Brit. J. Psychiat. (1965), **111**, 561–573

A Controlled Retrospective Study of Behaviour Therapy in Phobic Patients

By I. M. MARKS and M. G. GELDER

Introduction

Considerable claims have been made for behaviour therapy, but the evidence for its effectiveness is still conflicting. There are several reasons for this. First, although behaviour therapy is a convenient term to describe treatments which reputedly share a common derivation from learning theory, it describes techniques which differ widely from one another in practice, and which at the same time have features in common with other forms of psychotherapy. Secondly, behaviour therapy has been applied to a variety of neurotic disorders, ranging from writer's cramp to phobias, and these syndromes often have distinct natural histories. Any general statement about the value of behaviour therapy in a mixed group of neuroses is therefore of limited value. Thirdly, the well-known tendency of neurotic disorders to respond to energetic and enthusiastic treatment with non-specific methods makes it difficult to assess the results of treatment unless a matched control group is included in the investigation, or, in the absence of a control group, an exceptionally high rate of recovery is obtained.

Unfortunately few published reports justify the claims which have been made for behaviour therapy. Most are of single cases, or of a few cases without controls; in those which describe extensive series (e.g. Wolpe, 1958; Lazarus, 1963), it is sometimes difficult to group cases into diagnostic categories, and no controls are reported. Few include a satisfactory follow-up: Wolpe has not followed his cases systematically, so his claim of a 90 per cent. recovery rate applies only to the end of treatment, and in any case excludes patients dropping out after less than 15 treatment sessions; of those who started treatment only 75 per cent. did well. Lazarus, following his cases for a mean of 2·15 years, reports only one of 126 cases relapsed, but his original improvement rate was only 61·9 per cent., a figure which does not exceed the familiar two-thirds improvement rate obtained repeatedly when new treatments are tried for mixed groups of neurotic conditions. Cooper (1963) described a carefully controlled retrospective study in which a group of thirty cases was followed for a year after treatment. Only in the phobic disorders were results of behaviour therapy better than control procedures, and even then only at end of treatment and not a month later. However, Cooper's results are not strictly comparable with those of Wolpe and Lazarus because the case material is different: Wolpe and Lazarus treated cases usually in private out-patient practice, Cooper's cases were usually in-patients. Cooper's method of subdividing case material into diagnostic groups is preferable to Wolpe's combination of overall results from a mixed group of psychoneurotic disorders. Despite the difficulties of classification in the neuroses, certain syndromes can be defined. Amongst these the phobias are suitable for investigation because the group is fairly clearly defined, they lend themselves on theoretical grounds to treatment with behaviour therapy, and a direct effort to remove symptoms often appears justified because phobic symptoms may cause considerable distress.

We report a controlled retrospective follow-up study of 32 phobic patients treated since Cooper's report. Similar methods of symptom assessment and selection of control patients were used, enabling us to compare and combine the results of the two series. Having a larger homogeneous group of patients we were also able to examine the relevance to response to behaviour therapy of some specific factors.

https://doi.org/10.1192/bjp.111.476.561 Published online by Cambridge University Press

Results of Other Treatments for Phobias

Results of treatment of phobic disorders by other means have been reviewed by Roberts (1964). Wolpe (1958) and Eysenck (1960) compare results of behaviour therapy with those of psychoanalysis and psychotherapy, but other forms of treatment must also be considered. Roberts found an 80 per cent. improvement rate in 38 "housebound women" treated with sedation and encouragement to go out. This had fallen to 55 per cent. at the end of 3 years. His review of other reported series showed that a similar proportion of these patients respond to diverse treatments, perhaps because of "non-specific" factors which all share. Other series not included in Roberts' review (Friedman, 1950; King and Little, 1959; King, 1962; Knight, 1941; Sim, 1963) show the same. These findings are also similar to Cooper's small series of patients treated with deconditioning, but a detailed comparison is difficult as various authors do not use comparable criteria of improvement. As Roberts points out, slight improvement in phobic symptoms can leave patients with their original social handicaps. Again, severity of the phobic disorders in various series is uncertain. Not only are results of behaviour therapy similar to those of other treatments; it has also introduced no new principle into the treatment of phobias, but has changed the emphasis, making practice the focal point of treatment instead of an adjunct. Many authors (e.g. Janet, 1925; Freud, 1919) have commented on the need for patients to face the situations they fear, as part of treatment. Neither is behaviour therapy an unusually rapid form of treatment. Mean time for the in-patient treatments reviewed above was about 2–3 months; that for behaviour therapy was 4–6 months (Cooper, 1963).

Behaviour therapy has been used in phobias more uncommon than agoraphobia, and in these the most striking results have been reported, e.g. Freeman and Kendrick (1960) with a cat phobia. Although there are reports of individual patients recovering from such phobias with psychoanalysis, or psychotherapy (e.g. Alexander, 1957; Moss, 1960), no large series has been reported. Thus the outcome of these less common phobias is not clear.

Comparison is made yet more difficult by overlap between behaviour therapy and other treatments. Many psychotherapists encourage patients to undertake tasks, behaviour therapists talk to their patients and support them at the same time as they undertake specific deconditioning procedures. Both forms of treatment contain "non-specific" elements of suggestion, encouragement, and the doctor-patient relationship. Behaviour therapy is best regarded as one technique of psychotherapy. The overlap led some writers to attribute the success of one technique not to the apparently specific methods employed but to unplanned use of certain elements belonging to other techniques. Wolpe (1958) claimed that success of dynamic psychotherapy stems from unplanned use of reciprocal inhibition, whilst Glover (1959) suggested that successes of behaviour therapy result from transference and suggestion. We have examined results of treatment empirically, keeping an open mind about the theories. As Cooper (1963) remarked, "No single theoretical framework exists which can explain more than a small proportion of commonly observed phenomena."

