Brit. J. Psychiat. (1979), **135**, 28–34

Evaluation of a Detoxification Service for Habitual Drunken Offenders

By JOHN R. HAMILTON

SUMMARY The progress of 52 chronic alcoholic habitual drunken offenders who were offered a detoxification, assessment and referral service as an alternative to penal management for their public drunkenness was compared over a year with 48 control subjects, and each group's progress in the experimental year was compared with that in the previous year. The 'detoxification' patients were found not to have benefited as regards their alcoholism or episodes of drunkenness, though their periods of abstinence were longer. There were significant improvements in their accommodation and self-reported quality of life, and it is likely that their physical and perhaps mental health improved.

There is now general acceptance of the ineffectiveness of penal management of the drunkenness of chronic alcoholics. In the last 20 years detoxification centres have been established, especially in North America and Eastern Europe, to provide a more appropriate medical and rehabilitative service. Despite the proliferation of such centres, few if any controlled studies of their therapeutic effectiveness have been reported. This paper describes some of the results of Britain's first pilot detoxification centre.

The stimulus for the Edinburgh Alcoholic Detoxification Project was the Report (1971) of the Home Office Working Party on Habitual Drunken Offenders which recommended the establishment of detoxification centres as 'demonstrably medical and social work facilities with a clearly therapeutic purpose'.

The aims of the Project were (i) to assess the feasibility of adding an alcohol detoxification service to a Regional Poisoning Treatment Centre and to a psychiatric hospital; and (ii) to evaluate the effectiveness in terms of benefit to the patients of this detoxification, assessment and referral service for socially deteriorated alcoholics. A full description of the first of these aims has been given elsewhere (Hamilton *et al*, 1978); it was shown that the change from a penal to a medical and rehabilitative form of management was considered successful by all those concerned and need not be more expensive.

Methods

The cohort of 100 individuals, who met the criteria of being male, physically addicted to alcohol (but not receiving treatment) and habitual drunken offenders was recruited mainly from an Edinburgh court after the subjects' conviction for drunkenness. They were randomly allocated to a proband ('detox') group and a control group. Prior discussion had taken place with the police authorities and Procurator Fiscal who had agreed that for the period of one year the 'detox' subjects would not be prosecuted for drunkenness offences, but would instead be brought by the police to the detoxification centre; they were also able to refer themselves when drunk or having withdrawal symptoms. All of the 'detox' group were issued with an identification card, their names given with their consent to the police and they were asked to use the project psychiatrist and social worker for help with their problems. The control group were offered no special service, but continued to use the existing facilities in the city.

On enrolment, all subjects completed a questionnaire giving details of their present and past accommodation, employment, marital status, medical and alcoholic history and previous convictions for drunkenness and other offences.

The detoxification centre was first located in a Regional Poisoning Treatment Centre and subsequently in a psychiatric hospital. At each admission for detoxification, details were recorded including the circumstances of referral and admission, treatment given for alcohol withdrawal and for other physical and psychiatric conditions and proposed further management.

At the end of the experimental year, an attempt was made to trace each subject and administer a questionnaire similar to that on enrolment. In addition, data were collected from hospitals, prisons and courts on the subjects' contact with them during the experimental year and in the previous year.

Results

I Information from penal and medical sources

Number of days of abstinence

Complete data on court appearances, receptions into prison and admissions to hospital were collected for all but nine subjects. Five of the 'detox' group were excluded as they did not complete the experimental year, two having been withdrawn owing to complete lack of co-operation with the aims of the project and three having died; likewise, four controls are excluded as they died during the experimental year. (These seven deaths were due to a variety of causes, not all related to alcoholism; the rate was twice that of the general population).

Each individual was given a score, compared with the previous year, on each of the variables measured. The scores were subjected to Student's 't' test to find the significance of the variation from zero for each of the two groups in the experimental year, compared with the previous year; 't' was then calculated to find the significance of the differences between the 'detox' group and the controls.

Measurements of amounts of alcohol taken and frequency of drunkenness are of course most unreliable when the information is obtained from the subjects themselves and an attempt was therefore made to obtain more reliable data from other sources.

