT, $F(1, 67) = 6.07$, $p < .02$. One of the independent assessor-rated scores approached significance, DA, $F(1, 66) = 3.03$, $p < .09$. Thus, out of 23 univariate scores, six evidenced a significant Type × Term interaction effect and two approached significance. Multiple comparison tests conducted with the significant scores (see Table 4) revealed a consistent pattern. From the patient's perspective LTG therapy was rated best, STI therapy was a close second, LTI therapy was third, and STG therapy was a distant fourth. From the therapist's perspective STI therapy was rated best, followed closely by LTI and LTG therapy, and STG therapy was similarly a distant fourth. There were usually significant differences between STG therapy and LTG therapy, between STG therapy and STI therapy, and in a few cases significant differences between STG and LTI therapy. In addition to the univariate effects, the multivariate, Type × Term interaction effect approached significance, $F(10, 45) = 1.89$, $p < .08$.

Next, considering evidence for a Term × Ther interaction effect, the MANOVA effect was significant, $F(20, 92) = 1.83$, $p < .03$. At the univariate level two of the independent assessor-rated scores were significant, SSIAM, $F(2, 66) = 4.42$, $p < .02$; FO, $F(2, 67) = 3.72$, $p < .03$, and two of the patient-rated scores approached significance, TCP, $F(2, 67) = 2.68$, $p < .08$; TCPI, $F(2, 67) = 2.90$, $p < .07$. Thus, two of 23 univariate scores were significant, two approached significance, and the multivariate effect was significant. In an effort to understand this interaction effect we raised two questions. Which therapist(s) was associated with better outcome for short-term or long-term therapy? Was there a consistent outcome order among the therapists? Unfortunately, the answers to these two questions varied from score to score. This made it impossible to deduce what therapist characteristic might be interacting with length of therapy. For example, in regard to the characteristic of therapist experience, in the case of SSIAM, the most experienced therapist and the least experienced therapist had better results with long-term therapy, whereas the intermediately experienced therapist had better results with short-term therapy. However, in the case of TCP, the most experienced therapist and the inter-

Table 4

Multiple Comparisons Among the Four Forms of Therapy

Score	Type × Term interaction p	Form	Rank	Post-score mean[a]
Patient-rated scores				
CAT	.04	LTG	1	26.6_1
		STI	2	26.3_2
		LTI	3	25.3
		STG	4	$22.8_{1,2}$
OUP	.03	LTG	1.5	5.0_1
		STI	1.5	5.0_2
		LTI	3	4.6
		STG	4	$3.6_{1,2}$
TSPI	.05	LTG	1	$2.4_{1,2}$
		STI	2	3.0
		LTI	3	3.4_1
		STG	4	3.5_2
Therapist-rated scores				
TCT	.01	STI	1.5	8.8_1
		LTI	1.5	8.8_2
		LTG	3	8.4_3
		STG	4	$6.9_{1,2,3}$
TCTI	.01	STI	1	9.0_1
		LTI	2	8.9_2
		LTG	3	8.4_3
		STG	4	$6.9_{1,2,3}$
OUT	.02	STI	1	4.2_1
		LTI	2	3.8_2
		LTG	3	3.5_2
		STG	4	$2.6_{1,2,3}$

Note. Identical subscripts for two means indicate a significant ($p < .05$) difference using Duncan's multiple-range test. CAT = Cattell's H Scale; OUP = overall usefulness of therapy; TSPI = severity for most important target objective; TCT, TCTI = change for all target objectives and most important objective; OUT = overall usefulness of therapy; LTG = long-term group; STI = short-term individual; LTI = long-term individual; STG = short-term group.
[a] Adjusted ANCOVA postscore means are reported for CAT.

mediately experienced therapist had better results with long-term therapy, whereas the least experienced therapist had better results with short-term therapy. Such examples led to the conclusion that the significant, multivariate Term × Ther effect was reflecting a set of inconsistent univariate effects. Finally, consid-

Table 5

MANOVA for Before-Therapy to Follow-Up Outcome Scores[a]

