0022-3018/81/1691-2780$02.00/0
THE JOURNAL OF NERVOUS AND MENTAL DISEASE

Vol. 169, No. 12
Printed in U.S.A.

Addition of Time-Limited Psychotherapy to Medical Treatment in a General Medical Clinic

Results at One-Year Follow-up

EUGENE MEYER III, M.D., LEONARD R. DEROGATIS, PHD., MONA J. MILLER, B.S.W.,[1] ANTHONY J. READING, M.D., SC.D.,[2] IRVIN H. COHEN, M.D., LEE C. PARK, M.D., AND GERALD A. WHITMARSH, PHD.[1]

This study compares 72 patients screened for significant emotional problems and treated only by internists of a general medical clinic with 62 patients also treated by internists but completing in addition 10 weekly psychotherapeutic visits. Forty-one patients did not keep their initial appointments and 69 patients dropped out of treatment but are not considered in this report.

These patients, from inner-city Baltimore, were socially and economically a highly disadvantaged group. At intake, the 62 patients who completed psychotherapy and the 72 patients treated only by internists were equal demographically and in diagnosed physical illnesses. The two groups were approximately equal in the extent of emotional disturbance. All patients were followed up at 4 months and 1 year after intake. Methods of evaluation included a 7-point self-report of global improvement, the 58-item Hopkins Symptom Checklist, the primary target complaint, scaled clinical estimates of psychosocial adjustment, and scaled data from systematic review of medical charts. Significantly more patients undergoing the psychotherapy remained improved at 1-year follow-up, independent of age, sex, degree of disability, diagnosed medical illnesses, level of emotional disturbance, and employment status. While there was evidence of a common denominator to therapeutic results in both groups, the data strongly suggests specific effects of psychotherapy.

In the experience of the Psychiatric Liaison Service at The Johns Hopkins Hospital, follow-up of patients seen in medical consultation suggested the desirability of transplanting supervised outpatient psychiatry to the physical facilities of the Department of Medicine. Suggested by Dr. Samuel Novey, time-limited psychotherapy (10 weekly visits) began in 1962 as an effort to cope with the large number of patients requiring outpatient return visits. The observation that many patients recovered symptomatically in the course of this brief treatment encouraged more systematic exploration. These patients prompted the intriguing question of whether the psychiatrists' efforts had an effect on the confirmed recovery and its processes, or whether the psychiatrists were simply observers while patients went into spontaneous remission after experiences with physical illness in addition to psychosocial stress.

Two years' experience with time-limited psychotherapy and follow-up of these patients made it evident that improvements seen in the course of such time-limited psychotherapy could endure. Accordingly, an initial attempt was made to evaluate the results of such therapy in an organized research effort during the period of 1963 to 1967 (10). From this experience, it became evident that, among disadvantaged patients treated by predominantly white, middle-class therapists, race and sex of patient did not significantly influence completion or dropping out of therapy nor improvement or lack of improvement at 1-year follow-up. Results of this study highlighted the part played by experience of physical illness in psychological or emotional recovery processes. The presence of physical illness, however, was poorly evaluated, and a comparison group was not provided, as was originally hoped, by those patients who did not keep their initial appointments for brief psychotherapy.

Because it was clear from the number of patients presenting themselves to our General Medical Clinic

[1] The Johns Hopkins University School of Medicine, Baltimore, Maryland. Send reprint requests to Dr. Meyer, Psychiatric Liaison Service, The Johns Hopkins Hospital, 600 North Wolfe Street, Baltimore, Maryland 21205.

This research was supported by National Institute of Mental Health Grant MH26056 and The Island Foundation.

The following individuals, through supervision of psychotherapists and participation in case conferences, made major contributions to this project: John B. Imboden, M.D.; Janet Rioch Bard, M.D.; Jon K. Meyer, M.D.; Frances Williams, M.D.; Frederick F. Converse, M.D.; William C. Battle, M.D.; Arthur M. Hildreth, M.D.; Janice M. Shriver, M.A.; Othon Tirado, M.D. Mrs. Charlotte Waxman was of critical importance to the successful follow-up of patients. Irene E. Waskow, Ph.D., assisted with this study. The collaborative assistance of Carol J. Johns, M.D., Director, General Medical Clinic, is gratefully acknowledged. Myra T. Herbert, M.S.S.W., provided editorial assistance.

[2] University of South Florida College of Medicine, Tampa, Florida.

with significant, if not determining, emotional components to their illness, and because it became clear that some form of health maintenance organization was becoming fundamental in programs of medical care, the logic of attempting to establish the validity of brief psychotherapy in a systematic way seemed compelling. This issue is heightened by recent discussion of the validity of psychotherapy and the populations of patients to whom it should be addressed (5, 6).

The existence of a single general medical clinic taking care of a large number of patients whose lives were complicated by recurrent unemployment, family disorganization, and marginal economic status offered a logical environment to compare what psychotherapy might add to an existing program of general medical care. It was evident that this would require the collaborative interest of physicians working in The Johns Hopkins Hospital General Medical Clinic. A pilot project in 1968 established the fact that the physicians in the General Medical Clinic would refer patients previously screened and evaluated as being in need of psychotherapy (4). Accordingly, the currently reported controlled evaluation of time-limited psychotherapy was undertaken. Certain data on the outcome of the screening interview have been published, but these data lacked clinical judgments or evaluations of the patients' medical diagnoses other than that of hypertension (8, 9).

