British Journal of Psychiatry (1991), **158**, 362–367

An In-patient Behavioural Psychotherapy Unit
Description and Audit

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An in-patient behavioural psychotherapy unit is described that emphasises self-treatment, teaching relatives to become cotherapists while resident in the unit, routine collection of outcome data, minimising use of medication, and absence of night nurses. Patients are referred from all over the UK, mostly with chronic disabling OCD. Treatment includes self-exposure and self-imposed response prevention. A year's cohort (52 patients) showed substantial improvement that consolidated during six-month follow-up (83% decrease in total ritual time per day, 58% fall in target ritual scores, better social adjustment), and families noted relief of burden; eight patients dropped out. Further such units are needed in the UK, perhaps on a regional basis; they could be run as specialist hostels.

Behavioural psychotherapy is lastingly effective for a growing range of problems and is usually given on an out-patient basis. A minority of cases need more intensive, in-patient care, but there are few facilities for this or descriptions of their mode of operation, nor are there guides to routine audit of outcome. This paper reports the structure and function of an in-patient behavioural psychotherapy unit at the Bethlem Hospital, and treatment outcome for patients admitted.

Structure and function of the unit

The unit began in 1969 with IM as the consultant. The unit provides intensive in-patient behavioural treatment for severely disabled patients. Over the years, cost efficiency has risen as research indicated which methods were effective and which redundant. From this has evolved a self-regulatory, problem-orientated treatment, with nurses taking a major role in assessing, treating and following up patients. Clinical progress is rated on standard measures.

The unit is perhaps unique in combining five aspects of behavioural treatment: strong encouragement of self-treatment; frequent family involvement, with relatives living with the patient in an apartment in the ward for a few days and acting as cotherapists; routine collection of outcome measures; minimum use of medication; and absence of night nurses, which saves 40% of nursing costs without impairing care. This combination has not been previously described.

The in-patients (aged 17–64 years) are referred because they have severe, long-standing disability, need intensive treatment, have failed to respond to previous treatment, and because local behavioural services are lacking. Originally most had agoraphobia or sexual problems, but these people are now usually treated as out-patients. Most of the unit's current in-patients have obsessive–compulsive disorder (OCD), although most cases of OCD are treated as out-patients. Patients with other diagnoses are taken at times on a research basis.

The behavioural psychotherapy unit has ten beds and shares the ward with an eight-bed general psychiatric unit. The two staff teams remain separate. Patients have their own bedroom, and share a lounge, dining room, kitchen and recreational facilities. The unit includes a separate apartment with two bedrooms, lounge, kitchen and bathroom for up to four relatives of one patient to stay on the ward and learn to become cotherapists, and for patients to practise domestic skills. There are also three other bedrooms, which patients can share with a relative.

Staffing

The behavioural psychotherapy nursing team work from 7.30 a.m. to 8.30 p.m. daily and comprise a senior clinical nurse, a charge nurse, two staff nurses and two nursing assistants. The minimum staffing level is two nurses during weekday early shifts and one nurse at other times. At times there is a nursing student, the only supernumerary staff.

From the Bethlem–Maudsley psychiatry rotation a registrar works for seven sessions a week and a senior registrar for four sessions a week, and the consultant runs the weekly ward round. Other services are from occupational therapy and, rarely, a hospital teacher for adolescents. There is no psychologist. In recording progress, all team members share each patient's single case record, which is kept in a ring-bound folder.

Night cover was removed from the behavioural unit in 1987 because of two research findings. First, despite their severity and handicap, patients in the unit are rarely a danger to themselves or others, so night care is rarely needed. Second, several controlled trials found that the effective therapeutic ingredient for anxiety disorders is self-exposure, not therapist-accompanied exposure (Marks, 1987). Treatment emphasis therefore shifted to self-exposure methods, which need staff only by day. Staff now assess, guide and monitor patients rather than actually accompany them during therapeutic exercises. Since 1987 patients have cared for themselves without night staff, nursing cover having changed from 24 to 13 hours a day. The total annual cost of nursing salaries fell from £146 000 to £78 000, a recurring annual saving of £68 000 which went towards developing community care in the hospital.

The removal of night cover has not impaired safety: in the 21 months from October 1987 to June 1989, the behavioural unit admitted 100 patients and the general night nurses helped with only eight of these (11 times in all) owing to threatened violence or self-harm. Of these eight patients, five were sent briefly to more intensive wards, one was sent on leave, and two were discharged after breaking treatment contracts. A further two patients were sent to their catchment-area hospital when they became so depressed that they needed night supervision.