Selection of Cases

Behaviour Therapy

All patients treated with behaviour therapy since Cooper's study were located. Fifty-one were found, of which 32 were phobic states. The others will be reported separately. All were treated from 1960 to 1963 (except one in 1956), two-thirds by members of the Psychology Department under the supervision of a consultant psychiatrist.

Search for Controls

Records were searched for all phobics (diagnostic code 312) from the years 1954–1961. Notes of 400 phobic patients were obtained; from these 90 were selected because they had phobic symptoms of the same type as at least one of the behaviour therapy cases, and, for the agoraphobic in-patients, treatment for more than five sessions. From these 90, patients were selected to match individuals who had received behaviour therapy. This was done by one of us who was unaware of the identity or outcome of the patients.

The 32 phobic patients were divided into 21 with agoraphobia (described later) and 11 with other phobias. One of the 21 with agoraphobia had been rejected as

https://doi.org/10.1192/bjp.111.476.561 Published online by Cambridge University Press

unsuitable for behaviour therapy (as she experienced no phobic anxiety in therapy). Each individual was matched with a control as follows: same nature and severity of symptoms; whether in- or out-patient (day hospital counted as in-patient); same sex; and to within 33 per cent. of symptom duration and 10 per cent. in age. A close match was possible for nearly all the agoraphobics, but matching of the 11 other phobics was rather less complete (see later).

Method of Assessment

A detailed summary of each patient's history was prepared, including his condition at 5 points in time: (*a*) on admission, (*b*) end of treatment, (*c*) one month, (*d*) three months, and (*e*) one year after end of treatment. If no follow-up note appeared, the patient was followed by one of us.

At the end of treatment, information was always available from patients' notes. At one year after treatment we obtained information about all except three: 34 from psychiatric notes, 12 from personal interview, 10 from information supplied by the G.P. who had seen them at that time, and in two cases from interviews with relatives. When psychiatric notes or direct interviews were not available, two sources were used, except in one case, a patient who had emigrated.

Verbatim extracts from psychiatric notes of each patient were scored blindly by 2 assessors working independently. Disagreements were settled by a third assessor in 13 per cent. of the assessments. Two scales, identical to Cooper's (1963) were used. These were:

A. *Symptom Severity Scale*

Score	Severity	Definition
1.	Absent	No complaints and normal activity.
2.	Mild	Symptoms complained of by patient but not interfering with normal work or social activities.
3.	Moderate	Symptoms interfering with normal work or social activities in minor ways.
4.	Marked	Normal work or social activities interfered with markedly, but not prevented or radically changed.
5.	Severe	Normal work or social activities either radically changed or prevented.

A change in score of one was called "improved" and of two "much improved".

B. *General Scale*

Less information was usually available on general condition than on symptoms, thus a crude scale was necessary. Any note about the patient's state at work, at home, sexually, and socially was used to rate patients as 1 worse, 2 unchanged, 3 improved, and 4 much improved, when compared with their state at beginning of treatment.

Scales A and B together agree in general with Knight's, Roberts' and Wolpe's criteria, although subcategories are not exactly equivalent. These scales have the disadvantage that scale A is largely defined in terms of phobic symptoms hampering work or social activities, and therefore overlaps with B. However they were used to allow direct comparison with Cooper's findings.

Clinical Features of the Samples

Clinical details of our groups are given to facilitate comparison with other series. The patients appear to be more disabled than those reported by Lazarus (1963) or Wolpe (1958).

Phobic patients were defined as those in whom a main presenting symptom was unusually intense fear of definite situations or objects, recognized by the patient as being more incapacitating than external circumstances warranted.

A. *Agoraphobia*

Our agoraphobics were afraid to go out alone in the street, into shops, crowds, lifts, cars, trains, tunnels, bridges or to remain alone at home, in varying combination. Onset and course resembled those described by Roberts (1964) although our patients were not all "housebound housewives".

All were markedly or severely handicapped by their symptoms, most rating 5, a few 4, on the symptom severity scale. Sixty per cent. were housebound. Symptoms were of long duration, with a mean of 9–10 years. All were in- or day-hospital patients (except one behaviour therapy case). Seventy-five per cent. were married. Ninety per cent. were female—the usual proportion of females among phobic in-patients in this hospital is only 67 per cent. Why more women were selected for behaviour therapy is not clear, but matching reproduced the same feature in the control group. Seventy-five per cent. of patients were aged 20 to 45 years. Half in each group had had previous psychiatric in-patient admissions, the majority for phobias. Over half had had definite depressive mood during the present illness. Only seven patients had marked obsessive symptoms. Many had minor degrees of depersonalization but this was severe in only four.

Early background and family history of psychiatric disorder were similar in both groups. Fifty-five per cent. had neurotic traits in childhood. There was no typical pre-morbid personality, and in a substantial number this was normal. Sexual disturbances were noted in 55 per cent., mainly frigidity. This was usually lifelong, but sometimes starting with the phobias. Most had stable marriages, 80 per cent. of these had children. Verbal intelligence was just above average and mean occupational status was 4 on the Hall-Jones scale (about average).