Effect	F[b]	df	p
Type	1.92	8, 32	.09
Term	1.19	8, 32	ns
Ther	1.35	16, 66	ns
Type × Term	1.34	8, 32	ns
Type × Ther	0.49	16, 66	ns
Term × Ther	0.71	16, 66	ns
Type × Term × Ther	1.15	8, 32	ns

[a] The eight scores entered were IBSD, CAT, COR, TSP, OUP, TSIA, DA, and SSIAM. (For an explanation of these abbreviations see note to Table 1.) Ther = therapist.
[b] Pillais approximate *F*.

ering evidence for a Type × Ther interaction effect, only one score was significant, TCPI, $F(2, 67) = 5.80$, $p < .01$, and one score approached significance, TST, $F(2, 65) = 2.66$, $p < .08$.

Evidence for main effects. Nearly all evidence for significant main effects (univariate and multivariate) was overshadowed by significant interaction effects, particularly the Type × Term interaction effect. The only exception for a significant type main effect was FO, $F(1, 67) = 5.57$, $p < .03$, where individual therapy (pre–post mean decrease = 0.13) was favored over group therapy (pre–post mean increase = 0.47). There were no exceptions for a significant term main effect. The only exception for a significant ther main effect was OUT, $F(2, 67) = 5.53$, $p < .01$, where the means in order of increasing therapist experience were 3.9, 2.9, and 3.8. Overall, the evidence for main effects was quite minimal.

Evidence for improvement. Examination of prescore to postscore *t* tests for the four forms of therapy indicated an overall pattern of patient improvement. Eight of the 10 relatively independent scores used in the MANOVA had prescores and postscores. Significant improvement was found on six of these scores for LTG therapy, IBSD, $t(18) = 2.74$, $p < .02$; CAT, $t(18) = 3.31$, $p < .01$; COR, $t(18) = 4.07$, $p < .001$; DA, $t(18) = 2.22$, $p < .05$; TSP, $t(11) = 4.52$, $p < .001$; and TSIA, $t(18) = 6.59$, $p < .001$, on 4 of these scores for STI therapy, COR, $t(20) = 3.19$, $p < .01$; DA, $t(20) = 4.42$, $p < .001$; TSP, $t(20) = 3.38$, $p < .01$; and TSIA, $t(20) = 8.53$, $p < .001$, on 3 of these

scores for LTI therapy, COR, $t(19) = 2.52$, $p < .03$; TSP, $t(14) = 2.20$, $p < .05$; and TSIA, $t(19) = 7.63$, $p < .001$, and on 3 of these scores for STG therapy, TSP, $t(18) = 2.33$, $p < .04$; TST, $t(18) = p < .04$; and TSIA, $t(18) = 3.30$, $p < .01$. Evidence for significant worsening was found on one score for STG therapy, FO, $t(18) = 2.60$, $p < .02$.

Before-Therapy to Follow-Up Analyses

Sixty-nine of the 79 remainers (87%) provided data at the 6-month follow-up assessment. The percentages of patients lost at follow-up for the four forms of therapy were 5% (STI), 16% (STG), 10% (LTI), and 21% (LTG). Only a few patients reported taking psychotropic medication or participating in formal therapy during the follow-up period. Outcome scores were available from the patient and the independent assessor, but not the therapist, who had no contact with the patient during the follow-up period. The follow-up data were analyzed in the same way as the end of therapy data. For the MANOVA, eight of the 10, previously used, independent scores were entered because the two therapist scores were not available. The multivariate results are presented in Table 5.

Evidence for interaction effects. No significant MANOVA interaction effects were found. At the univariate level two significant triple (Type × Term × Ther) interaction effects were found, TCP, $F(2, 55) = 3.85$, $p < .03$, and TCPI, $F(2, 55) = 3.94$, $p < .03$. For both scores patients of the most experienced therapist reported greater improvement for LTI therapy over STI therapy and STG therapy over LTG therapy, whereas the patients of the lesser experienced therapists reported the reverse. In the case of the Type × Term interaction, only one significant effect, OUP, $F(1, 55) = 10.36$, $p < .01$, and one near significant effect, IBSD, $F(1, 55) = 3.60$, $p < .07$, were found. The pattern was the same as that found with the end of therapy scores. The worst outcome was associated with STG therapy and the best outcome with LTG therapy and STI therapy. No significant Term × Ther interaction effects or Type × Ther interaction effects were found.

