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## Evaluation of Therapeutic Alternatives to Imprisonment for Drug-Dependent Offenders. Findings of a Comparative European Multi-country Study

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### Summary

A multi-country, multi-site comparative research study has documented the feasibility of recruiting drug-dependent individuals receiving treatment as an alternative to imprisonment ('quasi-compulsory' treatment, in the setting of an experimental group), while comparing them with those receiving treatment in the same therapeutic institutions, on a voluntary basis (control group). The study combined qualitative and quantitative methods in describing the evolution and outcome of each case after 6, 12 and 18 months in treatment. 845 probands were recruited from 9 sites in 5 countries (Austria, Germany, Italy, UK, Switzerland), 429 in the experimental and 416 in the comparison group. Data were collected using a standardized instrument set and following a joint protocol that allowed for the testing of a number of pre-established hypotheses. Significant reductions in drug use and delinquent behaviour, together with improvements in social integration and health, were found in both groups. Higher rates of perceived external pressure to stay in treatment in the experimental group did not affect motivation of these patients as regards improvement and retention in the study. It can be concluded that the availability of treatment alternatives to imprisonment for drug dependence are a valuable policy option, under various different conditions, but that this option is open to further improvement.

*Key Words:* Therapeutic alternatives to imprisonment, drug use, delinquent behaviour, social integration, health improvement, policy option evaluation

### 1. Introduction

There are only a few European data on the course and results of treatments for drug-dependent offenders who are offered a therapeutic alternative to imprison-

ment. Before starting the project described here, a comprehensive review of the literature on treatment alternatives to imprisonment for drug-dependent individuals was performed in five languages (English, Dutch, German, French and Italian) [9]. The review

came to the following conclusions:

“There is a link between dependent drug use and crime, but there is no single, causal connection between them; drug treatment is effective in reducing the drug use and crime of clients; treatment is more effective if it lasts several months; it is not clear if QCT is successful and more research is needed; this research should include quantitative and qualitative methods and should use clear definitions and measures of drug use, crime, client characteristics (including coercion and motivation) and treatment characteristics” [9].

Within the 5th Framework Programme of the European Commission, a multi-country project to search for treatment alternatives to imprisonment for drug-dependent individuals was submitted and accepted, under the heading of “Quasi-compulsory treatment in Europe - QCT Europe”. Five countries participated: Italy, UK, Austria, Germany and Switzerland. A main aim was to document the outcome of such interventions as compared with those of voluntary interventions, on the basis of a comparison group of drug dependent probands receiving treatment in the same service units as the QCT probands.

The court procedures, the criteria of eligibility and the treatments provided differed from country to country. These differences have been described in detail for the countries participating in the QCT project [11], It was of interest to see whether these differences had any impact on the therapeutic outcome.

## 2. Methodology

### 2.1 Proband sampling

Proband sampling followed the protocol instructions. It was not, however, possible to implement the recruiting process in all countries within the prearranged time limits; in the case of Switzerland, it had to be prolonged until the end of May 2004. This was partly due to the fact that client turnover was slower than expected, with fewer new clients entering treatment, and partly to a low response rate, as considerable numbers of eligible persons were unwilling to participate in the study. When recruitment was definitively terminated, the number of probands meeting the conditions set and giving informed consent to their participation in the study amounted to n=845 (Table 1).

### 2.2 Developing a research protocol and instruments

The quantitative part of the study set up the hypotheses to be tested, and then developed the research protocol and the instruments for data collection. Translation of the protocol and instruments, along with the training of interviewers, was undertaken nationally.

All the data were entered into templates, transferred to the central data bank, cleaned and corrected, where necessary, and stored in an SPSS file. As in every multi-centre study, many errors and missing items had to be identified, classified and fed back to study partners for correction. An interim data evaluation was made after the first follow-up at 6 months after intake, and the final analysis was drawn up on the basis of the follow-up data 18 months after intake.

### 2.3 The research hypotheses

Based on the analysis of the literature and a joint discussion among partners, the initial hypotheses were revised and came to cover the following:

- a reduction in substance use and crime, and an increase in health and social integration in the QCT group;
- the same factors for the control group of voluntary clients;
- a better level of retention and a different outcome in the QCT group compared with the control group (after other factors had been checked statistically).

