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DIFFERENTIAL OUTCOME OF SHORT-TERM DYNAMIC PSYCHOTHERAPY AND SYSTEMATIC DESENSITIZATION IN THE TREATMENT OF ANXIOUS OUT-PATIENTS A PRELIMINARY REPORT [1]

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A number of out-patients, presenting anxiety manifestations, were randomly assigned to systematic desensitization or short-term dynamic psychotherapy. The results were compared with regard to symptomatic improvement, gain in insight and integration of conflicts, change in general functioning. The assessment was based on comparison of the results of different methods, applied before and at the end of the therapy and after a follow-up period of three months. Generally we do not find consistent differences of a statistically sufficient magnitude between the treatments. This is in line with the results of comparative studies where specificity of effect is not examined. We find some tendencies in the direction of our expectations. 1. Although not uniform, the results are in favour of the assumption that systematic desensitization produces more immediate specific symptomatic effects. The evolution of this improvement in the follow-up period is divergent, according to the different evaluation instruments. – 2. According to the appraisal of the therapists short-term dynamic psychotherapy produces a larger increase of insight; this opinion is not confirmed by the patients. Probably the concept of "insight" should be more circumscribed. – 3. General effects of therapy are estimated by both groups at the same level. The initial similar effect on habitual role functioning improves during the follow-up in the short-term dynamic psychotherapy group, while the opposite occurs in the systematic desensitization group.

From manifold studies on the effects of psychotherapy it became obvious that, in the description of the outcome, the use of general categories such as "recovery" or "improvement" is insufficient (Strupp, 1971; Pierloot, 1972). On the contrary we should look for more specific areas of change. As concepts referring to specific changes can be used : "evolution of symptoms", "insight and integration of conflicts", "role functioning", besides many others.

Mostly the theoretical bases of different forms of psychotherapy assume specific changes to be obtained. So the aims of behaviour therapy can easily be formulated in terms of symptomatic improvement, while psychodynamically oriented forms of psychotherapy look after changes in personality functioning. According to Luborsky et

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al. (1975) the validity of these assumptions has not been sufficiently established. Most comparative studies of psychotherapy do not include specific outcome measures, i.e. outcome measures specifically linked to each of the forms of therapy used.

In considering the results of psychotherapies, besides the content, the rate of occurrence of change is an important phenomenon. Research done by Gelder, Marks and Wolff (Gelder, Marks and Wolff, 1967; Marks 1976) offers strong arguments for the idea that patients treated with behaviour therapy improve sooner than patients treated with dynamic psychotherapy. A recent study by Sloane et al. (1976) confirms this point in that it finds more overall improvement through behaviour therapy when this treatment is compared with analytic therapy after four months but not after one year.

In our study we have tried to contribute to the solution of this problem of differential content and rate of change by comparing the effects of short-term dynamic psychotherapy and systematic desensitization with specific outcome criteria and at several moments. It is expected 1. that each treatment will yield best results for that aspect of outcome which is specifically related to the theoretical and practical aims of the treatment, i.e. insight for short-term dynamic psychotherapy and symptomatic improvement for systematic desensitization and 2. that the difference in effect will be more in favour of systematic desensitization when both forms of treatment are compared at an earlier point (end of therapy) than at a later point (after a 3 month follow-up period).

METHOD

RESEARCH DESIGN

All new patients coming to our department who could be considered reasonably good candidates for out-patient therapy and scoring 35 or higher on the Taylor Manifest Anxiety Scale (Taylor, 1953) were included in the study and randomly assigned to short-term dynamic psychotherapy or systematic desensitization. Their condition was evaluated with different methods to be described below at pretherapy, posttherapy and after a follow up period of three months. A further follow up is now being initiated.