Evidence for main effects. Similar to the before- to end-of-therapy data nearly all evi-

COMPARATIVE STUDY OF PSYCHOTHERAPY

dence for significant main effects (univariate and multivariate) was overshadowed by significant interaction effects. The only exception for a significant type main effect was FO, $F(1, 53) = 8.27$, $p < .01$, where individual therapy (pre-follow-up mean decrease = 0.37) was favored over group therapy (pre-follow-up mean increase = 0.72). There were no exceptions for a significant ther main effect. The two exceptions for a significant term main effect were TSIA, $F(1, 53) = 9.93$, $p < .01$, and TSIAI, $F(1, 52) = 8.86$, $p < .01$, where long-term therapy (pre-follow-up mean decreases = 2.55, 2.58) was favored over short-term therapy (pre-follow-up mean decreases = 1.79, 1.88). Overall, the evidence for main effects was quite minimal.

Evidence for continued improvement. Four-factor (Type × Term × Ther × Trials) ANOVAs, where trials referred to the end of therapy to follow-up assessment dimension, were conducted with each outcome score. Significant trial effects indicating continued improvement emerged for three scores, DA, $F(1, 53) = 5.33$, $p < .03$; SSIAM, $F(1, 53) = 11.96$, $p < .01$; and TSP, $F(1, 55) = 4.17$, $p < .05$. Three other scores approached significance, COR, $F(1, 55) = 3.64$, $p < .07$; W, $F(1, 44) = 4.03$, $p < .06$; and SA, $F(1, 52) = 3.04$, $p < .09$. Thus, three of 18 trials effects were significant and three approached significance. Few other significant effects were found, including no significant Type × Term × Trials effect. The pattern was clear. Patients tended to either maintain their end of therapy scores or evidence additional improvement.

Discussion

The outcome analyses indicated minimal evidence of main effects for type of therapy or duration of therapy, which is consistent with the findings of previous studies. However, the current study provided considerable evidence for a Type × Duration (term) interaction effect, which highlights the importance of these two dimensions when taken in combination. In the case of group therapy the outcome results strongly favored the long-term form, whereas in the case of individual therapy the outcome results favored the short-term form. The best outcomes were associated with LTG therapy and STI therapy and the worst outcomes with STG therapy. Stated in somewhat different terms, what was found to be important was the particular form of therapy received, not the general type (individual, group) or the general duration (short-term, long-term) of therapy.

The pattern that emerged, which emphasized the interaction between type of outcome and duration of therapy, was strongly evident at the time that therapy ended. The pattern was also present, but in considerably weaker form, at the time of follow-up. Examination of the follow-up mean scores indicated almost without exception that STG patients had the poorest scores. They, like most patients, continued to improve during the follow-up period. However, their outcome scores remained at the bottom relative to the other patients. Less significant effects at follow-up is not an uncommon finding in therapy outcome studies. Although follow-up data is important to examine, it is often beset with ambiguities. In the present study there were differential losses among the four forms of therapy, ranging from 5% (STI) to 21% (LTG). How the missing patients would have scored is unknown. The fact that therapist outcome ratings were not available also limits the strength of the follow-up data.

Although the poorest outcome results were associated with STG therapy, it would be a mistake to view its outcome effects as disastrous. Evidence for negative effects was minimal and the dropout rate for STG therapy was not particularly high. If STG therapy had been studied alone its outcome results would have seemed more favorable. It was only when the full range of outcome scores were examined and when the results for all four forms of therapy were considered that the unimpressive quality of the STG therapy outcome results became clear.