In addition, a number of client characteristics and treatment factors should be selected for testing as predictors of outcome.

### 2.4 The research protocol

In the research protocol, all the design and procedural details were finalized for quantitative evaluation, a draft protocol developed at the Research Institute in Zurich has been distributed to all partners. The final protocol covered:

- selection criteria for treatment services eligible for inclusion into the study;
- selection criteria for probands to assess their eligibility to enter the experimental or the control group;
- information material for authorities, services, clients and ethical committees and consent forms for clients;
- an instrument set for data collection on clients, at intake and at follow-up, for quantitative evaluation (8 questionnaires);
- instruments for data collection on participating services (2 questionnaires);
- rules for translation of instruments;
- instructions for conducting interviews;
- a coding system designed to make client data anonymous;
- a schedule for the timing of measurements (at the moment of intake into treatment, and again 6, 12 and 18 months afterwards).

Table 1. Proband recruitment						
Country	Site	n per site	n per country	n experimental	n controls	Total
UK	Kent	87		45	42	87
	London	70	157	44	26	70
Italy	Bari	50		29	21	50
	Florence	100		50	50	100
	Padua	150	300	66	84	150
Austria	Vienna	150	150	53	97	150
Switzerland	Fribourg	13		13	0	13
	Zurich	72	85	37	35	72
Germany	Berlin	153	153	92	63	153
Total		845	845	429	416	845

### 2.5 The instrument set used for data collection included the following:

#### Proband data:

- Europ-ASI, short version, incl. ethnicity
- Europ-ASI, short follow-up version
- ASI-crime module, amended version
- Victimization questionnaire (QCT.victimization.doc, adapted from the British Crime Survey [3])
- Perception of pressure questionnaire (QCT.pressure.doc, adapted from TCU, Institute of Behavioural Research)
- Self-efficacy questionnaire (QCT.selfefficacy.doc, based on Self Efficacy Scale [4])
- Readiness to change questionnaire (QCT.change.doc, based on Readiness to Change Questionnaire [Copyright © Commonwealth of Australia, 2000])
- Client satisfaction questionnaire (QCT.clientsatisfact.doc, adapted from Treatment Perceptions Questionnaire ATPQ, [6])

#### Service data:

- Revised Treatment Unit Form (TUF-R, adapted from the original TUF)
- Service Quality Questionnaire (adapted from WHO/MNH/MND/94.17 (Quality assurance in Mental Health Care).

The study was carried out according to the agreed protocol. All partners organized training for the interviewers in the use of the instrument set, so as to optimize data quality and comparability. Staff from the Zurich centre helped to clarify uncertainties and misunderstandings whenever necessary.

## 3. Findings

### 3.1 Service description

Data from the Treatment Unit Form, provided by 44 treatment services, were made available for evaluation. Services differed widely in terms of capacity, duration of treatment programme, type of therapeutic approach and range of care and support options. On the other hand, practically all these services have individualized treatment planning and provide access to psychiatric care if needed. Premature termination of treatment occurs with 0-83% of all clients. Staff-client ratios too show major differences, which are also found in the proportion of QCT versus voluntary clients. When analysing the relevance of service factors to outcomes, we only found a better prognosis in those receiving in-patient treatment compared with those in out-patient treatment. All services accepted voluntary patients (control group) and patients complying with a court order (QCT experimental group).

### 3.2 Recruitment and attrition

845 probands were recruited into the study: 300 from Italy, 157 from the UK, 153 from Germany, 150 from Austria and 85 from Switzerland (Table 1). Attrition rates at follow-up were 32% after 6 months, 42% after 12 months and 47% after 18 months (Table 2). During the study period, almost two thirds of probands left treatment, mostly by dropping out or after finishing the planned treatment period.

