



Enhancing Health Among Drug Users in Prison

Anne H. Berman

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ENHANCING HEALTH AMONG DRUG USERS IN PRISON

by

Anne Hephzibah Berman

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P.O. Box 7634

SE-103 94 Stockholm, Sweden

E-mail: order@city.akademibokhandeln.se

Phone: +46 8 613 61 00

Fax: +46 8 24 25 43

Dedication

*To drug users in prison in Sweden and elsewhere,
in the hope that this work in some way will help to enhance your health*

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Study I

Berman, A. H., Bergman, H., Palmstierna, T., & Schlyter, F. (in press). Evaluation of the Drug Use Disorders Identification Test (DUDIT) in Criminal Justice and Detoxification Settings and in a Swedish Population Sample. *European Addiction Research (in press)*.....133

Study II

Berman, A. H., Lundberg, U., Krook, A. L., & Gyllenhammar, C. (in press). Treating Drug Using Prison Inmates with Auricular Acupuncture: A Randomized Controlled Trial. *Journal of Substance Abuse Treatment (in press)*153

Study III

Berman, A.H. (in press). The Reasoning & Rehabilitation Program for Swedish Male Prisoners: Short- and Long-term Outcomes. *Journal of Offender Rehabilitation (in press)*.....173

Study IV

Berman, A. H., & Lundberg, U. (2002). Auricular acupuncture in prison psychiatric units: A pilot study. *Acta Psychiatrica Scandinavica*, 106 (Suppl. 412), 152-157.....195

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Abstract

Four interrelated studies on drug users in prison are presented within the framework of a proposed model for approaching the enhancement of health for persons that builds on an existential view of prisoners' needs, as well as the risk management and "good lives" perspectives. Risk management is the major focus in current offender rehabilitation based on research on "what works," which has shown that focusing treatment on risk factors termed "criminogenic needs," such as impulsivity, poor family relations and drug abuse, reduces recidivism by 10-15 percentage points. The "good lives" perspective proposes that offender rehabilitation should go beyond risk management and also address non-criminogenic needs such as autonomy, relatedness and competence as foundations for building personally meaningful lives.

Study I explores the assessment of drug use problems, and describes the psychometric evaluation of the Drug Use Disorders Identification Test (DUDIT), a newly developed 11-item test for quick screening of drug-related problems. Studies II-IV explore treatment for offenders in prison identified as drug users. Study II is a randomized controlled trial of two auricular acupuncture treatments for men and women in prison, inconclusive with regard to point specificity but showing that participants in both groups reported reduced symptoms of discomfort and improved night-time sleep. Study III evaluates the Reasoning & Rehabilitation program, an internationally widespread cognitive-behavioral program for groups of offenders. Results showed significant pro-social short-term changes in sense of coherence, impulsivity and attitudes towards the criminal justice system, as well as a 25% lower risk of reconviction among program completers compared to matched controls. However, the quasi-experimental nature of the study precludes any certainty regarding program effects; a selection bias whereby more motivated program participants are recruited could explain the findings. Study IV is a pilot project exploring the special needs of a subgroup of drug-using inmates with psychiatric and/or violent co-morbidity. Inmates housed in psychiatric prison units were offered long-term auricular acupuncture treatment. Half of the 22 inmates in the study received treatment twice a week for over eight weeks, and those treated over 25 times had lower psychopharmacological medication levels than untreated controls.

Studies I-IV address individual facets of a proposed model for enhancing health among drug users in prison. The health enhancement model approaches offender rehabilitation from perspectives of existential psychology, good lives and risk management. Specific definitions of physical, social, psychological/personal and spiritual needs indicate a framework according to which prison treatment can help drug-using offenders find ways to secure healthy need satisfaction.

Keywords: drug use, prison, screening, auricular acupuncture, cognitive behavioral treatment, psychiatric co-morbidity, existential issues, health, risk management

Att befrämja hälsa bland drogmissbrukare i fängelse (Swedish summary)

Avhandlingen omfattar behandling av drogmissbrukare i fängelse från ett hälsoperpektiv som bygger på riskhantering, planering av ett ”gott liv”, och en existentiell syn på mänskliga behov. Fyra empiriska studier tar upp följande frågor: hur man kan ta reda på att en intagen missbrukar droger, finns det någon behandling som förutsättningslöst kan erbjudas alla drogmissbrukare, hur man kan gå vidare med en behandling för drogmissbrukare som siktar på att minska sannolikheten att återfalla i brott samt hur man kan närma sig behandling av intagna med både psykiatriska och missbruksdiagnoser.

Riskhantering innebär identifiering och behandling av särskilda riskfaktorer för kriminalitet som drogmissbruk eller impulsivitet. Forskningssynteser som omfattar flera hundra studier om ”what works”, när det gäller rehabilitering av personer dömda för brott, har visat att behandlingsprogram som fokuserar på särskilda riskfaktorer leder till minskat återfall i brott med ca 10-15 procentenheter. En faktor som har stor betydelse för återfallssiffror är drogmissbruk. ”*Goda liv*”-perspektivet bygger på antagandet att en person som dömts för brott behöver finna mening och innehåll i sitt framtida liv för att den kriminella identiteten skall kunna släppas. Detta innebär att individuella behandlingsplaner särskilt bör visa hur intagnas självständighet, förmåga att relatera och känsla av kompetens kan förstärkas som en grund för att bygga ett meningsfullt liv som är socialt anpassat. Det *existentiella* perspektivet innebär att en fullvärdig behandling uppmärksammar såväl fysiska, sociala, psykologiska, som andliga behov.

Den första empiriska studien, Studie I, utvärderar ett nytt formulär med 11 frågor för framgallring av personer med drogrelaterade problem, den svenskspråkiga Drug Use Disorders Identification Test (DUDIT). Studierna II-IV undersöker behandlingsalternativ för fängelseintagna som identifierats som drogmissbrukare. Studie II, en randomiserad, kontrollerad studie av öronakupunkturbehandling för manliga och kvinnliga fängelseintagna, visar inte någon fördel för NADA-punktprotokollet eller för kontrollprotokollet, men finner för båda behandlingsgrupperna att fysiska och psykiska obehagssymptom minskat samt att nattsömnen förbättrats. Studie III utvärderar Cognitive skills-programmet för intagna i svenska fängelser, såväl missbrukare som icke-missbrukare. Resultaten visar kortsiktiga positiva förändringar i känsla av sammanhang, impulsivitet, äventyrlighet och attityder till rättsväsendet. Dessutom visas en 25% lägre återfallsrisk hos intagna som fullföljt programmet jämfört med matchade kontroller. Då studien är kvasiexperimentell, kan de positiva resultaten dock bero på en selektionseffekt där mer motiverade deltagare rekryteras

till programmet. Studie IV är en pilotstudie som tar upp långsiktig öronakupunkturbehandling för intagna med dubbla diagnoser samt de med särskild aggressionsproblematik. Hälften av de 22 intagna i studien behandlades två gånger i veckan under åtta veckor eller längre. De som behandlades 25 gånger eller fler visade lägre psykofarmakologiska medicineringsnivåer än obehandlade kontroller.

Studieresultaten placeras i ett nytt sammanhang inom ramen för en modell för befrämjandet av hälsa hos drogmissbrukare i fängelse som har utgångspunkt i såväl grundläggande existentiella behov som riskhanterings- och ”goda liv”-perspektiven. Resultaten diskuteras utifrån denna nya modell, som visar hur vägar till hälsosam tillfredsställelse av de fysiska, sociala, psykologiska och andliga behoven kan växa fram under fängelsevistelsen genom riktad behandling.

*Show me the prison
Show me the jail
Show me the prisoner whose life has gone stale
And I'll show you a young man
With so many reasons why
There, but for fortune, go you or I
– Song text by Phil Ochs*

Forward and acknowledgements

Between 1989 and 1996 I had the fortune to work as a probation officer in the Stockholm region of the Swedish National Prison and Probation Administration. I met my first clients with the naively enthusiastic eyes of a summer substitute. When they came into my well-appointed office, they charmingly appeared to lead relatively orderly lives with motives that, from their perspective, were rational. The thick files filled with court sentences for a variety of crimes – from the “simple” petty theft to the horror of murder – belied my illusion that these people were just like me, except for slightly different life circumstances. However, I felt I could understand why they lived the way they did, and why they committed the acts that they did. I could even understand what made some of them commit crimes in order to return to the predictable structure and regular meals of prison life. I also could see positive qualities in them that could be put to better use, given better circumstances. But what to *do* about this was an entirely different matter; one important aspect of their lives that was particularly difficult to approach was the drug use most of them reported. While I could listen and be empathetic and encouraging, they went out the door and continued their lives unchanged.

Apart from the legal sanctions attached to criminal acts, there were obvious moral and humanistic reasons for desisting from committing crimes. Yet something was making these people cross the border into illegal acts that for me – and for most people – were unthinkable. During my studies in clinical psychology, I began to think more in terms of explanations that lay in early childhood and adolescence. Much of the anti-social behavior of my clients could – theoretically at least – be traced to psychological pain that many tried to assuage with the help of drugs. The drugs were expensive, not to mention illegal, so one thing led to another and my clients landed in a vicious cycle which they themselves were only too keen to point out as explana-

tions for their lives and for their behavior. Not all of my clients used drugs, however. For some, the explanations lay in personality factors, socialization at home and in the streets, in having been unlucky enough to not have anyone take sufficient interest in them earlier so as to sway their path in another direction, or in not having responded when someone did. It was often a considerable challenge to get the clients to see their behavior as a problem in the first place, to then succeed in communicating honestly with them about it, to find out what they themselves wanted to do and could do to change their lives, and then to see what resources people and institutions around them could offer in support of such change. I had a lot of questions, and not too many clear answers seemed to be available, neither at the university nor in the field.

Through a series of serendipitous circumstances and some determination on my part, I ended up doing research in order to try to answer some of the questions myself. The dissertation you are now privy to is a collection of some of the answers. As is the nature of any scientific research, I have more questions now than I had when I began, but at least the contours of the field are clearer, and the methodologies available are part of my arsenal. Before turning to the contents of the dissertation, I would like to thank the many people and organizations who have helped my work along the way, and without whom none of this would have come about.

First of all, I would like to thank the probation clients and prison inmates of the Swedish National Prison and Probation Administration (KVS), who aroused my interest, curiosity and sympathy from the beginning. Second of all, I would like to thank KVS itself, which supported much of my research – through generous support for the two studies on ear acupuncture (II and IV), and through a research grant to Karolinska Institutet for the DUDIT screening instrument (I).

At the Section for Alcohol and Drug Dependence Research in the Department of Clinical Neuroscience at Karolinska Institutet (KI), in collaboration with the Stockholm Addiction Center (SAC), I found consistent encouragement and support for carrying out the different phases of the DUDIT study. I extend my deep appreciation to the National Council for Crime Prevention, Sweden (BRÅ) which allowed me considerable freedom in conducting the evaluation of the Reasoning & Rehabilitation program (III). Finally, gratitude and thanks are due to the Department of Psychology at Stockholm University, Karolinska Institutet and Helsinki University, whose dedicated teachers inspired me to continue to ask questions and deepen my learning. In addition, the opportunity to spend the final stages of this dissertation in the stimulating yet calm environment of the Center for Health Equity Studies (CHESS) at Stockholm University has given me the leisure to write these studies and reflect upon them without the ever-present stress that is otherwise the bane of the practitioner-researcher.

Many individuals have been supportive and generous at various stages of this work. First I would like to extend my deep gratitude to Professor Ulf Lundberg at the Department of Psychology, Stockholm University, who has believed in my work from the start and who has always answered my e-mails and calls immediately and efficiently, i.e., he has been there when I needed him. Thanks, in no lesser measure, are due to Professor Hans Bergman at the Section for Alcohol and Drug Dependence Research at KI. He has made himself available on many impromptu occasions and he has given all my ideas and writings his thorough critical attention in a consistently constructive manner.

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tone for. Thanks also to Reidar Österman, the always good-humored savior of computer-related crises, as well as to Pirjo Ahapassi and Eva Cipek. I know that there are many people I have missed in the above list that deserve thanks and appreciation and I hope they will forgive me for having left them out here; they will know when we meet that I have not forgotten them.

Finally, I would like to thank several colleagues at the Department of Psychology at Stockholm University, where I have been a student – off and on - for more years than I care to count. Thanks to Ulla Ek, who has been an occasional mentor and model, especially during the final phases of my clinical psychology training some years ago; thanks also to Birgitta Berglund for teaching me about scientific method, Peter Hassmén, Nathalie Koivula and Åke Hellström for their inspiring teaching on statistics, Lars R. Bergman and Bassam El-Khoury for their fascinating introduction to person-oriented methodology, Henry Montgomery for opening the door to my more serious involvement in philosophical issues, Gunn Johansson for her seminars on research ethics and health psychology, and also Ann-Marie Pettersson and Kerstin Halldin for always efficient and friendly administrative help in my studies and teaching at the department. While I have not spent much time at the department on an everyday basis, I appreciate the stimulating and friendly contact that has been my consistent experience with all the psychology doctoral students I have met in courses and corridors. Special appreciation goes to Jakob Håkansson, Birgitta Hellström, Kimmo Soronen, and Anna Dåderman.