Considerations of Cost-Effectiveness

The four forms of therapy differed substantially in the amount of therapist time that was required for each patient. As indicated in Table 6 the therapist time per patient ratio for the four forms of therapy was approximately 1 (STG) to 4 (LTG) to 5 (STI) to 20 (LTI). LTI therapy was by far the most costly and STG

therapy was the most economical of the four forms of therapy. Time is much easier to quantify and to compare meaningfully in a ratio than the concept of effectiveness, which in the present study was based on an entire set of outcome scores. To represent the effectiveness of one form of therapy as a multiple of another is possible but is unappealing due to the lack of a sound logical basis for determining the ratio. Despite this limitation it appears that several conclusions can be made concerning cost-effectiveness.

First, it can be argued that STI therapy and LTG therapy were more cost-effective than LTI therapy. In terms of outcome, STI and LTG therapy produced results that were as good (usually better) than LTI therapy. In terms of therapist time STI and LTG therapy required about one quarter of the time. Second, it can be argued that STI and LTG therapy were more cost-effective than STG therapy. This conclusion is more open to debate because proponents of STG therapy may argue that the low cost of STG therapy and the presence of some improvement indicate that it is cost-effective (i.e., small investment, small gain). We considered but rejected this conclusion for

several reasons. In absolute terms a therapist investment of 36 hours and a time period of 6 months is not a small investment. In addition, the magnitude of rated improvement and usefulness was minimal for most outcome scores, not unlike what one could expect to find among a set of waiting-list control or attention-placebo patients.

It is also possible to consider the time required of the patient as a cost. The time required of the patient also differed substantially among the four forms of therapy. This time ratio (see Table 6) was approximately 1 (STI) to 2 (STG) to 4 (LTI) to 7 (LTG). In this case there is no doubt that STI was the most cost-effective form of therapy. However, because patients assigned the best outcome ratings to LTG therapy, they may have felt that the extra time was worth it. In addition, the structural characteristics of STI and LTG therapy were considerably different. Although STI therapy offered a sense of "privacy" and "personal attention from the therapist," LTG therapy offered a sense of "continuity over time" and "peer relationships." Personal preference may also override the issue of how much time is required.

Table 6
Therapist Time per Patient Ratio and Patient Time Ratio for the Four Forms of Therapy

Form	Calculation
	Therapist time per patient
STG	24 sessions × 1.5 hours ÷ 8 patients = 4.5 hours
LTG	96 sessions × 1.5 hours ÷ 8 patients = 18.0 hours
STI	24 sessions × 0.9 hours ÷ 1 patient = 21.6 hours
LTI	96 sessions × 0.9 hours ÷ 1 patient = 86.4 hours
Therapist time per patient ratio (approximate)	1 (STG) :4 (LTG) :5 (STI) :20 (LTI)
	Patient time
STI	24 sessions × 0.9 hours = 21.6 hours
STG	24 sessions × 1.5 hours = 36.0 hours
LTI	96 sessions × 0.9 hours = 86.4 hours
LTG	96 sessions × 1.5 hours = 144.0 hours
Patient time ratio (approximate)	1 (STI) :2 (STG) :4 (LTI) :7 (LTG)

Note. Individual sessions lasted 55 min. Group sessions lasted 90 min. Short-term therapy involved 24 sessions. Long-term therapy involved 96 sessions. Groups consisted of 8 patients. STG = short-term group; LTG = long-term group; STI = short-term individual; LTI = long-term individual.

Considerations Concerning the Process of Therapy

The emphasis in the data on the particular form of therapy suggests that each possessed unique features. Short-term individual therapy was not simply less of long-term individual therapy, and long-term group therapy was not simply more of short-term group therapy. From the perspective of the therapists a number of distinctive qualities characterized each form of therapy. Although they were not present in every case, they were present often enough to permit the following general conceptions.

Short-term individual therapy. A facilitative atmosphere of time pressure was common to both the patient and the therapist. Both parties felt the need to work hard and relatively quickly. Attention was concentrated and focused. Affective involvement was high. Although the range of problems explored was not extensive there was depth associated with those that were explored. At completion most patients felt that they had received something valuable from the therapist.