THERAPISTS

As therapists we used psychiatric and clinical psychology residents in their clinical training, performing both types of therapy under individual supervision. These therapists should be considered, therefore, as rather inexperienced. This makes our study fall into "the twin pitfalls of exposing a patient to an ineffective treatment (because a technique probably does not attain its full potential in the hands of a beginning therapist) and of biasing our results in favour of behavior

therapy (where it is possible that less experience is required to attain a minimal level of competence than in psychotherapy)" (Sloane, et al., 1976). These factors, while limiting the possibility to generalize from our results, do not completely invalidate our study for the following reasons: first it is clear that this aspect of our design will prevent us from making any valid conclusion about the therapeutic results of the therapies in se. We can, however, draw valid conclusions on the therapeutic result of these therapies *as performed by therapists in training*. It seemed worth to us to look at these differences, because it can learn us a lot on what can be expected during training, as well for the therapists in training, as for the patients who are mostly unaware of this status of their therapist. Second, when one wants to study differential results of different therapies, one can argue that the use of inexperienced therapists will enhance the differences, because experienced therapists of different schools are more similar to each other than are inexperienced therapists (Fiedler, 1950). Unspecific clinical skills, probably called "experience", might progressively overshadow differences caused by different techniques. Finally, the danger that using inexperienced therapists would favour behavior therapy is, in our study, somewhat less because about half of the analytic therapies were performed by therapists engaged in formal analytic training, while this was the case for none of the systematic desensitizations.

TREATMENTS

In short-term dynamic therapy a specific psychodynamic conflict is selected and worked through. The conflict is agreed upon with the patient and represents, if possible, the nuclear, "focal" conflict or a conflict considered manageable within the limits of the therapy. The therapist actively centers attention on this conflict and tries to help the patient by offering resistance and mainly transference interpretations and carefully anticipating and preparing the end of therapy, which is explicitly set at 20 sessions (Malan, 1963). In systematic desensitization the patient receives relaxation training while one or more hierarchies, i.e. lists of situations in one anxiety provoking area, graded from quasi innocent to most anxiety provoking, are constructed. These hierarchies are subsequently imagined by the patient beginning with the least anxiety provoking, while being relaxed. (Wolpe, 1969).

As stated, patients were randomly assigned to treatments. Unlike Sloane et al. (1976), we did not allow our therapists to choose the therapy form which they considered best adapted to the patient's needs. We decided to do so 1. because of the selection criterion: the relief of anxiety was found to be one of the main effects of analytic therapy in a large survey on this topic by Hamburg et al. (1967). According to the patterns of anxiety, systematic desensitization is considered as less or more effective, but in general this indication can be justified (Marks, 1976). So it seemed fair to compare both

selected treatments with this population and fair to treat our patients with one of them; 2. because both therapies are comparable to each other in certain respects: both were restricted in time. Short term dynamic therapies were restricted to 20 sessions and this restriction was explicitly stated to the patient at the start of the therapy. For systematic desensitization such a restriction is not included in the classical procedure but, on the basis of the mean number of sessions needed for one hierarchy (Paul, 1969), it seemed acceptable to explicitly restrict these therapies also to 20 sessions. In both therapies, furthermore, specific, circumscribed problem areas are attacked; in the case of short-term dynamic psychotherapy this is the nuclear conflict or the conflict which is considered manageable (the "focus") and for systematic desensitization this is the content of the hierarchy or the hierarchies. On the other hand, the theoretical backgrounds and the therapeutic techniques are quite divergent.

So, while the use of inexperienced therapists makes us believe that our therapists will try to comply more with the prescribed technique and rely less on general clinical experience, the difference between both techniques is, by the use of the two mentioned therapy forms, reduced to what constitutes the essential difference between them: resistance and transference interpretations in short term dynamic psychotherapy and relaxation training and graded presentation of the feared situation in systematic desensitization.