Table I combines the number of days in all forms of 'treatment' (meaning medical and rehabilitative management) with days in penal management. These figures can be interpreted as the number of days when it is known that the individuals had certainly not been drinking and indicate the 'detox' group had a significantly higher number of 'dry' days. Such would also, of course, be the case if all had been sentenced to prison and Table II shows the increased number of days spent voluntarily in rehabilitative hostels and psychiatric hospitals. This indicates a significant increase for the

TABLE I

Number of days of known abstinence
(*Number of days in treatment** + *number of days in prison for all offences*)

	In the year before enrolment	In the experimental year	% change	
'Detox' group:				t = 2.8985
N = 47				df = 46
per 100 probands	5,926	9,411	+59%	p <0.01
Controls:				t = 0.8459
N = 44				df = 43
per 100 controls	4,557	3,580	−21%	NS

t = 2.6453; df = 89; p <0.01

* 'Treatment' includes days in all of psychiatric hospitals, hostels and detoxification unit.

https://doi.org/10.1192/bjp.135.1.28 Published online by Cambridge University Press

'detox' group, but is a measure more of the effectiveness of the management system than of the benefit to the individuals. As all institutions from which these data were obtained discharged patients who relapsed, Table II shows an increase in unenforced abstinence in the 'detox' group—a better indicator of effectiveness than when enforced abstinence in prison is included.

Number of episodes of drunkenness

The number of convictions for drunkenness offences among the 'detox' group fell to virtually zero, as they should have done, whilst the control group were convicted for drunkenness at the same rate as before. The 'detox' group had, in addition, admissions for detoxification and the combined known number of episodes of drunkenness is shown in Table III.

The incidence is seen to have risen among the 'detox' group at a level significant at $p < 0.05$, but this is not significant when compared with the controls. These figures therefore tend to refute any suggestion that the 'detox' group saw their participation in the project as a licence to get drunk.

The data on these episodes of drunkenness in the experimental year and the previous year were also studied in relation to the number of 'days at risk', which was calculated by subtracting from 365 the number of days in which the subject was in prison (for any offence) and was hence not at liberty to drink. Each subject was then given a score, obtained from the number of known episodes of drunkenness, multiplied by 365 and divided by the number of 'days at risk'. For each subject, the score for the year before enrolment was subtracted from that for the experimental year, giving a final score for the difference in the number of known episodes of drunkenness, taking into account the

TABLE II

Number of days of known unenforced abstinence
(Number of days in hostels and psychiatric hospitals)

	In the year before enrolment	In the experimental year	% change	
'Detox' group:				t = 3.368
N = 47				df = 46
per 100 probands	1,349	4,960	+368%	p < 0.005
Controls:				t = 0.469
N = 44				df = 43
per 100 controls	1,325	966	−27%	NS

t = 2.978; df = 89; p < 0.005

TABLE III

Number of known episodes of drunkenness
(Number of detoxification admissions + number of court appearances for all drunkenness offences)

	In the year before enrolment	In the experimental year	% change	
'Detox' group:				t = 2.0409
N = 47				df = 46
per 100 probands	508	808	+59%	p < 0.05
Controls:				t = 1.289
N = 44				df = 43
per 100 controls	350	448	+28%	NS

t = 1.1872; df = 89; NS

https://doi.org/10.1192/bjp.135.1.28 Published online by Cambridge University Press

days at risk. These final scores were then subjected to Student's 't' test in the same manner as described above.

Table IV shows that, taking 'days at risk' into consideration, the increased number of episodes of drunkenness in the experimental year is less among the 'detox' group than among the controls, but in neither group does the difference between the two years reach statistical significance; furthermore, there is no difference between the 'detox' group and the controls. The higher standard deviation in the 'detox' group (nearly double that of the controls) suggests that the latter group were more consistent in their drinking habits between the two years. Among the 'detox' subjects, there are probably two small groups of men with high individual scores who respectively did 'well' by having fewer episodes of drunkenness or 'worse' by becoming drunk more often.

