

# Summary

## Assessing motivation? An inventory of instruments to assess intrinsic motivation in drug addicts in the criminal justice system

### Introduction, purpose and research questions

Under the Dutch legal system, drug addicts in the criminal justice system may be 'pushed' into a care and treatment programme. By making participation in a care and treatment programme more attractive than opting for the penal programme, offenders are encouraged to opt for treatment. This treatment addresses the substance abuse of the person in the criminal justice system, combined with an attempt to prevent him or her from reoffending, or at least reduce the likelihood of reoffending. The presence of a client's intrinsic motivation to change has an influence on the effect of the treatment and could even produce a better long-term solution than the presence of extrinsic motivation (external pressure) alone. Intrinsic motivation is understood to be the degree in which an individual is *personally* motivated to change his or her problematic behaviour (Carey, Purnine, Maisto & Carey, 1999). Assessing the intrinsic motivation is crucial, since in addition to determining the factors that could be influenced to enhance motivation, it can also serve to determine if a behavioural change is in fact feasible (Drieschner, 2005). Commissioned by the Sanctions and Prevention Policy Department, the WODC drew up an inventory of tools to measure intrinsic motivation in drug addicts subject to jurisdiction. The purpose of the current study is to obtain an insight into the question of how intrinsic motivation for change in drug addicts in the criminal justice system can be measured, and to create an inventory of instruments (in terms of quality, reliability and validity) from the Netherlands and abroad to measure the concept of intrinsic motivation. This study was based on the following two questions:

- 1 Is intrinsic motivation to realise a behavioural change in drug addicts in the criminal justice system measurable, and are there instruments that measure the concept of intrinsic motivation in drug addicts in the criminal justice system?
- 2 Which instruments offer sufficient psychometric guarantees in terms of reliability and validity, among other things?

In order to find the answers to these research questions, this study categorizes which instruments are available to measure intrinsic motivation in drug addicts in the criminal justice system, and the psychometric characteristics of the selected instruments. The summary follows with the research method, discussing the assessment of the psychometric quality of the instruments found. The key results are then listed, followed by a conclusion and discussion.

## Research method

In order to answer the research questions in this study, the Documentary Information Supply Division (DIV) carried out a literature search by means of targeted searches in a range of databases, and an Internet search via Google. This search resulted in 89 titles and abstracts of possibly relevant articles. These were assessed for the question 'does this article contain information about measuring intrinsic motivation in drug addicts in a judicial setting'. Full publications were retrieved for 49 articles. Based on these publications, a selection was made of the instruments to be involved in the study. This was carried out using a number of pre-determined inclusion and exclusion criteria. For instance, the instruments selected should focus on establishing the intrinsic motivation in drug addicts in a valid and reliable manner. Preferably, these instruments should be suitable for use in judicial settings, although the selection also included instruments used in mental health care, as they also measure motivation to effect a behavioural change. If the article gave information about the reliability and validity of the instrument, the article was included in the selection. Of the 49 articles that were initially selected, the literature lists were screened for relevant referrals, and another 45 titles were subsequently retrieved. These publications were assessed on the basis of the same inclusion and exclusion criteria as the other articles.

As the study focuses on drug users in a judicial setting, instruments specifically targeted at measuring the motivation among alcohol, smoking and/or gambling addicts were not included in this study. Instruments targeting more than one target group were included in the study, if at least one of these groups concerned drug users. Since the motivation for treatment may coincide with the motivation to actually change problematic behaviour, but cannot simply be equated with the motivation to change, instruments specially developed to measure motivation for treatment were not included in this study. This study comprises a total of nineteen studies into the reliability and validity of instruments that aim to measure intrinsic motivation in addicts. These nineteen studies relate to thirteen instruments. Part of the remaining articles was used to provide the theoretical support for this study.

The thirteen instruments selected for this study were assessed for their psychometric quality, based on five aspects:

- 1) The internal consistency, in other words, whether the score for a number of subjects (items, questions, etc.) which jointly aim to measure a construct, is sufficiently replicable.
- 2) The test-retest reliability which indicates to what extent results for the two different reductions in time are the same within and between individuals.
- 3) Every selected instrument was checked for availability of information about the empiric substantiation of the scales structure. A transparent scales structure that is easy to interpret is crucial for a good instrument.
- 4) The construct validity of an instrument indicates if an instrument measures what it is assumed to measure, i.e. to what extent the test is a sound measurement of the underlying theoretical understanding. Every selected instrument was checked for availability of information about the construct validity of the instrument.

- 5) Finally, every selected instrument was checked for examination of the predictive validity. The extent to which a test has a predictive value, is central in the predictive validity.