PATIENTS

Selection: All new patients judged at intake to be sufficiently good candidates for individual out-patient therapy and scoring 35 or higher on the TMAS were included in our study. This selection procedure makes our population consist of anxious outpatients. As far as we can judge, this population is in some important respects comparable to the groups of the Sloane et al. (1976) study. In both cases the groups are relatively heterogeneous as to clinical psychiatric diagnosis and present no serious contra-indications for out-patient psychotherapy. As Sloane et al. argue, the study of such groups is clinically much more relevant than that of non-patient groups or of groups known to be specific indications (e.g. monophobic patients for systematic desensitization). Our group is more specific than those of the Sloane et al. study in that it is a group of anxious patients (TMAS score of 35 or higher; we preferred to use a test score to avoid the difficulties of psychiatric diagnostic criteria). This specificity enabled us to use two specific treatments, equally fitted for the treatment of anxious patients. On the other hand, the use of standard treatment procedures poses the problem to know if the forms of therapy used were exactly what our patients needed. In some cases a treatment might have been applied to patients or problems for which this form of therapy is not suited. Here again, as it is the case with our use of therapists in training, this procedure will prevent us from making conclusions about the *absolute*

efficiency of these therapies. (Conclusions about the absolute effect of therapies should, besides, be drawn from studies including a control group receiving minimal or no therapy.) What is important for us is, however, not the absolute effect of the therapy, but the *relative* effect. It is furthermore because indication for psychotherapy with anxious patients is not a matter of absolute indication (i.e. one treatment does apply and the other does absolutely not, as for example, appendicectomy for a broken leg) but of a relative indication, that conclusions about the differences in effect between both treatments can, in our opinion, be validly drawn from this design. It can be expected that the range of any effect will be larger than in studies with more selected patient groups, but this does not prevent a valid comparison between the effects of both treatments. One should remember that, on general clinical grounds, our patients were considered reasonable candidates for individual out-patient therapy in general.

Composition of groups: The study was carried out at the Psychiatric Out-patients department of the University Hospital "St. Rafaël", Leuven, during the period from November 1973 to May 1975. Of the 93 patients obtaining a TMAS-score of 35 or higher, 39 have been eliminated for different reasons (admission in a psychiatric hospital, severe disturbances, refuse of therapy). The remaining 54 patients went through the pre-therapy evaluation and were referred to one of the

		total group		focal therapy group		systematic desensitization group	
N		22		9		13	
sex	female	11		5		6	
	male	11		4		7	
		$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
age		33.45	8.89	35.11	7.82	32.31	9.71
education (1)		3.23	1.51	3.22	1.64	3.23	1.48
professional level (1)		2.77	1.34	2.89	1.27	2.69	1.44
intelligence (2)		5.27	2.10	5.11	2.57	5.38	1.80

TAB. 1. COMPOSITION AND CHARACTERISTICS OF PATIENT GROUPS. (1) In 6 categories, lower scores indicating less education or lower professional status. (2) Mean WAIS vocabulary (Stinissen et al., 1970) weighted scores, corresponding to extrapolated verbal IQ scores of 100 for the total group, 99 for the focal therapy group and 100 for the systematic desensitisation group.

mentioned forms of therapy. A portion of 28 patients dropped out in the very beginning of the therapy (13 of the short-term dynamic therapy group, 15 of the systematic desensitization group). Four patients completed their therapy but did not show up for the after-

therapy or follow-up evaluation. Only for the remaining 22 patients (9 in the short-term dynamic therapy group and 13 in the systematic desensitization group) we dispose of the complete data. Such a large drop-out confirms the opinion that only a small percentage of the general psychiatric population can benefit from whatever structured psychotherapy actually available (Heiberg, 1975; Marks, 1976). The composition of this group of 22 patients, with regard to age, sex, intelligence, educational and professional level, is presented in Table 1. Some formal characteristics of the therapies (number of sessions, length of therapy and follow-up) are shown in Table 2.

	total		focal therapy		systematic desensitization	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
number of sessions	19.77	0.61	19.67	0.71	19.85	0.55
length of therapy (1)	6.55	2.28	7.22	3.07	6.08	1.50
length of FU period (1)	3.95	1.21	4.11	1.36	3.85	1.14

TAB. 2. CHARACTERISTICS OF THERAPIES. (1) In months.