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*The greatest hazard of all, losing oneself,
can occur very quietly in the world,
as if it were nothing at all.
No other loss can occur so quietly.
Any other loss – an arm, a leg, five dollars,
a wife, etc., is sure to be noticed.*
- Kierkegaard, *Sickness unto Death*, p. 32

Introduction

The specific focus of this dissertation is the enhancement of health for drug users who have been sentenced to prison. Over 60% of Swedish prisoners are regular drug users outside prison. The topic of enhancing the health of drug users in prison is thus of interest to researchers *and* practitioners studying and working in the general field of offender rehabilitation, as well as researchers and practitioners involved in addiction treatment.

Because of the appeal of the subject to readers of varying backgrounds and professions, Chapters 1 and 2 in the framework of the dissertation cover more material than might otherwise be appropriate. Chapter 1 contains sections on offender rehabilitation, drug treatment in general and drug treatment in prison settings, and Chapter 2 covers some basic methodological issues. Parts of Chapter 1 might seem expendable to the addiction treatment practitioner (e.g., the offender rehabilitation section), and most of Chapter 2 might be considered unnecessary for the researcher (e.g., causality and validity issues in the methodology section). Nonetheless, a broad approach has been retained in the hope that the study as a whole it may serve as a reference source for researchers and practitioners working in the cross-section of offender rehabilitation and drug treatment that is addressed.

To summarize the framework of the dissertation, Chapter 1 reviews research on offender rehabilitation, as well as clinical theory and research on treatment for drug use. It ends with a section specifically covering literature on the treatment of drug use in prisons. Chapter 2 focuses on methodological issues that arise in the course of designing, carrying out and interpreting research about drug users in prison. Chapter 3 turns to the practical aspects of enhancing health for drug users in prison by summarizing the rationale, methods and major findings for each for the four studies reported in the dissertation. In addition, each study is discussed in the context of the entire work. Chapter 4 describes a proposed model for enhancing the health of drug

users in prison and Chapter 5 summarizes some general conclusions based on the health enhancement model and Studies I-IV. After chapters 1-5 each of the studies is presented in full text.

An important point for this work is the definition of drug use. In the addiction field, a distinction is generally made between the use of alcohol, a legal substance which is a common ingredient in social life, and the use of illicit drugs, which are used despite the knowledge that legal reprisals could follow. This dissertation uses the neutral, behaviorally-descriptive term “drug use” to describe the ingestion of substances that generally lead to deleterious effects on health. The reason for choosing “drug use” rather than “substance abuse,” or “drug dependence” is that, while the words “drug” and “substance” are relatively interchangeable, the words “use,” “abuse” or “harm,” and “dependence” refer to diagnostic categories that are based on specific criteria in the DSM-4 or ICD-10 diagnostic classification systems. Since the drug users referred to in the dissertation have not been diagnosed (with the exception of the drug user sample in Study I), the more general term “drug use” has been chosen to refer to the behavior that, for each drug-using offender, varies in severity as well as in the number of substances used.

A second point concerns the status of alcohol use among drug users in prison. Alcohol can be used as a principal drug with no side use of other drugs. An example of offenders with principal use of alcohol is those sentenced for driving under the influence of alcohol (DUI). The offenders referred to in Studies I-IV were generally sentenced for crimes other than DUI and their drug use generally included one or more illicit substances, where alcohol could be one of the drugs used. While the findings presented in the dissertation might in many aspects apply to alcohol users, they refer specifically to drug users who use illicit drugs, who have been sentenced to prison, and for whom alcohol use is for the most part just one aspect of a complex drug-using behavior pattern.¹

A final point is that any attempt at answering the question of what to do to enhance the health of drug users in prison requires a broad register of knowledge in the areas of drug user treatment, correctional and forensic clinical psychology, health psychology, rehabilitation psychology, and philosophy. One path to finding an answer would be to focus on one of these areas and explore part of the question in as much depth as possible. However, the issue is a broad one and another option is to study several aspects at an intermediate level of depth. I have chosen the latter path in an attempt to achieve an integrated view of what might be useful in this endeavor. So it is important to keep in mind that my intention has been to illuminate broad areas of the issue of how to enhance imprisoned drug users’ health, and I refer the reader to some of the sources cited below for more in-depth study of particular aspects of the problem.

Chapter 1

Enhancing health for drug users in prison – theoretical issues

Suppose you use illegal drugs regularly and commit criminal acts. You are caught by the police and after due legal process you are sentenced to prison. Once you pass the prison fence or wall, your freedom to act as you choose has been taken away from you. You continue to have the same physical, social, psychological and spiritual needs as before you entered the prison. In the eyes of society, you have been satisfying these needs in destructive ways – at least to a certain extent. This has led to your arrival in the prison. The primary basic question for this dissertation is, how can the prison help you satisfy your current – and future - needs in more constructive, health-enhancing ways?

The questions facing the lawmakers who saw to your imprisonment have probably been different from those above. The obvious basic question for them is how prison can help you stop using drugs and stop committing crimes. On a physical level, the prison is designed to protect society from you and your criminal acts. The issue of enhancing your bodily health is surely a secondary one from a societal perspective. Socially, the prison offers you association with other individuals who, like you, have crossed the boundaries of the law (some may, of course, already be your friends). Considerable research has shown association with antisocial individuals to be a risk factor for criminal behavior, yet aside from prison staff, no other associates are available. Psychologically, you are now separated from whatever significant others, if any, you have derived emotional support from, and any path of personal development that you may have been pursuing is likely to have been severely disrupted by your imprisonment. Prisons do not generally attend formally to spiritual needs, although pastoral consultation is traditionally available according to faith. On the spiritual level, your imprisonment may actually offer an opportunity for reflection on your situation and your life course. The term of imprisonment grants you a period of time in which you are no longer enmeshed in your daily routines, legal as well as illegal, thus opening a perspective of distance to your everyday life.

Evidently, prison authorities implementing legal sentences are faced with a difficult challenge if they are to satisfy basic human needs in health-enhancing ways. Before a discussion of the issues involved can be presented, a brief summary of some definitions of health and its enhancement is in order.

Health definitions

The post-war definition of health proposed by the World Health Organisation (WHO) in 1946 and still widely accepted is that health is not only defined by

the absence of disease but also by complete physical, mental and social *well-being* (WHO, 1946, 2000). Definitions of health stemming from medical perspectives such as those represented by WHO do not usually include any dimensions of health beyond the observable physical and social, and the subjectively communicable emotional. However, health can be conceived of as also encompassing a spiritual dimension. In fact, the Quality of Life Assessment Instrument (WHOQOL) developed by WHO covers six broad domains reflecting prerequisites for a healthful quality of life: physical, psychological, level of independence, social relationships, environment and spirituality (WHOQOL Group, 1994). Furthermore, the WHO Health for All initiative “acknowledges the uniqueness of each person and the need to respond to each individual’s quest for meaning, purpose, and belonging” (WHO, 2000).

Three other conceptualizations of health offer a more in-depth perspective. One conceptualization sees health as “a *latent construct*...a complex multidimensional construct underlying a broad array of observable phenomena” (Miller & Thoresen, 1999, p.4). This view includes *suffering* on a continuum from none to severe, *functional ability* from complete to gravely impaired, and *a sense of inner peace or coherence in life* having to do with “one’s broad subjective perspective on life” (ibid., p.5). Another approach emphasizes a feeling of *well-being*, a *hardiness* or ability to withstand the inevitable pressures of life, and an *optimization* of an individual’s capacity to develop physically, psychologically and socially (Jacobsen, 2000). A third conceptualization of dimensions of human existence, not specifically formulated in reference to health, proposes that human beings are “involved in a four-dimensional force-field at all times,” involving the *physical* dimension where humans are “bodies interacting with the physical environment,” the *social* dimension, where we are “selves interacting with the world of other people,” the *psychological* dimension, where we “connect through our ‘I’ or ‘self’ to the internal world that we construct out of the experiences on the other two levels,” and the *spiritual* dimension, where we “connect through what we may think of as our soul to the absolute world of ideas and their concrete significance in our everyday existence; our preoccupation is with meaning” (van Deurzen, 1997, pp.100-101). Each of these four dimensions can be experienced on a continuum from a positive to a negative pole, with intermediate values defined by van Deurzen (1997) as *safety*, *acknowledgement*, *autonomy*, and *wisdom* for each respective dimension.

Enhancing health for any individual can mean acting to facilitate or strengthen positive changes in one or more of the physical, social, personal or spiritual dimensions. Understanding how to enhance health for drug users in prison from the perspective presented in this dissertation does not, indeed, necessarily require choosing one particular definition of health. The purpose of the brief summary above is to

point out that health involves a multiplicity of aspects of human existence. The existential model proposed by van Deurzen (1997) has seemed particularly suited to the present analysis and is the basis of the health enhancement model proposed in Chapter 4.

Health in the prison population

An assumption underlying the research in this dissertation is that the health of imprisoned drug users is in some way impaired, creating a need for enhancement. This assumption could conceivably be questioned. A healthy prisoner serving a life sentence, for example, would be attending to his bodily needs, obtaining proper nourishment (or, as in many Swedish prisons, cooking it himself) and exercising regularly. On a social level, he would be making special efforts to maintain contacts and friendships with individuals and organizations inside and outside the prison and with significant others (otherwise, as stated above, his social contact would be limited to the other prisoners and prison staff). On a personal level, he would have invested considerable effort into accepting his situation and seeing himself as a worthy human being despite his criminal record and life sentence. On a spiritual level, he would have found some way to atone for his crime and worked to seek forgiveness from others and from himself. While forgiveness might not be attainable, he might at least have been able to accept this and have found a way of serenely viewing his situation as meaningful and perhaps even as a springboard for doing good works in his own particular environment. While some prisoners are able to create a healthy environment for themselves, this is generally more the exception than the rule.

In fact, the prison population is less healthy than the general population. Incarcerated drug users will often have especially acute physical health needs and if these are relieved, other needs quickly make themselves felt, particularly social needs such as recognition and belonging, and personal needs to feel competence, self-esteem and relatedness. According to a standard-of-living study on 411 randomly selected Swedish prison inmates in comparison to the general Swedish population, 37% of prison inmates were troubled by a chronic physical illness or injury and 49% of the prison inmates indicated the presence of psychological health problems, compared to 11% and 8% among the general population (A. Nilsson, 2002). One outcome of this is that the consumption of pharmaceutical drugs is markedly higher among prisoners than among other sectors of the population (Apoteksbolaget, 1997; Skagerberg, 1999). A more extreme expression of these difficulties is the higher prevalence of psychiatric co-morbidity among drug users in prison than among the general population (Badger, Vaughan, Woodward, & Williams, 1999; Fazel & Danesh, 2002; Godley et al., 2000).

This description of prison inmates' health needs remains incomplete without a mention of theory and research regarding *access to resources* as a prerequisite for satisfying needs. Resource access has recently been measured for the population in Sweden in two major surveys, Statistics Sweden's Surveys of Living Conditions (ULF), covering a total of 23,483 individuals surveyed in 1990 and 1991 and in 1998 and 1999, and in the Level of Living Surveys (LNU) in 1991 and 2000. These Swedish surveys of resource access cover actual living conditions in seven areas: health, education, work, income and economic circumstances, social ties, sense of security, and political resources (Palme et al., 2003). The theoretical issues involved in measuring resource access concern to what extent *actual* living conditions are measured as opposed to including *subjective* perceptions of the quality of living conditions. A third perspective includes the extent to which individuals are actually *capable* of making use of the resources they have access to in order to improve their living conditions (Fritzell & Lundberg, 2000).² The standard of living study referred to above measured resource access for prison inmates on a particular day in the late 1990s (A. Nilsson, 2002) and showed that prison inmates are clearly "marginalized or socially excluded" with regard to *actual* access to resources (Palme et al., 2003). The question of prison inmates' *subjective* perceptions of their living conditions, while interesting, is one that falls outside the framework of this dissertation. However, increasing the extent to which prisoners are capable of actually making use of the resources available to them, and making use of opportunities for acquiring better resource levels, is a highly relevant goal for offender rehabilitation.

In view of the findings on reduced access to resources among prisoners, enhancing the health of prisoners in general, and drug users in prison in particular, is a considerable challenge. These challenges are described in more detail in the following two sections on offender rehabilitation and on offenders who use drugs.

Offender rehabilitation

Definition

The aim of offender rehabilitation is to bring about behavior change among offenders so that they stop offending. This simple, straightforward definition builds on one or more value systems – ethical, prudential or epistemic. Rehabilitation can be implemented from the standpoint of *ethical* values – what is in the best interests of the community. Offenders are to stop offending and thus eliminate the risks to community safety. The value of protecting others is paramount. An alternative value perspective for defining rehabilitation is *prudential* values - what is in the best interests of offenders. According to this perspective, the aim of offender rehabilitation

is to enhance the capabilities of offenders so that they can build meaningful, purposeful lives where they feel they make a contribution to the community and thus no longer have a reason to offend. A third basis for values is *epistemic or knowledge related*: rehabilitation measures are implemented based on clinical and/or research results that show which models are “best practice” and which methods are most effective in order to achieve outcome-based aims defined by those models (Ward & Stewart, 2003b).

Whatever its value base, rehabilitation requires a conviction that investing in offenders will yield positive results that can be measured. Within the framework of this dissertation, offender rehabilitation will refer to measures implemented within the closed institutional framework of prisons, unless specifically stated otherwise. This means that the rehabilitative measures cited are all on the tertiary level of prevention, i.e., focused towards individuals who have already committed at least one crime leading to a prison sentence and for whom the aim of rehabilitation is to reduce or eliminate the risk of relapse.

