

## Evaluation of a Social Work Service for Self-Poisoning Patients

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**SUMMARY** Four hundred patients aged at least 17 who came to Casualty in one year after deliberately poisoning themselves were randomly assigned between an Experimental social work service (task-centred casework) and a Control (Routine) follow-up service. 139 patients were excluded from the trial, most of whom were already in continuing psychiatric treatment. After one year there was no difference in the proportions of E and C patients who repeated self-poisoning (about 14 per cent), but significantly more of the excluded group had repeated (36 per cent). A random half of the trial patients were re-interviewed four months after admission. Both E and C groups had improved to a significant extent on measures of depressed mood and of social problems. E patients showed more change in social problems and were more satisfied with the service they had received.

### Introduction

Deliberate self-poisoning has increased so markedly over the past two decades that in young women it is now the commonest cause of emergency admission to a medical ward, and it has been predicted that by 1984, if the trend continues, adults who have poisoned themselves will fill all the emergency beds (Jones, 1977). Although in each year only 1-2 per cent of patients kill themselves following the original attempt, this is a very high suicide rate compared to that of the general population (Ettlinger, 1975). The rate of non-fatal repetition is also high, about 20 per cent repeating their attempt within a year. Since little is known about the reasons for the rise in self-poisoning, it is difficult to plan programmes for primary prevention, but secondary prevention—prompt intervention after the event to prevent a repetition of it—is an important aim in view of the high repetition rate. The literature on secondary prevention is conflicting. Table I gives brief details of six studies carried out in different parts of the world since 1971, three of which report positive findings. However, the only study using a random allocation design

(Chowdhury *et al.*, 1973) found no difference in the repetition rate of parasuicides who had received intensive after-care, including 24-hour availability, compared to that of a control group having routine follow-up. The present study was designed as an experimental trial of the feasibility and effectiveness of a specially designed social work service for cases of deliberate self poisoning.

### Nature of the Experimental Service

Although all 'attempted suicides' are officially required to be assessed by a psychiatrist before leaving hospital, only a minority suffer from a major psychiatric illness. The act is more usually an impulsive answer to an unbearable social situation, often involving other key people and persistent social and relationship difficulties. Psychiatric treatment is not necessarily the most appropriate way of responding to this complex of problems, and the structure of psychiatric services may make them least accessible to people with the severest social problems. For these reasons it was decided that the experimental service should be a social work one, crisis-oriented, explicitly time-limited and direc-

TABLE I  
*Outcome of secondary prevention of parasuicide*

Author	Date	Intervention	Follow-up	Positive outcome:		Experimental design
				Repetition	Other criteria	
Greer & Bagley	1971	Psychiatric treatment	1-2 years	Yes	—	No
Kennedy	1972	Poisons treatment centre	1 year	Yes	—	No
Chowdhury <i>et al</i>	1973	Intensive aftercare	6 months	No	Yes	Yes
Ettlinger	1975	Systematic assessment, etc.	1 year	No	No	No
Oast & Zitrin	1975	Social work	—	Half sample refused service		Yes
Ternansen & Bywater	1975	Intensive aftercare	3 months	Yes	Yes	No

ted wherever possible at the patient in the context of his close relationships and in his home rather than the hospital.

The method used, task-centred casework (Reid and Epstein, 1972) is based on an explicit contract of limited work which both social worker and client agree to undertake during a defined time-period (up to a maximum of three months in this trial). This social work method is considered suitable for problems of personal relationships; social transitions—losses and changes which impose the necessity of finding new roles; problems in social relations generally; problems of role performance, as a worker, parent, etc; emotional distress interfering with coping ability; problems with officials and organizations; and of inadequate resources. Difficulties in all these areas were thought to be common in the lives of self-poisoning patients, although it was recognized that some of their problems, such as alcoholism, were less likely to respond to the task-centred approach. The method involves four stages of work:

1. The range of problems the client perceives in the life areas listed above is explored in order to locate a *target*, the problem perceived as most salient by the client and which he is most motivated to reduce.
2. The goal of treatment is then defined in terms of one or more specific *tasks*, formulated collaboratively by client and worker. Agree-

ment is reached about the time needed to complete the tasks.

3. The social worker's job is then to help the client complete the tasks.

4. At termination there is a formal *evaluation* when client and worker discuss what has been achieved and identify further tasks to be undertaken by the client alone.

This social work service was provided by two qualified and experienced social workers who were employed in the Department of Psychiatry.