ASSESSMENT

The assessment of change was based on the comparison of the results obtained prior to the therapy, at the end of therapy and after a follow-up period of at least 3 months on :

- The Psychiatric Status Schedule (P.S.S.) (Spitzer, et al., 1970). This standardized psychiatric interview for evaluation of psychopathology and impairment in role functioning offers interesting possibilities in the assessment of changes through psychotherapy because the data regarding the present status refer to the last two weeks (or in some instances the last month). The scale is composed of various symptom and symptom cluster scales and provides also indications on habitual role functioning.
- The Taylor Manifest Anxiety Scale (T.M.A.S.) and the State-trait Anxiety Inventory (S.T.A.I.) (Spielberger, et al., 1970).
- A symptom check list of 100 possible complaints or problem areas.

Moreover the subjective appraisal of several aspects regarding the outcome of the therapy was rated on a 10-point scale. This instrument is constructed at the Counseling Center of the K.U.Leuven [3] on the

[3] The authors gratefully acknowledge the permission of Dr. G. Lietaer to use this scale.

basis of a study by Nichols and Beck (1960) and includes judgments on symptomatic improvement, insight, happiness, general appreciation of therapy etc. Patients filled out this scale at the end of therapy and after the follow-up period. For the therapists we dispose only of the appreciation at the end of the therapy.

We distinguished the following categories of change :

1. Symptom evolution
   A. Specific symptomatic improvement (i.e. decrease of anxiety or relief from the specific complaint of the patient at the intake) expressed by :
      1. Subjective appraisal by patient and therapist of symptomatic improvement
      2. T.M.A.S. changes
      3. S.T.A.I. changes
      4. P.S.S. anxiety scale changes.
   B. General symptomatic improvement, expressed by :
      1. Changes in number of complaints on a symptom check list
      2. P.S.S. subjective distress scale changes.
2. Insight and integration of conflicts, expressed by :
      1. Subjective appraisal by patient and therapist on increase in insight
      2. P.S.S. Denial of illness scale changes (inversely related to insight).
3. General appreciation of the results of therapy and changes in role functioning :
      1. Subjective appraisal by patient and therapist of other aspects of change
      2. P.S.S. summary role score changes.

RESULTS

The mean values of the different criteria at different moments are given in Table 3.

SYMPTOMATIC IMPROVEMENT

On two of the scales for anxiety manifestations we see that systematic desensitization produces more improvement than short-term dynamic psychotherapy at the end of the therapy but this difference does not persist in the follow-up period. For the Taylor Manifest Anxiety Scale there is a greater reduction of anxiety in the systematic desensitization group than in the focal therapy group at the end of the therapy. This difference has, however, faded away after the follow-up period. For the State-Trait Anxiety index, Form State, the same trend is found, with the systematic desensitization group gaining more anxiety reduction at the post-therapy testing, but with a reversal at the follow-up tests. Analysis of variance shows an interaction between form of treatment and sequence, which is approaching statistical significance. When compared with the Mann-Whitney-U-test (Siegel, 1956), anxiety changes from post-therapy test-results to follow-up test-results are significantly greater in the short-term dynamic psychotherapy group at the .05 level.

In two other anxiety measures, change, obtained at the end of the therapy, is slightly larger in the systematic desensitization group and

TAB. 3. MEANS ($\bar{X}$) AND STANDARD DEVIATION (SD) OF OUTCOME CRITERIA BEFORE THERAPY (PRE) AT THE END OF THERAPY (POST) AND AFTER FOLLOW-UP (FU) FOR GROUPS TREATED WITH SHORT-TERM DYNAMIC PSYCHOTHERAPY (STDP) (N = 9) AND WITH SYSTEMATIC DESENSITIZATION (Syst. Des.) (N = 13) AND COMPARISONS (Mann-Whitney-U-tests) BETWEEN TREATMENTS AT POST AND FU. (1) Higher values indicate more favorable appreciation.