The in-patient unit also trains nurses and psychiatrists. Between October 1987 and September 1988 no staff had behavioural experience on joining it. Unit nurses, however, liaise closely with nurse therapist trainees and their teachers at the out-patient behavioural psychotherapy unit at the Maudsley Hospital run by IM. The registrar changes every six months, but the senior registrar and senior nurse remain longer to provide continuity.

One of the four registered mental nurses or one of the doctors becomes a patient's key worker. The nurses are supervised by the senior clinical nurse for treatment, performance appraisal and career development. Ward staff and others lead weekly teaching sessions, and daily hand-over meetings at noon allow informal teaching for the whole team. Within six months all staff nurses and nursing assistants take on the full responsibilities of assessing, planning, implementing and evaluating the care of their patients. Doctors take these on within a month.

Nursing students (modular and post-registration) have a 12-week training in behavioural treatment methods. Other hospital and community psychiatric nurses visit the unit for up to a week on placement from other district, regional or supraregional services.

Patients' paths to behavioural treatment

Patients come from throughout the UK (63% from outside London; only 23% come from the South East Thames region, and 14% from the rest of London). They are referred by their general practitioner (GP), psychiatrist, psychologist, nurse therapist or by themselves. If referred cases have OCD or phobias they are asked to read a self-help manual, *Living With Fear* (Marks, 1978), before being assessed, and then to write confirming willingness to proceed with such treatment.

Assessments are done by the registrar or senior nurses, who interview the patient, and an informant if possible. They decide if the patient is suitable for and committed to behavioural treatment, or whether admission needs to be postponed, for example because the patient needs to reduce benzodiazepines to 10 mg or less of diazepam equivalent per day. Patients who do not need admission may be offered treatment as out-patients, by telephone or be referred to a local therapist. Some local patients are offered day treatment. In-patient care is offered if problems are widespread, needing more intensive treatment than is possible as an out-patient.

For example, between April 1988 and March 1989 there were 68 referrals. The co-ordinator wrote asking for a local cotherapist to be arranged for post-discharge follow-up, and, if the problem was an anxiety disorder, for the patient and relative to read *Living With Fear*. Of the referrals, 16 did not attend for assessment. The 52 attenders were assessed by the registrar or senior clinical nurse on the ward. Of these, 34 were admitted (one as a day patient) and six were offered contingent admission (e.g. drug withdrawal needed first). Of the 12 not admitted, one was unsuitable for treatment, six refused it, and five were offered therapy as out-patients (1), by telephone (1), or locally (3).

Of 56 patients admitted between April 1988 and March 1989 (22 admissions had been processed earlier), 36 had family involved in treatment and 16 were on antidepressants for severe depression (some had both). Of nine given contingent leave for non-compliance, four responded and five dropped out; a further three dropped out without such leave. Forty-five were discharged and followed up.

Behavioural treatment methods

The main treatment methods (Marks, 1986*a*) are: graded self-exposure, self-imposed response prevention, modelling, guided mourning, habit control, social skills training, self-regulation, and taped audio feedback.

https://doi.org/10.1192/bjp.158.3.362 Published online by Cambridge University Press

After baseline measures on admission, each patient negotiates the goals of treatment with the primary therapist, and progress towards each goal and global % improvement is regularly monitored throughout admission. Patients with anxiety disorder agree a daily programme of self-exposure tasks that specifies the frequency and duration of each task to be completed unsupervised by the next review session. The programme progressively extends self-exposure and concurrently reduces the extent of anxiety-reducing rituals such as hand washing. Therapist-accompanied exposure is minimal.

Patients are taught from the start that behavioural treatment cannot be imposed on them, that they must become their own therapists, and that success depends on how hard they themselves work in treatment. They learn coping strategies to deal with problems that may arise even after discharge, and so minimise the risk of relapse. Patients keep a schedule of self-treatment tasks, are strongly encouraged to make their own suggestions for tasks to be undertaken, and record completed tasks on homework diary sheets, which are reviewed regularly.

Within a few weeks patients go home on leave several times for lengthening periods, usually over weekends, to practise in their natural environment the self-treatment skills they are acquiring in the ward. They telephone the ward first daily and then at decreasing intervals to report on progress, which is also fed back by relatives and the local cotherapist.

Except for the few patients who need anti-depressants for depressive mood, psychotropics and alcohol are reduced, and stopped wherever possible. Many patients are on benzodiazepines when first seen and are asked to withdraw from these at home or in a local hospital before they are admitted. Those reaching a dose of less than 10 mg equivalent of diazepam are accepted (the majority).