B. *Other Phobias*

Suitable controls were harder to find because few are referred to the hospital. One case could not be matched. These out-patients are more heterogeneous than the agoraphobics. For convenience they will be referred to as: (*a*) specific phobias: e.g. of animals and insects (seven in each group), thunderstorms (one in each group), and (*b*) social phobias: two patients in each group who were afraid of eating in public.

https://doi.org/10.1192/bjp.111.476.561 Published online by Cambridge University Press

Mean age at treatment of the behaviour therapy group was 28, of controls 27. Each group contained only 2 males and only 2 children (the latter having fears of animals or insects). Mean symptom duration was 18 years for the behaviour therapy and 21 years for the control group. These patients had a mean of 5½ months behaviour therapy; the length of treatment of controls varied widely from a few days to several years.

A striking finding was that age of onset of all specific phobias but two was before the age of eight. This contrasted sharply with agoraphobias and social anxieties, which began in early adult life in all but two patients.

A few specific phobias began after specific events—e.g. a dog bite. Once started, specific phobias tended to run a continuing course, unlike the fluctuating agoraphobias. Except for the specific phobias in children, specific phobias tended to be isolated disturbances in generally well-functioning people. Psychiatric problems other than phobias were present in three of the 12 behaviour therapy patients, and six controls. One behaviour therapy patient and four controls had previous psychiatric treatment. The control group showed rather more psychiatric disturbance.

Home background, childhood experiences and present family settings resembled those of the agoraphobias. Again the phobia occurred in no typical personality.

Treatments Received by the Groups

A. *Agoraphobia*

All except one were in-patients or in the day hospital, with the usual hospital and nursing care, history taking, investigation and occupational therapy.

Behaviour therapy consisted of graded retraining in all patients, with gradually increased activities along a hierarchy as described by Meyer and Gelder (1963). Eight also had relaxation-hypnosis, and six of these received desensitization in imagination, along lines described by Wolpe (1958). At least thirteen had sedative drugs, mostly barbiturates, nine had anti-depressants, two E.C.T., one abreaction and one leucotomy. Three received other psychotherapy at some stage.

Among controls at least nine had sedative drugs, five antidepressants, one LSD, two drug abreaction and one leucotomy. Seven had intensive psychotherapy and seven were given general encouragement to go out for walks. Thus more patients in the behaviour therapy group had these additional treatments—a point which must be taken into account when assessing results.

B. *Other Phobias*

Behaviour therapy consisted of graded exposure to the feared situation for all but one patient. Three received sedatives, only one had anti-depressants, one had psychotherapy, and one child had play therapy. Seven of the patients were out-patients, two in-patients and three in the day hospital.

Among controls four had intensive psychotherapy—two in a group; one had hypnosis. One child had play therapy, one was an in-patient and only one had drugs (sedatives). Three did not remain in treatment. Thus in both behaviour therapy and control groups the "other phobias" received much less treatment than the agoraphobias, usually as out-patients.

Results

A. Agoraphobias

Main Phobic Symptoms (Table Ia, Fig. 1)

Results are given both as number of cases "much improved", "improved" and "unchanged", and as mean scores for each group on the symptom scale at each point in time.

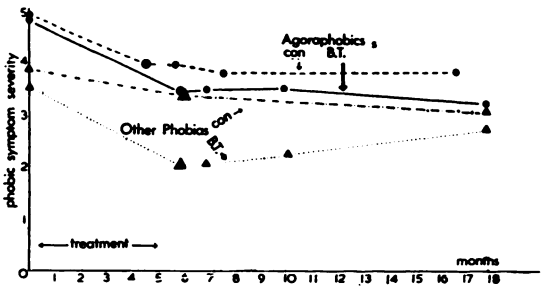


FIG. 1.—Course of phobic symptoms.

Analysis of variance showed no significant difference of symptom scores between the two groups, taking into account all five occasions (before and after treatment, 1, 3, and 12 month follow up).

The proportion of patients showing each degree of improvement did not differ between the two groups on any occasion (χ^2 test), nor did it differ when Cooper's results were pooled with ours to increase numbers. Analysis of variance of symptom scores showed a group by

https://doi.org/10.1192/bjp.111.476.561 Published online by Cambridge University Press

TABLE I

Improvement Rates: Behaviour Therapy versus Controls: Agoraphobia

Group	Result	Number Improved at:			
		End of Treatment	1 Month Follow-up	3 Months Follow-up	1 Year Follow-up*
	(*a*) Phobic Symptoms				
Behaviour Therapy (n=20)	Much improved ..	9	8	9	9
	Improved	3	4	3	4
	No change	8	8	8	4
Control (n=20)	Much improved ..	5	4	6	5
	Improved	6	8	7	6
	No change	9	8	7	6
	(*b*) General Improvement				
Behaviour Therapy	Much improved ..	3	3	3	3
	Improved	7	7	9	7
	No change	10	10	8	7
Control	Much improved ..	2	2	3	3
	Improved	11	7	6	8
	No change	7	11	11	6

* 17 cases in each group.

occasion interaction, i.e. they began at the same point before treatment, but diverged significantly with time—Figure 1 shows this to occur mainly during treatment ($F=4\cdot13$; $df=4$; $p<\cdot01$) with little change during the year after discharge.