TABLE IV

Adjusted number of episodes of drunkenness. (Court appearances for all drunkenness offences and detoxification admissions)

		Episodes in experimental year —Episodes in previous year	
'Detox' group: (N = 47)	Mean SD	0.82 18.46	t = 0.3041 df = 46 NS
Controls (N = 44)	Mean SD	2.28 9.50	t = 1.5908 df = 43 NS

t = 0.4688; df = 89; NS

Physical and mental health

No attempt was made to measure change in the subjects' mental health, but Table V shows an increased stay in psychiatric hospitals, excluding the detoxification unit, among the 'detox' group. Whilst this is no doubt a reflection of the change in management, one can tentatively suggest that their mental health may have improved through contact with psychiatric services.

To gain an impression of improvement in physical health, note was taken during detoxification admissions, of all medical morbidity, defined as a pathological condition requiring the attention of nurses and/or doctors, over and above intoxication and detoxification. A physical condition was treated in approximately every second admission and the pathological conditions encountered ranged from pneumonia, pulmonary tuberculosis, chronic bronchitis and hypothermia to lacerations, soft tissue infections and verminous conditions. There are no data for comparison between groups or years, but it seems reasonable to conclude that the physical health of the 'detox' group improved.

II Information from subjects

Fifteen of the 100 enrolled cases could not be traced at the one year follow-up, a further seven had died and thus complete information was available from 78 subjects. The characteristics of the missing alive men showed a trend for them to be younger, not so severely addicted to alcohol and more likely to be employed; many had probably left Edinburgh to find work elsewhere.

TABLE V

Number of days in psychiatric hospitals

	In the year before enrolment	In the experimental year	% change	
'Detox' group: N = 47 per 100 probands	302	2,138	+608%	t = 2.9603 df = 46 p < 0.005
Controls: N = 44 per 100 controls	1,136	611	−46%	t = 0.6999 df = 43 NS

t = 2.4384; df = 89; p < 0.02

https://doi.org/10.1192/bjp.135.1.28 Published online by Cambridge University Press

Of the 42 'detox' patients followed-up, 13 had had no admissions for detoxification nor any contact with the project team during the experimental year; no help had therefore been offered to them.

(a) *Drinking habits*

The men were asked what was their longest period of unenforced abstinence in the last year and for most, this was less than one week. There was no difference between the two groups or between the experimental year and that previously. Eight of the 'detox' group said they had had shorter periods of abstinence and ten had had longer.

Of the 'detox' group, 19 per cent said they had drunk more or much more than the previous year, 31 per cent had drunk the same and 50 per cent less, much less or none. The figures for the control group were 16 per cent, 39 per cent and 44 per cent.

Thus, there was no significant difference in the amount of alcohol consumed between the two groups, despite half the 'detox' group reporting they were taking less. The reported improvement in the control group is noteworthy.

(b) *Accommodation*

Information was taken on the details of what kind of accommodation the men had lived in, for how long, with whom and in which subcultural area of the City. There was a definite trend for the 'detox' group to have moved 'up the ladder' from sleeping rough to being in a night shelter, to being in a common lodging house, to being in a hostel, to digs or a Corporation house. They also tended to be living alone less and some had moved out of the 'Skid Row' area of Edinburgh. Of the 'detox' group, 38 per cent were in improved accommodation, 48 per cent in the same and 14 per cent in worse. Of the controls, 11 per cent had improved accommodation, 67 per cent the same and 22 per cent worse. ($\chi^2 = 10.2$; df $= 2$; $p < 0.01$).

(c) *Employment*

The men reported no difference between the two groups on amount of days worked in the year, or again compared with the previous year; 58 per cent of the 'detox' group were continuously unemployed in the previous year and 48 per cent in the experimental year. Attempts to check unemployment records through the Employment Service Agency proved fruitless; that organisation had records on less than half the cohort and the records which they did have were incomplete.

(d) *Quality of life*

Finally, the subjects were asked for the impressions on the kind of life they had led during the experimental year. Of the 'detox' group, 52 per cent said it was better, 17 per cent the same, 26 per cent worse and 5 per cent of responses were other or not known. Of the controls, 28 per cent said it was better, 42 per cent the same, 25 per cent worse and 6 per cent of responses were other or not known. ($\chi^2 = 11.2$; df $= 2$; $P < 0.01$).