Based on their results in respect of the above, the instruments were divided into four categories:

- 1) Adequate: more than two of the abovementioned psychometric aspects suffice, two of which are the internal consistency and the construct validity. In addition, the psychometric characteristics of the instrument for use with drug addicts have been examined.
- 2) Possibly adequate: more than two of the above-mentioned psychometric aspects suffice, one of which is internal consistency. The instruments that are labeled possibly adequate have not yet been tested for their applicability in drug addicts and/or construct validity has not yet been examined.
- 3) Not adequate: more than two of the abovementioned aspects are insufficient. An instrument will be labeled not adequate if the internal consistency is not sufficient, because a reliable measurement is a condition for a valid measurement.
- 4) Instruments for which it is unknown if they are adequate. More than two of the five psychometric aspects are not known and/or the outcome of the study into the internal consistency is not known.

### **Key results**

The overview in this study shows that the Reasons for Quitting Questionnaire (RFQ) is possibly adequate in measuring intrinsic motivation in individuals. For the Personal Concerns Inventory (PCI), Scaling rulers, Algorithms, Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES), the Dutch version of Readiness to Change Questionnaire (RCQ-N), Treatment Motivation Questionnaire (TMQ), Pre-treatment motivation scales and the Stage of Change Scale (SOCS) it is not yet clear if they are adequate in terms of reliability and validity. Finally, the University of Rhode Island Change and Assessment Scale (URICA), Circumstances Motivation Readiness and Suitability Scale (CMRS), Circumstances Motivation and Readiness Scales for Substance Abuse Treatment (CMR) and the Motivation for Treatment Scale (MfT) do not seem adequate in measuring the intrinsic motivation to change in addicts. Remarkably, twelve of these thirteen studies still need examining for their suitability for use in a judicial setting, while some instruments still need to be examined for possible use for drug addicts. Also remarkable is the fact that only the RCQ, CMRS, CMR, URICA and MfT have been translated into Dutch and have been examined for their applicability in a Dutch context. Finally, the overview of selected instruments clearly shows that the instruments vary as to their theoretical basis: the majority of instruments are based on the transtheoretical model by Prochaska and DiClemente.

## Conclusion and discussion

The purpose of this study has been twofold. First of all, the study was to provide an insight into the question how intrinsic motivation for treatment in drug addicts in the criminal justice system can be measured. Secondly, the study served to provide an overview of adequate instruments (in terms of quality, reliability and validity) from the Netherlands and abroad to measure the concept of intrinsic motivation. This study shows that intrinsic motivation to change is measurable. There are instruments that measure motivation, focusing on problem recognition by the client and an attempt by the client to deal with his or her problematic behaviour (Marlowe, Merikle, Kirby & McLellan, 2001). The second goal of this study, categorizing adequate instruments from the Netherlands and abroad to measure the concept of intrinsic motivation, could also be realised. To support an important decision – the choice between a regular detention or a care program – the RFQ might be suitable, since this instrument is possibly adequate. The construct validity of this instrument has not yet been examined and the instrument should be translated into Dutch. Following translation, the psychometric characteristics of the translated instrument should also be examined. The conclusion drawn from this study is that there is an instrument which is possibly adequate for measuring intrinsic motivation for change. Nevertheless, the concept of *motivation* cannot be defined unequivocally. For instance, the concepts of intrinsic and extrinsic motivation in drug addicts in a judicial setting cannot be regarded separately. In addition, the question whether intrinsic motivation is actually present in this target group is a fair one. Being able to measure intrinsic motivation for change does not answer how this form of motivation must or can be promoted in this group. The transtheoretical model by Prochaska en DiClemente (1984) is also used extensively in literature to explain motivation for change. However, there is no certainty that behavioural change does actually develop in predetermined phases, the assumption on which this model is based.

Finally, in this study it was assumed that the instruments which measure intrinsic motivation to change, will be used when the choice has to be made between a regular detention or a care programme. It can be questioned if it is advisable to measure motivation at this point. Probably it is better to measure motivation *after* this crucial point, because then the client has no or less interest in the results of the test and it will be more likely that the client will complete the test truthfully. If an instrument to measure intrinsic motivation to change will be used after this crucial point, the internal consistency of such an instrument can be judged according to the rules for less important decisions on individual level. In such a case, the CMRS and CMR seem to be adequate. These instruments are already translated into Dutch and have proven to be useful in such a context. However, the instruments have not yet been examined on their usefulness in a judicial setting.

Furthermore it is advisable to keep in mind that when intrinsic motivation is measured, the extent of motivation can change and fluctuate over time. So it is advisable to measure motivation on more than one occasion. Despite these points for attention, the findings of this study offer opportunities to further develop the examined instruments, translate them, adapt them and/or study their psychometric characteristics.