The findings show sharp differences. The highest drop-out rates occurred during the first 6 months. In most countries, retention rates turned out to be higher in the control group, while Austria and Germany recorded a

Table 2. Study retention in QCT group vs. controls

Group	England		Italy		Austria		Switzerland		Germany		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
QCT	47	52.8	74	51.0	30	55.6	37	75.5	37	40.2	225	52.4
CG1	47	69.1	86	55.5	37	38.5	30	83.3	22	36.1	222	53.4
Total	94	59.9	160	53.3	67	44.7	67	78.8	59	38.6	447	52.9

better level of retention for QCT probands in the study. So too, there are major differences in overall retention rates, with the highest values recorded in Switzerland and the lowest in Germany and Austria.

As would be expected, those out of treatment had higher attrition rates than those still in treatment. Overall rates were almost equal in the experimental and control group. In addition, a shift during follow-up from residential to out-patient treatment could be observed in those who were still in treatment.

### 3.3 Base-line proband description

At intake, we found major differences in proband characteristics from country to country in the following areas: age, gender, rate of non-nationals in the study cohort, mental health status, substance use, crime involvement, motivation for change and perceived pressure for entering treatment. Moreover, the treatment provided varied from country to country (e.g. drug-free residential treatment covered high percentages of the German and the Austrian samples, but were rated at zero per cent in the UK sample; only in the UK was there a high proportion of day-care programmes involved). Such differences had to be considered when comparing the outcomes in the participating countries.

### 3.4 Comparability of experimental and control group

While being almost equal in size, the groups differed in a number of issues: gender disparity (more females in the control group), mental health problems (more problems in the control group), crime involvement (higher rates in the experimental group) and treatment received (more detoxification and substitution treatment in the control group, more out-patient drug-free treatment in the experimental group).

### 3.5 Changes recorded during follow-up

Almost all changes in proband status and behaviour tended to be improvements :

- Employment status, as measured by the number of

working days during the last month, turned out to have improved and was slightly better in the control group than in the experimental group;

- Overall health status had improved, too, and proved to be slightly better in the comparison group (the difference was not significant, however), while the mental health status improved equally in the two groups;
- A massive reduction in substance use was recorded in the self-report data, showing equal rates in the two groups after 18 months, even if the experimental group had shown higher rates at intake. The main problem drug proved to be heroin, both at intake (36% of probands) and at follow-up (19% of probands). As might be expected, those still in treatment tended to have fewer consumption days than those out of treatment (the difference was not statistically significant, however);
- Crime involvement, too, showed massive reductions, mainly during the first 6 months, with a slight move upwards thereafter. Probands in the experimental group displayed an equally high fall in crime involvement, but higher rates at follow-up, as at intake, compared with the control group. As was to be expected, probands still in treatment showed the highest fall in crime involvement.

### 3.6 Testing of hypotheses

Various statistical methods were used (bivariate and multivariate) in order to test the main hypotheses, with the following results:

- substance use was significantly reduced in both groups, mainly during the first 6 months, and with only slight move upwards between 6 and 18 months;
- reductions differ between treatment centres, with in-patient treatment resulting in an increasingly rapid fall in use;
- no significant differences in outcome were recorded between the experimental and control groups;
- crime involvement was significantly reduced in both groups, mainly during the first 6 months, and with only few recidivisms thereafter;

- overall health status and mental health status improved in both groups (but with no significant differences between groups);
- social integration (in terms of employment) improved in both groups (no significant differences between groups);
- no difference in retention between the experimental and control groups.

Testing of the predictor hypotheses allowed us to make the following findings:

- legal status at entry predicts perceived coercion; the experimental group had higher scores of perceived legal coercion;
- high perceived coercion at intake is not correlated with a low motivation for change;
- the staff-client ratio (case-load) and the proportion of court-referred clients in a given service cannot be demonstrated to be predictive of outcome;
- differences in court procedures and supervision of QCT clients cannot be demonstrated to be predictive of outcome on the basis of the available information;
- among client characteristics, the following are found to be predictive of a reduction in substance use, applying bivariate analysis: the prognosis of nationals is worse than non-nationals, a high initial delinquency score correlates with a worse prognosis, higher numbers of days in treatment correlate with higher reduction rates, the injection of drugs and having a polydrug consumption pattern both correlate with a worse prognosis, whereas high scores on self-efficacy improve the prognosis;
- other client characteristics are not found to be predictive; these include: age, gender, length of drug career, length of criminal career, starting crimes before taking to drugs, a score for violent crimes, perceived coercion, motivation scores, mental health scores, number of treatment episodes.