Methods

Population of Patients

Of the 1319 new patients referred to the General Medical Clinic at The Johns Hopkins Hospital, 698 were selected for screening between July 1970 and February 28, 1973. Excluded from screening were males under 16 or over 65, females under 16 or over 62, the mentally retarded, senile, overtly psychotic, suicidal, severely physically ill, and substance abusers. Patients were also excluded if they lived too far from the hospital or if they had had three or more psychosocial treatment visits or a psychiatric hospitalization in the 6 months previous. Forty-seven per cent [327] of the 698 patients were found to have significant emotional disorders or emotional components to their illness, related to or independent of each other (8). Here we report on 133 of those 327 patients, 61 of whom completed time-limited psychotherapy in the Psychosomatic Clinic in addition to medical treatment and 72 of whom received only medical treatment from the physicians in the General Medical Clinic.

These two patient populations were followed up at 4 months and 1 year after the screening process. For reporting purposes, we are using a biased shorthand designation of these two patient groups as "completers" and "controls."

At intake, a patient found to be in need of treatment was randomly assigned in a ratio of 2 to 1 to the group receiving short term psychotherapy or to the control group. Randomization was maintained by the research group. A card reading "refer" or "don't refer" made up in the stated ratio was given to the screener at the beginning of the interview. The screener proceeded uninformed and consulted the card for direction only at the interview's completion. Previous experience with contractually time-limited therapy had resulted in 57 per cent of the patients completing therapy; thus, the 2 to 1 ratio of patients referred was chosen expecting that the number of completers would equal the number of controls.

One hundred seventy-six patients were referred for psychiatric treatment, and 94 patients were treated only by internists in the General Medical Clinic. Of the 176 patients referred, 41 failed to keep the first appointment, and 69 patients dropped out of psychiatric treatment. Dropouts were similar to completers in demographics, psychosocial variables, disability ratings, Hopkins Symptom Checklist (HSCL) scores, and all major medical diagnoses. No-shows differed in important respects but will not be discussed here.

Of the 66 patients who completed brief psychotherapy, 61 were available for follow-up at both 4 months and 1 year. Seventy-two of the 94 patients treated in the General Medical Clinic were followed up at 4 months and 1 year. The patients not followed up in both groups did not differ in their screening profiles from those who were followed up.

Procedure

At each General Medical Clinic session, new patients meeting the study's criteria were interviewed for possible short term psychiatric treatment. If a patient was assessed in need of psychiatric treatment, the treatment assignment card was drawn by one of the trained screening personnel. Criteria for referral were a clinical judgment in which high ratings on extent of nervous problems and worry about illness and significantly higher scores on questions relating to the dimensions, Anxiety and Depression, on the HSCL were probably the most significant factors in differentiating patients deemed in need of psychotherapy. With referred patients, the screener discussed the results of the interview with the patient's physician, and the referral to the Psychosomatic Clinic was made by that patient's physician. The nature of time-limited therapy was explained to the patient.[3] Both treatment

[3] The interests of patients concerned in these studies were protected in accordance with the policies of the U. S. Department of Health, Education, and Welfare on informed consent as of 1969.

and control groups continued their visits to the General Medical Clinic as recommended by their physicians.

Treatment in the Psychosomatic Clinic consisted of 10 weekly visits of 1 hour. In 12 of the cases, there were fewer than 10 visits by agreement between the patient and the therapist. The Psychosomatic Clinic operated in the medical outpatient area of the hospital so that patients came to the same physical facility for both medical treatment and psychotherapy. This identity of appointment procedures, setting of fees, waiting room, and office space undoubtedly reduced for many patients the stigma and fears attached to the idea of being a psychiatric patient.

Over the 3-year period (July 1, 1970 to July 1, 1973), treatment was provided by 26 Johns Hopkins psychiatric residents, one staff psychiatrist, six mental health counselors, three nurses, and eight psychiatric residents from other hospitals. Each therapist received 1 hour of supervision for every 2 hours of psychotherapy. Supervision was provided by 12 full-time and part-time Johns Hopkins Hospital psychiatrists and one senior psychiatric social worker. It should be noted, however, that supervisors were respected senior practitioners experienced in time-limited psychotherapy with disadvantaged patients. They played a critical role in helping therapists with the inevitable problems of countertransference and the difficulties in termination with patients where unexpected mutually sympathetic emotional attachments had taken place. The inner dimensions of this time-limited psychotherapy supervised by psychoanalytically oriented supervisors must await exposition elsewhere.

The 4-month follow-up interview attempted to coincide with termination of brief psychotherapy. Follow-up at 4 months was selected because inevitable cancellations and holidays stretched 10 weekly visits to a period of up to 14 weeks in many cases. Follow-up interviews were similar in structure to the intake interviews to allow for the computation and analysis of change scores. At 1 year, an evaluation of all medical charts was completed for both groups.

Instruments

There were three primary instruments used in the study, two of which were used for screening. The first was a semistructured interview of basic demography, employment record, medical history, and clinical self-reports of emotional distress and psychosocial state. The second was the HSCL (2, 3). The third instrument was an itemized and scaled review of the patients' medical charts.