### Methods

Patients attending the Accident and Emergency Department of Southampton General Hospital from April 1975 to March 1976 after deliberate self-poisoning (defined as the deliberate taking of a pharmacologically active substance in more than the prescribed dose or the usual consumption), who were aged 17 or over and came from a defined geographical area, were assessed for inclusion in the trial. Altogether 539 patients were assessed; while 14 per cent of eligible patients were not assessed for a variety of reasons: refused, failed to contact, too ill, in police custody. The 87 missing patients included more men and fewer people admitted to a medical ward.

One of two research psychiatrists interviewed every patient as soon as possible on full recovery of consciousness and obtained demographic, clinical and social information, using structured

instruments. After all assessment procedures were completed, the psychiatrist decided whether a patient was eligible for the trial. Patients were excluded if they had a formal psychiatric illness requiring immediate psychiatric treatment (34 cases, 6 per cent of the sample); if they were judged, from scores on a predetermined scale, to be an immediate suicide risk (9 cases, 2 per cent of the sample); or if, though otherwise suitable, they were in continuing treatment with a psychiatrist or social worker whom they had seen within two weeks (18 per cent of the sample). On one or other of these grounds 139 patients were excluded from the trial. The remaining patients were randomly allocated to Experimental or Control groups until there were 200 in each. E patients were directly referred to one of the special social workers, who tried to make immediate contact. C patients received the routine service: referral back to a G.P. (54 per cent); psychiatric referral (33 per cent) and other referral (13 per cent). The trial therefore, was not comparing a treated with an untreated group, but the E service differed in being systematic, explicitly time-limited, immediately available and offered in the patient's home.

E and C groups did not differ significantly on any baseline measures. As described, 139 patients were excluded from the trial as needing, or already in, some other form of treatment. This 'T' group differed significantly from the rest both clinically and socially. They included more men and more from social class V. They

had had more previous psychiatric treatment and admissions for parasuicide. In relation to the index attempt they scored significantly higher on measures of intent to die and on a standard predictive scale (Buglass, 1974) were shown as more likely to repeat their attempt.

### Follow Up

Table II summarizes our outcome criteria and sources of information. To check on repeated admissions for self-poisoning during the year after the index admission medical records of the two general hospitals serving the area (Southampton General and the Royal Hampshire County, Winchester) were monitored. A search was made of general practitioner records, including those of patients who had moved, and any mention of a repeated admission was checked from the hospital concerned. The records of the three psychiatric hospitals serving the area were monitored, and G.P. records were used to obtain data on psychiatric treatment during the following year. The records of Hampshire Social Service and Probation Departments were examined.

Information about changes in depressive mood and social problems was obtained by re-interviewing patients. A randomly chosen half of E and C groups were re-interviewed four months after the index attempt. The remainder are being re-interviewed 18 months after it, but these data of longer-term social outcome are not yet available. The follow-up interviews were carried out by three experienced interviewers

TABLE II  
*Criteria of outcome and sources of information*

Criterion	Period of follow-up	Source of data
Repetition of self-poisoning	1 year	G.P. and hospital records
Use of psychiatric and social services	1 year	G.P., hospital, social service and probation records
Change in depressive mood	4 months (18 months)	Scores on Beck Depression Inventory
Change in social problems	4 months (18 months)	Interview
Satisfaction with service	4 months (18 months)	Interview

after a short training period. The interviewers had had no connection with the Project and did not know what treatment patients had received. Out of 200 patients 159 were successfully re-interviewed, 78 per cent of the C sample and 81 per cent of the E sample. Forty-one could not be re-interviewed. Three were too ill, 14 refused, 24 had moved out of the region and/or could not be traced. There were no differences in age and sex distribution between the interviewed sample and the missing cases.

### Results

#### *Service input*

Nearly 90 per cent of E cases had some social work help immediately after their overdose, and in two-thirds of the cases the contact lasted for twelve weeks or less. The mean number of interviews per case (including interviews with collaterals) was 10. Twenty-two cases (11 per cent) had to be re-opened after closing at the prearranged time limit, and 34 cases (17 per cent) had to be referred on to another agency when the case was finally closed. The mean number of significant other people contacted per case was 1.55, and the mean number of social or medical agencies contacted on the client's behalf was 2.65 per case.

Table III shows the number of E, C and T cases who were in contact with psychiatric or social agencies during the 12 months after the index self-poisoning. Significantly more T cases were in contact with psychiatric and social services ( $P < .001$ ). C cases had significantly more contact with psychiatric services than did E cases ( $P < .02$ ).