A special analysis including qualitative data of the relationships between legal status, perceived pressure and motivation in treatment confirmed that those who enter treatment under QCT do perceive greater pressure to stay in treatment, but that this does not necessarily lead to a higher or lower motivation than that of voluntary patients [10].

#### **4. Discussion**

This is the first multi-national European study on the outcome of treatment for drug addicts offered as an option by a court, while prison sentences are suspended. The findings are: significantly positive changes in drug taking and delinquent behaviour in the experimental as well as the control group, in spite of major differences

between countries and sites, in treatment provision, in court procedures, and in eligibility criteria for treatment alternatives to imprisonment. Improvements can also be documented for health status and social integration.

The findings do, however, reveal the negative impact of high attrition rates during follow-up and the problem of a lack of independent data to corroborate the self-reports of probands. However, other studies which had less attrition and included access to independent corroborating data indicated the high reliability of self-reporting if no negative consequences arising from accurate self-reporting can be suspected. Using independent interviewers is an efficient way of preventing such suspicions, and the use of independent interviewers in our study may be considered to provide support for our findings.

The results of this study confirm the findings from an earlier Swiss study comparing the outcomes of court ordered residential treatment with voluntary treatments at the same sites; it found better social integration in voluntary patients following the treatment, but otherwise no differences in outcomes [5].

The findings presented here are in line with reports on findings from national QCT Data [1, 7, 8]. In particular, the Italian study mentions the positive effects in terms of social integration, besides the improvements in drug taking and delinquent behaviour. No differences were found in attrition rates between the experimental and control group [1]. For the English sample, comprising people who entered treatment under QCT or comparable 'voluntary' treatment, the following results were observed [7, 8]: Significant reductions in reported drug use and crime, modest improvements in mental health, reductions in reported risk behaviours (e.g. sharing injecting equipment), improvements in housing and relationship situations, no change in (very high) rates of unemployment. There were no significant differences between QCT and comparison groups in retention or outcome. These findings suggest that QCT is effective in producing reductions in drug use and crime, together with improvements in mental health and social integration. It can therefore be considered a viable alternative to imprisonment. This is much in line with earlier observations on the British Drug Testing and Treatment Orders (DTTO), where the addicts get a choice of treatment options by court [2].

According to our English partners, more attention should be paid to issues of treatment process and coordination between treatment and criminal justice systems, in order to provide high quality and consistent treatment that is likely to optimize outcomes for individuals and society in general. The salient points are: ensuring that QCT is made quickly available to offenders who are likely to obtain the most significant benefits (i.e. those who have high levels of offending)

in ways that develop motivation and engagement, while promoting the development of supportive ‘therapeutic alliances’ between offenders and their probation officers and treatment staff. Making the full range of treatment available to people who enter treatment under QCT is essential too, so that they can access treatment appropriate to their needs. Lastly, better aftercare arrangements to support people who are leaving QCT are needed.

Our hope is that the results from the QCT Europe study can be used constructively to make possible an informed debate about the appropriate use of these options.

## 5. Conclusions

We may conclude in a cautious way that all our findings point in the same direction: quasi-compulsory treatment is as effective as voluntary treatment, if provided in the same type of service units. Given the higher initial scores for substance use and criminal involvement in the case of QCT probands, the improvements are all the more noteworthy. We also have reason to conclude that the treatment provided is more relevant to outcome than the personal characteristics of clients.

In contrast to a position which prefers to rely on imprisonment as a corrective for drug dependence and drug-related offences, our findings support a policy that gives drug-dependent offenders an option to go into treatment, as an effective alternative to imprisonment.

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## Contributors

The authors contributed equally to this work.

## Conflict of Interest

The authors have no relevant conflict of interest to report in relation to the present study.

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