Measurement of rehabilitative outcomes

The effectiveness of rehabilitative measures is generally measured by assessing recidivism in crime, as expressed by self-reported criminal activity, re-arrests, violations of parole orders, reconvictions with sentences at various levels of severity, or incarceration. Rehabilitation can be attempted by a wide range of measures targeting both *internal* and *external* obstacles to a life free of criminal activity. Internal obstacles are those residing within the individual, such as lack of employable skills, cognitive or social skill deficits, or psychological distress. External obstacles are those determined by agents or circumstances outside the individual, such as housing, employment, education or treatment (Ward, 2002b). Measuring the effect of rehabilitative procedures could thus focus either on the primary specific goals of the rehabilitative procedure, such as providing housing, a vocational diploma, improving cognitive or social skills, or reducing psychological distress; or, alternatively, on the secondary, more distant goal of reducing recidivism. The recidivism figure reflects the interaction of a number of internal *mediators* of change as well as external *agents* such as family, school, employment and public safety measures. However, the recidivism rate is still the “bottom line” behavioral standard to which rehabilitative measures are pinned, both from a criminological and even from a psychological perspective (Redondo, Sanchez-Meca, & Garrido, 2002).

Current and historical sociopolitical status of offender rehabilitation

The implementation of a rehabilitative measure is often a local decision within the

province of the chief prison officer. This decision may be influenced by a number of factors, primarily the rehabilitation strategy set out by the central prison administration and the political climate in the country influencing the allocation of funds to prisons and to particular strategic measures (Blud, 2003), but also by policies set at higher levels in the political system. Two governmental organizations in the European Union issue policies on general conditions and health care in prisons: the Council of Europe (COE) in Strasbourg (the COE Pompidou group focuses exclusively on drug issues) and the World Health Organization's (WHO) Collaborating Center on Health in Prisons in Bern. A third organization, the European Monitoring Centre on Drugs and Drug Addiction (EMCDDA) in Lisbon tracks drug use in prison and reports on policy implementation and treatment.

Current status of offender rehabilitation in Europe

The Council of Europe has issued clear recommendations on treatment in prisons (Council of Europe, 1987, 1998) in the European Prison Rules, stating in Recommendation R(87)3 that:

The purposes of the treatment of persons in custody shall be such as to sustain their health and self-respect and, so far as the length of sentence permits, to develop their sense of responsibility and encourage those attitudes and skills that will assist them to return to society with the best chance of leading law-abiding and self-supporting lives after their release.

Recommendation R(87)3 further recognizes the goal of reducing the stigma that follows from incarceration, and recommends that prisoners be offered individualized treatment that takes into account their individual differences. Furthermore, prisoners' cooperation and participation in their treatment process should be promoted by specific systems, including "spiritual support and guidance," according to Recommendation 66a in the European Prison Rules. Relationships between staff and prisoners should be improved in order to increase the effectiveness of prison regimes and treatments, opportunities should be available for the acquisition of a specific occupation, and educational and recreational programs should be offered and access to prison libraries encouraged. Finally, progressive and conditional release systems should be available in collaboration with community-based agencies.

Recommendation R(98)7 concerning the ethical and organizational aspects of health care in prison states that "the prison doctor should encourage prisoners to take advantage of the system of social or psychotherapeutic assistance in order to prevent the risks of abuse of drugs, medication and alcohol" (§44), and that "detained

persons should be able to consult a specialised internal or external counsellor who would give them the necessary support both while they are serving their sentence and during their care after release” (§47). In addition, “doctors should be willing to cooperate in a constructive way with all the services concerned, with a view to enabling prisoners to benefit from such programs and thus to acquire the social skills which might help reduce the risks of recidivism after release” (§67).

The WHO Working Group on Health in Prisons (WHO Regional Office for Europe, 2002) emphasizes that it is “important that care and treatment programs holistically address the *full range*³ of health and social problems faced by people who are misusing drugs.” A 1981 amendment to the Swedish Prison Service Act (1974: 203) from the early seventies incorporates this type of rehabilitative thinking in paragraph 4, which states as follows:

§4. Prison care shall be designed so that the prisoner's adaptation to society should be furthered and the negative consequences of the loss of liberty counteracted. To the extent that it is possible without compromising the need for public protection, the prison regime should, from the start, be focused on measures that prepare the prisoner for life outside prison. Release should be planned for well in advance. (1981:213)⁴

Historical overview of rehabilitation

The brief historical review provided by Hollin (2001) indicates that the rehabilitative ideal expressed in the above-described policies has by no means been self-evident. The classical theory influencing penal law of the 18th to 20th centuries built on the principle that human beings act to avoid pain and gain pleasure, implying that if pleasure can be gained by committing a crime without undue risk of sanction, people will choose to commit crimes. Punishment by sanctions equal to the severity of a crime was therefore seen as necessary to dissuade the large majority of the population from becoming criminals.

Psychological theories from the late 19th and early, middle and middle late 20th centuries pointed out that the commission of crimes is not wholly a matter of free will as classical theory states, but rather results from determinism, differentiation and pathology, all concepts that assume innate given attributes that reduce individual freedom to choose whether or not to commit crimes. A deterministic view is that individual behavior results from bio-psychosocial factors beyond individual control. It follows that criminals are fundamentally different from non-criminals, and that the difference can be explained by the offender's pathological or abnormal status. Viewing the offender as abnormal opened the way for treatment initiatives, which flourished in the 1950s and 1960s. However, a negative evaluation of treatment

programs from those two decades (Martinson, 1974) led to the rapidly adopted conclusion that rehabilitation quite simply did not work, a view that persisted in Britain and the United States despite Martinson's later recantation of his 1974 statements (Martinson, 1979; Sarre, 1999). The 1980s saw the introduction of harsh measures of deterrence such as "boot camps," recently shown to be ineffective (Petrosino, Turpin-Petrosino, & Buehler, 2001), a shift in government funding from rehabilitation to situational crime prevention (installation of alarms, video cameras, security devices, etc.) and the intense academic criticism of the research base supporting treatment effectiveness (Lipton, 2001).

The rehabilitative climate warmed considerably in the 1990s, when the conclusions of research based on meta-analyses showed that certain types of treatment led to small but significant effects measurable in reduced recidivism (McGuire & Priestley, 1995). These findings fortified the positions of pro-rehabilitation decision-makers in prison services in Canada, Britain and parts of the United States, leading to considerable investment in rehabilitative measures for offenders.

In Sweden, rehabilitative thinking was early on included in legislation. During the 1970s and 1980s many different kinds of treatment programs were introduced locally, often at the initiative of one or more individual staff members. Some of these flourished and spread to other areas in Sweden (e.g. *Rattfylleriprogrammet*, a program for offenders sentenced for driving under the influence, and *Brottsbrytet*, a brief program for probationers focusing on offense analysis), but most were only implemented locally for limited periods of time. An ambitious therapeutic community for drug-using offenders was also available at Österåker Prison between 1978 and 1993 (Farbring, 2000).

In the 1990s the extent of rehabilitative measures in Sweden was sharply curtailed as budget limitations cut severely into the National Prison and Probation Administration (KVS). The organizational hierarchy of the prison and probation administration was then streamlined during some difficult years in the mid-1990s. Following this, however, initiative was taken to introduce rehabilitative measures in accordance with "What works" principles, including the organization of several domestic conferences with international guest speakers (1997, 1998 and 2000). The present KVS policy is to encourage treatment programs that follow the "What works" principles and an accreditation board has recently begun the work of authorizing specific programs for nationwide implementation.

The following section details the results of meta-analytic studies on crime recidivism, generally referred to as "What works" research.

“What works” in offender rehabilitation

As mentioned above, the publication of Martinson’s (1974) article summarizing the results of a narrative review of 500-600 studies evaluating offender rehabilitation programs from the United States and Canada had a tremendous impact on policy- and decision-makers who adopted the maxim “nothing works” and channeled resources into punishment and control-oriented measures. Research surveys presented in the form of a narrative review, like Martinson’s, summarize the findings of selected studies and present conclusions on the general trends in the findings. These conclusions, although seminal for building theory and pointing to new directions for research, are subject to individual interpretation and as such vulnerable in their validity.

The technique of meta-analysis, developed during the early 1980s (Wolf, 1986), allows for combining the results of a large number of experimental studies and calculating *effect sizes* that are easily understood intuitively. Meta-analyses take into account variations in outcome measures, subject numbers, and the quality of experimental design. Meta-analyses have thus offered a tool for synthesizing the results of research in the area of offender rehabilitation and have clearly pointed to evidence that something *does* work in the treatment programs studied.

McGuire and Priestley (1995) summarized the results of meta-analyses conducted in the late 1980s and early 1990s. After describing what has been shown *not* to work in prison treatment interventions, they offered research-based guidelines for more effective programs. They pointed out the promise of cognitive-behaviorally-based interventions and community sentencing, and reviewed implications for practice, program management and future research.

Based on meta-analyses, little or no evidence has been found that traditional psychodynamic psychotherapeutic methods, medical interventions based on medication or other biologically related programs such as dietary change, or various forms of punishment contribute anything at all to reducing re-offending figures. Regarding punishment, behavioral research shows that it can be effective in extinguishing undesired behavior (i.e., criminal offending) if the punishment *always* follows the offense, comes *immediately* after the offense has been committed, is as *severe* as possible, *comprehensible* to the offender and when the offender has an *alternative* way of behaving besides offending. As McGuire and Priestley (1995) point out, the criminal justice system does not meet these conditions and meting out punishment for offending is far more the expression of an irrational hope than an effective way of reducing re-offending.

Empirically-based principles of effective rehabilitation

Treatment programs that are effective in reducing recidivism have been shown by

meta-analyses to follow six basic principles (McGuire & Priestley, 1995). The first three principles refer to characteristics of the offender, which rehabilitative programs must take into account in order to influence offender behavior. The remaining three principles refer to program characteristics that are necessary preconditions for affecting recidivism figures.

First, the *risk* level of the offender needs to be matched to the extent of the treatment intervention, so that higher-risk offenders receive longer-term and more intensive treatment and lower-risk offenders receive minimal intervention. This principle is generally referred to as the *risk principle*. Second, the problems that offenders have which contribute to offending behavior should be separated from other problems that are less closely related to offending. The offending-related problems are referred to as *criminogenic needs*, while the other, general life problems are referred to as non-criminogenic needs. Effective programs focus on helping offenders resolve their criminogenic needs according to the *need principle*. Third, effective programs are designed to evoke a response in offenders by using active, participatory psycho-educational methods. This principle recognizes differences in people's learning styles and the importance of adapting methods to the learning styles of offenders: the *responsivity principle*. These three principles regarding offender characteristics are extended to include a fourth principle by Andrews and Bonta (1998), namely that of *professional discretion*. According to this principle, professional corrections staff review the risk, need and responsivity factors in each individual offender's situation and make treatment decisions "according to legal, ethical, humanitarian, cost-efficiency and clinical standards" (Andrews & Bonta, 1998).

The three principles regarding program characteristics begin with the idea that effective programs recognize the breadth of offender problems, use a skills-oriented focus in teaching problem-solving, social interaction or other coping skills, and use cognitive-behaviorally based methods. This principle refers to programs' *treatment modality*. Secondly, effective programs are highly structured and organizationally supported so that they can be delivered in the same high-quality way regardless of the setting and specific staff involved, having high *program integrity*. Thirdly, programs delivered in a *community* setting (i.e., probation or within social services) are more likely to be effective since offenders can practice their skills in a real life environment.

Static and dynamic predictors of recidivism

A number of meta-analyses, reviews and commentaries have elucidated issues related to the principles described above in relation to a priori factors predicting recidivism (Andrews, 1995; Andrews & Bonta, 1998; Gendreau, Little, & Goggin, 1996).

Gendreau et al. (1996) coded 131 studies correlating data on offender characteristics with outcomes of recidivism or no recidivism, and found 18 significant predictor domains divided into 10 static predictors (non-reversible), seven dynamic predictors (open to influence) and one composite predictor consisting of various risk scales used to predict recidivism. The static predictors were collapsed into five factors: criminal history, age/gender/race, family factors (e.g., family criminality or rearing practices), socio-economic status and intellectual functioning (predictive Pearson r correlations from .16 to .07 in descending order). The dynamic predictors fall under three types of factors: criminogenic need factors (e.g., antisocial personality, companions, interpersonal conflict and substance abuse), social achievement and personal distress. Of the static and dynamic factors, the criminal history predictor had the highest predictive value (.16) and the personal distress predictor had the lowest predictive value (.05). Static predictors had a total mean predictive r of .12 and dynamic predictors had significantly higher mean r of .15.⁵

As Andrews & Bonta (1998, p. 225) point out, the fact that dynamic factors actually do predict recidivism is a hopeful element in offender rehabilitation practice, since these factors are the ones that can be influenced and possibly change in a pro-social direction. Also, as Andrews (1995) noted earlier, these factors indicate what areas of change it is useful to focus on. For example, it would be useful to focus on specified intermediate targets such as changing antisocial attitudes, companions and feelings, facilitating family ties, or minimizing drug use, rather than addressing general emotional troubles that are not explicitly linked to criminal behavior, or improving neighborhood living conditions without specifically addressing the situations of neighborhood residents who have a higher risk of criminal behavior.