1. The semistructured interview took 15 to 20 minutes and consisted of 60 precoded questions. The attitudinal and behavioral questions were rated on a 4-point scale (none, minimum, moderate, a great deal) or a 5-point scale (very good, good, fair, poor, very poor).[4] Employment status was ultimately categorized on a yes-no basis assigning "part-time" as "yes." At the end of the interview, patients were asked, "What things would you most like help with, personal as well as physical?" and "How much does it bother you?" These questions attempted to establish target complaints as suggested by Battle *et al.* (1) as a measure of change. Only the patient's first mentioned target complaint (target complaint 1) was used in our analysis.

2. The HSCL is a 58-item self-report inventory oriented toward the measurement of symptomatology in various groups of medical and psychiatric patients (2, 3). The inventory takes 15 minutes to administer and has five primary symptom dimensions and three global scores.

3. The medical chart containing the physician's notes, laboratory reports, and reports by other health personnel was the source of information for the chart review carried out 1 year after intake by one of the authors (A. R.). Chart review summed the clinical diagnoses, number of hospital visits, drugs prescribed, laboratory tests ordered, and estimated cost of care. The patient's disability and the extent of emotional component in the presenting illness were also estimated and recorded on a 9-point scale. Patients were, in addition, classified by major disease types. For each nosological category, an attempt was made to indicate the degree of clinical certainty with which they might apply. Coding was: 0, does not apply; 1, symptoms only; 2, positive findings, either by physical examination or laboratory test; 3, diagnosis made (written in chart); 4, positive treatment given, specific for disorder. For operational use, diagnosis was limited to categories 2 to 4.

Follow-up: Instruments and Methods

At both 4 months and 1 year, the semistructured interview and the HSCL were readministered to study patients with appropriate modifications in time reference.

Analyses

Due to the magnitude and complexity of the study, a large volume of data of different types was analyzed. Some variables were measured on a continuum while others were recorded as discrete frequency data. In general, wherever measurement approached interval levels, parametric statistics, *e.g.*, *t*- or *F*-tests, were

[4] In 31 patients interviewed and rated simultaneously by two interviewers, the mean difference between ratings was .79 across all scales and all patients. For items involving a dichotomized choice, there was agreement in 85 per cent of the cases.

employed. In those situations where proportions were contrasted, either z-tests for independent proportions or χ^2 tests were done.

Analysis involving repeated measures, *e.g.*, prepost evaluations, was almost exclusively done by either analysis of covariance, with end point measurement being treated as the variate and baseline measurement as the co-variate, or t-tests for correlated pairs of means. In several instances, one-way analyses of variance were conducted with partitioning of significant effects through post-F-tests, *e.g.*, Newman-Keuls. All analyses were conducted through the SPSS system on a 370-145 IBM computer.

Results

At intake there were only two demographic items of a total of 60 variables in which completers and controls were found to be different (Table 1). Completers reported more money problems, but there was no difference in methods of payment for treatment in the two groups. Of the five factored dimensions and three composite ratings of the HSCL, only the mean Anxiety score was significantly higher among completers.

Over 60 per cent of both groups were on medical assistance, and approximately two thirds of each group were unemployed. Rating of the extent of nervous or emotional problems was also higher among completers, but the difference was not significant. Other nonsignificant differences among important demographic variables at intake are listed in Table 1. The fewer males among completers is largely accounted for by the greater dropout of males who were referred for treatment. Of 21 males referred, 5 or 24 per cent completed treatment. Of 130 females referred, 56 or 43 per cent completed treatment. We had reason to believe then that in all important characteristics the sample of completers and the sample of controls were essentially similar.

TABLE 1

Demographic and Clinical Characteristics of Completers and Controls at Initial Evaluation

Characteristics	Completrs ($N = 61$) (%)	Controls ($N = 72$) (%)
Sex		
Male	8.2	20.8
Female	91.8	79.2
Race		
Black	86.9	91.5
White	13.1	8.5
Marital status		
Single	25.4	22.5
Married	30.5	26.8
Separated, divorced, widowed	44.1	50.7
Number of major physical illness (past year)		
0	73.3	78.6
1 or more	26.7	21.4
Employment status		
Unemployed	72.1	62.0
Employed	27.9	38.0
Social class		
II and III	1.7	4.8
IV	22.4	15.9
V	75.9	79.4
Payment code		
Medical assistance	69.2	62.3
Patient pays	26.9	36.1
Private insurance	3.8	1.6
	$\bar{X}$	$\bar{X}$
Length of present illness (months)	22.2	13.9
Age (years)	39.6	37.5
HSCL		
Somatization	2.13	2.01
Obsessive-Compulsive	1.91	1.84
Interpersonal Sensitivity	1.92	1.88
Depression	2.03	1.93
Anxiety	2.18	1.93

Estimates of Change at 4-Month and 1-Year Follow-up

Estimates of global improvement by self-report were available at both 4-month and 1-year follow-up for both groups of patients, and these estimates were found to be central to any evaluation of change in the behavior of patients over time. HSCL scores of the two groups at 1-year follow-up showed no significant difference in any of the five factors or three composite indices. Global improvement ratings, however, revealed important differences between completers and controls at 4-month and 1-year follow-up (Figures 1 and 2). At both 4 months and 1 year, the patients treated by psychiatrists were improved more often than was the case for patients treated by internists alone ($p < .05$).

To dichotomize patients as improved or unimproved, we rated as unimproved those patients who showed no change in combination with those who reported themselves worse in any degree. Using this method (Table 2), completers showed greater improvement at 4 months ($p < .01$) and at 1 year ($p < .02$). Both groups showed greater numbers of patients improved at 4 months than at 1 year.