Patients daily see one of the two designated therapists, one of whom is the key worker, the other a nursing assistant or student nurse who has participated in assessment, negotiation with the patient of the planning and implementation of homework exercises, and evaluation of their progress towards achieving their goals. Patients usually attend occupational therapy and also a weekly patients' support meeting which allows them to discuss their progress or problems, with staff present to advise where necessary. A few cases have video feedback, largely for anger management and social skills training.

A verbal or written contract is asked of a few patients, usually to refrain from alcohol or violence. If treatment compliance is limited, then contingency management is used: patients are asked to go home on leave for a week to decide whether to continue treatment. Any patient who involves relatives in the problem is asked to allow them to learn to become cotherapists. Before treatment, in a vain attempt to spare the patient distress, relatives often unwittingly reinforced the rituals by responding to requests for reassurance by giving it dozens or even hundreds of times, and by participating in the rituals when asked to do so. Relatives are taught instead to aid response prevention by withholding reassurance and refusing to participate in rituals. In role play with the patient they learn to reply, in a neutral voice, to every request for reassurance or help in rituals, "Hospital says no answer" – the 'broken gramophone record' method. Relatives are seen with the patient at ward rounds and spend some days with the patient in the ward flat under the key worker's supervision to practise the withholding of reassurance and to monitor the patient's self-exposure tasks.

Treatment outcome

Patients admitted during the year October 1987 to September 1988 totalled 56. They were mainly young (aged 18–50 years); 34 were women, 45 were unemployed and all were white. Over three-quarters came from outside the South East Thames Region and nearly two-thirds from outside London, some from as far afield as northern Scotland. Patients had very chronic problems (mean duration 11 years, s.d. 10). Twenty-nine were tertiary referrals from psychiatrists and six from psychologists, having had repeated past psychiatric admissions (mean 3.4) with previous drug and behavioural treatment (the latter a mean of 0.7 times).

Only two potential patients were refused assessment because they seemed likely to need night care.

The diagnoses were anxiety disorder 49 (OCD 42, agoraphobia 5, social phobia 2), acute stress reaction 1, Tourette's syndrome 1, chronic depression 1, and opiate addiction 4. They were often severely disabled, for example by being house-bound or bed-bound, unable to work or look after their children or home, and insisting, often threateningly, that relatives comply with rituals. On admission 29 were on antidepressants and seven were on benzodiazepines; at discharge these figures were 17 and none respectively. The four opiate addicts were admitted for a trial of cue exposure to prevent post-withdrawal relapse (Kasvikis *et al*, 1991*a*,*b*), and are not included in the results below.

Follow-up

The local cotherapist (usually a psychologist or community psychiatric nurse) is arranged by the referring agent before admission, and is invited to attend a ward round before discharge and at follow-up. Patients are asked to continue their behavioural programmes after discharge, and are told

Table 1
Outcome on clinical ratings

	Mean (s.d.)			% gain since admission at:	
	admission ($n=45$)[1]	discharge ($n=39$)[2]	6 month follow-up ($n=22$)[3]	discharge ($n=45$)	6-month follow-up ($n=23$)[4]
1. OCD time (0-8)	5.7 (1.9)	3.2 (2.2)	2.4 (2.2)	44	65
2. OCD discomfort (0-8)	7.6 (0.9)	4.5 (1.9)	3.4 (2.5)	41	58
3. OCD handicap (0-8)	7.0 (1.4)	3.4 (1.9)	3.4 (2.5)	51	57
4. OCD check-list (0-111)	40 (19)	27 (17)	22 (19)	34	44
5. Global phobia (Fear Questionnaire) (0-8)	7.0 (1.6)	4.5 (2.2)	4.3 (2.4)	37	35
6. Total phobia (Fear Questionnaire) (0-120)	72 (30)	37 (25)	41 (31)	39	24
7. Anxiety/depression (Fear Questionnaire) (0-40)	27 (9.1)	20 (9.7)	16 (9.5)	26	40
8. Depression (Wakefield scale) (0-45)	28 (8.1)	23 (9.6)	20 (11)	19	29
9. Work (0-8)	7.0 (1.7)	4.9 (2.2)	4.7 (2.9)	30	33
10. Home management (0-8)	6.4 (2.2)	4.1 (2.3)	3.3 (2.7)	36	48
11. Social leisure (0-8)	6.4 (1.9)	3.8 (2.6)	3.9 (2.5)	41	39
12. Private leisure (0-8)	5.5 (2.2)	3.1 (2.3)	3.6 (2.8)	44	35
13. % global improvement (self-rated, 0-100%)[5]				47	