The issue of risk and needs assessment is thus a prerequisite for placing prison inmates in appropriate treatment contexts. For adequate assessment, scales assessing risk should include both static and dynamic factors. Indeed, composite risk scales including both static and dynamic factors have been found to have the highest predictive correlation with recidivism at .30 and are superior to antisocial personality scales (Gendreau et al., 1996). Scales such as the Level of Service Inventory – Revised (LSI-R) (Andrews & Bonta, 1995) have a high “dynamic validity” in that they reliably predict recidivism outcomes according to both risk level and need configuration (Andrews & Bonta, 1998; Hollin, 2002).⁶ With the help of such scales, practitioners can adapt treatment plans to focus on the most relevant criminogenic need factors and on social achievement.

Treatment targets for reducing recidivism

This section reviews the question of whether or not treatment that addresses risk-

and criminogenic need predictors is effective. The associations between static and dynamic predictors of recidivism and various types of treatment have been reviewed in a number of studies (Andrews, 1995; Andrews & Bonta, 1998; Dowden & Andrews, 1999; Egg, Pearson, Cleland, & Lipton, 2000; Gendreau et al., 1996; Graham, 1998; Hollin, 2002; Lipsey, 1995; Lösel, 1995; Redondo et al., 2002). A review follows of the results of treatment-focused meta-analyses published over the past decade. In brief, the findings show treatment effects of at least 10 percentage points, expressed in reduced recidivism figures, among offenders participating in programs focusing specifically on criminogenic needs and using cognitive-behavioral methods.

A meta-analysis of 400 research studies on juvenile delinquents found a general treatment effect of about 10 percentage points for treatment groups compared to controls. Treatment modalities focused on concrete aspects of rehabilitation such as employment and the teaching of behavioral and cognitive skills were more effective than less specific treatments such as various types of counseling (individual, group and family). This implies that targeting *behavioral change* is more effective than targeting *psychological change* in treatment. Negative effects were noted for vocational counseling⁷ and for deterrence (e.g., programs with harsh disciplinary measures such as boot camps). Greater “treatment dosages” of 100 hours or more were more effective than low dosages of less than 100 hours. When researchers were involved in the treatment design and implementation, better effects resulted. In fact, an interaction occurred between the research monitoring and treatment dosage variables in that low dose programs that were research-monitored yielded better effects than high dose programs that were not research-monitored (Lipsey, 1995).

A second report summarizing 13 meta-analyses conducted between 1985 and 1994 also found a moderate treatment effect of about 10 percentage points for treatment groups compared to control groups. A higher treatment effect was also noted for treatment based on cognitive-behavioral principles and using several types of pedagogical approaches or modalities, thus following the responsivity principle described above (Lösel, 1995).

A third meta-analysis recently published in a British-edited book focused exclusively on European programs, including 23 studies reported between 1980 and 1998 from the UK, Germany, Sweden, the Netherlands and Israel (Redondo et al., 2002). This report is highly valuable since offender rehabilitation has been discussed and evaluated in North America for many years, as well as in the United Kingdom, but the results of studies from other countries have not been widely known. Using an effect size measure based on the odds ratio⁸ rather than the more commonly used, more conservative, *phi* coefficient, Redondo et al. (2002) found a general odds ratio-

based effect size of .21 in favor of treatment groups (the *phi* coefficient was .12, very similar to the above reported previous findings). The most effective treatment types according to the odds ratio were educational programs (.49) and cognitive-behavioral therapy (.30). The effect size was approximately .25 for all offense types except drug traffic offenses, where it was .12. Programs were most effective when delivered in the community or in open prison regimes (over .25). Best results were achieved in the Netherlands (.35) followed by the UK (.24) and Germany (.23), Sweden (.18) and Israel (.05). Allocation of study participants was non-random in the majority of the studies with an overall effect size of .21 compared to an effect size of .10 for the two studies using random allocation.

Redondo et al. (2002, p. 115) conclude that rehabilitation does work, but note the “regrettable fact...that despite lengthy debates concerning rehabilitation held over the last few years...governments and penal systems throughout the world invariably respond to offenders through punishment, especially the use of imprisonment; [and] only very few states have established educational and treatment facilities for offenders.” They go on to observe that even when programs are available to offenders, they are offered to very few, often for practical reasons such as lack of resources, lack of interest on the part of decision- and policy-makers, and – not the least – lack of motivation on the part of the offenders for whom the programs are intended.

The above studies refer to male offenders. Dowden and Andrews (1999) explored treatment findings in a meta-analysis of 26 studies on female offenders. Findings showed highly positive treatment effects for programs targeting higher risk cases, focusing on criminogenic needs and using behavioral and social learning-based strategies. Interestingly, the most effective criminogenic needs targeted were *interpersonal* rather than personal criminogenic needs, while targeting of *non-criminogenic* needs was related to *increases* in recidivism among the offenders treated.

A final aspect of offender treatment that deserves mention is the effectiveness of treatment that actually follows the risk, need and responsivity principles. An analysis of reduced recidivism following treatment according to these principles showed that *appropriate* treatment gave an effect size of +.25⁹, *unspecified* services had an effect of +.13, *inappropriate* services had a negative effect of -.03 and criminal sanctions a negative effect of -.02. Appropriate services included short-term family therapy, one-to-one paraprofessional programs with active counseling on the part of the treatment provider, specialized study or work programs, intensive and structured skill training, individual and group behavioral therapy and therapeutic milieu (Andrews & Bonta, 1998, p. 270). This analysis suggests that recidivism can be reduced beyond the 10% level if greater efforts are made to match treatment to risk level and criminogenic needs, and if treatment is designed to respond to offenders’ receptiveness to learning via treatment modalities.

Clinical application of empirical findings on effective rehabilitation

Combining predictors of recidivism and treatment targets into a clinically applicable – and effective - model is a significant challenge. A prerequisite for defining treatment targets for individual offenders is reliable and valid *assessment* of “complex” predictors of recidivism, i.e. ones that take more than one single predictor into account

Assessment

In the assessment process, it is crucial to keep in mind that actuarial instruments have consistently been found to predict recidivism better than clinical judgment (Grove & Meehl, 1996) and should, for this reason, be part of the routine intake procedure in prisons. Three well-developed such instruments of prediction are the Violence Risk Appraisal Guide (VRAG) (Harris, Rice, & Cormier, 2002), the Psychopathy Checklist- Revised (PCL-R) (Hare, Clark, Grann, & Thornton, 2000), and the Level of Supervision Inventory (LSI) mentioned earlier (Andrews & Bonta, 1995).¹⁰ Assessment instruments such as these measure different aspects of personal history and some current needs that predict recidivism highly effectively. Because their predictive validity is generally very high, this type of instrument also indicates which current areas should be a priority for treatment.

Another instrument currently being introduced in the National Prison and Probation Administration (Kriminalvårdsstyrelsen – KVS) with a similar purpose is the Addiction Severity Index (ASI) (Krantz, Schlyter, & Sallmén, 2000; McLellan et al., 1992). While research on ASI prediction of recidivism is scarce, there is some evidence that it improves correct prediction of violent crime among male DUIs (Gresnigt, Breteler, Schippers, & Van den Hurk, 2000) and that clients' need scores on the ASI reflect their motivation for change (Shen, McLellan, & Merrill, 2000). In KVS, ASI has in fact been combined with a motivational instrument called MAPS (Öberg & Sallmén, 1999) which measures motivation for change in the seven ASI problem areas of physical health, employment, alcohol, drugs, criminality/asocial behavior, family/social relations and psychological health. An evaluation of a pilot application of the ASI/MAPS package at some prison and probation units has indicated that while many staff members and clients in both prison and probation appreciated the interviews as an opportunity to discuss the client's situation in a structured manner, it was less clear in what way the information could be used as a planning instrument for improving the client's situation (Rollsby, 2000).

Approaching treatment

How to approach the treatment areas is thus a second challenge. While some individuals may have only one problem area that will clearly catch the prison worker or

clinician's attention, other individuals may have a number of areas that seem to be problematic. Most Swedish prisoners, in fact, have been found to have two problems or more (71%) while only 9% have no problems at all, in a study of problems that reduce the quality of life for the individual (A. Nilsson, 2002).¹¹ The same study reports that in comparison, only 19% of the general population has been found to have two problems or more, while 47% of ordinary people have no such problems.

Once relevant problem areas are identified, the question becomes how to proceed with appropriate treatment. In view of the importance of the responsivity principle, inmates need to be motivated to participate in treatment, and treatment also needs to be designed in such a way that the participants can respond effectively and thereby experience positive effects. A number of strategies seem to be possible here:

1. Select a primary problem and focus treatment on that area.
2. Select a primary problem but also rank remaining problems to be addressed once the primary problem is treated.
3. Approach treatment from a holistic point of view and target problems more or less concurrently.

The first strategy characterizes present policy in KVS. In some cases referral follows sentencing according to crime type, in other cases recruitment occurs spontaneously at the prison, and in still other cases - in the few units where ASI/MAPS assessments are routine - the results are used for referral to treatment. In the latter instances, primary problems are assessed by ASI and the inmate's motivation for resolving identified problems is explored according to the MAPS agenda; when appropriate treatment programs are available in the prison, the inmate is referred to them.

Available programs in Swedish prisons as of March 2002 were *Reasoning & Rehabilitation* (R&R; referred to as *Cognitive Skills* in Sweden, see Study III), a group psycho-educational cognitive and social skills building program; the *Changing Ways program [Våga välja]*, a drug abuse treatment program; the *Living without Violence in the Family Program* for domestic violence offenders; *One-to-One*, an individual cognitive and social skills building program; and three DUI programs available in a special prison for DUI offenders. Programs are by no means available to all inmates; for example, in the 36% of Swedish prisons where R&R is offered, places are available to only about 10% of inmates in each prison. Accurate data on the prevalence of program participation in Swedish prisons are not available; a study on Stockholm probationers between 1997 and 1999 found that 17% of them participated in programs (Berman, submitted). As noted above, an accreditation panel has recently begun work on accrediting programs that fulfill "What works" criteria.

The second strategy of treatment delivery characterizes program availability in the Correctional Service of Canada (CSC), where the *Living Skills Program* includes the R&R program as a core program that is offered to inmates who fulfill acceptance criteria. The *Living Skills Program* is followed by additional programs according to inmates' specific criminogenic needs. Examples of such programs are the *Anger and Emotions Management Program*, the *Leisure Skills Program* and the *Community Integration Program* (CSC, 2000).

U.K. treatment program policy is characterized by an evidence-based approach. This approach basically states that if a program has been shown to contribute to reduced recidivism, it is accredited for offering to inmates and probationers according to availability (Rex, Lieb, Bottoms, & Wilson, 2003). This policy may in practice mean focusing on one primary problem but it may also allow for continued treatment based on secondary or even tertiary criminogenic needs.

The third strategy is perhaps more of a utopian ideal than a strategy that is implemented in any existing prison service. However, a step in the direction of holistic programming is exemplified by *Client Management Classification (CMC)*, developed in Wisconsin in order to: 1) assess background information about inmates; 2) identify 12 criminogenic factors for each individual of which four are selected as key, prioritized factors; and 3) establish a correctional treatment plan to address the prioritized factors. A key to the successful implementation of such a program is effective assessment of needs and risk so that treatment programs are offered at appropriate intensity according to risk level and program implementation remains consistent with "What works" and CMC principles (Hollin, 1995, 2002).

Treatment delivery according to all three strategies is based on manual-based treatment programs as the response to identified levels of risk of recidivism and criminogenic need among offenders (the "risk-need" model). This is in accordance with the "What works" principles outlined above (pp. 26-27), which can be viewed as an approach based on management of the risk posed by offenders to the community. In other words, the purpose of the manual-based programs described is to bring about changes in offenders' behavior so that they no longer threaten the community. The risk management approach is in line with an *ethical* value base, which puts the best interests of the community first (Ward & Stewart, 2003b). A broader approach that is epistemically based offers a holistic ideal for rehabilitation that both protects the community *and* helps offenders build meaningful, "good" lives. The methods for achieving these aims are (also) knowledge- or evidence-based. This approach is outlined in the next section.

The risk-need model and the good lives model: complementary approaches?

Recent work has taken the “risk-need” model proposed by Andrew and Bonta (1998) a step beyond the risk management perspective. The “good lives” model recognizes and acknowledges the “striking and welcome” contributions of the empirically based risk-need model, yet adds the perspective that offender treatment should involve “installing strengths or capabilities that will enable an offender to secure *valued* outcomes in addition to removing risk factors” (Ward & Stewart, 2003c, p.6). The question of what constitutes a *valued* outcome for an offender is related to what, for any human being, constitutes components of a “good” life. These components are referred to as “primary goods” and are viewed as arising out of basic human needs defined as follows (Ward, 2002b, p.175):

Basic needs are usefully construed as innate propensities to engage in certain activities that, if not met, result in harm or increased risk of harm in the future. Whether or not basic needs can be met in a manner that will promote an individual's well being depends crucially on the existence of specific internal and external conditions (capabilities). Internal conditions refer to psychological characteristics such as skills, beliefs, attitudes and values. External conditions refer to social, cultural, and interpersonal factors that facilitate the development of the above psychological characteristics and include effective valued goals. Criminogenic needs are associated with the distortion of these conditions and can be viewed as internal or external obstacles that prevent basic needs from being met in an optimal manner.... The different classes of criminal needs (i.e., dynamic risk factors) reflect problems achieving the [various] types of primary human goods.