We can conclude that some element in the treatment of the behaviour therapy group increased their improvement by the time of discharge, compared to the control group. We can *not* conclude, however, that the deconditioning itself necessarily achieved this, because, although well matched in other ways, the behaviour therapy group received more treatment. This will be examined presently.

Although 55 to 60 per cent. of the patients improved, only one lost all symptoms. Using a less stringent criterion, a further four behaviour therapy and three control cases had symptoms not interfering with their activities a year after discharge, i.e. only 20 per cent. Roberts' (1964) similar figures also indicate that the outlook for severe agoraphobics is not as optimistic as overall improvement rates suggest. Certainly 60–80 per cent. tend to improve during treatment in many studies, but such "improvement" can still leave most with considerable residual disability restricting their lives and imposing demands on relatives.

Times of Improvement and Relapse of Main Phobia

The groups as a whole remained stationary during the year after discharge, but within the groups individuals fluctuated considerably.

The pattern of times of improvement in the

https://doi.org/10.1192/bjp.111.476.561 Published online by Cambridge University Press

two groups was found to be similar, again suggesting that the nature of treatment did not specifically modify the course of the condition.

The pattern of relapse after treatment is also similar in both groups, arguing against a maintained specific effect of treatment. No patients went out worse than they came in.

Altogether only 6 out of the 40 agoraphobics showed no change at any of the 5 assessments (3 in each group), again emphasizing the fluctuating nature of the condition.

Improvement of General Condition (Table Ib)

The general scale was somewhat unreliable, due to scanty information, so that only ratings of "much improved" can be depended on. The overall pattern is the same for both groups, but limitations of this scale render conclusions tentative.

In 85 per cent. of the ratings in both groups general ratings improved when phobias improved and when phobias did not change neither did the general condition.

Number of In-patient Admissions Before and After "Rated Admission"

The longer term effects of treatment of the agoraphobics can be assessed by looking at psychiatric admission rates in an equivalent number of years before and after rated admission. Total counts in both groups were similar (8 before and 5 after in the behaviour therapy group, 6 before and 4 after in the control group), and in both were smaller after than before the "rated admission". All except 3 admissions were for similar phobic symptoms. Again the findings indicate that type of treatment had no strikingly different effect.

B. Other Phobias

Only status of the main phobias is shown, as information about the general condition was too scanty. Table II shows that every behaviour therapy case showed some improvement at the end of treatment. There is a tendency to partial relapse during the year's follow up. By contrast, controls show far less improvement at the end of treatment and rather less at a year's follow up. Insufficient information about controls was available between these two points. At the end of treatment the difference between groups is significant ($\chi^2=8\cdot81$; df=1; $p<\cdot01$), but is no longer at a year. At a year's follow up two of the three patients who were much improved

Table II

Improvement Rates: Behaviour Therapy versus Controls: Other Phobias

Group	Result	Number Improved at: End of Treatment	1 Month Follow-up	3 Months Follow-up	1 Year Follow-up
		Phobic Symptom			
Behaviour Therapy (n=11)	Much improved ..	6	6	6	3*
	Improved	5	4	2	4
	No change	0	1	3	4
Controls (n=10)	Much improved ..	2	–	–	3*
	Improved	1	–	–	1
	No change	7	–	–	6

For χ^2, "much improved" and "improved" categories were combined. At end of treatment the behaviour therapy group did significantly better than controls ($\chi^2=8\cdot81$; df=1; $p<\cdot01$). This difference is no longer significant at a year.

* These contained the only two children in each group—all animal/insect phobias.

https://doi.org/10.1192/bjp.111.476.561 Published online by Cambridge University Press

in each group were children with fears of animals or insects. Marked remission of these fears probably occurs more commonly in children.

Numbers are too small to allow definite conclusions. However, in the adults the improvement of "other" phobias occurred on a background of relatively continuous symptoms which rarely changed in the absence of treatment. This distinguishes them from the agoraphobics where pronounced fluctuations often occurred independent of treatment. Change during treatment of adults is therefore better evidence of the efficacy of behaviour therapy in "other" phobias than it is in agoraphobia, but is still not conclusive.

Relation Between Outcome and Treatment Variables

(a) *Treatment frequency:* among *agoraphobics* mean maximum frequency of sessions per week was 4·1 for the behaviour therapy and 2·4 for the control group. Behaviour therapy patients who improved also received more frequent treatment than controls who improved. Table III shows results at the end of treatment according to frequency of treatment. More of the behaviour therapy cases were treated 4–5 times a week and more cases treated 4–5 times weekly were rated "much improved", but this is not significant. When Cooper's data were pooled with ours (Table III), the tendency for more frequent treatment to be associated with ratings of "much improved" falls just short of the 5 per cent. significance level ($\chi^2=3\cdot7$). This is no longer present at the end of a year.

More frequent treatment provides both increased contact with the therapist and more frequent exposure to phobic situations with greater opportunities for deconditioning. It is uncertain which was more important.

"*Other phobias*" in the behaviour therapy group also received more frequent treatment (3 times weekly) than controls. By contrast with the agoraphobics, frequency of behaviour therapy was not related to outcome of these patients.