Primary Target Complaint and Improvement

Improvement on target complaint 1 of the whole groups of completers and controls showed that more completers reported improvement at 4 months and 1 year, but these differences were marginally significant, and the levels of improvement were not impressive.

When both groups are divided into globally improved and unimproved patients, changes in target complaint 1 showed striking differences, and different information was obtained (Table 3). At 1-year follow-up, globally improved completers and controls both showed high levels of improvement on target com-

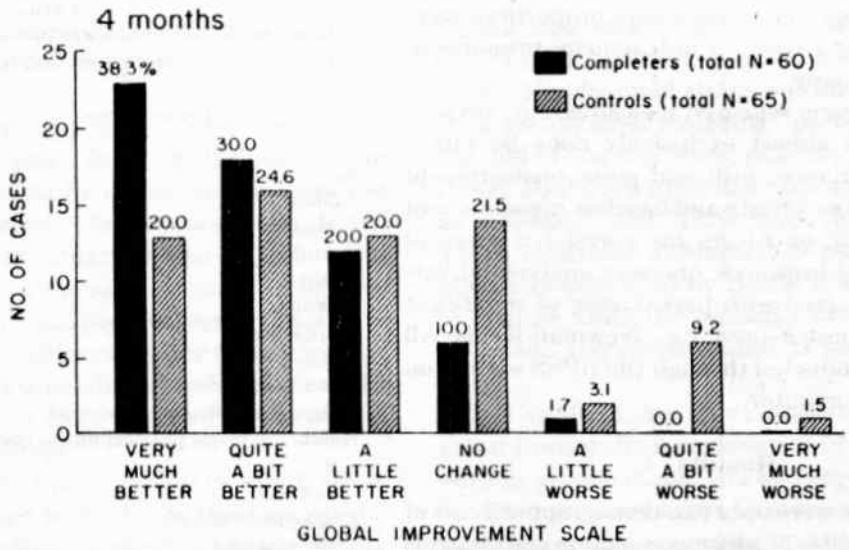

FIG. 1. Comparison of global improvement rating of completers and controls at 4 months.

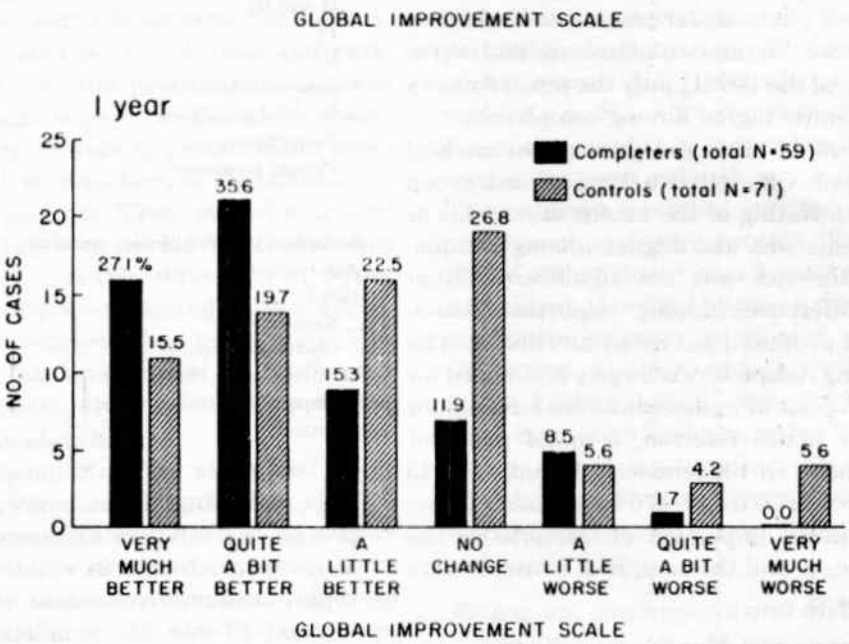

FIG. 2. Comparison of global improvement rating of completers and controls at 1 year.

plaint 1, and this level of improvement was the same between completers and controls.

Unimproved completers and unimproved controls both showed a clear-cut reversal of improvement on target complaint 1.

It is thus apparent that whole group analysis combines diametrically opposite directions of change in the target complaint rating of the subgroups of globally improved and unimproved patients. Evidently whole group analysis largely erases the value of target complaint 1 in measuring behavioral change.

HSCL and Improvement

At 1-year follow-up, whole group analysis revealed no difference in any HSCL score. Next we assessed the two groups to determine if significant change had occurred within each group from time of initial evaluation to 1-year follow-up. Statistically, *t*-tests for correlated pairs of means were used, and the significance of the changes was evaluated on each of the HSCL dimensions and composite scores. These data are summarized in Table 4 and reveal significant

changes for completers on almost all measures and a similar picture for the controls except for only marginally significant changes in the Depression and Anxiety scores.

If the HSCL scores are now applied to a division of completers and controls into globally improved and unimproved patients, different and clearer results are obtained (Table 5). HSCL scores on Somatization, Depression, and Anxiety are improved in both groups at the .001 level. Improved completers improved on the dimensions Obsessive-Compulsive and Interpersonal Sensitivity, but this was not true of improved controls. HSCL scores of unimproved patients in both completers and controls showed no significant change, and the scores moved in the direction of being worse. In fact, unimproved controls were significantly worse in the dimension of Depression. Both improved completers and controls were significantly improved on all composite indices, and the unimproved patients of both groups showed no significant change.