Long-term individual therapy. Although the patients seemed satisfied with the structure and process of therapy, the therapists were less satisfied. The length of time available coupled with the frequency of one session per week seemed to favor an increase in resistance and a decrease in working through. Thus, the patient tended to behave as if there was always plenty of time to work later. Patients dutifully came to sessions but found it easy to defend against affective involvement. They tended to control regression and restrict expression of transference, which made these processes more difficult to clarify and interpret.

Short-term group therapy. Both the patients and the therapists experienced difficulties with this form of therapy. Its structure appeared to heighten the patients' anxiety about obtaining relief for their problems to the exclusion of allowing themselves to engage in an exploration of relationship difficulties experienced in the group. Initial anxiety about working on sensitive issues in the presence of others was soon followed by anxiety about ending the group. An atmosphere of deprivation prevailed. The therapists felt burdened with the task of trying to treat 7–8 patients together for their presenting problems using a psychoanalytically oriented approach in the limited time and situation that was available. It is possible that the structure of these groups would be more suitable for other orientations of short-term group therapy, for example those that consist of highly structured exercises and/or attempt to minimize rather than arouse anxiety during sessions. It is also possible that a different technical application of psychoanalytically oriented therapy in short-term groups would prove to be more successful.

Long-term group therapy. This form of therapy was characterized by a high degree of involvement and attentiveness by both patients and therapists. The presence of a group of people provided continual stimulation and there was ample time to deal with important issues that were not immediately and directly associated with the patient's presenting symptomatology. The clinical material that emerged was viewed by the therapists as relatively rich and varied. The frequency and duration of sessions of this form is characteristic of psychodynamic group therapy as it is practiced in North America.

Admittedly the therapists' conceptions of process were provided retrospectively with knowledge of the outcomes. Nevertheless, they provide some suggestions about advantages and difficulties associated with the structure of each of the four forms of therapy that may have been related to outcome. The structure of both LTG and STI therapy seemed to facilitate active involvement and attentiveness for both parties and an optimal mobilization of affect on the patient's part. The patients appeared to evidence greater regression, stronger transference reactions and less resistance, processes crucial to an interpretive, psychoanalytic approach. In contrast, the structures of LTI therapy and STG therapy seemed to result in levels of involvement, attentiveness, and affect that were not optimal. LTI therapy was permeated with a sense of too much time and STG therapy with a sense of too little time.

An appropriate question concerning the outcome differences among the four forms of therapy is whether they may have been due to differences in therapist experience, bias, or

skill. It would be naive to assume that the therapists of the present study, or any therapists, could have exactly the same experience, bias, or skill for four forms of therapy. Nevertheless, we do not believe that these factors played a significant role in the present study. In regard to the experience issue, the three therapists had previously worked together for a number of years in a unit that provided both individual and group therapy of different durations. Provision of the four forms of therapy did not appear to be a large step from the work with which they were quite familiar. In regard to the bias issue, if an initial outcome bias existed in the form of differing outcome expectations, it probably favored the long-term therapies. However, the data indicated minimal evidence for a term main effect and the results for LTI therapy and STI therapy actually ran counter to such a bias. A more serious form of bias concerns the possibility that the therapists prejudicially wished to demonstrate the superiority of one or more of the forms of therapy. We can only emphasize that we were not aware of such a bias. The commitment to provide something useful to each patient was taken seriously and permeated all forms of therapy. The issue concerning the possibility of differential skill is a more open one at this time because we unfortunately do not have process ratings that indicate whether each of the four forms was conducted in an equally skillful manner.

The therapist dimension per se had a relatively small impact (main or interaction effects) on the outcome data. The multivariate results appeared to mask inconsistent univariate effects, which themselves were not that substantial. We believe that the commonalities among the three therapists outweighed the difference. All three were male psychiatrists, who had completed their training and who subscribed to a similar conceptual framework. Although differences in length of experience and some differences in technical style probably existed, they did not appear to exert a major impact on the outcomes of the four forms of therapy.