(b) *Number of treatment sessions:* among *agoraphobics* mean number of treatment sessions was 66 in the behaviour therapy group (52 excluding two cases whose treatment was prolonged for special research) and 27 for controls. However, in both groups patients who had

TABLE III

Frequency of Treatment and Degree of Recovery of Phobic Symptom at End of Treatment: Agoraphobia

Group	Degree of Recovery	Maximum Frequency of Treatment (sessions/week) 1–2	3	4–5	Mean Maximum Frequency (sessions/week)
Behaviour Therapy	Much improved ..	0 (0)	3 (3)	6 (10)	4·1
	Improved	0 (4)	1 (1)	3 (4)	
	No change	3 (4)	2 (2)	2 (2)	
Control	Much improved ..	3	1	1	2·4
	Improved	3	2	1	
	No change	6	2	1	

Figures in brackets represent our data pooled with Cooper's (1963).

For χ^2, "improved" and "no change" categories were combined, as were 1–2 and 3 times weekly categories. Testing our data alone, differences are not significant. However, when the figures are pooled, more frequent treatment becomes associated with more "much improved" patients just short of the 5 per cent. significance level ($\chi^2=3\cdot7$, df=1).

https://doi.org/10.1192/bjp.111.476.561 Published online by Cambridge University Press

more sessions did not do any better at end of treatment than those with fewer sessions.

"*Other phobias*" in the behaviour therapy group had a mean of 29 sessions, less than half that in the behaviour therapy agoraphobics. There was no relation between number of treatment sessions and outcome.

(c) *Duration of treatment:* for controls duration of treatment was taken as the period of in-patient admission. For behaviour therapy cases, we took the duration of behaviour therapy, which was not necessarily the same. Mean duration of treatment for *agoraphobics* was 5·4 months in the behaviour therapy group and 3·8 months in controls. Those treated with behaviour therapy for more than six months did not improve significantly more than the others. The course of both agoraphobic groups ran parallel during treatment and follow up (Fig. 1) suggesting that differences between groups at the end of treatment is at least partly the result of the behaviour therapy group receiving longer treatment.

Only two agoraphobics who relapsed after discharge, were treated with further behaviour therapy. In neither did the second course have a more lasting effect than the first.

Mean duration of treatment of "*Other Phobics*" in the behaviour therapy group was 4·5 months. The length of treatment in controls varied too much to allow comparison, but in neither group was there any relation between duration and outcome.

(d) *Outcome in relation to therapist* (*behaviour therapy only*). As behaviour therapy is said to depend on learning processes, the results of treatment by therapists with different knowledge of learning theory were examined (Table IV). Taking first the agoraphobias, ten patients were treated by staff psychologists thoroughly familiar with learning theory, four by post-graduate psychology students under the direction of staff psychologists, and six by psychiatric registrars. Duration of illness was very similar in patients treated by the three kinds of therapist. Psychiatric registrars and student psychologists treated rather more severely ill patients.

Numbers are too small for tests of significance, but therapists best acquainted with learning

TABLE IV

Outcome of Behaviour Therapy in Relation to Therapist

Type of Case	Therapist	Severity of Cases		Outcome of Treatment			
		Proportion Rated Severe*	Duration of Symptoms (years)	Unchanged	Improved	Much Improved	Total
Agoraphobia	Psychologist ..	6/10	11	4	3	3	10
	Student Psychologist	4/4	8	3	0	1	4
	Psychiatric Registrar ..	5/6	11	1	1	4	6
Other Phobias	Psychologist ..	2/4	21	0	3	1	4
	Student Psychologist	3/6	21	0	2	4	6
	Psychiatric Registrar ..	1/1	20	0	1	0	1

* Or moderate in case of other phobias.

https://doi.org/10.1192/bjp.111.476.561 Published online by Cambridge University Press

theory certainly did no better than the others, and this was not due to staff psychologists taking on more severe cases. Findings with "Other Phobias" were similar.

(e) *Effect of desensitization during relaxation.* All patients receiving behaviour therapy had graded practical re-training by exposure to feared situations. Six of these also had desensitization in imagination, while in a state of relaxation-hypnosis, as described by Wolpe (1958). These did rather better than the rest, but all had frequent treatment, and numbers are small. This aspect requires further study.

(f) *Other factors.* Seven control patients were encouraged to go for walks, but not in a systematic or graded fashion as employed in behaviour therapy. Final outcome was no different in these patients. One patient in each group had a leucotomy during admission, and did well at first but later relapsed. More patients receiving behaviour therapy had other treatments, including antidepressants (see above). Numbers were too small to decide how these contributed to the results.

Relation Between Outcome and Characteristics of the Patient

(a) *Age at Treatment, Symptom Duration and Severity*

Do patients in both groups who remained improved at the end of a year differ from those who remain unchanged, and does behaviour therapy help a different type of patient from that helped by control treatment? To answer these questions we compared relevant subgroups of the agoraphobic patients on the following items: symptom severity and duration, age at symptom onset, age at treatment, treatment duration and number of treatment sessions, previous treatment, and the presence of depression and panic attacks. All comparisons were negative, except that patients improving with behaviour therapy were older at treatment (mean age 40 years) than those who remained unchanged (mean age 27) or those who improved with control treatment (mean age 31). Their symptoms also began earlier.

However, two of the most improved behaviour therapy cases were atypical, being older with longer symptom duration than other patients. If these are excluded the differences diminished, so this finding may not be of general importance. Surprisingly, shorter history or lesser severity of symptoms had no relationship to outcome. Spontaneous improvement during follow up without previous improvement during treatment was found in five patients in each group. These shared similar characteristics in both groups, and did not differ from controls improved during treatment.

