



# Kent Academic Repository

Stevens, Alex, Berto, Daniele, Frick, Ulrich, Hunt, Neil, Kerschl, Viktoria, McSweeney, Tim, Oeuvray, Kerrie, Puppo, Irene, Santa Maria, Alberto, Schaaf, Susanne and others (2006) *The relationship between legal status, perceived pressure and motivation in treatment for drug dependence: Results from a European study of quasi-compulsory treatment*. *European Addiction Research*, 12 (4). pp. 197-209. ISSN 1022-6877.

## Downloaded from

<https://kar.kent.ac.uk/29900/> The University of Kent's Academic Repository KAR

## The version of record is available from

<https://doi.org/10.1159/000094422>

## This document version

Author's Accepted Manuscript

## DOI for this version

## Licence for this version

UNSPECIFIED

## Additional information

## Versions of research works

### Versions of Record

If this version is the version of record, it is the same as the published version available on the publisher's web site. Cite as the published version.

### Author Accepted Manuscripts

If this document is identified as the Author Accepted Manuscript it is the version after peer review but before type setting, copy editing or publisher branding. Cite as Surname, Initial. (Year) 'Title of article'. To be published in *Title of Journal*, Volume and issue numbers [peer-reviewed accepted version]. Available at: DOI or URL (Accessed: date).

## Enquiries

If you have questions about this document contact [ResearchSupport@kent.ac.uk](mailto:ResearchSupport@kent.ac.uk). Please include the URL of the record in KAR. If you believe that your, or a third party's rights have been compromised through this document please see our [Take Down policy](https://www.kent.ac.uk/guides/kar-the-kent-academic-repository#policies) (available from <https://www.kent.ac.uk/guides/kar-the-kent-academic-repository#policies>).

**The relationship between legal status, perceived pressure and motivation in treatment for drug dependence: Results from a European study of quasi-compulsory treatment.**

Alex Stevens<sup>1</sup>, Daniele Berto<sup>2</sup>, Ulrich Frick<sup>3</sup>, Neil Hunt<sup>1</sup>, Viktoria Kersch<sup>4</sup>, Tim McSweeney<sup>5</sup>, Kerrie Oeuvray<sup>6</sup>, Irene Puppo<sup>7</sup>, Alberto Santa Maria<sup>8</sup>, Susanne SchAAF<sup>3</sup>, Barbara Trinkl<sup>9</sup>, Ambros Uchtenhagen<sup>3</sup>, Wolfgang Werdenich<sup>9</sup>

1. European Institute of Social Services (School of Social Policy, Sociology and Social Research), University of Kent, Canterbury
2. Servizio Tossicodipendenza, ULSS 16, Padova
3. Institut für Sucht- und Gesundheitsforschung, Zurich
4. SPI Forschung, Berlin
5. Institute for Criminal Policy Research, King's College London
6. Université de Fribourg
7. Servizio Tossicodipendenza, ULSS 10, Firenze
8. Servizio Tossicodipendenza, ULSS BA/4, Bari
9. Lehr- und Forschungspraxis der Universität Wien

**Short title:** Legal status, perceived pressure and motivation in treatment

**Published:** 2006, *European Addiction Research*, 12, 197-209.

**Address for correspondence:**

Alex Stevens  
Senior Researcher  
European Institute of Social Services  
School of Social Policy, Sociology and Social Research  
Keynes College  
University of Kent  
Canterbury  
Kent  
United Kingdom  
CT2 7NP  
Tel: 01227 827304  
Fax: 01227 827246  
Email: [A.W.Stevens@kent.ac.uk](mailto:A.W.Stevens@kent.ac.uk)

## **Abstract**

This paper reports on intake data from QCT Europe, a study of quasi-compulsory treatment for drug dependent offenders. It explores the link between formal legal coercion, perceived pressure to be in treatment and motivation amongst a sample of 845 people who entered treatment for drug dependence in 5 European countries, half of them in quasi-compulsory treatment and half 'voluntarily'. Using both quantitative and qualitative data, it suggests that those who enter treatment under QCT do perceive greater pressure to be in treatment, but that this does not necessarily lead to higher or lower motivation than 'volunteers'. Many drug dependent offenders value QCT as an opportunity to get treatment. Motivation is mutable and can be developed or diminished by the quality of support and services offered to drug dependent offenders.

## **Introduction**

There is increasing interest in the role of motivation and coercion in the success of legally coerced drug treatment, but a recent review of the literature in this area found that "[g]iven the significance of the topic, there has been remarkably little research in this area, and only a limited evidence base from which to make judgements about the effectiveness of coerced treatments for offenders" [1]. Issues of motivation and coercion are important in understanding and explaining the effect of treatment for problematic drug use, and especially of legally coerced drug treatment. This article attempts to start filling the gap that has been identified in the research by examining issues of coercion and motivation among a sample of problematic drug users in five European countries. As has previously been recommended [2], it uses both quantitative and qualitative methods to examine the links between legal status, perceived pressure and motivation.

## **Previous research**

Research on legally coerced drug treatment is still developing and there have been mixed results reported internationally [3]. As the evidence mounts that drug treatment can be effective in reducing drug use and crime amongst dependent users [4], politicians and researchers have been increasingly interested to know whether these benefits can be extended by coercing offenders who use drugs into treatment. There have been critics of this approach, who have questioned reports, for example, of the claimed success of American drug courts [5, 6]. It has been suggested that people who are coerced into drug treatment will not be motivated to change [7], and that these groups may therefore be less likely to engage and succeed in treatment [8]. Several studies have found that motivation is a good predictor of retention and outcome in treatment for drug dependence [9-12], although other writers have suggested that motivation is less important than the characteristics of treatment and its perceived utility [13, 14].

Some previous studies of the effect of legal coercion on motivation have given mixed results [15]. It has been argued that this "can at least partly be traced to conceptual and methodological problems in the research", which has not sufficiently recognised the diversity of treatment settings and types of coercion [16]. Recent studies have tended to suggest that legal pressure can predict better retention [17], especially when factors such as previous criminal history are taken into account [18]. One of the conceptual confusions that has hindered previous research in this area is on the

difference between legal status and perceived coercion [16, 19, 20]. Some people who enter drug treatment through the criminal justice system may be very highly motivated to treatment. And others who enter from other routes may feel different kinds of pressure (e.g. from family and friends). So it is important to look at what pressure the person perceives as well as at their legal status.

Previous research combining different measures of coercion have produced some interesting results. For example, an American study in three residential therapeutic communities found that perceived legal pressure did predict better retention, but legal status had mixed effects, while pressure from families predicted worse retention [21]. Wild *et al* reported that, in their study of 300 people entering drug treatment, 35% of those who were legally mandated reported that they perceived no pressure, while 37% of non-mandated clients reported that they felt some coercion [19].