Scores at discharge and at follow-up were significantly improved over admission scores (t-test, $P<0.001$ for all variables except that at 6-month follow-up for depression $P<0.01$ and for private leisure $P<0.05$).
Measures 1-4 are for OCD patients only, measures 5 and 6 phobics only, measures 7-13 are for OCD patients and phobics.
All measures appear in detail in Marks (1986*a*); their reliability was established in Marks (1986*b*).
1. OCD 38, phobia 7.
2. OCD 34, phobia 5.
3. OCD 18, phobia 4.
4. Includes 1 patient from another diagnostic category.
5. From Fear Questionnaire (Marks & Matthews, 1979).

to expect initial setbacks (which they have to learn to overcome). Patients attend a ward round at one, three and six months after discharge and rate their progress. Regular contact with the local cotherapist, patient and family by telephone is often maintained in the early months after discharge.

Results

The mean number on the unit at a time was nine and the mean duration of in-patient stay was nine weeks. A mean of five day patients attended the unit for an average of two days a week. Eight of the admitted patients dropped out.

For OCD and phobic patients, the mean number of face-to-face hours invested per patient was 16 (s.d. 11), of which 5 (s.d. 5) were supervised practice in which the therapist accompanied the patient during the behavioural exercise (the total hours per patient has since fallen further to 15, including only 3 hours of supervised practice). The further 11 hours on average were spent in supervising relative and local cotherapists, telephone supervision, documentation, planning, administration, and assessment of other patients for future admissions. The number of hours of help from local cotherapists is not known.

Improvement of OCD and phobias from admission to discharge and six-month follow-up was significant ($P<0.001$) on all measures of clinical and social function (Table 1). Gains remained throughout follow-up. The 58% reduction in the mean OCD time score, from 5.7 to 2.4 at six-month follow-up, represents a decrease from over three hours to about 30 minutes spent each day on rituals – a sixfold improvement.

From the 52 discharged patients who were not opiate addicts, follow-up scores were obtained for 15 at one month and 23 at six months. Improvement was similar at both points. Of the 23 patients who gave no written follow-up ratings, telephone contact was made with 15: of these, seven noted further gains since discharge, two no overall change, four a worsening, and two refused to answer. We tested whether follow-up completers were unrepresentative of the whole group by comparing patients who were and were not followed up at six months on baseline demographic features, past psychiatric history, and clinical severity on admission and at discharge. The two groups showed no significant differences.

On admission, OCD and phobic patients did not differ on demographic features or past psychiatric history. The OCD group had initially higher compulsion check-list scores ($P=0.03$), lower total phobia scores ($P=0.03$), and more impaired social leisure than did phobics ($P=0.02$). At discharge and six-month follow-up the OCD and phobic groups were similar on outcome measures except on the compulsion check-list scores.

Discussion

In a routine unit with cases from all over the UK, follow-up was short (six months in over half) but the results are encouraging. Patients were significantly improved on all measures by discharge and one-month follow-up, with gains consolidating to six-month follow-up. By then, ability to manage the home and work capacity had improved, although

paid employment was often only resumed subsequently. In the minority we followed up for one to two years, the impression was of slight further gains in rituals and in work, social and family adjustment, although with some residual problems. The gains on ratings were borne out by reports from patients, family, friends, local cotherapists, and referring agents.

Although few patients were totally cured by behavioural psychotherapy, most were helped to overcome the bulk of their handicap and develop a lasting strategy that enabled them and their family to lead fairly normal lives, despite residual problems, and to detect and prevent potential relapse. The gains were achieved with a modest therapeutic input from staff – a mean per patient of 15 hours face-to-face contact over nine weeks (less severely affected out-patients require an average of seven hours' input). Brief additional in-patient or day-patient admission was occasionally necessary.

We had no randomised control group. We can, however, compare our results with those of nine studies from four countries which followed 195 OCD cases for two to six years after mainly controlled trials of exposure therapy (O'Sullivan & Marks, 1990). In those studies, at last follow-up the mean reduction in target rituals compared with baseline was 60%, similar to our six-month follow-up figure in routine care.

Before treatment, patients and families had reported severe and chronic disabilities (many to at least the same extent as chronic schizophrenics), with inability to work or care for children, and a heavy family burden. All but one had been previously admitted for psychiatric treatment, and nearly half had previously received behavioural treatment. Referral was often seen as a last resort (as it commonly is in teaching hospitals), sometimes before consideration for psychosurgery.

There were considerable financial savings when we changed from 24-hour cover to 13-hour cover. Such a unit could operate within a free-standing hostel (with a staff member on night call with a bleep).