(b) *Other Factors*

No relation was found between degree of recovery and presence of depressive mood during treatment, sexual disorders, premorbid personality, childhood neurotic traits, disturbed home background or family history of psychiatric disorder.

(c) *Attitude of Behaviour Therapy Patients to Therapist and Treatment*

Marked attachment to their therapists was noted in 5 patients. Four of these were females attached to the same male therapist, showing marked dependency. The fifth patient was a female attached to a female therapist, who was unable to continue with a new female therapist when the original one left. These dependent attached patients did not do any better at the end of treatment than the rest.

The bulk of attachments to one therapist suggests that dependency was the outcome not so much of behaviour therapy as of the personality of the therapist. Most patients related satisfactorily to their therapists, without undue hostility or affection hindering treatment. In no agoraphobic patient did the notes mention as a problem that the patient insisted on talking about personal problems. One patient specifically desired to talk about "underlying causes" requesting a psychoanalytic type of treatment rather than behaviour therapy (after one year in subsequent group psychotherapy he was still no better).

Lack of co-operation was thought to be present in three patients—all had very variable symptoms, e.g. one male after performing many

https://doi.org/10.1192/bjp.111.476.561 Published online by Cambridge University Press

tasks could not do them again, yet was found to be slipping out of the ward undetected to indulge in gambling outside the hospital. All three were no better at end of treatment, yet by a year's follow up, two were much improved symptomatically, the third improved, and all were working full time. On the other hand very co-operative patients sometimes remained in treatment a long time, but did not improve at all as a result of treatment. This distinction between "treatability" and "improvability" has been well emphasized by Frank *et al.* (1957) in an investigation on what keeps patients in psychotherapy, and applies with equal cogency to behavioural treatment.

(d) *Fresh Symptoms Arising During and After Treatment (Symptom Substitution)*

Every clinician is familiar with patients whose symptoms change or disappear from time to time, only for fresh ones to appear later. One explanation for this "symptom substitution" supposes symptoms are the reflection of underlying dynamic processes which continue if they are not dealt with and consequently lead to the emergence of new symptoms. Reports of behaviour therapy stress the absence of "symptom substitution". Whilst confusion may arise because differently oriented therapists are treating different types of patients, it is equally clear that the appearance of fresh symptoms is open to alternative interpretations: (*a*) the unfolding of the natural history of a disorder unrelated to any therapeutic measures, or (*b*) the direct result of therapy removing symptoms which were a safety valve, thus predisposing the development of fresh ones to prevent excessive anxiety.

Nearly all our agoraphobics had several types of phobia—e.g. travel, open spaces, closed spaces, heights, tunnels, etc. These usually emerge not simultaneously, but over a period of time, suggesting that this was the natural course of the disorder. Severity also fluctuated in response to numerous external events, e.g. marriage, miscarriage, pregnancy and bereavement. Many agoraphobic patients also had periods of depression, occasional obsessive symptoms and episodes of depersonalization, at times before treatment. Had they occurred for the first time during or after therapy, they might have been thought of as "symptom substitution".

Such possibilities are often overlooked in discussions on "symptom substitution", and the criteria for distinguishing between them are not always specified. As the phrase carries so many overtones, the authors prefer to speak of fresh symptoms appearing during or after therapy, without making any assumptions as to why this occurred.

Fresh symptoms developed in four behaviour therapy patients, three with agoraphobia and one bird phobia, and in three controls, all agoraphobics (symptoms which had been present intermittently before treatment are excluded). These were: in the behaviour therapy group—depression, alcohol and barbiturate over-consumption, and new phobias in two; in the controls—homosexuality, and new phobias in two. Their time of appearance was variable during or after treatment, and there was no relationship to the amount of change in the patients' treated phobias. New symptoms arose in the same number of patients with behavioural and control treatments. They are therefore not a special hazard of behaviour therapy, and fear of their occurrence should not in itself be a deterrent to direct symptomatic treatment.

Discussion

Results in the agoraphobic patients showed a slight initial advantage for behaviour therapy which was related to more frequent and longer treatment and rather more additional treatments. This reduced the advantage to dubious clinical significance as differences were small, and the behaviour therapy was protracted, contrary to some assertions that it is shorter than other approaches. The length and frequency of behaviour therapy testify to the vigour and enthusiasm with which it was executed, but results do not justify expenditure of such effort to retrain in-patient agoraphobics.

A different pattern of response was found with patients with other phobias at the end of treatment. Immediate results were better with behaviour therapy, but fell off at a year's follow-up. These patients are rarer than those with agoraphobia, with much less disability,

https://doi.org/10.1192/bjp.111.476.561 Published online by Cambridge University Press

and are not the phobic patients who most often seek help in this hospital. The control group had certain shortcomings, but immediate results with behaviour therapy in these patients were sufficiently encouraging to justify further research with this type of case to try to prolong the improvement. In neither group was the emergence of new symptoms a problem.