Previous American research has mostly used quantitative methods. Another research approach has focused on understanding how and under what conditions coerced treatments are implemented [19, 22, 23]. Client progress and issues such as motivation, perceptions of coercion and retention in treatment are analysed in relation to the way key actors attempt to make court ordered treatment work. Typically, such studies conceptualise quasi-compulsory treatment (or QCT) as a complex, and often problematic, process between penal and treatment sectors [24]. Qualitative studies expose how actors handle key phases of a QCT order. Whilst assessment at entry to voluntary treatments is considered particularly critical for treatment efficacy as it involves “pairing” [25-27] between needs and services, this crucial step is not always taken when entering treatment with a court order [24]. For example, a judge can order a course of methadone without being an expert in this type of treatment and without checking the availability of such a treatment [28]. Lawyers’ legitimate demands for lighter sentences are not necessarily accompanied by assessments in terms of treatment requirements [24]. From this perspective, good outcomes depend on actors in the QCT process being able to deal with the essential contradictions that the care/control dichotomy presents.

One such contradiction arises from the potential conflict between motivation and coercion. While some have argued that motivation is damaged by pressure from the criminal justice system [29], others have suggested that "the appropriate use of coercion may increase a client's readiness for treatment" and so create better outcomes, even "as treatment lengths shrink and resources for treatment dwindle" [30] (although this conclusion comes from a problematic study, as will be shown below).

In Europe, QCT is applied in a variety of ways [31, 22]. England uses sentences such as the Drug Treatment and Testing Order (which has recently been replaced by the Drug Rehabilitation Requirement). These sentences enable courts to order an offender to enter treatment and submit to drug testing for a specified period as an alternative to some other sentence, usually imprisonment. In Austria, Germany and Switzerland, legal arrangements are in place that can broadly be described as “therapy instead of punishment”, with the possibility to suspend prosecution or sentence on the condition that the offender enters treatment. In Italy, prison sentences of no more than 4 years, or the last 4 years of a longer prison sentence, can be replaced by a period in judicially supervised drug treatment. These arrangements differ from other possibilities for coerced treatment in that they are consequent to a crime that the person has

committed, and so are not civil commitment of drug users on the basis of their drug use alone. They require the informed consent of the offender to enter treatment as an alternative to another sentence, in contrast to, for example, the Dutch SOV system, in which offenders may be placed in treatment institutions without their consent [32]. And they take place in treatment settings that are also used by people who have not been ordered to do so by a judge or prosecutor. It should also be noted that European arrangements for QCT differ from the drug courts established in many states of the USA, in that they are not limited to drug offenders and are often used for persistent offenders, who would be excluded from several of the American drug court systems.

### **Research question and hypotheses**

The North American research highlights the issues and suggests some conceptual and methodological problems to avoid. It suggests that both quantitative and qualitative methods are necessary in order to understand the conditions of successful outcomes in QCT. Very little research has been published on this issue from Europe. This paper will use evidence from a European study to attempt to answer the question: How are legal status, perceived pressure and motivation linked? Quantitatively, it will test two principal hypotheses:

1. That entering treatment through QCT is associated with higher perceived coercion.
2. That higher perceived coercion is associated with reduced motivation.

The first of these hypotheses tests that common-sense notion that if a person is told to enter treatment by a court or prosecutor, then they are more likely to feel pressured into attending treatment. The second relates to the idea, coming from self-determination theory [33], that people are more likely to be motivated if they experience autonomy, and less likely to be motivated if they experience control and restraint.

### **Methods**

As noted above, the North American research relies heavily on quantitative data and statistical analysis. This limits the analysis of the actual experience of being legally coerced and entering drug treatment. It also limits the use of between-method triangulation [34] to add to the reliability of the findings. This article will also draw on qualitative work to reveal issues of motivation and coercion that can easily be overlooked if attention is not paid to how key actors attempt to make quasi-compulsory systems work. We thus use both quantitative and qualitative data in order to gain insights into how coercion and motivation fit into the various processes at work during the entry phase into court ordered treatments.

The data used in this article comes from the QCT Europe study. This is a European study of quasi-compulsory treatment (QCT) of drug dependent offenders. We define QCT as treatment of drug dependent offenders that is motivated, ordered or supervised by the criminal justice system and takes place outside regular prisons. The study is collecting primary data in five countries; the UK, Austria, Germany, Italy and Switzerland. They were chosen for this study as they operate similar levels of coercion in their QCT systems, in that people in these countries who have committed a range of offences that could otherwise be dealt with by imprisonment are given the

option to attend treatment instead. We recruited a quantitative sample of 845 people who entered drug treatment between June 2003 and May 2004. They were a random sample of all those who entered QCT (n=428) or comparable ‘voluntary’ treatment (n=417) at our 65 purposively selected treatment centres. We refer to these as legal status groups, entitled the QCT group and the ‘voluntary’ group<sup>1</sup>. The sites were selected on the grounds that they were providing treatment to both QCT and ‘voluntary’ clients and were receiving enough clients to make their participation in the research viable. They were not evenly spread around the countries, but were clustered in London, Kent, Bari, Florence, Padua, Vienna, Berlin, Zurich and Fribourg.

We used an adapted version of the European Addiction Severity Index (EuropASI) [35] to measure domains on demographics, medical status, employment/support status, drug/alcohol use, family/social relationships and psychiatric status. In order to reduce the time taken to administer the instrument, and to limit data collection to items that would be used in analysis, items that are not in the list of “critical objective items” according to the EuropASI manual [36] were omitted. In order to clarify the link between legal status and perceived coercion, the questions on perception of pressure from Simpson and Knight’s initial assessment form for correctional residential treatment were used [10]. These use a Likert scale to ask the respondent whether they felt pressured by each of 6 sources (medical authorities, family and friends, employer, legal authorities, self and other), with the scale ranging from 1 for ‘not at all’ to 5 for ‘extremely’ for each source (item). Responses to the items (excluding self-pressure) were added to give a score for total perceived external pressure, ranging from 5 to 25<sup>2</sup>. We also used an adapted version of the Proactive Coping Scale [37], and the Readiness to Change Questionnaire (RCQ) [38]. Interviews were carried out by researchers who had been trained in the use of the EuropASI. We attempted to interview treatment clients within two weeks of their entry to treatment.

From the questions in the EuropASI on drug use and drug problems experienced in the past 30 days, we created a drug use composite score, following the example of Koeter and Hartgers [39], with a possible range of 0 to 1.

The RCQ was used to assign respondents to the pre-contemplation, contemplation or action stages of Prochaska and Diclemente’s stages of change model [40]. This model has been extremely popular and influential in the field of addictive behaviours during the last two decades. Despite the model’s intuitive appeal, some concerns have been expressed regarding conceptual confusion, accurately defining change stages, the notion of successive or continuous change, the model’s predictive validity, and its ability to inform clinical decision making [41-43]. It measures readiness to change, and not readiness for treatment, which is included in DeLeon and Jainchill’s circumstances, motivation, readiness and suitability scale [12]. Nevertheless, the RCQ has been validated and applied to a range of behaviours (using factor and cluster analytic methods in retrospective, prospective and cross-sectional studies) and has been shown to demonstrate widespread utility [44]. Its use aids the comparability of this study to others which have used it [e.g. 30, 45].