The savings did have a cost – the 4% of referrals we did not assess because they would have needed 24-hour nursing. This was well offset by the 40% fall in nursing costs, especially given that the data in the referral letters suggested that the few cases we did not assess seemed likely to do badly even with night nurses. Such patients are more easily cared for in a long-term unit.

Some of our patients could probably have been treated successfully in local general psychiatric units. Half had had behavioural treatment elsewhere before coming to our unit and either had not improved or did so but relapsed shortly afterwards. Such local behavioural treatment might well have been more effective and obviated the need to come to our unit had all the following points been dealt with fully:

(a) withdrawal of benzodiazepines and alcohol to no more than minimal amounts before starting exposure therapy
(b) devotion of staff to regular work with behavioural patients whatever the demands from other patients
(c) explanation to the patient of the rationale of self-exposure and how it is done in order to assist compliance, together with use of a manual
(d) negotiation and formulation with the patient of clear treatment goals and stages in their attainment
(e) where they are involved in the problem, recruitment of family members (with the patient's permission) as cotherapists, learning how to encourage, monitor and praise the patient's self-exposure, and withhold reassurance (in a neutral tone) when patients ask for it
(f) concentration on self-exposure rather than on time-consuming therapist-accompanied exposure, which is unhelpful in the long run
(g) self-exposure done consistently for at least an hour a day to well beyond the in-patient phase, and continued for months after discharge
(h) monitoring of homework during follow-up, including a home visit by the local cotherapist.

The great majority of patients with anxiety or habit and sexual disorders who could benefit from behavioural psychotherapy can successfully complete it as out-patients or in primary care. A minority need in-patient care, but it is difficult to judge the size of this minority. As well as our unit, there are two others, both in London (at St George's Hospital – see Adshead *et al* (1988) – and at St Luke's Hospital). Our waiting-list for in-patients is two to four months. Each time the media cover anxiety disorders and behavioural treatment there is a further surge of referrals, so clearly there is great suppression of demand by shortage of treatment supply. We have no way of measuring the shortfall. Our ten-bed unit admitted about 14 patients a year from the South East Thames Region, for which four beds would have been enough: on this basis a behavioural psychotherapy unit of four to ten beds or hostel places per region might suffice with a staff member on bleep at night.

In population surveys in the USA and Germany (Myers *et al*, 1984; Wittchen, 1988) over half the cases of anxiety disorder identified in the community had never been treated for their problems. Some of them may have been untreated because they did not know effective treatment was available, and others because they did not want treatment. Although we do not know exactly how many sufferers receive no help yet want and could benefit from therapy, there are many more than current facilities for behavioural psychotherapy can possibly cope with. Such services are cost effective in primary care (Marks, 1986*b*); we have no comparable figures for in-patient care.

A hostel has some advantages over an in-patient ward without night cover. These include lack of stigmatisation for patients, no interference from disturbed patients with other mental disorders, a more community-type setting, and freedom from bureaucracy in the rest of the hosptial. A hostel could be attached to an out-patient and day-patient facility.

In addition to their clinical function, in-patient units can also play an important training role for nurses, psychiatrists and other care providers. Our unit trains them to assess, treat, measure outcome, and liaise with and write to referring agents, such as GPs. Trainees include nurses and psychiatrists on the hospital staff who eventually leave and apply their skills elsewhere. Student nurses new to psychiatry often display remarkable skills within a few weeks. Cotherapists from patients' districts around the UK attend to learn behavioural skills to use with our patients during follow-up, and with other patients of theirs too; those skills may attenuate in settings where they are not valued or practised.

Although many agree that clinical activities should be audited, the time and costs incurred may prevent this from being done. The audit data in this paper took 190 person-hours to analyse and write up, and its collection from patients by paper-and-pencil methods took another 100 hours. If patients rated outcome on a computer which could also store, accumulate and retrieve ratings for analysis, then considerable time would be saved and the audit method would be easier to adopt more widely. Such computerisation has now been achieved in the unit.

Conclusion

Routine in-patient behavioural treatment with 13-hour cover a day achieved a significant and worthwhile improvement even in very disabled OCD patients and in other patients. Gains were sustained to six-month follow-up, and family distress was relieved. These results accord with many other follow-up studies two to six years after exposure therapy. The problem-orientated approach emphasises self-treatment and does not require a heavy investment of time from clinicians. Demand for treatment exceeds supply, and more such units in the UK could appreciably reduce patients' disability, family burden, and major demands on health-care resources that are incurred by severe chronic anxiety disorders.

Acknowledgement

Valuable comments on the manuscript were made by Drs Paul Lelliott and Simon Fleminger.

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