The difference in outcome between agoraphobics and other phobics is paralleled by a difference in natural history. The agoraphobics were mostly in-patients, severely handicapped, with a long history of fluctuating disturbance starting mainly in early adult life, and associated with much general anxiety, depression, sexual difficulties, and other psychiatric problems. In these respects and outcome they resembled the housebound housewives of Roberts (1964) rather than the less disturbed patients of Lazarus (1963) and Wolpe (1958). By contrast, the other phobics were mainly out-patients, had a very long history of continuing minor disability since early childhood, and they generally functioned well in the community, without much other psychiatric disturbance. This may suggest that only such simple phobias respond to simple re-learning techniques, and that more complex phobias require very different handling. However, even the simple fears of very localized stimuli required three months behaviour therapy for short-term benefit. If agoraphobic patients are regarded as meeting stimuli of their fears more universally, each stimulus requiring re-learning, the re-learning might have to be so extensive as to require several years using present techniques. Possibly re-learning techniques would be more effective in agoraphobic patients whose fears are less extensive than in these patients. This is being examined.

Various possibilities for the poor results in the agoraphobic patients must be considered. Lack of suitable controls is not a valid criticism as they were well matched as a group. It was the other phobics who were less well matched, and they showed better results with behaviour therapy, although these were short-lived. Lack of skill on the part of therapists is an alternative explanation but results showed that experienced therapists obtained no better results. It might be argued that lecturers and senior lecturers in a University Department of Clinical Psychology were unskilled, but if this is so, who then is to be regarded as skilled?

We cannot exclude the possibility that unknown selection factors resulted in agoraphobic patients with a poorer prognosis receiving behaviour therapy, though we could find no evidence for this. There was little overlap in the years when the patients were selected for treatment, they were well matched on the variables we compared, and from their case notes they appeared to be representative of agoraphobics receiving in-patient treatment at this hospital.

One might contend that social problems of the patients were not dealt with; in fact, they were. Relatives were always interviewed, and social problems were handled, often together with a psychiatric social worker, wherever they were found to be important. Complex social aspects require treatment, not simply by "self-assertion" (Wolpe, 1958) but by skilled casework, which leaves behind pure behavioural techniques and enters the more traditional approach of psychiatrists treating the whole patient. It seems likely that most agoraphobics display many features not explicable in terms of simple learning.

Behaviour therapy might help only special kinds of agoraphobics. We found no evidence for this, though it is not excluded. There was no relationship of symptom duration to outcome. Longer follow up will become necessary as time goes on, but during a year the agoraphobic groups did not change *vis-à-vis* one another, and a longer term inquiry into admission rates showed no difference between the groups for an average of three years after treatment. Treatment was long, averaging 4–5 months in agoraphobics, and where repeated for relapse after discharge did not produce any more sustained improvement. Were even longer and more frequent treatment desirable, this would be difficult for a group largely consisting of married women with children, whose attendance imposes considerable strain on their immediate family. Results would have to be much better to justify such demands.

Was the type of behaviour therapy at fault?

https://doi.org/10.1192/bjp.111.476.561 Published online by Cambridge University Press

All patients received graded retraining in meeting their feared situations, and only a few also received desensitization in imagination while in a state of relaxation-hypnosis. There was slight evidence that the latter did rather better.

In some patients initial improvement was maintained, but did not spread to involve other situations as well. One could say that patients failed to take advantage of their improvement, or that processes maintaining the phobia continued to operate, preventing patients from extending their range of activities.

To call phobias, especially agoraphobia, simple learned habits begs fundamental questions. Everybody has fears, most people get over them, others do not but never consult a psychiatrist, and a residuum seek psychiatric help. We know little of what makes patients seek aid from psychiatrists. We do not know why patients cannot extend their activities after previous competence. Most agoraphobias start in adult life, after decades of successfully coping with numerous activities alone; obviously they learned to face those situations quite adequately, then fairly suddenly, in the context of trivial everyday events the patients became afraid of situations of which they had no fear before. The phobias then extended gradually in ways which can sometimes be understood in learning terms. But this tells us nothing of conditions starting the phobia in the first place. In certain patients the fear first occurred in a dramatic situation charged with special significance, e.g. a patient whose fears began on bus rides to visit her rejected dying son who was conceived out of wedlock; such events could be construed as settings increasing anxiety and thus facilitating single trial learning, or as conditions activating latent conflicts. The alternatives are not mutually exclusive, but to combine them gets beyond simple behavioural explanations.

In some simpler fears of animals and insects, dating back to early childhood and remaining restricted to specific situations, the process is more understandable as simple learning of fear responses. It is perhaps not surprising that such simple fears responded better.

Our agoraphobics were severely handicapped for many years, and neither treatment we examined seemed to affect their overall course. The apparently high improvement rate masked the fact that as a whole the agoraphobics remained markedly handicapped after a year's follow up, despite considerable individual fluctuations within the group. Their phobias affected their general adjustment, as in their ability to work. As a group the other phobias were rather heterogeneous, but the specific phobias tended to be relatively minor handicaps in patients' lives. It was these, rather than the agoraphobics who derived most immediate benefit from behaviour therapy.

To most patients behaviour therapy was acceptable, though a few expressed preference for a more indirect psychotherapeutic approach which did not necessarily help them any more. If the treatment worked it would be possible to administer it to most patients, as they were largely co-operative, and did not show extreme variability of symptoms, or inability to experience phobic anxiety during therapy. In the few patients showing excessive dependence on the therapist, evidence suggested that this was unwittingly produced by the therapist, and implies that behaviour therapists, like others, need to be aware of their relationship with the patient.