---

<sup>1</sup> We follow Gregoire and Burke [30] in using inverted commas for the ‘volunteers’ to recognise the possibility that people who are not under formal legal supervision may also experience pressure to enter treatment.

<sup>2</sup> This data was missing for 4 respondents, who were excluded from the analysis.

We also carried out semi-structured interviews in all countries with 43 treatment clients and 37 professionals. The qualitative strategy was to ensure that comparisons between contrasting systems would encourage greater understanding of site specificity and, secondly, to identify the processes at work that were common to all sites. Clients were selected from the population constituted by the quantitative sample according to theoretical criteria (e.g. gender, principal drug used). The client qualitative sample can therefore in no way be considered a statistically representative sub-sample of the quantitative sample. On the other hand, it collectively reflects a large diversity of contrasting situations that are useful in developing and challenging understandings of the processes involved. The professional interviewees came from both the legal and treatment systems. They were again purposively selected in order to provide a range of opinions which could be compared with each other and with the quantitative data.

Developed from pilot interviews in each country, and coordinated by a designated member of the research team, the qualitative interviews were carried out according to a common interview guide. The guide presented themes focused on identifying the various procedures and processes leading up to the judicial decision and entry into treatment programs, as well as seeking information about early experiences in treatment. The underlying perspective was to consider the decision to enter treatment as occurring over a period of time, during which motivation and coercion issues would be faced and dealt with by the different actors that were obliged to work together. Whilst English was used as the working language for both the interview guide and the interview report, interviews were carried out by native speakers in the interviewee's language. Interviewers then completed a structured, thematic report on each interview, which included a section on their own analysis of the interview. Reports were then sent to the designated partner where, with the support of a computer assisted qualitative analysis program (QSR NVivo), the data were analyzed for underlying logics and mechanisms. Interpretations were tested and clarified via email discussions between research partners, as well as by the presentation of on-going results during the more formal research team meetings

Team meetings also provided the occasion for challenging comparisons between quantitative and qualitative findings. Strategies included searching for triangulation evidence, attempting to explain inter-site differences or anomalies occurring in either dataset, identifying common themes and cumulating the different types of evidence concerning specific themes.

*[Insert table 1 here]*

## **Quantitative data**

### *The sample*

Some characteristics of the sample in each country are shown in table 1. The mean age of respondents was 31, and this did not differ significantly between the QCT and 'voluntary' groups. There were significantly fewer women in the QCT group (14%) than in the 'voluntary' group (23%) ( $\chi^2=10.296$ , d.f. = 1;  $p<0.01$ ). The QCT group contained significantly more people of other ethnic origins than white (10%, compared to 5%) ( $\chi^2=8.768$ , d.f. = 1;  $p<0.01$ ). The medical status of the two groups

was similar. The 'voluntary' group reported experiencing more psychological and emotional problems than the QCT group, although this difference was not significant. Both groups had long histories of using several drugs. The most commonly reported drugs used in both groups were heroin, (powder) cocaine and methadone, with slightly higher levels of reported past use of cocaine in the QCT group, and of methadone in the 'voluntary' group. The mean drug use composite score, indicating the frequency of use of all drugs, spending on drugs and drug problems experienced in the past 30 days, was not significantly different between the QCT and 'voluntary' groups. The most common offences that respondents reported they had ever done in their lifetime (apart from simple drug possession) were minor property crimes, including shoplifting (reported by 61% of the sample, ranging from 42% in Italy to 82% in Germany) and dealing drugs (57%, from 42% in England to 75% in Switzerland). These were also the most common crimes for which the QCT clients had received their sentence. Very few received their sentence for simple drug possession. The QCT group were significantly more likely to report having committed these offences (for minor property crimes,  $\chi^2=17.324$ , for drug dealing  $\chi^2=36.738$ , both at  $p<0.001$ , d.f.=1), although 54% of the 'volunteers' reported minor property offences and 47% of them reported drug dealing.

In England, 80% of the respondents were in structured daycare programmes, with just under half of them also receiving methadone (or, less frequently, buprenorphine). From the other countries, 63% were in residential drug-free treatment. These were typically therapeutic communities with planned treatment lengths of at least six months. The imbalance between the countries partly reflects the range of treatments that are made available to people undergoing QCT in the areas studied (although it should be noted that there are areas in England that make more use of residential treatment than those included in this study).

### *Perceived pressure*

The distributions of total perceived external pressure for each legal status group are shown in figure 1. As hypothesised, they show that these scores tended to be higher for the QCT group than the 'volunteers'. Use of the Kolmogorov-Smirnov Z- test revealed that this difference was significant ( $Z=3.321$   $p<0.001$ ).

*[Insert figure 1 here]*

Interestingly, and as suggested by Wild and his colleagues [19], 65% of the 'volunteers' reported feeling some external pressure, and 22% of the QCT group reported feeling no external pressure. This pattern was repeated for the individual item for legal pressure, with 29% of the QCT group and 76% of the 'volunteers' reporting that they felt no legal pressure. This difference between the groups was highly significant ( $\chi^2=226.379$ , d.f. = 1;  $p<0.001$ ), but these figures show that not all people who are in QCT experience a feeling of compulsion from legal or other sources, and many people who do not enter treatment under formal legal supervision, nevertheless feel under pressure, including legal pressure, to be there.

A logistic regression analysis was carried out in order to control the influence of potentially confounding variables on the link between legal status and perceived pressure. The dependent variable was whether the person reported high or low score



for total perceived external pressure, with legal status group, treatment type (residential/non-residential), age, gender, number of prior treatment episodes, and dummy variables for country<sup>3</sup> as the potential predictor variables. The drug use composite score did not add significantly to the predictive power of the model, and so was not included in the analysis.

Italy was the only significant country predictor, with sample members there being more than three times as likely to report high perceived external pressure than those in England (odds ratio 3.21,  $p < 0.01$ , 95% confidence interval 1.93- 5.33). In this model, perceived external pressure reduced slowly but significantly with each year of increased age (odds ratio 0.98,  $p < 0.05$ , C.I. 0.96 – 1.0). And those in residential treatment were more than one a half times as likely to report high perceived external pressure as those in non-residential (odds ratio 1.77,  $p < 0.01$ , C.I. 1.2 – 2.61). However, the strongest predictor of perceived external pressure was legal status group, with those in the QCT group being three and a third times more likely to report high perceived external pressure than the ‘volunteers’ (odds ratio 3.37,  $p < 0.001$ , C.I. 2.46 – 4.62). The other variables were not significantly predictive of perceived pressure.

This analysis supports our first hypothesis. Respondents who entered treatment under the formal legal supervision of QCT were more likely to report feeling greater perceived pressure to be in treatment, even when other potential influences were taken into account.