The value of the HSCL scores, then, as with the primary target complaint, was made most apparent only by partitioning whole groups of patients into those globally improved and unimproved. Changes in certain dimensions, which had previously been masked in the whole group analysis, became evident. The significance of differences in HSCL dimensions clearly reinforced the 7-point global self-report of improvement.

TABLE 2

Improvement Ratings (Global) in Completers and Controls at 4 Month and 1 Year Follow-up

Global Rating	4 Month				1 Year			
	Completers		Controls		Completers		Controls	
	N	%	*N*	%	*N*	%	*N*	%
Improved	53	88	42	65	46	78	41	58
Unimproved	7	12	23	35	13	22	30	42

TABLE 3

Improvement Ratings (Target Complaint 1) in Completers and Controls, Improved and Unimproved, at 1-Year Follow-up

Rating of Target Complaint	Rating of Global Improvement							
	Completers				Controls			
	Improved		Unimproved		Improved		Unimproved	
	N	%	*N*	%	*N*	%	*N*	%
Improved	38	83	1	8	31	78	4	14
Unimproved	8	17	11	92	9	22	24	86

TABLE 4

HSCL Mean Scores of All Completers vs. All Control Patients at Initial Evaluation and at 1-Year Follow-up

HSCL Measure		Completers ($N = 61$)		Controls ($N = 72$)	
		Mean score	*p*	Mean score	*p*
Somatization	Initial	2.14	.001	2.01	.001
	1 year	1.83		1.77	
Obsessive-Compulsive	Initial	1.91	NS	1.84	NS
	1 year	1.82		1.82	
Interpersonal Sensitivity	Initial	1.92	NS	1.88	NS
	1 year	1.79		1.87	
Depression	Initial	2.03	.005	1.94	.10
	1 year	1.75		1.84	
Anxiety	Initial	2.18	.005	1.93	.10
	1 year	1.84		1.81	
General Sensitivity	Initial	2.03	.005	1.93	.005
	1 year	1.80		1.81	
Positive symptom total	Initial	33.89	.005	32.58	.005
	1 year	29.43		29.17	
Positive symptom distress	Initial	1.64	.001	1.55	.05
	1 year	1.40		1.47	

TABLE 5

HSCL Mean Scores of All Completers vs. All Control Patients Divided into Improved and Unimproved at Initial Evaluation and 1-Year Follow-up

HSCL Measure		Completers				Controls			
		Improved ($N = 46$)		Unimproved ($N = 13$)		Improved ($N = 41$)		Unimproved ($N = 30$)	
		Mean score	*p*	Mean score	*p*	Mean score	*p*	Mean score	*p*
Somatization	Initial	2.15	.001	2.04	NS	1.96	.001	2.08	NS
	1 year	1.71		2.22		1.64		1.96	
Obsessive-Compulsive	Initial	1.91	.01	1.99	NS	1.75	NS	1.96	NS
	1 year	1.70		2.24		1.62		2.10	
Interpersonal Sensitivity	Initial	1.92	.01	1.98	NS	1.78	NS	2.03	NS
	1 year	1.71		2.09		1.76		2.02	
Depression	Initial	2.04	.001	2.07	NS	1.92	.001	1.96	.05
	1 year	1.62		2.17		1.63		2.13	
Anxiety	Initial	2.27	.001	1.91	NS	1.91	.001	1.99	NS
	1 year	1.70		2.29		1.61		2.11	

Other Clinical Variables and Improvement

Analysis by scaled estimates of other clinical variables were obtained at screening and at 4-months and 1-year follow-up (Table 6).

In globally improved completers, significant improvement occurs in work- or role-related variables, in family relations, and in estimates of the present extent of emotional problems. This improvement occurs particularly or exclusively by the end of 4 months and is maintained at 1-year follow-up. Globally unimproved completers improved in three of four variables at 4 months but relapsed by 1 year.

In contrast, globally improved controls show improvement in one of two work- or role-related variables and in family relations, but only over the entire year of follow-up. Unimproved controls showed no significant improvement in three of four clinical variables at 4 months or 1 year. Improvement in extent of emotional problems occurs at 4 months but relapses thereafter.

In summary, certain selected clinical variables estimating capacity for work, state of family relationships, and present extent of emotional problems show globally improved completers to be significantly improved in more clinical dimensions than were globally improved controls. This improvement occurred during the period of psychotherapy and was maintained at 1-year follow-up. In contrast, globally unimproved completers and controls showed no improvement over the year. These groups improved in extent of emotional problems in the first 4 months but relapsed thereafter.

Medical Diagnoses and Their Relation to Global Improvement

The influence of physical illness on global improvement ratings utilizes accepted medical diagnoses as written in the patient's medical chart[5] (see *Methods*).

Hypertension, obesity, and cardiovascular disease were the most frequent medical diagnoses in both completers and controls. Because of their importance, we examined the overlap between the diagnoses hypertension, obesity, and cardiovascular disease. Hypertension, with or without obesity and cardiovascular disease, was distributed to an approximately equal extent in both completers and controls.