Behaviour therapy might play a future role in conjunction with many other techniques used in treating the agoraphobic patient as a whole, including sensitive handling of personality and social difficulties, as occurs in other forms of psychotherapy. It usefully draws attention to the range of stimuli setting off various phobias, and may be specially helpful in the simpler phobias. We should continue to encourage agoraphobic patients to go out, doing so in a way that is informed by learning principles, but should regard this as only one part of a wider treatment programme, and not suppose that we are fundamentally altering the results of treatment which remain disappointing in these complicated cases.

Summary

1. Evidence in the literature for the efficacy of behaviour therapy is still conflicting, and in

https://doi.org/10.1192/bjp.111.476.561 Published online by Cambridge University Press

phobias comparable results have been obtained with several kinds of treatment.

2. Thirty-two phobic patients are reported who received behaviour therapy in this hospital since 1960. These were conveniently divided into 21 with agoraphobia and 11 others with animal and social phobias. Matched controls, not treated by behaviour therapy, were found for all but one. Verbatim extracts of patients' notes after treatment, and at one, three, and twelve months follow up were rated "blindly" by independent assessors on scales of symptom severity and general condition.

3. Behaviour therapy patients had graded practical retraining. Behaviour therapy was longer, more frequent and took more sessions than treatments received by the control patients.

4. Agoraphobic patients who had behaviour therapy did slightly better than controls at the end of treatment but this was related to more frequent and longer treatment. The groups did not differ in general condition. The improvement rate of 55 to 60 per cent. during treatment of both groups of agoraphobic patients masked considerable residual disability at the end of treatment and a year later. There was no evidence that a particular kind of patient responded better to behaviour therapy.

5. Patients with other phobias who had behaviour therapy did much better than controls but some had relapsed a year later.

6. The development of fresh symptoms ("symptom substitution") did not appear to occur during or after behaviour therapy.

7. In complex agoraphobias, behaviour therapy on the lines of graded practical retraining was not particularly useful. In other phobias behaviour therapy produced a useful short-term improvement which diminished with time.

ACKNOWLEDGMENTS

We wish to thank Professor Sir Aubrey Lewis for valuable advice and encouragement, Drs. F. Post, H. Gwynne-Jones and S. Rachman for helpful comments on the manuscript, and Dr. Patrick Slater for statistical advice; also the physicians who allowed us to include their cases in this investigation, the psychologists who treated cases, and general practitioners who collaborated in the follow up. The work was made possible by a grant from the Medical Research Council. Dr. J. E. Cooper kindly allowed us use of his rating scales and access to his data.

BIBLIOGRAPHY

ACKNER, B. (1960). "Permissiveness and firmness in the psychotherapy of in-patients." *Comprehen. Psychiat.*, **1**, 42–48.

ALEXANDER, V. K. (1957). "A case of phobia of darkness." *Psychoan. Rev.*, **44**, 106–109.

COOPER, J. E. (1963). "A study of behaviour therapy in thirty psychiatric patients." *Lancet*, *i*, 411–415.

EYSENCK, H. J. (ed.) (1960). *Behaviour Therapy and the Neuroses*. London: Pergamon Press.

FRANK, J. D., GLIEDMANN, H., IMBER, S. D., NASH, E. H., and STONE, A. R. (1957). "Why patients leave psychotherapy." *Arch. Neur. Psychiat.*, **77**, 283–299.

FREEMAN, H. L., and KENDRICK, D. C. (1960). "A case of cat phobia." *Brit. med. J.*, *ii*, 497–502.

FREUD, S. (1919). *Collected Papers*, **2**, 392. London: Hogarth Press.

FRIEDMAN, J. B. (1950). "Short-term psychotherapy of phobia of travel." *Amer. J. Psychoth.*, **4**, 259–278.

GLOVER, E. (1959). Critical notice. *Brit. J. med. Psychol.*, **32**, 68–74.

JANET, P. (1925). *Psychological Healing*, **2**. London: George Allen and Unwin.

KING, A. (1962). "Phenelzine treatment of Roth's calamity syndrome." *Med. J. Austr.*, **1**, 879–883.

—— and LITTLE, J. C. (1959). "Thiopentone treatment of the phobic anxiety-depersonalization syndrome." *Proc. Roy. Soc. Med.*, **52**, 595–596.

KNIGHT, R. P. (1941). "An evaluation of results of psychoanalytic therapy." *Amer. J. Psychiat.*, **98**, 434–446.

LAZARUS, A. A. (1963). "The results of behaviour therapy in 126 cases of severe neurosis." *Behav. Res. Ther.*, **1**, 66–79.

MEYER, V., and GELDER, M. (1963). "Behaviour therapy and phobic disorders." *Brit. J. Psychiat.*, **109**, 19–28.

MOSS, C. S. (1960). "Brief successful psychotherapy of a chronic phobic reaction." *J. abn. soc. Psychol.*, **60**, 266–270.

SIM, M. (1963). *Guide to Psychiatry*. Edinburgh: Livingstone Ltd.

WOLPE, J. (1958). *Psychotherapy by Reciprocal Inhibition*. Stanford, California: Stanford University Press.

I. M. Marks, M.D., D.P.M., *Research Worker, Institute of Psychiatry; Honorary Senior Registrar, The Maudsley Hospital, London, S.E.5*

M. G. Gelder, M.A., B.M., M.R.C.P., D.P.M., D.Obst., *Lecturer, Institute of Psychiatry, The Maudsley Hospital, London, S.E.5*

(*Received 11 August, 1964*)

https://doi.org/10.1192/bjp.111.476.561 Published online by Cambridge University Press