### *Motivation*

As shown in figure 2, there was not a consistent, linear relation between levels of perceived external pressure and the three stages of motivational change, as measured by their scores on the RCQ. The respondents who were assigned to the precontemplation and the action stages tended to have similar scores for perceived pressure, while these scores tended to be higher among those who were assigned to the contemplation group. The differences in total perceived external pressure score between stages of change groups was significant according to the Kruskal Wallis test ( $\chi^2=9.425$ ; d.f. = 2;  $p < 0.01$ )

*[Insert figure 2 here]*

In order to test the association between perceived pressure and motivation in the presence of the significant covariates, a multinomial regression analysis was carried out, with stage of change as the outcome variable (and with pre-contemplation stage as the reference category in order to check which variables were associated with higher motivation). The potential predictor variables were legal status group, whether the person reported any pressure from medical, legal, employer, family/friend or other sources, treatment type, number of prior treatment experiences and the dummy country variables. Again, the composite score for drug use was not a significant predictor, and was excluded from the model.

---

<sup>3</sup> England was chosen as the reference country, as it was the country where respondents tended to report the lowest perceived external pressure and the highest motivation.

The significant predictors of whether respondents were assigned to the contemplation and action stages are shown in table 2. The only item of perceived pressure that was predictive of contemplation was from “other sources”, which increased the likelihood of assignment to contemplation compared to the precontemplation stage by nearly a half. Respondents’ descriptions of the other sources of pressure included social services (this was sometimes associated with their children being taken away from them), fellow prison inmates and peers in treatment. Prior treatment experience was linked to being in both the contemplation and action stages, as those people with more prior treatment episodes were significantly less likely to report being at higher levels of treatment readiness than precontemplation.

*[Insert table 2 here]*

Perceived pressure from family or friends was linked to reduced likelihood of being in the action stage, while perceived pressure from medical authorities was associated with an increased likelihood of being at this higher stage of readiness to change. People in residential treatment were significantly more likely to report being in the action stage than those in non-residential settings. And three of the four countries being compared to England showed lower likelihoods of respondents reporting being in this stage. This may be an effect of different cultural inclinations to express readiness to change between the countries. Or it may be an indicator of people entering treatment at an earlier stage of readiness in these countries. Waiting times for treatment are generally lower in Austria, Germany and Switzerland than in England. People who are still at a stage where they appear in contemplation may not have the relatively greater patience or determination that entry into treatment in England requires.

This analysis suggests that there is a link between perceived pressure and motivation, but not a linear relationship as hypothesized between increased perception of pressure and decreased motivation. If precontemplation is thought of as low motivation and the action stage as high, it was the middle, contemplation group that tended to report the highest levels of perceived pressure. The multivariate analysis found interesting associations between perceived pressure from medical, family or friend and other sources and stage of change. However, it appears that there was no significant link between motivation and perceived legal pressure, or formal legal status. Being in the QCT group was not significantly associated with a different likelihood of being in different stages of motivation, and nor was perceived legal pressure.

Looking at both hypotheses, our data suggests that entering treatment through QCT will not necessarily damage the likelihood of success in treatment by reducing motivation. There is a link between legal status and perceived pressure, but this does not seem to reduce people’s readiness to change.

### **Qualitative analysis**

Whilst being guided by the same hypotheses, the qualitative analysis concentrated on how coercion and motivation interact during what can be called the decision phase of court-ordered treatment. In all sites, clients and professionals confirmed the importance of the coercion - motivation question at this stage. Formulating or demonstrating motivation, measuring or assessing motivation, convincing others that

a particular treatment is indeed a best option - all these activities were part and parcel of entering a court ordered treatment in each country.

Three principal findings emerge from the qualitative material. They concern the role of QCT in getting people into treatment, the difficulty of assessing mutable motivation and, finally, the existence of other, hidden influences on motivation and the related ambivalence towards treatment.

The first principal qualitative finding is that QCT can get people into treatment. All sites had examples showing that without the encouragement of a judicial order, interviewees would not have chosen to be in treatment at that time, nor maybe at any other time. In other words, the coercive influence exerted by the criminal justice system can indeed act as an effective catalyst for engagement with treatment services. QCT is not experienced necessarily as an imposition. A common response to questions seeking information about perceived pressure was *“I chose to come to treatment”*. Some interviewees reported that they had been waiting to get into treatment when they were arrested, or that they had intended to get treatment, but had not acted on that intention. As one English QCT client said:

*I mean I say “I’ll do it today, not tomorrow”, but before you know it that day’s leading to a week, that week’s leading to a month, and I suppose if you do get arrested and you’ve got that chance to do something about it then you’ll take it.”*

The judicial coercion can be viewed by the individual as being helpful and as providing a chance or a possibility. This positive view of QCT was confirmed by treatment professionals. One treatment manager remarked:

*“Some people come in actually with a lot of gratitude and say, ‘Oh thank God. Now is my opportunity to do something about this because I know it’s a problem’”.*

This apparent disappearance of the coercive aspect of the treatment in favour of a more intrinsic motivation was noted in all sites. These “best” cases suggest not only a willingness to enter treatment but also an appropriation of treatment goals in order to resolve *“the problem”*. However, all sites also had their “worst” cases, suggesting that if some form of motivation had indeed justified the order, it was not a motivation for treatment. As a QCT client in a follow-up interview pointed out:

*It was a joke...there was no one on the programme who really wanted to change... it was a waste of my time and theirs.*

In these “worst” cases, the almost universally expressed idea that *“treatment is better than staying in prison”* does not in itself seem to be sufficient for the person to adopt treatment goals. After having already served a part (10 months) of his sentence, one Swiss client went to great lengths to justify his own decision to accept on his own terms the treatment obligation:

*As I got 16 months, that means that I could already get out. But I prefer to do a therapy... I was condemned to 16 months. I know that the therapy lasts around a year and a half, two years. There was a person who left recently and he did 32 months [of therapy]. I wouldn’t agree to that. One year, ok, even if that’s already too much. In fact, I’m planning a few months, six months, no longer. When I will have done these six months, the sentence, the 16 months will be over. And there, the Judge, if I leave*

*the therapy in good health, not having made a relapse, then he's not going to put me back into prison".*

For those clients who were, as a treatment manager put it, doing a “*swerve*” from prison, the readiness for treatment of such clients would certainly not appear promising at the early stage of a treatment order. However, whilst freely admitting to the importance of avoiding imprisonment, the majority of these externally motivated clients also seemed sincere about wanting “*to give (treatment) a go*”. Even the Swiss calculator wanted to “*rest his veins*” and “*try abstinence*”. Other clients “*went along with it*” in order to please family or significant others. These mixed motivations were common amongst our interviewees.