Ward and Stewart (2003a) identify three basic essential needs for psychological well-being and fulfillment: *autonomy*, *relatedness*, and *competence*. *Autonomy* concerns human beings' tendency to regulate themselves, organize their experiences, and “function as unified, integrated beings”. *Relatedness* concerns the tendency to connect emotionally to other human beings with the goal of giving and receiving love and care. *Competence* concerns the tendency to seek a sense of mastery in one's environment, to look for challenges and to successively master them (Ward & Stewart, 2003a).

The goods that humans need to obtain are defined in nine categories as “life (including healthy living and functioning), knowledge, excellence in play and work (including mastery experiences), excellence in agency (i.e., autonomy and self-directedness), inner peace (i.e., freedom from emotional turmoil and stress), friendship (including intimate, romantic and family relationships) and community, spirituality

(in the broad sense finding meaning and purpose in life), happiness and creativity” (Ward, 2002b).

The “good lives” model and offenders’ needs

Offenders are attempting to obtain the same goods as all other human beings, but they are doing so in unacceptable ways that ultimately are dissatisfying for themselves. The reasons for their misguided attempts lie in offenders’ lacking internal and/or external conditions that create hindrances or obstacles for them to meet their needs optimally. These lacking conditions are referred to by Andrews and Bonta (1998) as criminogenic “needs,” although they might be more understandably referred to as criminogenic “*conditions*” or “*factors*”. The purpose of treatment programs, seen within this framework, is to remedy lacking internal and/or external conditions, in order to make it possible for offenders to find more socially and personally adapted ways of meeting their needs.

The risk-need model focusing on treating criminogenic needs according to “What works” principles can be seen as a pure *risk management* model. An alternative approach is an *enhancement* model, arguing for improving offenders’ capabilities of bettering the quality of their lives so as to reduce their motivation to commit crimes (Ward & Stewart, 2003a). Juxtaposed, these two models can appear as opposites, where the risk management model is the evidence-based, hard-line answer to rehabilitation that justifies its costs to the taxpayer, whereas the enhancement model becomes the soft, naïve, idealistic (and expensive) one catering to offenders’ needs while forgetting the very real harm they inflict on others in their surroundings. However, the risk-need model can be “embedded within a good lives model” (Ward, 2002b) with a number of practical implications that need not necessarily tax resources more than present levels; the point is rather to be able to view the offender’s past, present and future circumstances from a different, more holistic perspective.

Applying the “good lives” model to treatment plans

Practical application of good lives principles to a treatment plan embodying the risk-need way of thinking would mean paying attention to six points (Ward, 2002b):

- Thorough assessment of risk for re-offending and identification of specific prominent criminogenic needs. This would involve individualized specification for each offender.
- Analysis of the ways in which the offender has been seeking to satisfy his or her primary goods (according to the nine categories described above or other relevant dimensions).

- Selection of a primary good to strive for above all others; this would take place in close alliance with the offender and would mean establishing a significant, meaningful basis for a future, non-criminal identity.
- Selection of secondary goods to consider striving for, with the aim of broadening the individual's basis for meaning and quality of life.
- Analysis of attributes of the specific environment where the offender might be living following release from prison, so that the results of the work done in treatment will be appropriate for the culture in the future living environment.
- A final examination of the sort of life that the individual would find meaningful and fulfilling, and analyzing what capacities the individual would need to begin a realistic journey towards achieving meaning and fulfillment.

One difference between the risk-need model and the good lives model is that the former excludes treatment of non-criminogenic needs because they are not empirically related to reduced recidivism. Such needs are addressed in the good lives model because anxiety, low self-esteem and psychological distress can interfere with establishing a therapeutic alliance necessary to work towards realizing a “good lives plan.” From this perspective, treating non-criminogenic needs is in agreement with the responsivity principle of the risk-need model, which states that treatment methods should be adapted to offenders’ cognitive and emotional level in order to be effective, thus suggesting that treatment does need to increase offenders’ sense of safety, self-esteem and well being (Ward & Stewart, 2003c).

Another difference between the risk-need model and the good lives model is in the assessment and program orientation phases of treatment. Assessment generally focuses on offenders’ vulnerabilities, while offenders’ strengths, capacities and interests are not brought into relief. As Ward and Mann (in press) point out, “like the rest of humanity [offenders] have needs to be loved, valued, to function competently, and to be part of a community. To lose sight of this fact is to...risk becoming agents of punishment rather than facilitators of hope.” Offenders need to build more meaningful and pro-social identities, and they need prison treatment program providers’ help to do so. If treatment providers offer a conception of possible good lives that they believe in for offenders, the prison inmate will be able to begin construing himself as “someone who does not need to offend and who is able to secure important goods in socially acceptable and personally rewarding ways....The process of reconstructing a personal identity depends crucially on fashioning a conception of good lives” (Ward, 2002a, pp.526-527).

Summary of offender rehabilitation section

This concludes the section on offender rehabilitation. In brief summary, the literature review indicates that small improvements in recidivism figures occur after participation in treatment programs that focus specifically on criminogenic needs. It seems quite clear how such programs should be delivered in order to be effective. At the same time, such “risk-need” oriented measures appear to fall short of addressing offenders’ needs on a deeper level. A “good lives” perspective adds dimensions of personal competence and meaning to the rehabilitation process. The two perspectives should be possible to integrate and future development of such treatment programs – for individuals or groups – should be subject to rigorous evaluation that explores the validity of an integrated approach.

The focus of the present dissertation is how to approach the problem of treating drug users who are in prison, both in order to reduce recidivism and in order to enhance their health, in an attempt to integrate aspects of the risk-need and good lives models of rehabilitation. The section below turns to this more specific focus: the rehabilitation of offenders whose drug use is a highly prominent criminogenic need. The section covers individual and societal problems associated with the presence of drug users in prison, and the available knowledge on treating such problems effectively.

Offenders who use drugs

Prevalence of drug use in the prison context

In a Canadian study of 311 male prisoners who had recidivated within a year of being released from a prior prison sentence, each offender was asked to rate the severity of nine problem areas experienced after being released. Over 80% indicated problems with alcohol or drug abuse. The mean problem severity rating was highest for substance abuse, after which came the following problem areas: financial matters, employment, physical or emotional health, family issues, release supervision, housing, friends and time use (Zamble & Quinsey, 1997).

The 2002 annual report from the EMCDDA shows that drug users, defined as those who used drugs within the 12 months prior to incarceration, are over-represented in European prisons, varying between 29% and 86% of prisoners in the European Union (EU) countries and Norway. Actual drug use within the prison varies between 5 and 54% among European prisoners. Drug use among women prisoners is proportionally higher compared to male inmates (EMCDDA, 2002a). According to reports from European prisons, drugs such as cannabis, heroin and benzodiazepines

(and even other substances) are relatively easily available to prisoners who want to use them and have the money to pay for them.

A KVS publication on the drug situation in Swedish prisons in 2002 reported 61% drug users among male prison inmates and 70% among women inmates (Krantz, Hagman, & Lindsten, 2003).

Drug treatment in European and Swedish prisons

As suggested by the above statistics, substance abuse is a considerable problem within the criminal justice system. Drug use has been identified in meta-analyses as one of the dynamic criminogenic needs most strongly associated with prediction of recidivism (Dowden & Andrews, 1999; Egg et al., 2000; Gendreau et al., 1996). Drug users in prison engage in risk behaviors such as needle sharing in connection with intravenous drug use, tattooing and piercing, and unprotected sexual intercourse. Societal problems related to using drugs while in prison, and to criminal recidivism following release, have provided a utilitarian incentive¹² for prison administrators to reduce the demand for drugs by providing various addiction care services. The type of services offered range from detoxification, small intramural programs run by external agencies, substitution treatment (particularly common in Spain, France and Italy but unavailable in Sweden, Greece and two *länder* in Germany), structured abstinence-oriented programs run by prison services (in nine countries), and special drug-free units or entire drug-free prisons (in 10 European Union countries and Norway) (EMCDDA, 2002a).¹³

The Swedish prison system has expanded its addiction care services following a government-initiated policy, announced in April 2002, to reduce drug use among prison inmates and probationers.¹⁴ At present, only 1285 special places are available in just one-third of the prisons in Sweden, for the approximately 6250 new drug-using inmates that enter the prison system each year. The special places are available for treatment (467 places), motivation (650 places) and difficult-to-motivate inmates (168 places). Detoxification, intramural services, and structured abstinence-oriented programs are also available outside the special places, bringing the percentage of drug-using inmates who receive some sort of addiction care service to about 35% (in October 2002). Another significant aspect of the Swedish prison system strategy is the investment in motivational interviewing services (Miller & Rollnick, 2002), primarily for prison inmates, implemented by employing and training 20 new staff members in the system (Krantz et al., 2003).

The next section outlines current approaches to general treatment of drug use from a pragmatic, practice-oriented perspective,¹⁵ and the section after that gives an overview of four types of treatment that research has shown to be effective and that

are currently available, at least to a certain extent, to drug users within prison walls.

Current approaches to treatment for drug users

The research and clinical literature available on treatment of drug use problems in general is extensive. Generally speaking, it is clear that drug use is an extremely difficult problem to approach; the bio-psychosocial aspects of drug use mean that any attempted treatment must take into account a number of aspects of a person's functioning, involving many people in each drug user's sphere of activity (McLellan, 2003). The treatment forms that have been developed are based on theoretical orientations from genetics, neurophysiological brain reward mechanisms, physiological and psychological sensations of craving, psychodynamic factors in the family of origin, socio-cultural contexts and the psychology of stages of change.

This implies that prison systems face considerable challenges in directing effective addiction care services to the inmates most likely to benefit from them, and also to those inmates not clearly motivated for treatment.

In view of the enormous societal and human costs associated with crimes committed by drug users, it is curious that not much has been written about the subject of addiction treatment specifically for drug users in prison. The marginality of research on treatment alternatives for drug users in prison is exemplified by the fact that four major books published between 1986 and 2003 on treatment of drug use deal mainly with users *outside* the criminal justice system (Lowinson, Ruiz, Millman, & Langrod, 1992; Miller & Heather, 1986; Sorensen, Rawson, Guydish, & Zweben, 2003; Vuchinich & Heather, 2003). The relatively late recognition of the problem of drug use within prisons is exemplified by the very recent publication of just *one* book on the subject (Springer, McNeece, & Arnold, 2003).¹⁶ The few books on the subject of treating drug use – mainly for persons outside prison - are complemented by an extensive research and clinical literature in a wide variety of scientific journals concerning the treatment of drug and alcohol use, both outside prison and – to a certain extent – within.

The book by Miller and Heather (1986) reflects the crucial insight that treating addictive behaviors involves the recognition of processes of *change*, and that such processes differ according to the drug user's stage of readiness for change. This approach came as a contrast to the disease model of addiction which left little space for the drug user's *choice* about using drugs. The articles in Miller and Heather (1986) describe treatment interventions that are appropriate to each of four stages of change: contemplation, action, maintenance and relapse (Prochaska & DiClemente, 1986), an insight that is now being implemented in the Swedish prison system within the framework of the motivational interviewing effort that is part of

the prison administration policy from 2002. By this approach, treatment efforts are considered worthwhile once the drug user recognizes the need for change, i.e., has come to the *action* stage of change. Treatment efforts continue to be worthwhile as the (former) drug user works with maintaining the change and develops strategies for dealing with relapse.

Lowinson et al.'s textbook (1992), which has since been published in a third edition (1997), provides comprehensive descriptions of determinants of substance abuse, neurobiology and clinical aspects of a number of substances, disorders related to drug use such as gambling or sexual addiction, early assessment and treatment (screening, diagnosis and detoxification), various treatment approaches and also some related topics such as treatment of particular sub-groups and HIV infection. The treatments described in Lowinson et al.'s textbook (3rd ed., 1997) can be grouped into five categories:

- (a) twelve-step programs;
- (b) therapeutic communities;
- (c) substitution treatments;
- (d) psychotherapeutic treatments for individuals, groups, and/or families (both psychodynamic and cognitive-behavioral); and
- (e) other types of non-classifiable treatment such as self-help groups, comprehensive treatment programs, relapse prevention, network therapy, acupuncture and religion.

A special chapter in the book also addresses treatment in prisons and jails.¹⁷

The book published a decade later by Sorensen et al. (2003) addresses the issue of how practice and research partnerships are to work in collaboration towards effective drug abuse treatment. This book reflects the insight that however wide or deep the research knowledge base, drug users will not be helped unless researchers and practitioners collaborate within organizations that are open for new ways of helping clients. The book contains four sections. The first section deals with dissemination from practice (therapeutic communities, auricular acupuncture, self-help groups, syringe-exchange studies, and drug courts) to research. The second section deals with dissemination from research to practice (substitution treatments for opiates, relapse prevention, and motivational interviewing are described in separate chapters). The third and fourth sections give a broader perspective. The third section covers collaborations between practitioners and researchers. This section includes discussions of outcome evaluation, the benefits of integrating information systems technology with treatment, various community intervention pilot projects where researchers

and practitioners collaborate, collaborative initiatives from government agencies, integration of research into ongoing treatment and the implementation of PTSD¹⁸ outcome research in drug use treatment programs in the community. The fourth section discusses the implications of the above for science-based strategic approaches to dissemination and for practice-research collaboration.