CRITERIA	PRE				POST					FU				
	STDP		syst. des.		STDP		syst. des.		P post	STDP		syst. des.		PFU
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD		$\bar{X}$	SD	$\bar{X}$	SD	
1. *symptomatic*														
TMAS	35.89	6.31	38.23	4.92	34.89	6.94	30.46	10.74	NS	30.50	9.93	30.18	9.85	NS
STAI state	58.22	15.55	60.85	11.43	55.44	8.35	50.84	15.25	NS	50.66	6.61	54.92	16.80	NS
STAI trait	62.67	8.57	60.38	13.12	58.66	7.95	57.76	12.59	NS	58.66	7.02	55.07	15.02	NS
PSS anxiety	63.56	9.34	61.31	8.29	59.78	11.50	54.23	13.20	NS	60.38	17.61	49.92	12.55	NS
subjective appraisal														
symptom. improv. (1)														
patient					6.00	1.12	6.23	1.64	NS	5.78	1.09	6.38	2.18	NS
therapist					6.33	1.32	6.08	1.12	NS					
symptom check list	30.78	12.71	32.85	17.31	27.00	17.04	29.53	21.01	NS	21.33	14.34	26.61	13.17	NS
PSS subjective distress	61.78	6.18	61.92	8.47	54.44	9.00	52.77	12.88	NS	50.13	10.97	50.08	12.55	NS
2. *insight*														
subjective appraisal														
insight (1)														
patient					5.77	1.99	5.84	1.46	NS	5.66	1.41	5.76	1.92	NS
therapist					6.11	0.93	4.92	0.86	0.05					
PSS denial illness	41.78	2.91	44.46	8.08	41.33	2.00	41.23	1.92	NS	41.50	2.98	42.46	3.48	NS
3. *general*														
subjective appraisal														
general improvement (1)														
patient					18.44	4.72	18.08	5.45	NS	15.11	3.82	16.69	6.32	NS
therapist					24.22	6.74	22.77	3.68	NS					
PSS summary role	51.33	4.30	52.67	6.80	49.33	5.45	49.33	6.84	NS	48.38	6.63	54.64	13.63	NS

the difference persists in the follow-up period. For the State-Trait Anxiety index, Form Trait, differences are very small but slightly growing in the follow-up period. This same trend is apparent with the anxiety scale of the P.S.S. but here the differences are greater, without however, reaching sufficient magnitude to be statistically significant.

The subjective appraisal of specific symptomatic improvement concerns the manifest symptoms, also others than anxiety, existing at the start of the therapy. According to the opinion of the patients, systematic desensitization is scored as yielding more symptomatic relief and this advantage over short-term dynamic psychotherapy is still larger after the follow-up period. For the therapists, on the contrary, (from which we have only an evaluation at the end of the therapy) the difference between both therapy groups is in the opposite direction.

For the evaluation of change with regard to general symptomatology we dispose of two measures : the numbers of complaints on a symptom check list and the subjective distress scale of the P.S.S. For both scales the slopes of the changes in both therapy groups are essentially similar, with some slight advantage for short-term dynamic psychotherapy for the first and for systematic desensitization for the second measure.

INSIGHT

For the changes in insight and integration we refer to two forms of reporting; the subjective appraisal by patient and therapist on this point and pre-post differences on the denial of illness scale of the P.S.S. From Table 3 it can be seen that patients do not differentiate both forms of therapy on this point : at the post-therapy testing as well as after follow-up the gain of insight is judged essentially similar. The therapists again do not have the same appreciation as the patients : in their opinion there is significantly more gain in insight in the short-term dynamic psychotherapy group (Mann-Whitney-U-test, $p < 0.05$).

The content of the insight is more specified in the Denial of Illness Scale. Here it is apparent that there is no change in the mean insight in the psychological nature of the illness in the short-term dynamic psychotherapy group. Such a change would, however, have been hardly possible because there happens to be very little denial of illness in this group at the start (no denial at all = 40). This would mean, parenthetically, that this group is, at least at this point, well suited for analytical therapy. In the systematic desensitization group we start with a higher level of denial which falls, at the end of therapy to the same level as that of the short-term dynamic psychotherapy group and some of the gain is lost in the follow-up period.