So our second principal qualitative finding was that motivation is mixed, pliable, ambivalent, takes time to emerge, and is difficult to assess. Recognizing mixed motivations is an important step towards opening up the whole issue. For some clients, it seems to be a matter of expressing the appropriate motivation at the right time. One treatment manager described how potential clients have learnt to talk about motivation:

*“A lot of the people we see have been through the system - treatment and prison. They know the language.”*

Potential QCT clients have an excellent reason to use the ‘right’ language, and at least one reported being coached in this language by prison drug treatment workers in order to get the QCT order. But wanting to get out of prison would certainly not have been considered sufficient in itself to convince a judge in any of the research sites we visited that QCT was warranted. How can treatment providers know to what extent the person has this will and how much he or she has ‘learnt the language’ of motivation? Often, the issue is seen as being a case of either/or. As the same treatment manager puts it:

*“So it's very difficult to tell if they're really ready for treatment or just trying to get out of prison” (our underlining).*

Examples from all sites predictably show that considerable efforts are thus employed by counsellors, case workers, treatment programme managers and probation officers to distinguish whether the stated motivation is of the desired type and whether it is sufficient. However, some professionals explicitly questioned the feasibility of accurately assessing motivation, at least with regards to any standardised attempt. Some seemed to be doing this from a pragmatic point of view:

*It's very hard to qualify people in a community-based setting where a lot of their behaviour, even on interview, may be as a result of their drug use. So to go into any kind of make-up or profiling is unjust because they are still under the effects of something” (Drug treatment manager).*

Rather than rely solely upon a specific diagnostic tool to measure motivation or to gauge the willingness of an individual to engage with treatment, one English senior probation officer advocated a much more pragmatic approach. This involves setting prospective clients a number of hurdles and challenges that need to be negotiated before any decision is made regarding suitability:

*“They have to have a serious enough drug problem and crucially they have to be willing to comply with the order”.*

*Q. And how do you measure that? How do you gauge whether someone will engage?*

*“Well you know its very easy if someone is on bail to measure that because we might suggest that they go and visit [the treatment provider] or they go and see their GP [doctor], they sign on [for state benefit]. So they get over a few little hurdles. Now people who have got absolutely no wish to engage can't even get through that”.*

For others, it was not just a question of pragmatism, but of the nature of motivation. Insisting too much on demonstrated motivation during the decisional phase could well be ‘putting the cart before the horse’. The treatment manager quoted above argues that if that particular treatment agency do not “*qualify people on interview for motivation*”, it is because the agency considers motivation “*as the first interface of intervention*”. A QCT client explained succinctly:

*“At first most people are doing it just to stay out of prison but eventually you'll find that once they start getting negatives [drug test results] they start to feel more positive, the staff make you feel more positive and you start actually wanting a better life”.*

To summarise, two tendencies seem to characterise the different professional practices. The first is an either/or position; seeing motivation as something to be demonstrated. This tendency places much value on the need to have sufficient and appropriate motivation in order to be prepared for the difficulties to come in treatment. The second tendency involves a belief that intrinsic motivation can develop alongside extrinsic motivation. This approach tolerates more easily the motivational ambivalence of many QCT clients and expects motivation to progressively emerge through the treatment process itself. This latter position enables wider consideration of the issues that could be behind the client's ambivalence.

This leads us to our third principal qualitative finding, which was that motivation was directly related to other, sometimes hidden, issues. Motivational development is not just an attribute of the QCT client. At least to some extent, motivation will also depend on the perception and quality of the treatment being offered. As seen in the quantitative data, there seems to be a link between having more experience of previous treatment episodes and being less ready to change in the current treatment. This may be explained by more experienced clients becoming more cynical about the prospects of success in treatment. But even people with no experience in treatment may share this cynicism. One QCT client explained previous refusals to seek treatment by a belief that “*treatments don't work*”:

*I used to see them [other users] go into treatment. A few weeks later there they'd be again, on the streets”.*

Even without examining the legitimacy in this particular case of such a negative judgement, the point of view expressed does underline again the need to look at the quality and the appropriateness of the treatments offered. The client cited above as being convinced that QCT is a “*waste of time*” reported that he had asked for residential treatment, and had received assurances that he would get it, only to find that this was not possible when he actually entered QCT. Apparently, the out-patient community programme did not correspond to his needs. And his apparent feeling of disappointment would not be conducive to creating trust and motivation.

One can also speculate about whether more appropriate and attractive services could have made a difference to the following situation:

*“In prison they [prisoners] are in a position where they want as much help as you can give them. Particularly remand prisoners who are in a position where they want you to help them get out of prison. So if they think that we can do anything then they are quite happy to talk about anything. I have never met a reluctant prisoner yet. But in prison you see them when they are all ‘yeah, yeah, yeah’ and then they are released and you never see them again”.*  
(Prison resettlement worker).

However, rather than attempting to shift the onus from the obligation of clients to demonstrate motivation to the obligations of services to provide appropriate treatments, we sought out examples which could suggest how the two could interact. Once again best cases do exist in all sites. However, rather than being characterised by the presence of highly motivated clients, such cases reveal the time and effort required from various actors to arrive at a suitable treatment order. Examples of best cases occurred when social workers, psychologists or probation officers had access to potential clients in prison. These professionals (whatever intervention sector they came from) could thus intervene during the crisis period caused by arrest and impending trial in order to give information to clients, to encourage them to examine the QCT possibilities. Some clients talked about this period during which they had “luck” with those supporting and informing them. “Maybe”, said one client, “he realised that I was serious with my decision. He cleared up with me a lot of my stuff. He was very engaged”.

But these good examples highlight the absence of enabling conditions in other contexts. Some judicial and treatment systems do not even attempt to promote a ‘best fit’ placement. Options in some of our research sites were limited to only one type of treatment. At another level, preliminary data about early experiences in programmes suggest that socially disadvantaged clients (particularly in out-patient programmes) can be confronted with serious income and housing problems resulting from slow or negative decisions about their welfare rights. Coordination difficulties between the judicial and treatment sectors can be another source of problems causing, for example, methadone prescription delays. These examples suggest that the development of motivation can be hampered by organisational, practical and social issues

Qualitative information also pointed to some potential explanations of patterns that we have noted in the quantitative data. For example, during interviews with clients in the ‘voluntary’ group in Austria, some of them reported that, while they were not subject to a formal QCT order, they did feel that the treatment that they were entering would help them in their dealings with the criminal justice system (e.g. by showing a judge that they were willing to change). This may help explain why nearly a quarter of the ‘voluntary’ group reported that they felt some legal pressure to be in treatment.

Overall, the qualitative data triangulates reliably with the quantitative analysis in suggesting that there is no simple, causal link between coercion and motivation. Low motivation cannot be ascribed from the presence of legal coercion. Attempts to measure and assess motivation prior to treatment entry are no guarantee of a successful treatment placement. As one English probation officer told us:

*“What’s funny is that some of the people who consequently admit and say ‘well I wasn’t really interested in treatment, it was a prison swerve’ actually end up doing quite well.”*

Recognizing the dynamic, transactional nature of motivation enables responsibility for developing greater motivation to be shared between the potential client and those who have dealings with him or her. This recognition leaves the door open to attempts to transform apparently insufficient, ‘prison swerving’ motivation into deeper motivation to escape drug dependence. It also puts more responsibility on treatment services to provide the necessary support and to offer services that nurture and develop treatment motivation. The success of the transition from coercion to motivation is probably more about helping people to want the treatment than just getting them into treatment.