Whilst these are perhaps the most subjective of the data, it should be said that the Project team considered it an important question to ask, that the replies were in accord with their own views and knowledge of the men's lifestyles and the respondents had nothing to gain by not telling the truth. The Project team were of course pleased to see that significantly more of the 'detox' group thought their quality of life had improved. It is easier to convey the impression felt by the 'detox' men by anecdotes and the following are the comments written by one of the men on Christmas Day from prison, to which he had been sent for stealing money to buy drink:

> 'Now that it is over, all I can do is try again. I can't say that last year was exactly a triumph over the 'auld enemy', but in some ways it was quite successful for me. At least I had four jobs in a year and that was after fifteen years of unemployment. So I suppose you could say that being a patient must have influenced me in some way . . . I think this contact gave me an incentive to try harder (not always successfully, alas), knowing, I suppose, that at least someone cared for your welfare and tried to understand your problems and have found myself with a sense of direction again after being nearly rudderless for so long'.

Discussion

It is nearly 200 years since Thomas Trotter described drunkenness as a disease of the mind warranting medical attention (Trotter, 1788), but it is clear from review of the current literature on alcoholism treatment programmes that those subjects with the characteristics of the drunken offender—low social class, severe alcohol addiction, personality disorder, a history of failure of interpersonal relationships and poor intellectual ability—are either not treated by psychiatrists or alcoholism treatment units or when they are usually do badly (Edwards *et al*, 1974; Freeman and Hopwood, 1968). Most drunkenness offenders are alcoholics (Hamilton *et al*, 1978) and have special needs, requiring alternative methods of management. Penal management has been ineffective in preventing recidivism (Ratcliff, 1966) and has been criticized (Ross, 1971) as inappropriate in dealing with a medical condition in offenders who are themselves the victims of their offences. In the U.S.A., Pittman and Gordon's (1958) book described 'The Revolving Door' of drunkenness offenders and stimulated the decriminalization of drunkenness and proliferation of a wide variety of detoxification centres. It is regrettable that so few controlled studies of the effectiveness of such centres have been published.

Root (1970), in an uncontrolled study, showed that of 160 patients followed up four months after discharge from the St Louis detoxification centre about half showed overall improvement. There was an improvement in drinking pattern in 47 per cent, 49 per cent had improved health, 18 per cent improved employment and 15 per cent improved housing.

From the same centre, Pittman and Tate (1969) compared a group of 177 subjects whose detoxification was followed by extensive diversified in-patient and out-patient treatment with 78 controls who were detoxified only, discharged after one week and invited to attend for further therapy. The actively treated group were reported to have improved on several measures, but examination of the paper shows them to have improved in comparison with the passively-managed group on the measure of employment only and that significant at only $P < 0.05$.

The most recent evaluation reported from North America (Smart, 1977) found the mean length of stay in Toronto detoxification centres was 3.9 days. An uncontrolled group showed a high re-arrest rate and poor use of after-care facilities. No comparisons were made, however, with the period before entering the detoxification programme.

In Britain, Hershon *et al* (1974) asked 'What shall we do with the drunkenness offender?' and suggested that part of the answer depended on the needs and expectations of those concerned. The Edinburgh Project found that the needs expressed by the individuals were often greatly at variance to what the Project team thought they needed, and it was often difficult to marry the two. More in accord were expectations, though these waxed and waned.

The individuals probably had more faith in their belief that they could stop drinking than did the Project team, though the latter acted as an assessment and referral service rather than providing treatment themselves. Clearly, little was done to combat the alcohol abuse itself, though there is a crumb of comfort in that most of the men did not become 'worse' with the 'easier' life, as critics had forecast. Three of the 'detox' group were identified as certainly not having benefited from participation in the project. They had numerous admissions for detoxification (distorting much of the data) and would not accept or would not be accepted for admission to any conventional hostel for rehabilitation.