GENERAL APPRECIATION OF RESULTS AND CHANGES IN ROLE FUNCTIONING

We assumed that the remaining categories of the above mentioned subjective appraisal scale (see : Assessment), reporting more general

effects of therapy, reflect the general appreciation of the result of the therapy by patient and therapist. In Table 3, the pooled results of these categories are given. For the patient's appraisal, we do not find clear differences between the therapy groups. The small advantage of the systematic desensitization group in the follow-up testing is non-significant. But there is a significant order effect, indicating that both patient groups are estimating the general effects of their therapy significantly more positive at the end of the therapy than after the follow-up period. Therapists again do slightly favour short-term dynamic psychotherapy in their appreciation of general effects, but the difference is non-significant.

We finally employed the summary role scale of the P.S.S. as a measure of habitual role functioning. We find here largely comparable changes for both forms of therapy for the pre- to post-therapy evolution. During the follow-up period, however, we see for the short-term dynamic psychotherapy group a continuation of the trend towards better role functioning, while for the systematic desensitization group there exists a deterioration of their normal role functioning. But also these differences do not reach statistical difference.

DISCUSSION

Coming to the question wether we find specific effects of short-term dynamic psychotherapy and systematic desensitization when these treatments are applied to anxious out-patients by therapists in training, the answer must be negative. Even when outcome measures are used which are relatively specific to each treatment, we do not find consistently significant differences between treatments. This result is similar to those of most comparative studies of psychotherapies where this specificity is not pursued.

Besides the restrictions inherent in our design, a restriction must be made concerning the specificity of our measures: on the one hand the specific effects of short-term dynamic therapy might better be stated in dynamic terms, as is proposed by Malan (1973) and on the other hand it could be that the effects of behaviour therapy could be more specifically stated in behavioral terms.

Next to this conclusion of poor specificity of the effects of the treatments examined, some trends may be discovered in the results: at the end of therapy the change found in the systematic desensitization group exceeds that of the short-term dynamic therapy group for two of the anxiety rating scales; for the other scales it is almost similar but nowhere the opposite is found. This trend is also confirmed by the subjective appraisal of improvement, concerning manifest symptoms by the patients; the judgment of the therapists, however, goes in the opposite direction.

According to the different evaluation instruments, the evolution of specific symptomatic improvement in the follow-up period is quite divergent: the difference becomes more pronounced in favour of

systematic desensitization (STAI-trait, Anxiety scale PSS, subjective appraisal patients), disappears (TMAS) or is reversed (STAI-state).

The expectation that short-term dynamic psychotherapy would produce a larger increase of insight and integration of conflicts is confirmed only by the subjective appraisal of the therapists. The patients of the systematic desensitization group assess their gain in insight as high as those of the short-term dynamic psychotherapy group. This apparent difference between the opinion of patients and therapists might be partly explained by a difference in the kind of insight which is gained : systematic desensitization might have brought about cognitive changes which are considered as a gain in insight by the patient but are not appraised as such by the therapist.

The general effects of the therapy are estimated by both patient groups at the same level but their appreciation diminishes significantly in the follow-up period. It should, finally, be stated that a follow-up period of three months is very restricted and does not permit conclusions on long term effects. A further follow-up examination is being initiated.

CONCLUSIONS

1. Clear and consistent evidence for differential effects of short-term dynamic therapy and systematic desensitization when applied to anxious out-patients by therapists in training is not found. While differences might have been more statistically significant with larger groups, this result is consistent with those of most comparative studies of psychotherapies.

2. Some trends, partly confirming our expectations, may be discerned in the results :

- Although not uniform, the results of our study are in favour of the opinion that systematic desensitization produces more immediate specific symptomatic effects than short-term dynamic psychotherapy. This tendency is not found in the assessment of general symptomatic change. The evolution of this specific symptomatic improvement in the follow-up period is quite divergent, according to the different evaluation instruments.
- In the appraisal of the therapists, short-term dynamic psychotherapy produces a larger increase of insight, but the patients of the systematic desensitization group assess their gain in insight at the same level as those of the short-term dynamic psychotherapy group. Probably the concept of "insight" is too large and should be more circumscribed.
- General effects of therapy are estimated by both groups at the same level, but the appreciation diminishes significantly in the follow-up period.
- During the follow-up, the initial similar effect on habitual role functioning improves in the short-term dynamic psychotherapy group while the opposite occurs in the systematic desensitization group.

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