## **Discussion**

### *Limitations*

Our data is, of course, subject to several limitations. Caution should always be applied to interpretation of interviews with comparatively small groups of people about issues that affect much larger numbers, especially when the interviews concern such a personally and socially sensitive issue as drug use. This is particularly true when these interviews take place in different countries with diverse cultures, languages and patterns of drug use and treatment.

Whilst international comparisons and explicitly seeking diversity in data collection can bring to light new and pertinent insights over and above the expected differences, they also demand considerable efforts in order to verify shared understandings of key notions. We took care to take account of different interpretations of issues such as motivation and coercion through extensive discussion of them between research partners, and by the use of interviewers who were native speakers of the languages of the respondents. Nevertheless, international comparisons such as ours should not be thought of as establishing lawlike relations, but rather as suggesting general mechanisms that operate in certain contexts [46]. We have controlled for differences between countries in our multivariate analysis, and observed similar patterns within countries as those reported for the whole sample, so we believe that our analysis is reliable across the sites involved in our study.

It is also possible that asking people about the pressure they perceived after they have entered treatment presents an opportunity to reinterpret actions that were originally coerced as being freely chosen, in order to increase perceptions of autonomy. This tendency may affect both QCT and ‘voluntary’ groups, although the effect may be largest in the QCT group, as they experienced the most formal and impersonal type of pressure. So our analysis may underestimate the extent of perceived pressure across the sample and the difference in perceived pressure between the ‘voluntary’ and QCT groups.

As noted in the section on quantitative data, we were not able to interview all the people who entered treatment. It should also be noted that the number of people who entered treatment was substantially lower than the number of people who had been

ordered to do so by a court in at least one of the research sites. It is likely that those people who dropped out of QCT before they had even entered treatment, or who dropped out of the treatment before we could interview them, were those who were the least motivated to change their drug use. Our findings do not therefore tell us about all those who are ordered into QCT, but only about those who actually entered this type of treatment in the sites we looked at and did not drop out very early. This problem of early drop-out is too often ignored in research on QCT and has led in the past to over-optimistic estimations of outcome [3].

The final limitation of our research design to be mentioned here relates to the timeframe that we adopted for intake interviews with QCT clients. We attempted to interview them within two weeks of entering treatment. However, in most cases this was some time after they were arrested, and many of them were imprisoned in the intervening period. The processes that followed arrest may have limited their access to drugs and would therefore make them more likely to respond positively to items in the Readiness to Change questionnaire such as “I have just recently changed my drug habits.” While there may be some consequent over-estimation of the proportion of the QCT group who report being in the action stage of readiness to change, we do not believe that this seriously compromises our analysis. Clients in the voluntary group may also have had to change their drug use prior to treatment entry (e.g. to provide a clean urine test before entry to residential treatment) and so may also provide responses influenced by external, rather than internal motivations. And the close triangulation between quantitative and qualitative data on the experience of coercion and motivation among QCT clients increases our confidence that our analysis was not seriously distorted by the timepoint at which we chose to interview people.

### *Comparison to existing research*

A recent article, using similar methods to our own with a group of 295 clients in American out-patient treatment for drug and alcohol dependence found that "legal coercion was associated with greater readiness to change after controlling for addiction severity, prior treatment history and gender" [30]. Gregoire and Burke conclude that coercion can improve treatment outcome, even as the length and costs of treatment are reduced. This conclusion is not warranted by the data that they present and is not supported by our findings. Gregoire and Burke's article has limitations that dent our confidence in its conclusions. For example, they use legal status as their measure of legal coercion. As noted in previous research and our data, the coercion that people experience is more complicated than their route of entry into treatment. There is little mention in the article of the possibility that legally coerced clients may have ‘learnt the language’ of motivation or have been ‘coached’ by professionals and peers and so appear to be more motivated than they really are. There is a warning that their sample may not have included the least motivated people who were legally coerced, as they may have dropped out before interview. But this warning is not heeded when they draw their conclusion, that coercion may increase motivation. Nothing in their methods would enable them to establish a causal link from coercion to motivation. The apparently higher motivation in their sample of legally coerced clients may be a result of the limitations described here, and not of the effect of coercion.



Gregoire and Burke's conclusion may lead to the erroneous view that coercion is a substitute for high quality treatment of adequate length. Simply expanding the numbers of people who are coerced towards treatment may not lead to a higher number of people who are motivated and are actually retained in treatment. It may have the perverse effect of wasting resources through assessing, processing and then punishing people who are ordered into treatment, but who fail to engage in it. This would also have the effect of a further widening of the criminal justice net, and lead to more people being punished, not for their crimes, but for their failure to comply with treatments that they are told are good for them, but which in reality prove inappropriate and poorly targeted.

While our results suggest that legal coercion does not necessarily enhance motivation, they also suggest that it does not always damage it. Drug treatment can be successful for people who enter it under some form of legal coercion. Many of these people may have lacked the inclination or opportunity to access support before but nevertheless they may still want to change their lives, to stop committing crimes and damaging their health. For these people, legal coercion can be a useful way of entering and engaging in treatment.

This finding, that even people who are legally coerced can be motivated to treatment seems to contradict the notion that motivation is damaged by control and restraint, as posited by self-determination theory. But we do not believe that our data should be used to criticise this theory, as they suggest that people who enter treatment under legal supervision may not experience this as control or restraint. They may experience their entry to treatment as an autonomous choice, even though they have also been told to enter treatment by a court. For these people the "quasi" element in quasi-compulsory treatment is important, as they know that they could have refused treatment (even if the consequences of that refusal would be unpleasant).

The mutability of motivation indicates again that it is susceptible to enhancement [47]. Techniques such as motivational interviewing, which has been found to improve retention and adherence early in treatment [48], therefore have potential to improve the outcomes of QCT.

## **Conclusion**

Our analysis of data from the intake phase of our study has suggested that people who enter treatment by order of the criminal justice system do feel more pressure to be there. However, this increased pressure is not felt by all QCT clients, and does not necessarily translate into lower levels of motivation than reported by 'voluntary' clients. This finding is supported by both our quantitative and qualitative data. The quantitative data also threw up some interesting findings that deserve more examination, such as the link between perceived pressure from family and friends, and from medical authorities on readiness to change. The qualitative data provided some deeper insights into the nature of coercion and motivation among QCT clients. It suggested that QCT can be a valuable route in to treatment for some people who are having problems with drug use but are not willing or able to enter treatment without a 'push' from the criminal justice system. It also suggested why some people who experience this 'push' do not go on to enter and stay in treatment. They may have poor previous experience or low expectations of treatment, and may find that the

treatment is not suitable for them, and so may choose the continued risks of drug use and imprisonment.

Motivation is a dynamic, not a steady state. Its development is not necessarily hampered by pressure from the criminal justice system, but the best chance of nurturing it and increasing the chances of successful treatment seems to come when professional time and expertise can be invested in understanding the client's needs and creating a prompt and smooth transition into an appropriate and attractive treatment placement.