TABLE III  
*Contact with psychiatric and social services in year following index self-poisoning*

	E N = 200	C N = 200	T N = 139
Psychiatric services	44 (22 %)	65 (38 %)	115 (83 %)
Social services department	34 (17 %)	47 (23 %)	63 (45 %)
Probation	13 (6 %)	10 (5 %)	21 (10 %)

#### *Satisfaction with service*

Compared with C patients who had the routine after-care service, E patients reported themselves at the four months follow-up as having had significantly more help following their self-poisoning. Forty-eight per cent of E cases, compared with 15 per cent of C cases, said they had had 'a lot' of help. In particular, E cases reported themselves as having had more help with improving their relationships with some significant other person ( $P < .05$ ) and with leading a more satisfying social life ( $P < .01$ ). Of those who had received any service, half the E patients but only 17 per cent of the C patients were 'very satisfied' with the service received.

#### *Repetition of self-poisoning*

Repetition can be measured in four ways. 1. Readmission for self-poisoning to a medical ward or to Casualty at the same hospital as the original attempt. 2. Documented readmission for self-poisoning at any hospital. 3. Repetition of self-poisoning known to general practitioners including cases not taken to hospital. 4. All repetitions reported by patients in interview, whether or not they led to medical attention. Since we carried out a systematic survey of general practitioners' records we were able to compare the results obtained by the first three methods. If 'readmission to the same hospital' is taken, 95 cases repeated self-poisoning in the 12 months following the index attempt. Eleven cases are added if 'documented hospital readmission' is taken. Thirteen more cases are added if all self-poisonings recorded by a general practitioner are counted. We decided to use method 2, since our primary concern, from the public health point of view, was with the strain on hospital services imposed by repeaters.

There was no significant difference in repetition of self-poisoning in the 12 months following the index attempt between Experimental and Control cases (13.5 per cent *vs* 14.5 per cent). In the T group 50 patients (36 per cent) repeated self-poisoning, a significantly greater number ( $P < .001$ ).

It was likely that the increased repetition rate

of the T group could be explained by its containing a preponderance of high risk patients. This was tested by means of the scale developed by Buglass *et al* (1974) to predict the risk of repetition of parasuicide. The scale contains six items: previous parasuicide; previous in-patient and out-patient psychiatric treatment; not living with relatives; problem in the use of alcohol; diagnosis of sociopathy. Risk category is computed by adding one point for each item positively scored. Overall, the scale performed approximately as well in Southampton as in Edinburgh in predicting repetition. If 0 were taken as the cut-off point, one-third of the total cases could be ignored at a cost of missing 5 per cent of the repeaters. Table IV shows that the Experimental service did not perform significantly better than the routine service for any risk category. However, patients in the T group continued to repeat significantly more even when their higher level of risk was controlled for.

*Change in depressive mood*

After they had recovered consciousness, the self-poisoning patients were asked to complete a self-rating depression inventory (Beck, 1961). A randomly selected 50 per cent of the E and C cases were followed up four months later and the depression inventory was repeated. 74 E patients and 72 C patients (73 per cent of the follow-up sample) completed ratings on both occasions. The missing patients did not show any significant difference in age, sex or mean depression score at time of self-poisoning.

A later paper will show the relationship of

scores on the Beck Depression Inventory to PSE ratings of psychiatric illness in the present sample. Scores on the BDI are correlated with measures of intent to die (Silver *et al*, 1971), and have been shown to correlate well with psychiatrists' ratings of the severity of illness in about two-thirds of a group of depressed patients; in the remaining cases agreement was poor (Bailey and Coppen, 1976). A high score on the BDI is therefore not always equivalent to a clinical diagnosis of depressive illness, but it can be regarded as an indicator of depressed mood (Metcalf and Goldman, 1965). Table V shows that the mean BDI scores of both E and C groups had fallen to a highly significant extent four months after the index self-poisoning. There was no difference between E and C groups in the amount of change shown.

*Change in social problems*

A semi-structured questionnaire was developed and tested during the pilot stage to gather information about patients' perceived

TABLE V  
Mean Score on Beck depression inventory at time of self-poisoning (T.1) and after four months (T.2)

	E N = 74	C N = 72
Time 1	17.61	19.63
Time 2	11.15	13.49
Difference	-6.46	-6.14
t =	6.05*	4.84*

\* P < .001

TABLE IV  
Repetition of self-poisoning, by predicted risk of repetition (Buglass scale)

Buglass score	% Repeating			All N = 536	Edinburgh sample N = 907
	E N = 200	C N = 200	T* N = 136		
0	6	6	0	5	5
1	12	16	18	15	9
2	19	25	43	27	16
3	36	15	59	36	27
4	40	20	43	38	37
5-6	25	60	67	57	48

\* Buglass score not known for 3 T cases.



social problems. Structured information was gathered about the nature and extent of the problems experienced by patients in various life areas. The problem areas were those which the method of social work offered to the E group (task-centred casework) had most chance of influencing, according to the literature. After detailed questioning, patients were asked to rate the severity of the difficulties they mentioned under each heading on a scale ranging from 0 (no problem) to 4 (very considerable problem).