Examination of the influence on global improvement by medical diagnostic categories reveals that the greater global improvement achieved by patients also treated by psychiatrists held true to a marginal extent for the following illnesses: hypertension, cardiovascular disease, and endocrine disorder (diabetes included) ($p < .10$). Reported improvement in cases of obesity are similar and under 65 per cent in both completers and controls (Table 7).

In short, patients traditionally treated by internists in this study were globally improved to an equal or greater extent when psychotherapy was added to their medical care. Changes in the physiological measures of the medical conditions, *e.g.*, blood pressure, weight, etc., are not reflected in the global improvement rating.

Psychoactive Drugs and Global Improvement

There was a substantial use of drugs in conjunction with brief psychotherapy and a lesser use of drugs by internists with patients in the control groups and with psychotherapy patients after termination of psychotherapy. During the first 4 months, 69 per cent of patients undergoing psychotherapy received some psychotropic drugs, but these drugs were prescribed equally among improved and unimproved completers.

After termination of psychotherapy, there were no significant differences in the use by internists of psychoactive medications in completers and controls as ascertained by review of medical charts. Minor tranquilizers were the most frequently prescribed, and their use was distributed equally between completers and controls.

It seemed, therefore, unlikely that the use of psychoactive drugs entered into the greater global improvement of patients completing psychotherapy at 1-year follow-up.

Employment, Disability, and Global Improvement at 1-Year Follow-up

Disability rated from chart review on a 9-point scale was dichotomized into high and low disability. Division of completers and controls, according to disablement and employment status, resulted in four proportionately similar groups (Table 8).

Employment status and disability ratings did not affect the greater global improvement of completers as single variables or in combination, although high disability patients had a greater proportion of unemployed persons in both groups. The greatest global improvement occurred among the low disabled and unemployed patients who completed psychotherapy.

Disablement as a rating was an attempted synthesis of emotional and physical contribution to impaired function in the patient's role as worker, housewife, or student. In a further effort to dissect out the contribution of emotional disorder to patterns of illness and

[5] Dr. Reading reviewed 364 medical charts. These were a sample of the 698 patients screened between July 1, 1970 and February 28, 1973. Charts were processed so that Dr. Reading was unaware that a patient received medical treatment alone or medical treatment in addition to psychotherapy. Of this group, 79 patients had no significant emotional disorder.

TABLE 6

Status of Clinical Variables among Improved and Unimproved Completers and Controls at Screening, 4 Months, and 1 Year

Clinical Variables	Completers: Improved ($N = 46$)					Completers: Unimproved ($N = 13$)					Scale Definition
	Initial		4 months		1 year	Initial		4 months		1 year	
Job/role performance past 4 months	3.49	$p < .035$	3.96	$p < .09$	4.24	3.23	NS	3.69	NS	3.08	1 Incapacitated 3 Moderate 5 Not affected
			$p < .001$					NS			
Physical limitations for work	2.11	$p < .11$	1.85	NS	1.78	2.31	NS	2.31	NS	2.62	1 None 2 Minor 3 Moderate 4 Severe
			$p < .012$					NS			
General family relations	2.63	$p < .01$	2.07	NS	2.04	2.85	$p < .055$	2.31	NS	2.61	1 Very good 3 Fair 5 Very poor
			$p < .01$					NS			
Present extent of nervous or emotional troubles or problems	2.37	$p < .01$	3.41	NS	3.44	2.23	$p < .06$	3.08	$p < .008$	2.15	1 Very much 3 Moderate 5 None
			$p < .001$					NS			

Clinical Variables	Controls: Improved ($N = 41$)					Controls: Unimproved ($N = 30$)					Scale Definition
	Initial		4 months		1 year	Initial		4 months		1 year	
Job/role performance past 4 months	3.72	NS	3.94	NS	3.92	3.41	NS	3.75	NS	3.72	1 Incapacitated 3 Moderate 5 Not affected
			NS					NS			
Physical limitations for work	2.02	NS	1.83	NS	1.71	2.14	NS	2.17	NS	2.17	1 None 2 Minor 3 Moderate 4 Severe
			$p < .02$					NS			
General family relations	2.41	NS	2.31	$p < .003$	1.93	2.48	NS	2.60	NS	2.76	1 Very good 3 Fair 5 Very poor
			$p < .003$					NS			
Present extent of nervous or emotional troubles or problems	3.08	NS	3.47	NS	3.31	2.38	$p < .06$	2.82	NS	2.48	1 Very much 3 Moderate 5 None
			NS					NS			

TABLE 7

Proportional Diagnostic Categorizations from Chart Review for Completers and Controls and Global Improvement Status at 1-Year Follow-up

Diagnostic Category	Completers				Controls				χ^2	p
	Improved		Unimproved		Improved		Unimproved			
	N	%	N	%	N	%	N	%		
Hypertension	14	88	2	12	16	59	11	41	3.69	.10
Obesity	14	64	8	36	10	56	8	44	.27	NS
Cardiovascular	6	75	2	25	5	36	9	64	3.14	.10
Gastrointestinal	6	75	2	25	9	60	6	40	.52	NS
Endocrine-metabolic	3	100	0	0	7	54	6	46	3.10	.10
Diabetes	4	67	2	33	1	20	5	80		

TABLE 8

Disability, Employment Status, and Improvement at 1-Year Follow-up

	High Disability Unemployed			High Disability Employed			Low Disability Unemployed			Low Disability Employed			Total		
	N	Improved		N	Improved		N	Improved		N	Improved		N	Improved	
		N	%		N	%		N	%		N	%		N	%
Completers	23	15	65	7	6	86	11	10	91	17	14	82	58	45	78
Controls	26	14	54	7	4	57	16	10	63	20	12	60	69	40	58