Future reports from this study will focus on the outcomes of QCT and comparable 'voluntary' treatment, with special attention to the role of coercion, motivation and treatment quality in predicting outcome.

## References

1. Day A, Tucker K, Howells K: Coerced offender rehabilitation - A defensible practice? *Psychol. Crime Law* 2004;10:3:259-269.
2. Battjes, R.J., Onken, L.S., & Delany, P.J: Drug abuse treatment entry and engagement: Report of a meeting on treatment readiness. *Journal of Clinical Psychology* 1999;55(5): 643-657.
3. Stevens A, Berto D, Heckmann W, Kersch V, Oeuvray K, van Ooyen M, Steffan E, Uchtenhagen A: Quasi-Compulsory Treatment Of Drug Dependent Offenders: An International Literature Review. *Subst. Use Misuse* 2005;40:269-283.
4. Prendergast ML, Podus D, Chang E, Urada D: The effectiveness of drug abuse treatment: a meta-analysis of comparison group studies. *Drug and Alcohol Dependence* 2002;67:1:53-72.
5. Hoffman MB: The Drug Court Scandal. *North Carolina Law Review* 2000;76.
6. Nolan JL: *The Therapeutic State: Justifying Government at Century's End*. New York, New York University Press, 1998.
7. Cahill MA, Adinoff B, Hosig H, Muller K, Pulliam C: Motivation for treatment preceding and following a substance abuse program. *Addict. Behav.* 2003;28:1:67-79.
8. DiClemente C, Bellino L, Neavins T: Motivation for change and alcoholism treatment. *Alcohol Research and Health* 1999;23:2:86-92.
9. Simpson DD, Joe GW: Motivation as a predictor of early dropout from drug abuse treatment. *Psychotherapy* 1993;30:357-368.
10. Hiller ML, Knight K, Leukefeld C, Simpson DD: Motivation as a predictor of therapeutic engagement in mandated residential substance abuse treatment. *Criminal Justice and Behavior* 2002;29:1:56-75.
11. Joe GW, Simpson DD, Broome KM: Effects of readiness for drug abuse treatment on client retention and assessment of process. *Addiction* 1998;93:8:1177-1190.
12. DeLeon G, Jainchill N: Circumstances, motivation, readiness and suitability. *Journal of Psychoactive Drugs* 1986;18:203-208.
13. Fiorentine R, Nakashima J, Anglin MD: Client engagement with drug treatment. *Journal of Substance Abuse Treatment* 1999;17:3:199-206.
14. Millar T, Donmall M, Jones A: *Treatment effectiveness: demonstration analysis of treatment surveillance data about treatment completion and retention*. London, National Treatment Agency for Substance Misuse, 2004.
15. Stark MJ: Dropping out of substance abuse treatment: A clinically oriented review. *Clinical Psychology Review* 1992;12:93-116.
16. Young D: Impacts of perceived legal pressure on retention in drug treatment. *Criminal Justice and Behavior* 2002;29:1:27-55.
17. Joe GW, Simpson DD, Broome KM: Retention and patient engagement models for different treatment modalities in DATOS. *Drug and Alcohol Dependence* 1999;57:2:113-125.
18. Hiller ML, Knight K, Broome KM, Simpson DD: Legal pressure and treatment retention in a national sample of long-term residential programs. *Criminal Justice and Behaviour* 1998;25:4:463-481.
19. Wild TC, Newton-Taylor B, Alleto R: Perceived coercion among clients entering substance abuse treatment: Structural and psychological determinants. *Addictive Behavior* 1998;23:81-95.

20. Young D, Belenko S: Program Retention and Perceived Coercion in Three Models of Mandatory Drug Treatment. *J. Drug Issues* 2002;Winter 2002:297-328.
21. Maxwell SR Sanction threats in court-ordered programs: Examining their effects on offenders mandated into drug treatment. *Crime Delinq.* 2000;46:4:542-563.
22. Werdenich, W., Waidner, G., & Trinkl, B: Quasi-Compulsory Treatment of Drug Dependent Offenders - A Description of Existing Systems. *Verhaltenstherapie und Verhaltensmedizin* 2004;1: 71-78.
23. Wild, T.C., Newton-Taylor, B., Ogborne, A.C., Mann, R., Erickson, P., & Macdonald, S: Attitudes toward compulsory substance abuse treatment: a comparison of the public, counsellors, probationers and judges' views. *Drugs-Education Prevention and Policy* 2001;8(1): 33-45.
24. Brochu, S., Guyon, L., & Desjardins, L: Comparative profiles of addicted adult populations in rehabilitation and correctional services. *Journal of Substance Abuse Treatment* 1999;16: 173-182.
25. Gottheil, E., McLellan, A.T., & Druley, K.A: *Matching Patient Needs and Treatment methods in Alcoholism and Drug Abuse*. Springfield: Thomas, 1981.
26. Landry, M., Brochu, S., & Bergeron, J: Validity and relevance of self-report data provided by criminalized addicted persons in treatment. *Addiction Research & Theory* 2003;11(6): 415-426.
27. Miller, W.R.M: Matching Individuals with Interventions. in R.K. Hester (ed.), *Handbook of Alcoholism Treatment Approaches. Effective Alternatives*. New York, Pergamon, 1989.
28. Crété, R : Le toxicomane, le juge et le soignant, *Psychotropes. Revue Internationale des toxicomanies* 1997;3(4): 65-80.
29. Rounsaville, B.J., & Kleber, H.D: Untreated opiate addicts: How do they differ from those seeking treatment? *Archives of General Psychiatry* 1985;42: 1072-1077.
30. Gregoire TK, Burke AC: The relationship of legal coercion to readiness to change among adults with alcohol and other drug problems. *Journal of Substance Abuse Treatment* 2004;26:337-343.
31. Council of Europe: *Drug Misusing Offenders and the Criminal Justice System: the period from first contact with the police up to and including sentencing*. Strasbourg: Council of Europe Publishing, 1998.
32. van 't Land, H., van Duijvenbooden, K., van der Plas, A., & Wolf, J: *Opgevangen onder dwang procesevaluatie strafrechtelijke opvang verslaafden*. The Hague: WODC, Ministry of Justice, 2005.
33. Deci EL, Ryan RM: *Intrinsic motivation and self-determination in human behaviour*. New York, Plenum, 1985.
34. Fielding NG, Fielding JL: *Linking Data*. London, Sage, 1986.
35. Kokkevi A, Hartgers C: Europe ASI: European adaptation of a multidimensional assesment instrument for drug and alcohol dependence. *Eur. Addict. Res.* 1995;1:4:208-210.
36. Blanken, P., Hendriks, V., Pozzi, G., Tempesta, E., Hartgers, C., Koeter, M., Fahmer, E.-M., Gsellhofer, B., Küfner, H., Kokkevi, A., & Uchtenhagen, A. *European Addiction Severity Index: A guide to training and administering EuropASI interviews*. Lisbon: EMCDDA Evaluation Instrument Bank. 1994.