The fourth book I have chosen to include in this brief overview concerns behavioral economics as a possible explanation for the mechanisms behind drug-using behavior (Vuchinich & Heather, 2003). The reason this book is important is that it offers a strong contrast to disease-based theories of addiction and to deterministic psychodynamic or socio-cultural theories of addiction. The book emphasizes the drug user's autonomy of choice while explaining why drug use - a smaller, sooner reward - will be chosen by active drug users because of their difficulty in delaying action in order to obtain a later, larger reward. The behavioral economics approach explains why drug users experience themselves as unable to allocate behavior to activities other than drugs, as long as alternative activities, which would require delayed response, do not appear as attractive options. This very short description of the book's focus does not do it justice, but it does indicate a theoretical link with both the risk-need and the good lives models.

The risk-need model emphasizes cognitive-behavioral skills as a prerequisite for making non-drug-use-related choices, thus giving drug users *tools* with which to choose later, larger rewards rather than the smaller, quick rewards resulting from drug use. For the drug user who sees a value in changing, the good lives model emphasizes the importance of identifying meaningful, long-term, non-drug-related life goals. These goals require acquired skills and motivation so that the prospect of immediate rewards can be rejected in order for larger, later, meaningful rewards to be obtained. This suggests that treatment based on the risk-need model within a good lives model approach would help the drug user develop attractive options. The good lives approach would facilitate a process whereby a drug treatment program would acquire personal meaning (and increase motivation accordingly) in the action stage of change, and whereby a relapse preventive treatment would also acquire a new personal meaning in the maintenance stage of change.

The overview of the above four books provides a sketch of developments within the addiction field over the past two decades. In summary, a clear picture of biological and environmental determinants of drug use, screening and diagnosis, and treatment options has been summarized in two comprehensive textbooks (Galanter & Kleber, 1999; Lowinson et al., 1992). Some of the prior literature on drug use has had a deterministic, disease-oriented focus. Stages of change theory and behavioral economics theory emphasize that drug use is a behavior that can be altered by choice.

These developments in addiction treatment seem promising since they return a degree of behavioral control back to the individual drug user. In addition, the complexity of drug use has led to an insight that effective treatment requires collaboration between practitioners from various disciplines as well as between researchers and practitioners.

The next section focuses specifically on descriptions and outcomes of drug treatment programs that research has shown to be effective and that could be applied within the prison context or are already applied there.

Treatment programs for drug users in prison

The review that follows of treatment for drug users in prison is primarily based on meta-analytic overviews from the NIDA-funded Correctional Drug Abuse Treatment Effectiveness (CDATE) registry. This registry is in effect an extensive library of studies on what works with adult prisoners who use drugs. It focuses on therapeutic communities and cognitive-behavioral programs. Other types of programs that are available to varying degrees in prisons are substitution treatments and twelve-step programs; there are limited research findings on such programs. Programs that are part of the general panorama of treatment offerings for drug users outside prison, such as various types of out-patient care, are not described in this sub-section.¹⁹

Therapeutic communities

Therapeutic communities (TCs) are residential centers that offer 9-18 months of intensive treatment by staff recruited from among professionals and recovered addicts. TCs are hierarchically structured. Patients progress gradually as they show signs of greater maturity, fewer behavior problems and better self-esteem. The goal of treatment is to build a new personal identity based on positive social and personal values such as work, honesty, self-reliance and responsibility to self and others. Much of the treatment is organized around work (often maintaining community operations) and builds on self-help and psychotherapeutic groups.²⁰

One meta-analysis is available that covers 15 studies of adequate methodological quality on TCs for prisoners or probationers/parolees, from the period between 1968 and 1996. It shows a general effect size of $r=.12$. The effect size measure is an expression of the number of percentage points between treatment participants and controls. This meta-analysis showed that 44% of TC participants were re-arrested compared to 56% of controls who received either no treatment or treatment as usual (Lipton, Pearson, Cleland, & Yee, 2002b).²¹ The results of this meta-analysis, the first one published on TCs, indicate positive effects on reduced recidivism, even when methodological limitations are taken into account; in fact, the higher quality

studies in Lipton et al.'s (2002b) sample correlated positively with effect size ($r=.24$). (It is unusual for higher quality studies to show greater effect sizes than lower quality studies; for example, higher quality studies on cognitive-behavioral treatment generally show lower effect sizes (Lipton, Pearson, Cleland, & Yee, 2002a)).

A meta-analysis of four European prison TCs also showed a positive effect size with regard to recidivism, although a relatively small one - $r=.13$ - compared to educational programs ($r=.49$) and cognitive-behavioral therapy programs ($r=.30$) (Redondo et al., 2002). A TC at Österåker prison north of Stockholm showed similar results according to two quasi-experimental studies, one of which was part of Redondo et al.'s (2002) meta-analysis (Farbring, 2000). Furthermore, a recent Home Office narrative review of North American TC treatments – several of which were part of Lipton et al.'s (2002b) meta-analysis - arrived at similar conclusions (Bullock, 2003).

Retention and dropout in therapeutic communities

An important aspect to consider regarding TCs is that the dropout rate from TCs outside of prisons is as high as 60-90% and it is about 50% within prison settings (e.g., Farbring, 2000; Lipton et al., 2002b). Since the purpose of TCs is “to change the negative patterns of behavior, thinking, and feeling to develop a responsible drug-free lifestyle” and since this takes time – “enduring change in lifestyle and a positive personal-social identity requires a holistic approach focusing on lifestyle rather than drug abuse, criminality or any one problem alone...clinical observation says [this takes] in total about two years on the average” (Lipton et al., 2002b, pp.65-66), it is perhaps not surprising that dropout rates are high among drug users both in and out of prison. The prospect of entirely changing one's life and identity is certainly a daunting one that requires strong motivation to persevere.

A study on dropout from a residential TC for Texas probationers sentenced to treatment showed significant correlations between dropout and cocaine dependence, previous psychiatric treatment, unemployment before sentencing as well as anxiety, depression and hostility. Probationers with low self-efficacy and with friends marked by low levels of pro-social characteristics also dropped out earlier than others. Also, a high baseline score on a criminality risk index predicted dropout (Hiller, Knight, & Simpson, 1999).

One partial solution to the high dropout rate could be targeting resistance and poor motivation as intermediate targets of change, instead of using low motivation as a reason to exclude potential treatment participants (Andrews, 1995). An example of a useful way of improving retention rates, especially for potential participants with lower educational levels, is the use of a pre-TC four-session group program intended

to increase readiness for treatment by enhancing mood and self-esteem, providing non-confrontative exposure to long-term negative consequences of drug use, developing a "Personal Action List" to identify positive areas of action, and enhancing cognitive memory and performance strategies (Blankenship, Dansereau, & Simpson, 1999).

Notwithstanding possible measures to increase TC retention, it is important to keep in mind that drug users often go through a cyclical pattern of problem awareness, treatment, brief maintenance and relapse, and that even dropouts can retain part of a treatment effect that becomes cumulative with time, to the point where each prior treatment for heroin users reduces the probability of a post-treatment arrest by 25%, and six or more prior treatment episodes - and a final treatment bout of 12 months or more - lead to half as many post-treatment arrests as among heroin users with no prior treatment (Merrill, 1999). An additional point to keep in mind is that in view of the high dropout rates for non-incarcerated TC residents, prison custody actually offers an opportunity to intervene with treatment and obtain demonstrably higher retention rates. The cumulative character of drug use treatment also suggests that in-prison TC:s are well worth their costs if run according to the principles characterizing the best of them (Lipton et al., 2002a). TCs offer a potentially unique opportunity to address offenders from a holistic good lives perspective, at the same time that risk management principles are retained.

Meta-analyses of studies done specifically among drug users have also shown reduced recidivism following cognitive-behavioral programs, as described in the next section.

Cognitive-behavioral programs

Cognitive-behavioral programs have been analyzed according to two types of outcomes: drug use relapse as a primary treatment outcome, and recidivism as a secondary treatment outcome.

In a meta-analysis of ten cognitive-behavioral programs, eight of which were rated at least fair in methodological quality, Lipton et al. (2002a) found a mean effect size of $r=.08$, corresponding to differences of at least eight percentage points in *drug use relapse* as the primary treatment outcome.

Regarding recidivism outcomes, Lipton et al. (2002a) review two interesting studies on re-arrest outcomes for drug users who were participants in the cognitive-behavioral program R&R (R&R, the program evaluated in Study III). One 1997 study from California showed that 25% of 70 R&R participants were re-arrested compared to 32% of controls who had participated in a multiphase drug treatment program including urine tests, psycho-social assessment, drug counseling and treat-

ment planning. A 1995 study from Colorado that randomly assigned probationers to R&R in combination with a specialized drug program, to a group that received only the specialized drug program and to a group that received regular probation, showed significant differences between the three groups: probation revocation outcomes were 25%, 29% and 42%, respectively. Furthermore, a sub-group of participants with particularly severe drug and alcohol problems showed probation revocation outcomes of 18%, 43% and 60%, respectively.

To summarize the findings for both TCs and cognitive-behavioral programs for drug users in prison, these two treatment modalities seem to help at least some drug users acquire usable social and cognitive skills that will help them lead pro-social lives. The theoretical basis for TCs lies in developmental psychology and attachment theory, while the theoretical basis for cognitive-behavioral programs is social learning theory and self-efficacy, i.e., the premise that offenders use drugs and engage in criminal behavior because they have not learned the cognitive, social and emotional skills needed to live socially productive lives. The mechanisms at work in TCs are staff-participant and participant-participant relationships, whereas the mechanisms at work in cognitive-behavioral programs are primarily psycho-educational, i.e., teacher-pupil relationships. Although the approaches overlap in practice, the above is a simplified explanation of the different orientations in each modality.

A different way of approaching drug use is to accept the drug user's pattern of use as a phenomenon not easily let go of, and to replace the illicit drug with a pharmacological agent that will, theoretically at least, eliminate craving for the illicit drug and allow the drug user to live pro-socially under medication. This type of treatment is generally termed substitution or pharmacological treatment and is briefly reviewed below.

Substitution treatments

Opiate drug users can be offered pharmacological treatment by methadone, buprenorphine or LAAM (Kreek, LaForge, & Butelman, 2002; Ling, Rawson, & Anglin, 2003).²² These agents reduce or eliminate opiate abstinence symptoms and block craving for heroin if given in high enough doses. The pharmacotherapy can be given during a tapering period at the end of which total abstinence from opiates is expected, or else during an undetermined time period to facilitate reduction of injecting behavior with its risks of spreading disease, to reduce criminality motivated by the need to finance heroin and other drug use, and to facilitate re-introduction into a pro-social lifestyle. Arguments against substitution treatment are that it may reduce drug users' motivation to take part in other types of treatment in the short-term and that it builds on continued dependence on drugs. This continued dependence often

expands into illegal side use of drugs such as cocaine and alcohol.²³

Substitution treatments in prisons are rare, but the little evidence available suggests that they could lead to positive results under optimal circumstances. No known controlled studies are available in this area. An example of a prison methadone substitution program that, at this writing, has been in operation for over 15 years is the Key Extended Entry Program (KEEP), the only known U.S. in-prison methadone treatment program for opiate users. KEEP was initiated in 1987 at the Rikers Island prison facility in New York and continues to provide methadone substitution services for prisoners who are sentenced to less than one year in prison and who are willing to comply with program regulations and with the "Inmate Rule Book." Since violation of this rule book results in detoxification from methadone, prisoners who participate in the program are more compliant in prison. The program offers daily medication, psychoeducation, HIV treatment services, and referral to a community-based methadone program upon release (78% of KEEP participants report to aftercare). The program services about 4000 prisoners a year. While no control group data are available, 60% of those treated were not re-incarcerated during an 11-year follow-up (Tomasino, Swanson, Nolan, & Shuman, 2001).

A recent Home Office review of substitution programs concludes, however, that there is little methodologically reliable evidence that prison methadone treatment programs effectively reduce relapse and recidivism (Bullock, 2003). An additional point is that substitution treatment alone will not address the complexity of the drug use phenomenon, and that complementary therapeutic interventions need to be added. This claim is supported by a placebo-controlled study designed to test whether buprenorphine as an interim treatment for patients waiting for methadone treatment would alleviate the stresses of the waiting period "even without additional control and psychosocial treatment and support." Results indicate that while buprenorphine alone during a three-month waiting period did reduce drug use and alleviate suffering, a relatively high initial attrition rate in the experimental group might have been reduced by structured treatment programs (Krook et al., 2002).

The introduction of substitution treatment programs in a number of European prisons (EMCDDA, 2002a) could be interpreted as capitulation to the enormously complex goal of achieving abstinence from drugs among opiate users, and as an official approval stamp on opiate drug use as a legitimate lifestyle. At the same time, European societies, Sweden included, are faced with the staggering human and material costs of illicit opiate use to the drug users themselves and to the public at large. The doctrine of "harm reduction" involves a sober weighing of resources and leads to the conclusion - for some governments - that prison substitution treatment programs are a pragmatic way of reducing the costs to society of illicit opiate use. In

the absence of known controlled evaluations of this policy, it is not possible to give a considered opinion of the value of such treatments. Clearly, however, a pharmacological treatment is no replacement for the personal identity changes that are needed in order to make the transition from being an illegal drug user to a user of substitution drugs who can become re-integrated into society. Pharmacological treatment may, however, be a considerable help and support in this difficult process, especially for less-motivated individuals, and for those with low tolerance for the frustration and pain involved in any transition from one way of life to another.