It was encouraging that progress was made in improving living conditions for a large number, and such change is often an essential preliminary to a further change, which involves obtaining employment and ceasing to become drunk so often. Though the 'detox' group did not have better employment records, this is partly due to the policies of hostels and psychiatric hospitals of discouraging residents and patients from leaving to work, at least initially. It should be emphasized that this Project took place over a short period of time, was working initially with some staff who were sceptical or even hostile to it, and took place in a Calvinistic city with the most meagre of services for alcoholic offenders.

The Edinburgh Project (Hamilton *et al*, *op.*

cit.) has shown that it is feasible to transfer the management of habitual drunken offenders from the penal system to a medical and rehabilitative system, and that detoxification should be conducted in a medical environment with medical and nursing staff trained in psychiatry. Close social work liaison and an adequate supply of different types of residential and rehabilitation hostels are essential.

The establishment of detoxification centres in Britain has been extremely slow, and of the 110,552 people arrested for drunkenness in England and Wales in 1977 (Home Office, 1978) less than 1 per cent were admitted to a detoxification centre. Whilst the Edinburgh Project has made specific recommendations based on their experiences, it is recognised that different models will be appropriate in other centres, depending mainly on who is willing to carry out the work and what type of premises are available. Even more important is that all centres research their work to provide more evidence on what is the best model for different patients.

Acknowledgements

The author is indebted to the other members of the Project team: Professor Cairns Aitken, Mrs Ann Griffith and Dr Bruce Ritson; and to the medical and nursing staff, police, court and prison officials and others without whom the project could not have taken place. The Project was financed by a grant from the Scottish Hospital Endowments Research Trust.

References

Edwards, G., Kyle, E. & Nicholls, P. (1974) Alcoholics admitted to four hospitals in England: social class and the interaction of alcoholics with the treatment system. *Quarterly Journal of Studies on Alcohol*, **35**, 499–522.

Freeman, T. & Hopwood, S. E. (1968) Characteristics and response to treatment of an unselected group of alcoholics. *Scottish Medical Journal*, **13**, 237–41.

Hamilton, J. R., Aitken, R. C. B., Griffith, A. & Ritson, E. B. (1978) *Detoxification of Habitual Drunken Offenders*. Scottish Health Service Studies no. 39. Scottish Home and Health Department. Edinburgh: H.M.S.O.

Hershon, H. I., Cook, T. & Foldes, P. A. (1974) What shall we do with the drunkenness offender? *British Journal of Psychiatry*, **124**, 327–35.

Home Office (1971) *Habitual Drunken Offenders: Report of the Working Party*. London: H.M.S.O.

—— (1978) *Offences of Drunkenness 1977 England and Wales*. London: H.M.S.O.

Pittman, D. J. & Gordon, C. W. (1958) *Revolving Door: A Study of the Chronic Police Case Inebriate*. Glencoe, Illinois: Free Press.

—— & Tate, R. L. (1969) A comparison of two treatment programmes for alcoholics. *Quarterly Journal of Studies on Alcohol*, **30**, 888–99.

Ratcliff, R. A. W. (1966) Characteristics of those imprisoned in Scotland in 1965 on conviction for primarily alcoholic offences. *Health Bulletin*, **24**, 68–70.

Root, L. E. (1970) A community experience—treatment of the public intoxicant. Paper read at International Conference on Alcoholism and Addictions, Cardiff.

Ross, C. F. J. (1971) Comparison of hospital and prison alcoholics. *British Journal of Psychiatry*, **118**, 75–8.

Smart, R. G. (1977) The Ontario detoxication system: an evaluation of its effectiveness. In *Alcoholism and Drug Dependence: A Multi-disciplinary Approach*, eds. J. S. Madden, R. Walker and W. H. Kenyon. New York: Plenum Press.

Trotter, T. (1788) *De Ebrietate ejusque Effectibus in Corporis Humanum Complectens*. M.D. Thesis, University of Edinburgh.

John R. Hamilton, M.D., M.R.C.Psych., *Consultant Forensic Psychiatrist, Broadmoor Hospital, Crowthorne, Berks; previously Research Fellow, Edinburgh University Department of Psychiatry*

(*Received 24 November 1978*)