TABLE 9

Estimated Emotional Component in Presenting Illness and Global Improvement

	High Levels of Emotional Component			Low Levels of Emotional Component		
	N	Improved		N	Improved	
		N	%		N	%
Completers	39	29	74	19	16	84
Controls	33	18	55	36	22	61

response to treatment programs, the estimated emotional component in the patient's presenting illness was examined in relation to global improvement and dichotomized into high and low levels for analysis. These estimates by chart review showed more completers to have high levels of emotional component to their presenting illness ($p < .05$) and thus agreed with differences suggested in the screening data. The greater global improvement of completers, however, was independent of the estimated level of emotional component in patterns of illness. In fact, patients with lower levels of estimated emotional component were improved more often in both groups of patients (Table 9). It appears that the differences found in estimated degree of emotional disturbance do not account for the greater global improvement found in patients completing psychotherapy.

Change in Employment Status from Intake to 1-Year Follow-up

To estimate and compare change in employment status in completers and controls, it was first necessary to establish the reliability of welfare patients' statements on the sensitive question of employment status. To do this, we related patients' stated reasons for unemployment at the screening interview with disability ratings made from review of the patients' medical charts not less than 1 year later.

If any patient gave illness as a reason for unemployment, there was an 85 per cent chance that the totally independent chart review would classify the patient as highly disabled. If the patient gave a social reason ("can't find" or "no desire"), there was a 65 per cent chance there would be low disablement rating by chart review. Fewer than 10 per cent gave illness as a reason for unemployment and were later assigned a low disability rating. We concluded from this evidence that patients' statements on unemployment status were apt to be reliable.

More patients completing psychotherapy in addition to treatment by internists made the transition from initial unemployment to employed status at 1-year follow-up than was the case for patients treated by internists alone. The net gain of improved patients from screening to 1-year follow-up among completers was 10 patients (17.2 per cent). Among controls, the net gain was two patients (2.9 per cent). The net gain represents the number of patients becoming employed minus the patients becoming unemployed from initial to 1-year follow-up. ($z = 2.75$, $p < .01$).

There was also a strong association between the objective measure of change from unemployed to employed status and the self-report of global improvement. Of the 12 patients in both groups representing the net employment gain at 1 year, 11 (92 per cent)

were globally improved at 1 year. Age, race, and disability status of these patients did not markedly differ from the whole groups' profiles.

The greater global improvement of completers, then, is associated with a greater number of patients unemployed at screening who became employed at 1-year follow-up.

Discussion

It is possible that the subtraction of 41 no-shows and 68 dropouts left a group of completers who tended to evidence somewhat greater degrees of emotional disorder among patients completing psychotherapy. Patients with higher levels of emotional disturbance would be apt to benefit more from any treatment assuming that demographically they were not different. There was evidence from our data, however, that strongly suggested that this was not the explanation for the greater global improvement of completers. The prevalence of diagnosed physical illnesses was not different in the two groups. The greater difference in global improvement between completers and controls occurred in patients judged to have lower rather than higher disability ratings from the chart review. Patients judged to have lower levels of emotional component contributing to their patterns of illness were more often improved than patients judged to have higher levels of emotional distress. Patients with the diagnosis of hypertension, cardiovascular disease, and endocrine-metabolic disorders tended to be more improved at 1-year follow-up if they had also completed the 10 weeks of psychotherapy. While the evidence is not conclusive, the somewhat greater levels of emotional distress among completers did not seem likely to account for their greater global improvement found at 4-month and 1-year follow-up.

Central to our evaluation of results is the finding of significantly greater global improvement which was established at 4-month and 1-year follow-up for completers or patients undergoing psychotherapy in addition to their medical treatment.

Two general possibilities can be implied from the rather complex data deriving from the dichotomized categories globally improved and globally unimproved. Confining attention to the data on global improvement, the HSCL, and the patient's first mentioned target complaint, it might be concluded that the chief contribution of brief psychotherapy is to address more systematically patients in whom patterns of illness are strongly enmeshed with psychosocial problems with or without the presence of organic disease. This view would suggest that there is a common denominator in the clinician's meliorative influence independent of the specific professional role of clinicians as internists or psychiatrists. This would be consistent with the report by Strupp *et al.* (11) of the nonspecific effects of psychotherapy which could here be cited as the common denominator in the clinical effectiveness of the psychiatrist and the General Medical Clinic physician. This would still leave the fact that, whatever the nature of improvement as measured by global self-report, significantly greater numbers of patients completing brief psychotherapy were so improved. Furthermore, on the HSCL dimensions Obsessive-Compulsive and Interpersonal Sensitivity, patients undergoing psychotherapy were significantly improved while improved controls showed no improvement in these dimensions.

The most important evidence that the brief psychotherapy results in a qualitative difference in improvement of patients comes primarily from the timing of the improvement experience.

Maximal global improvement in completers and controls and the highest level of difference of improvement between completers and controls occurs at 4 months which coincides with the termination of brief psychotherapy. Other scaled clinical variables which document this timing are those estimating impairment for work, the state of family relations, and the extent of emotional problems. In these variables, improvement among completers occurs in the first 4 months, an improvement that is maintained but not altered at 1-year follow-up. Among improved controls, no such pattern is observed. Significant improvement does not occur in any clinical variable in the first 4 months, and those fewer variables that show significant improvement occur gradually over the year.