Programs that follow the “twelve-step approach” are a well-known source of long-term support in the process of personal identity changes involved in leaving behind drug use. Such programs are described in the next section.

Twelve-step models

Methodologically sound evaluations of the 12-step model are surprisingly nonexistent. However, this presentation would be incomplete without a description of the model, in view of its phenomenal expansion since the ‘30s within the framework of Alcoholics Anonymous (AA) and since the ‘50s within Narcotics Anonymous (NA),²⁴ and in view of its widespread availability to alcohol and drug users all over the world,²⁵ most often outside prisons but also within them. Several differences stand out between standard drug treatment programs and 12-step programs (Fiorentine & Hillhouse, 2000). Drug treatment programs are expected to last for a few weeks or months, are staffed by addiction recovery professionals, are fee-based, and often offer additional services beyond the actual treatment program. Twelve-step programs, on the other hand, emphasize life-long participation, build on self-help principles, are usually free of charge, and are limited to working on personal development along the lines of the 12 steps.

The model covers 12 steps that express a progression from a first admission that “we were powerless over alcohol [/drugs/gambling/eating/sex, etc.] - that our lives had become unmanageable” to actions such as the 4th step, making a “searching and fearless inventory of ourselves”, to a turning towards others in the 8th step, making “a list of all the persons we had harmed and became willing to make amends to them, to the final 12th step, with the admonition that “having had a spiritual awakening as the result of these steps, we tried to carry this message to alcoholics [drug users/gamblers, overeaters/sex addicts, etc.], and to practice these principles in all our affairs” (Alcoholics Anonymous, 2003). These principles are worked through over a long period of time that varies from one person to another, sometimes over the whole lifetime, sometimes over and over again.

The insight that drug use that has become so problematic as to be termed depend-

ence (in ICD-10 or DSM-4 diagnostic terms) or addictive behavior, may take a lifetime of support to recover from or live better with, is not so surprising in view of the lifetime support required for chronic illnesses such as hypertension, asthma or diabetes. Such illnesses require constant monitoring for detection of symptoms that can signal a recurrence of the illness, they require support to continue with prescribed medications and they require a number of lifestyle changes (McLellan, 2003). As an experienced clinician puts it, drug users often “continue to grapple with lapses and relapses throughout their lives...when they encounter difficulties they need to be able to call on [someone], knowing that they have an experienced, empathetic person to whom to turn” (Bishop, 2001). However, drug users are frequently expected to recover after relatively brief courses of treatment without adequate aftercare to support them.

Some evidence suggests that 12-step participation in combination with other treatment contributes to long-term abstinence from drugs (Fiorentine, 1999; Fiorentine & Hillhouse, 2000; Pearson & Lipton, 1999). More specifically, “weekly or more frequent 12-step participation is associated with drug and alcohol abstinence,” while less than weekly participation does not show the same positive outcomes (Fiorentine, 1999). Furthermore, participants who integrated their recovery activities by participating in a 24-week drug treatment program *and* a 12-step program showed higher abstinence rates than those who participated in only one of these programs (Fiorentine & Hillhouse, 2000). Results from a British evaluation of four prison programs integrating a 10-12 week TC program and the 12-step model showed positive results regarding abstinence rates, with both treatment “graduates” and dropouts saying that they “had achieved a sense of personal development that went beyond the limit of their dependence on drugs” (Martin and Player, 2000a, cited in Bullock, 2003). As McLellan (2003) points out, a “cure” for drug users is not realistic in many cases since the behavior pattern is ingrained and prone to relapse once changed.

Evaluation of treatment of drug users in prison

As described above, drug use treatment in prisons is a complex challenge and reliable and valid measurement of outcomes would require attention to a number of dimensions:

- baseline differences between participants and non-participants (controls) in risk-need levels, personality factors, mental disorders and motivational factors
- length, content and structure of treatment program
- provision of after- and through-care and documentation of the aftercare as well as participant compliance with such
- follow-up over a number of years or even decades of negative indicators

such as drug relapse occasions, indicators of criminal activity as well as positive indicators such as employment, housing, relationships with others, and movement towards fulfilment of good lives goals.

At the present time, resources are generally not in place to permit evaluation according to the above criteria (McLellan, 2003). Also, as indicated in the meta-analyses cited above (Lipton et al., 2002a, 2002b; Redondo et al., 2002), few studies on drug treatment in prisons satisfy basic methodological requirements, thereby leading to a confounding of the results by unmeasured correlates of outcomes such as motivation for change or previous treatment experience. The methodological challenges of doing evaluation research in prisons are addressed in Chapter 2. Before this, the final sections in this chapter consider motivational aspects of receiving drug treatment in prison, responsivity and co-morbidity issues, organizational and societal perspectives on punishment versus health enhancement, and legal-psychological models for facilitating rehabilitation (therapeutic jurisprudence).

Motivation as a problem in treating drug users in prison

A basic problem facing legislators, prison administrators, and would-be treatment providers, is that drug users who arrive in prison often are not particularly interested in changing their behavior patterns. A concise description of this “offender resistance” is given by Redondo et al. (2003, pp. 135-136):

Perhaps the main reason [for offender resistance] is the fact that incarcerated offenders frequently see nothing wrong with their offenses, have no desire for change, and seriously question the motives and intentions of those offering treatment... Another important obstacle is [personal coping strategies] such as... denials and rationalizations, which enable... the individual to avoid facing the self-defeating and socially destructive nature of his or her acts. Finally, it is likely that some offenders re-enact long-standing patterns of interpersonal manipulation and coercion with practitioners, which eventually serve to impede the rehabilitation process... A related matter is the absence of tangible rewards and incentives for changing behavior.

In other words, offenders face internal obstacles (lack of motivation, destructive coping strategies, and successful manipulation of treatment providers) as well as external obstacles (lack of skills and real possibilities of building a “good life”). Legislators, administrators and treatment providers need to take these obstacles very seriously if any diminution of human suffering on the side of the offenders and that of the public is going to take place. At the same time, clinical experience indicates that

“most higher risk offenders are disciplined, organized, dedicated, and hardworking when it comes to stealing, substance abusing, fighting,...[and] disliking authority” (Beech & Mann, 2002, p. 377). So, without forgetting the very real difficulties that face the offender-drug user who wants to change the course of his life, much of the problem may lie in the person’s values, priorities and goals, i.e., where they invest their energies.

Motivational interviewing (MI) is a therapeutic approach that its initiators define as a “person-centered, directive, method of communication for enhancing intrinsic motivation to change by exploring and resolving ambivalence” (Miller & Rollnick, 2002, p. 25). The basic assumption is that the offender/drug user has an intrinsic motivation to change towards a more pro-social lifestyle but feels a great deal of understandable ambivalence about it, as expressed in the above citation. The treatment provider offers a highly empathetic, listening approach that expressly aims to explore this ambivalence, and uses techniques of open questions, reflections, avoidance of confrontation, and emphasis on the client’s autonomy of decision in order to encourage the client to speak more about his own desire to change and the steps he can begin taking to achieve his own goals.

As mentioned earlier, MI is being introduced on a large scale within the Swedish prison service (cf. p. 38 above), and is used in many other criminal justice settings (Ginsburg, Mann, Rotgers, & Weekes, 2002), with drug as well as alcohol users (Moyers, 2003) and with other special groups such as sex offenders (Beech & Mann, 2002). As Beech & Mann (2002) point out based on research in social psychology, people are more motivated to change towards “approach goals” for which they strive, rather than towards “avoidance goals” from which they will strive to refrain (*ibid.*, p. 278). This fits in well with the good lives approach described earlier, whereby treatment focuses on satisfaction of general human needs, rather than narrowly emphasizing the criminogenic needs associated with offending (Ward & Stewart, 2003a).

In spite of much enthusiasm for motivational interviewing, and considerable evidence to support its efficacy with alcohol users, the evidence is more equivocal regarding its efficacy with drug users. A number of problems may impede the possibility of drawing clear conclusions about the contribution of motivational interviewing to reductions in drug use: training in MI conflicts with confrontational cultures within the criminal justice system, the coercive character of prison inmates’ situations may be perceived as conflicting with the MI emphasis on self-efficacy and autonomy, and it may be that MI needs to be supplemented by other interventions when clients are subject to “severe bio-psychosocial stressors” (Moyers, 2003). It may be possible to solve these problems with time, and the initiatives to introduce MI on a widespread basis within the Swedish system are encouraging and promising, but

it remains clear that more research is needed into how to effectively address motivational aspects for drug users in prison.

While motivational interviewing seems to be an intervention that is generally in line with the responsivity principle (Andrews & Bonta, 1998, p. 340), a significant issue is whether differences in risk-need levels, variations in personality, and psychiatric co-morbidity can affect drug users' responsivity to treatment interventions that are more oriented towards facilitating provider-initiated change. This question is discussed below.

Responsivity issues and co-morbidity

The responsivity principle is defined as “delivering treatment programs in a style and mode that is consistent with the ability and learning style of the offender” (Andrews & Bonta, 1998, p. 245). In addition, the responsivity principle extends to considerations of offenders' personalities and other characteristics such as interpersonal sensitivity, interpersonal anxiety, verbal intelligence and cognitive maturity. To cite an example, clients who were amenable to psychodynamic casework and received such treatment were incarcerated significantly fewer months (2.1) than those who were amenable to such casework but did not receive the treatment (4.8). In contrast, among clients who were not amenable to psychodynamic casework, there was no significant difference in months of incarceration between those who did receive the treatment (5.5) and those who did not (4.8) (Grant, 1965, cited in Andrews & Bonta, p. 246).

The implication of the responsivity principle for treatment of drug users in prison is that it is necessary to pay careful attention to their individual motivation and characteristics in order for treatment efforts to be worthwhile. Furthermore, when making decisions on assessment strategies and allocation of resources to different kinds of treatment, prison administrators need to take into account that the drug users who are in prison have a collectively more problematic profile than the drug users found in community rehabilitation services: drug users in prison have reported more social maladjustment, less preoccupation with their drug consumption and less motivation to change than their counterparts in community drug treatment services (Brochu, Guyon, & Desjardins, 1999).

Drug-using prison inmates who also show signs of diagnosable major mental disorders present a further challenge due to their compounded treatment needs, and the documented higher risk for violent offending among this group (Hodgins, 2001; Mullen, 2002). While research on treatment outcomes for this group is scarce, two recent studies exemplify the challenges and point at possible solutions.

High-risk offenders who use drugs

A Canadian study exploring treatment dropout among moderate to high-risk offenders who had been referred to an anger management program lasting about six months, found a dropout rate of 38%. Analysis of the dropouts' characteristics showed that, in comparison to the completers, they were more likely to come from maximum security facilities and to have Aboriginal ethnic backgrounds, and they were less likely to have been employed before imprisonment. Pre-program risk assessment indicated significantly higher risk for recidivism among the non-completers, as well as lower motivation and higher denial levels (Wormith & Olver, 2002).

A second study, in the U.S., tested the risk and responsivity principles in a four-site randomized blocked design. 120 parolees and probationers in high- or moderate risk groups were offered either experimental treatment with "seamless system" case management or traditional supervision. The seamless system approach prioritizes treatment retention. It offers coordinated treatment- and criminal-justice agency services through co-facilitated group drug treatment sessions three times a week during 6 months. Preliminary findings 12 months after random assignment show that the high-risk participants (of whom about half reported currently used drugs, over 70% reported criminal activity and about 80% had been in prison over the past year), had better employment, re-arrest and drug use rates than the controls, who received traditional supervision.²⁶ Also, 94% of the high-risk participants completed the treatment. Moderate-risk participants, on the other hand, showed negative outcomes following the intensive treatment, compared to controls (Thanner & Taxman, 2003).

While the two studies described differ in setting (prison vs. probation) and in the type of high-risk client targeted, they illustrate the problems involved in retaining high-risk clients in treatment, and they also highlight the potential rewards of addressing risk and responsivity issues explicitly when designing treatment.

Many of the authors cited above express frustration at the lack of knowledge, research, and application of existing knowledge with regard to drug-using offenders who also have psychiatric problems at different levels of severity, up to major mental disorders (e.g., Hodgins, 2001; Mullen, 2002; Redondo et al., 2002; Thanner & Taxman, 2003; Wormith & Olver, 2002). Hodgins' (2001) conclusions on the components of effective treatment programs for offenders with major mental disorders *and* drug use suggest that decision-makers need to allocate resources for the following services.

- a) effective treatment of major mental disorders;
- b) specific treatment for drug use (and other possible co-morbid problems),

- c) appropriate and varying levels of supervision according to the individual pattern of problems,
- d) “legal obligation for community treatment if compliance is a problem,”
- e) possibilities of effecting involuntary re-hospitalization for short terms, and
- f) adequate housing, income, and occupational services.

These recommendations refer to high-risk groups of the type studied by Wormith et al. (2002), but the general principles of providing care for a range of individual needs and for protecting the community by mandating involuntary risk management are applicable to other types of high-risk groups involving offenders who use drugs. The question of how legislators, administrators, decision-makers and treatment providers are to coordinate an effective response to a broad range of needs is briefly addressed in the final two sections of this chapter.