One other finding that deserves highlighting was the absence of significant differences in dropout rates among the four forms of therapy and in particular between the group and individual forms. In the past it has been suspected that group therapy is associated with higher dropout rates than individual therapy. High dropout rates for group therapy have been reported in a number of studies (Baekeland & Lundwall, 1975; Berne, 1955; Scher & Johnson, 1964; Sethna & Harrington, 1971; Nash, Frank, Gliedman, Imber, & Stone, 1957). Dropping out often has a demoralizing effect on the departing patient, the remaining patients, and the therapist. The potential that it may precipitate a chain of additional dropouts that will eventually result in the demise of the group is real. The potential for serious multiple repercussions in a therapy group may have resulted in an exaggerated perception of its incidence relative to individual therapy.

In conclusion, we believe that the present study has provided evidence that favors LTG therapy and STI therapy relative to LTI therapy and STG therapy. In terms of quality of outcome, LTG therapy and STI therapy received the best outcome ratings, although LTI therapy was not far behind. In terms of cost-effectiveness and the quality of therapy process as viewed by the therapists LTG therapy and STI therapy were regarded as superior. These conclusions need to be replicated. No single study can provide definitive answers. If the findings of the present study hold, they could have significant implications for the use of professional resources in the treatment of outpatients with psychotherapy.

References

American Psychiatric Association. (1968). *Diagnostic and statistical manual of mental disorders* (2nd ed.). Washington, DC: Author.

Baekeland, F., & Lundwall, L. (1975). Dropping out of treatment: A critical review. *Psychological Bulletin, 82,* 738–783.

Berne, E. (1955). Group attendance: Clinical and theoretical considerations. *International Journal of Group Psychotherapy, 5,* 392–403.

Budman, S. H. (Ed.). (1981). *Forms of brief therapy.* New York: Guilford Press.

Cattell, R. B., & Eber, H. W. (1956). *Sixteen personality factor questionnaire.* Champaign, IL: Institute for Personality and Ability Testing.

Davanloo, H. (1978). *Principles and techniques of short-term dynamic psychotherapy.* New York: Spectrum Press.

Gurland, B. J., Yorkston, M. J., Frank, J. D., & Fliess, J. L. (1972). The structured and scaled interview to assess maladjustment (SSIAM): I. Description, rationale

and development. *Archives of General Psychiatry, 27,* 259–263.

Luborsky, L., Singer, B., & Luborsky, L. (1975). Comparative studies of psychotherapies. *Archives of General Psychiatry, 32,* 995–1008.

Malan, D. H. (1976). *The frontier of brief psychotherapy.* New York: Plenum Press.

Nash, E. H., Frank, J. D., Gliedman, L. H., Imber, S. D., & Stone, A. R. (1957). Some factors related to patients remaining in group psychotherapy. *International Journal of Group Psychotherapy. 7,* 264–274.

Piper, W. E., Debbane, E. G., & Garant, J. (1977). An outcome study of group psychotherapy. *Archives of General Psychiatry. 34,* 1027–1034.

Scher, M., & Johnson, M. H. (1964). Attendance fluctuations in an aftercare group. *International Journal of Group Psychotherapy. 14,* 223–224.

Sethna, E. R., & Harrington, J. A. (1971). A study of patients who lapsed from group psychotherapy. *British Journal of Psychiatry, 119,* 59–69.

Sifneos, P. E. (1979). *Short-term dynamic psychotherapy: Evaluation and technique.* New York: Plenum Press.

Small, L. (1979). *The briefer psychotherapies.* New York: Bruner/Mazel.

Smith, M. L., Glass, G. V., & Miller, T. I. (1980). *The benefits of psychotherapy.* Baltimore, MD: The Johns Hopkins University Press.

Spitzer, R. L., Endicott, J. E., & Cohen, G. M. (1967). *Psychiatric status schedule.* New York: New York State Department of Mental Hygiene.

Weider, A., Wolff, H. G., Brodman, K., Mittleman, B., & Wechsler, D. (1948). *Cornell index.* New York: The Psychological Corporation.