Among the unimproved completers, there is a tendency to improve in the first 4 months and relapse during the subsequent 8 months. This is particularly striking in the case of the variable present extent of nervous or emotional problems. These changes are less clearly demonstrated in unimproved controls.

The operational value of the self-report of global improvement, underscored in our analysis of complex data, is in agreement with the findings of McNair (7) in his comparative analysis of methods of evaluating change by self-report in the drug therapy of depression. McNair recommends as the primary and most sensitive instrument a 7-point global rating scale. In our experience, the combination of the 7-point global improvement scale has definitely improved the quality and amount of information to be derived from the HSCL and the patient's first mentioned target complaint. The latter, as suggested by Battle and colleagues (1), has proved useful in the comparison of patients with different presenting complaints. We have found the first mentioned target complaint useful as a criterion of improvement in groups of patients with

various admixtures of physical illness and emotional disorder, but only when used in conjunction with a global improvement rating.

Finding more unemployed patients to be employed at 1-year follow-up among patients also undergoing psychotherapy was unexpected. The overlap between greater global improvement of completers and the finding concerning greater employment status at follow-up was evidence of a welcome combination of greater global improvement in subjective emotional state and a most important objective measure of improvement in social adjustment, that of employment.

Our results suggest a common beneficial effect of internist and psychotherapist but also contain findings that endorse unique effects of the introduction of time-limited psychotherapy to an ongoing program of general medical care. These differences are manifested in the numbers, quality, and timing of improvement in patients who complete brief psychotherapy.

Conclusions

1. The clinical work of psychotherapists under the constraints of time-limited psychotherapy resulted in significantly more patients evaluated as globally improved at 4-months and 1-year follow-up as compared with patients treated by internists only. This greater global improvement evaluated on a 7-point scale by self-report was confirmed by other methods of evaluating and comparing change in the behavior of patients.

   a) Globally improved patients were significantly improved on all dimensions of the HSCL at 1-year follow-up. Globally unimproved patients were unimproved in all dimensions of the HSCL.

   b) Globally improved patients of both groups were improved on their primary target complaint in about 80 per cent of patients. Globally unimproved patients were unimproved on their primary target complaint in about 90 per cent of patients.

   c) Scaled clinical data concerning work and social adjustment demonstrated that patients undergoing psychotherapy who reported themselves as improved had achieved this improvement by the time of termination of their brief psychotherapy (4 months). This improvement was maintained but not altered at 1-year follow-up.

   d) Scaled data derived from later independent review of the patients' medical charts strongly suggested that greater global improvement held true for patients assigned certain major medical diagnoses, *i.e.*, hypertension, cardiovascular disease, and endocrine disorders.

   e) More patients unemployed at screening became employed at 1-year follow-up among patients treated in time-limited psychotherapy than did patients treated by internists alone.

2. The better results of psychotherapy were independent of age, diagnosed medical illness, disability ratings, and use of psychoactive medications.

3. The internist or general practitioner is effective in treating a substantial number of emotionally disturbed and socioeconomically disadvantaged patients. The addition of brief psychotherapy does, however, result in a significantly greater number of patients who are improved at 1-year follow-up in report of their subjective state and an increase in the number who were employed.

References

1. Battle, C. C., Imber, S. D., Hoehn-Saric, Stone, A. R., *et al.* Target complaints as criteria of improvement. Am. J. Psychother., *20:* 184–192, 1966.
2. Derogatis, L. R., Lipman, R. S., Rickels, K., *et al.* The Hopkins Symptom Checklist (HSCL): A measure of primary symptom dimensions. In Pichot, P., Eds., *Psychological Measurements in Psychopharmacology.* Karger, Basel, 1974.
3. Derogatis, L. R., Lipman, R. S., Rickels, K., *et al.* The Hopkins Symptom Checklist (HSCL): A self-report symptom inventory. Behav. Sci., *19:* 1–15, 1974.
4. Herbert, M. T., and Meyer, E. *Technical Report of the Psychiatric Liaison Service of The Johns Hopkins Hospital.* Johns Hopkins Hospital, Baltimore, 1968.
5. Marshall, E. Psychotherapy faces test of worth. Science, *207:* 35–56, 1980.
6. Marshall, E. Psychotherapy works, but for whom? Science, *207:* 506–508, 1980.
7. McNair, D. M. Self-evaluation of antidepressants. Psychopharmacologia, *37:* 281–302, 1974.
8. Meyer, E., Derogatis, L. R., Miller, M. J., *et al.* Medical clinic patients with emotional disorders. Psychosomatics, *19:* 611–619, 1978.
9. Meyer, E., Derogatis, L. R., Miller, M. J., and Reading, A. J. Hypertension and psychological distress. Psychosomatics, *19:* 160–168, 1978.
10. Meyer, E., Spiro, H. R., Slaughter, R., *et al.* Contractually time limited psychotherapy in an outpatient psychosomatic clinic. Am. J. Psychiatry, *124:* 57–68, 1967.
11. Strupp, H. H., and Hadley, S. W. Specific *vs.* nonspecific factors in psychotherapy: A controlled study of outcome. Arch. Gen. Psychiatry, *36:* 1125–1136, 1979.