37. Greenglass E, Schwarzer R, Taubert S: The Proactive Coping Inventory (PCI): A Multidimensional Research Instrument. Toronto, York University, 1999.
38. Rollnick S, Heather N, Gold R, Hall W: Development of a short 'Readiness to Change' Questionnaire for use in brief, opportunistic interventions among excessive drinkers. *British Journal of Addiction* 1992;87:743-754.
39. Koeter, M., & Hartgers, C: European Addiction Severity Index: Preliminary procedure for the computation of the EuropASI composite scores Amsterdam: Amsterdam Institute for Addiction Research 1997.
40. DiClemente CC, Prochaska JO: Self-change and therapy change of smoking behavior: A comparison of processes of change in cessation and maintenance. *Addict. Behav.* 1982;7:133-142.
41. Davidson, R: Cycle of change: ideas, issues and implications, *Drugs: education, prevention and policy* 2002;9(1): 7-14.
42. Drieschner, K.H., Lammers, S.M.M., & van der Staak: C.P.F. Treatment motivation: An attempt for clarification of an ambiguous concept, *Clinical Psychology Review* 2004;23: 1115-1137.
43. Sutton, S: Back to the drawing board? A review of applications of the transtheoretical model to substance misuse. *Addiction* 2001;96: 175-186.
44. Zimmerman, G.L., Olsen, C.G., & Bosworth, M.F: A 'stages of change' approach to helping patients change behaviour. *American Family Physician* 2000;61(5): 1409-1423.
45. Kelly, J.F., Finney, J.W., & Moos, R: Substance use disorder patients who are mandated to treatment: Characteristics, treatment process, and 1- and 5-year outcomes. *Journal of Substance Abuse Treatment* 2005;28(3): 213-223.
46. Ødegård, E: Comparative research in the drug field, *European Journal on Criminal Policy and Research* 1998;6: 357-367.
47. Miller WR, Rollnick S, Conforti K: *Motivational Interviewing: Preparing People for Change (Second Edition)*. New York, Guilford Press, 2002.
48. Hettema J, Steele J, Miller WR: A Meta-Analysis of Research on Motivational Interviewing Treatment Effectiveness (MARMITE). *Annual Review of Clinical Psychology* 2005;1:91-111.

**Table1: Characteristics of the sample**

	Country					Total (n=845)
	England (n=157)	Italy (n=300)	Austria (n=150)	Switzerland (n=85)	Germany (n=153)	
Mean age	30.7	33.7	27.2	33	30.4	31.3
Proportion male	76.4%	88.7%	80%	89.4%	71.2%	81.8%
Proportion white	81.2%	95.3%	98%		94.1%	92.7% <sup>4</sup>
Proportion in QCT	56.7%	48.3%	35.3%	57.6%	60.1%	50.7%
Mean drug use composite score	.247	.1	.144	.202	.183	.162
Proportion in residential treatment	0%	56.7%	82%	67.1%	90.8%	57.9%
Proportion who gained the usual qualification for 18 year olds or higher	22.3%	23.6%	47.4%	63.8%	27.4%	32.3%
Proportion who reported being homeless in past 30 days	23.6%	7.3%	17.3%	24.1%	27.5%	17.4%
Response rate at intake	52% <sup>5</sup>		80%	87%	63%	77% <sup>6</sup>

<sup>4</sup> In Switzerland, the research team did not ask respondents about their ethnicity. This total omits the Swiss sample.

<sup>5</sup> There was a relatively low response rate in England (52%), which was largely caused by potential interviewees dropping out of treatment before they could be interviewed.

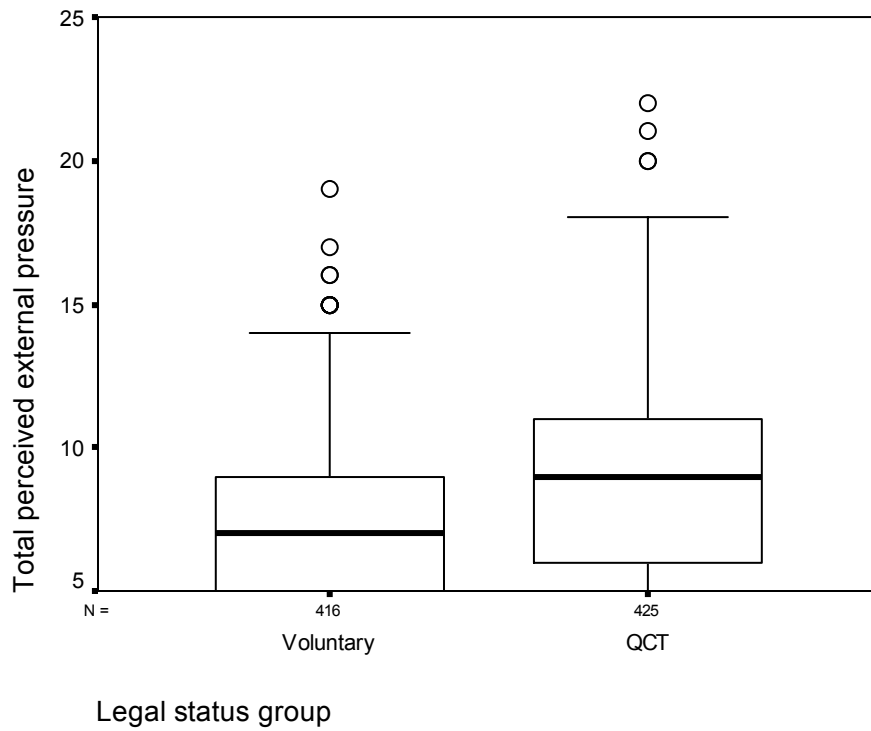
<sup>6</sup> It was not possible to calculate an exact response rate due to the lack of a complete record of treatment entries in Italy. This figure is an estimate.

**Table 2. Multinomial regression analysis of stage of change**

Significant predictors of whether respondents were assigned to the contemplation stage		
<i>Variable</i>	<i>Odds ratio</i>	<i>95% Confidence interval</i>
Any perceived pressure from other sources	2.16*	1.15 – 4.0
Number of prior treatment episodes	0.98*	0.96 – 0.94
Significant predictors of whether respondents were assigned to the action stage		
Any perceived pressure from family or friends	0.68*	0.46 – 0.99
Any perceived pressure from medical authorities	1.86*	1.14 – 3.03
Number of prior treatment episodes	0.96**	0.94 – 0.98
Treatment type (residential/non-residential)	1.75*	1.11 – 2.76
Country is Austria	0.28**	0.14 – 0.57
Country is Germany	0.44*	0.21 – 0.93
Country is Switzerland	0.38*	0.18 – 0.82

\* p<0.05, \*\* p<0.01

**Figure 1.** Box plot of total perceived external pressure scores by legal status group





**Figure 2.** Box-plot of total perceived external pressure score by stage of change.