During the pilot stage a reliability study was carried out on 20 patients who were independently assessed by the two male psychiatrists doing the baseline interviews. Reliability was 90 per cent or better on all but two of the problem areas investigated. The exceptions were questions relating to perceived problems in the domestic roles of housewife and parent, where reliability was reduced to 70 per cent. The women follow-up interviewers obtained more information under these headings, so that measures of change were also unreliable. In its final version, therefore, the social problem questionnaire provided information on five areas of social life—personal relations, social transitions, social relations, emotional distress interfering with coping, and material resources—each rated on a scale of perceived seriousness by patients at the time of self-poisoning and four months later.

Table VI shows how patients' views of their overall social circumstances changed in the period following self-poisoning. Although the social problems of both E and C groups had improved, the improvement was significantly greater for E patients.

TABLE VI  
*Improvement in social problems four months after self-poisoning*

	Improved	Not improved	Total
E	70	11	81
C	53	23	76*

$\chi^2 = 6.43; df 1; P < 1.02.$

\* 2 C cases not known

### Discussion

In considering the results of the trial, questions must be asked about how far they can be applied to the treatment of self-poisoners in general. Our original aim was to exclude from the trial only those self-poisoners whom it would have been unethical to include, because of their urgent need for some other form of treatment. In fact, only 43 cases (8 per cent) would have been excluded on these grounds. However, the trial sample was less representative than we had planned for two reasons. First, because of the difficulty of contacting the total population of casualty attenders for baseline assessment, 87 cases were not interviewed. The interviewed sample of 539, though representative of the total in terms of age distribution and marital status, included more women. Secondly, an unexpectedly high proportion of the interviewed sample had to be excluded on administrative grounds: they were already in continuing treatment with someone else whom they had seen within two weeks. The 139 excluded cases turned out to be an unexpectedly homogeneous group in terms of their high degree of psychiatric and social disability. The trial sample of 400, therefore, represents relatively lower-risk self-poisoners, living in more stable conditions and with relatively less personal and social pathology. The psychiatric and social services appear to be highly successful in selecting the most disturbed and disadvantaged people for treatment. However, being in continuing active treatment at the time of self-poisoning is shown in this study to be an unfavourable prognostic characteristic (cf. Hankoff, 1976).

The second point to consider in assessing the results is our choice of outcome criteria. Repetition of self-poisoning is an objective criterion, relatively easy to establish in a reliable way. Trying to assess change in people's subjective morale and immediate social circumstances is a more difficult undertaking. In gathering information about patients' psychiatric and social status we obtained standardized clinical and social data which will be reported elsewhere. However, in assessing change, we were interested in penetrating as far as we could into the subjects' views of their own social situations,

rather than imposing meanings on their experiences from our vantage point. We have therefore been prepared to use as data patients' own statements of how they assess their problems, together with changes in their statements, both over time and resulting from treatment. Since self-poisoning is a willed act carried out by a person as a result of his own view of his social situation at that time, we believed that his own estimation of improvement had more meaning than a value judgement by an outside observer.

These limitations and assumptions borne in mind, the results of this study are consistent with those of Chowdhury *et al* (1973) in suggesting that preventive intervention after self-poisoning has no effect on repetition. The studies of Greer and Bagley (1971) and Kennedy (1972), both of whom suggested that psychiatric assessment or treatment had a positive effect, did not use an experimental design. Our findings do not support the view that psychiatric treatment reduces repetition (in fact the opposite could be argued). The Canadian trial reporting reduction in repetition after three months follow-up is of interest in its methods of intervention: 'mental health workers' followed up the experimental group very intensively but for a short period—daily in week 1, every two days in week 2, twice in weeks 3 and 4, thereafter declining. However, methodological problems make the findings hard to evaluate (Ternansen and Bywater, 1975).

Our Experimental social work service had no advantage over the Control (routine) service in preventing repetition. However, it was rated as more satisfactory and helpful by its consumers. After four months, E patients also showed more improvement in social problems than did C patients. At present our conclusions must be that we do not know how to prevent people from repeating self-poisoning, but that a planned social work service using a task-centred approach is more acceptable to patients and can reduce some of their most pressing difficulties in a relatively economical way.

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