Organizational and societal perspectives

The literature includes several voices indicating where the problems lie and what to do about them. Already in 1991, John Gregrich, then chief of the Corrections branch of the U.S. Bureau of Justice Assistance, identified a number of obstacles towards effective treatment of drug-using offenders. He recognized three clear avenues for redressing the problems that face the criminal justice system: research and evaluation, technical assistance and training, and management information systems (Gregrich, 1991, p. 220). He pointed out that it is more challenging to treat drug-using offenders, with their criminal experience and manipulative skills, than “mainstream members” of society, and that effective intervention must occur early, both in the offender’s own life and in the criminal justice process. Furthermore, effective intervention must include thorough assessment, it must be organized in such a way that it is “rigorous, formal and substantial,” and it must ensure continuous contact with the offender.

Twelve years later, Gregrich, now at the Office of Demand Reduction at the Office of National Drug Control Policy in the Executive Office of the President, was still pondering the same issues, but now, in view of the lack of filtration of research results into practice, he had some very practical advice to researchers on how they should effectively communicate evaluation results to policy makers and practitioners (Gregrich, 2003). He advised using basic communication tactics that may require a good deal of time and effort at first but might not be as taxing if systematized. The communication tactics he recommended are the following: actively e-mailing interested parties, keeping track of their responses, offering to meet informally, having user-friendly handouts that summarize research results, adapting language to

the receiver of information, not seeking funding at the same time as findings are presented, keeping findings short and pithy, providing preliminary results, pointing out changes in routine that can yield benefits and be introduced without any extra cost,²⁷ “respecting the values and insights of policy makers and practitioners as much as those of scientists,” and, finally, without going beyond what is supported by data, specifying clearly the applicable results of the research.

A rather provocative argument, that explains obstacles to communication between researchers and practitioners, is presented by four experienced researcher-clinicians (Gendreau, Goggin, Cullen, & Paparozzi, 2002). They discuss “knowledge destruction” as an in-house strategy used within criminal justice systems to counteract the “What works” ideas that criminal behavior is predictable, that individual differences between offenders matter, that correctional rehabilitation is effective and that prison time can be used constructively. Methodological knowledge destruction finds fault with scientific theories, methods or outcomes, while philosophical knowledge destruction rejects research findings as contradicting human morality and experience. The authors suggest three remedies for the problems of knowledge destruction in the hope of one day seeing at least 20-40% of correctional policies apply “What works” research findings.

The remedies involve introducing correctional service policies that target *staff, organizations and the knowledge base itself*. Regarding *staff*, policies should ensure that assessment procedures are based on psychometrically sound assessment instruments rather than on invariably erring clinical judgment. Praxis in *organizations* can be improved by introducing and maintaining “mission statements based on the concepts of fairness, justice, and the improvement of lives through ethically defensible means rather than...derived from a host of quick-fix panaceas based solely on emotional responses such as anger and punishment” (p. 373). Finally, the *knowledge base* can be continually replenished with up-to-date information on effective treatment policies, focusing on meta-analyses rather than the more subjective narrative reviews that are often produced by correctional services.²⁸ The solutions proposed by Gendreau et al. (2003) are certainly a challenge to implement in large bureaucratic organizations such as correctional services. However, this question is outside the focus of this dissertation and must be abandoned at this point, though not before allowing a former drug-using offender a forum for expression.

Alan Rogers, a former drug-using offender, has had the opportunity to address the Council of Europe’s Pompidou Group, which focuses exclusively on drug users in prison. He offered counsel from his perspective on what should be done to “improve services and make them more acceptable to prisoners” (Rogers, 1999). His recommendations are listed in ten abbreviated points briefly summarized below:

- *Prison environments are so harsh that drug use is encouraged*

- *Staff attitudes towards prisoners who use drugs need to be softened⁹*
- *Prisoners should be made equal partners in decision-making about drug treatment in prisons*
- *Peer support groups should be set up with prisoners who receive group counseling training*
- *Total abstinence from drugs in prison is an unrealistic goal; the goal should instead be adequate and humane response to the needs of prisoners who use drugs*
- *The prison environment should be conducive to change and offer training in relationship-building and in marketable skills*
- *Positive change should be rewarded and negative events should be met with help and understanding rather than punishment*
- *Intravenous drug use occurs in prisons and is better dealt with by strategic minimizing of infection (e.g., information and sterilization equipment) rather than denial and punishment*
- *Support and aftercare for prisoners must be planned for well in advance and must be in place at the time of release. Furthermore, work schemes should be available for re-integrating released prisoners into the community.*
- *“The most effective way of reducing drug use in prisons is to stop sending drug users there.”*

The last point above, which suggests that prison punishment is not the solution for drug users’ offending problems, is the subject of the next two sections.

From punishment to health enhancement

From a sociological and ethnographic perspective, the illicit drug user within the corrective control model currently applied by criminal justice authorities in the United States and Europe is in a predicament, since punishment and control measures do not affect illicit use from the drug user’s point of view (Manning, 1992). The reasoning behind legislative deterrence with regard to drug use relies on drug users’ fear of arrest being greater than their motivation to use drugs. This reasoning is faulty due to several inappropriate assumptions. One is that drug users will focus on a future possible negative consequence of using rather than the present immediate reward of drug use, a very unlikely way of reasoning according to modern behavioral choice theories (Vuchinich & Heather, 2003). Another faulty assumption is that the risk of arrest is consistent and relatively predictable, rather than erratic and rare. A third problem is that arrests have not been shown to directly reduce illicit drug use. There is, in fact, a general lack of empirical support for punishment models of reaction to offending behavior in general, including illicit drug use (McGuire & Priestley,

1995).

Recent writings introduce the idea of utilizing legislation to increase treatment attendance, for example by means of Drug Courts (Deschenes, Peters, Goldkamp, & Belenko, 2003; Springer et al., 2003), or through the application of therapeutic jurisprudence (Birgden, 2002). Still, the corrective control model, whereby legislation punishes drug users for their solutions to satisfying their needs, is more the rule than the exception in Europe.

A separate but vital issue linked to the paradigmatic shift suggested in the good lives model, is how to connect legislative goals with therapeutic goals. As indicated in the hypothetical description of a drug user's path through the criminal justice system (p.18), legislation is aimed at punishment and risk management, whereas treatment can be aimed at risk management and the reconstruction of a new personal identity as outlined in the good lives model. Solutions to this discrepancy are beginning to emerge in the field of therapeutic jurisprudence, briefly outlined below.

Therapeutic jurisprudence

Therapeutic jurisprudence is a field of inquiry focusing on the interplay between criminal law and rehabilitation psychology, the main question being to what extent the law can be harnessed to maximize therapeutic effects. The application of therapeutic jurisprudence can influence not only the way legal actors (judges, prosecutors and defense lawyers) think and behave with offenders, but also the way in which representatives from correctional authorities are involved in pre- and post-trial proceedings, and also the timing and content of rehabilitative interventions by treatment administrators and providers. Two examples of the application of principles of therapeutic jurisprudence to offenders who use drugs are described below: the establishment of special "drug courts" in the U.S. (Deschenes et al., 2003), and a rehabilitative framework for corrections in Victoria, Australia (Birgden, 2002).

Five basic assumptions underlie therapeutic jurisprudence as presented by Birgden (2002). The first assumption is that any application of the law always has an impact of some kind on the offender; an important aspect of this impact in a rehabilitative context is that the application of the law can raise, lower or leave unchanged the offender's sense of psychological well-being. The second assumption is that the process of interaction between agents of the law and the offender offers an *opportunity* to intervene in favor of a pro-social lifestyle. The third assumption is that the recognition of the interplay between the law and psychology implies a need for interdisciplinary cooperation, which in turn can lead to the discovery of new ways in which to enhance offenders' well-being. Fourth, the law must balance the need for community protection (i.e., risk management of the offender) and individual autonomy (i.e.,

the enhancement of the offender's health and well-being). These interests need to be attended to in a way that does not cater to therapeutic paternalism or coercion, but rather in a way that allows the offender to feel that he is making a *choice* in favor of a pro-social life or, alternatively, a choice to accept punishment. Finally, therapeutic jurisprudence is a "normative theory" which makes value judgments about offenders' risk, needs, and responsiveness to rehabilitation. It is the responsibility of the agents of the law to make this explicit within the legal process.

A prime example of the application of these assumptions is the establishment of drug courts in the U.S., which in January of 2002 numbered almost 1000. Drug courts were first set up in 1989 in answer to overcrowding within the criminal justice system and in order to address the "revolving door" phenomenon whereby offenders who used drugs were repeatedly imprisoned for criminality related to their drug use. Briefly, the aim of drug courts is to reduce drug-related crime by increasing treatment rates for drug users. Legal agents cooperate with treatment providers in a collaborative effort, where drug users are offered treatment instead of incarceration, and treatment providers can rely on better retention and compliance since dropout can very quickly lead to referral back to the drug court. The latter can quickly impose an alternative sentence of imprisonment. Drug users' progress is also followed up by the legal agents, i.e., the judge meets with the offender not only at the sentencing occasion but also at selected times during the treatment. Outcome research on drug courts is in its beginning stages; action and process-oriented evaluations have contributed to improved procedures and point to positive results. The considerable expansion of the drug court model over a relatively short time span provides a firmer basis for obtaining funding for evaluation that with time may offer systematic evidence of solutions and problems in the drug court model (Deschenes et al., 2003).

A different model for therapeutic jurisprudence is the one currently funded by Australian corrections in Victoria. Its target is reducing recidivism by diverting 600 potential offenders from prison to treatment between 2000 and 2005 (Birgden, 2002). The model combines therapeutic jurisprudence principles with the good lives theory described earlier (e.g., Ward, 2002). Both internal and external obstacles to living good lives are addressed within the model. Regarding internal obstacles, non-criminogenic needs such as anxiety over participation in programs or unresolved issues of earlier victimization are addressed in individual counseling. Criminogenic needs are addressed in a wide range of offense-related programs that focus on problem-solving as well as skills needed to reduce offending involving violence, alcohol, drugs, or sexual assault. In terms of external obstacles, environmental stress resulting from lack of housing and employment is addressed by increased support in these areas during the transitional process between prison and the community. In

addition, the motivational readiness of offenders, in terms of the stages of change motivational cycle (see pp. 39-40 above), is taken into account in order to maximize the appropriateness of services offered to the offenders, i.e., rehabilitative responsiveness. The model is unique in its integration of principles of therapeutic jurisprudence and the good lives model, and also in its assignment of equal weight to the risk, need *and* responsiveness principles. The rehabilitative framework proposes, in sum, to “respectfully motivate and assist offenders to make informed decisions about participation in rehabilitative programs....The result should be optimism by a correctional system that change in offending behavior can occur based on an enhancement model of rehabilitation” (Birgden, 2002).

The principles of therapeutic jurisprudence and the two applications described above are not supported by research evidence. Time – and evaluation - will tell whether the hope embodied in these models is justified. The issues of when, what, and how to evaluate is a complex one which has been at the heart of the four studies presented in this dissertation. Before turning to a description of rationale, methods, major findings and discussion of each of the studies, a chapter on methodological aspects of doing research in prisons follows. If it is not already clear, it hopefully will become clear that doing such research offers considerable challenges to design, analysis and the conclusions that can be drawn. At the same time, research in prisons is vital to the efforts to apply “What works” and “good lives” principles in order to improve community protection as well as the lives of individual offenders.

Chapter 2

Methodological issues in prison research

The questions asked in this dissertation about enhancing health for drug users in prison are broad and involve many variables that are difficult to control. It is a considerable challenge to define the theoretical questions, operationalize them in terms of measurable variables, design a study that can generate reliable and valid results, and lead to justifiable conclusions. Also, quantitative designs can be complemented by qualitative interview material. How to use quantitative and qualitative methods as complements rather than opposites is a question without clear answers in an either-or research paradigm.³⁰

This chapter focuses on issues of causality, experimental design, and evaluation research in order to provide a backdrop for the reasoning used in planning the studies described in Chapter three. As an aid to the reader, the methods used in each study are summarized in a table at the end of this chapter (Table 1, p. 70).

The prison research context

Before discussing specific methodological issues, a few words on the prison research context are in order. Prisons are closed institutions, and their inmates have fixed dates of entry and departure. While the inmates are incarcerated, their activities are largely defined by what the prison administration has to offer. In short, once the inmates have entered the prison, they have been deprived of their freedom, losing the autonomy of decision that ordinary human beings often take for granted.

The situation whereby inmates' lives are determined to a large part by administrators' and staff decisions might lead one to assume that research within the prison environment would be a simple matter. After all, the structure of the prison, both architectural and social, generally gives the impression of rigidity and constancy. In this way, one might expect the prison setting to offer research conditions not unlike those of a laboratory, where conditions are fully controlled by the researcher (to the extent that this is possible). However, the inmates are living beings, with their own needs and aspirations. The same applies to the prison staff and administrators. This means that inmates' daily actions and activities are not as predictable as one might think. It also means that the prison is a social setting, subject to and influencing power conflicts and political decrees, at the staff level and also at the inmate level.

From a research design point of view, it is important to take into account the political context of the prison. As a British sociologist points out, "the search for truth can still take place, provided that political goals do not override this search, and a strong empirical base is pursued." However, it is important to keep in mind that research in the prison becomes a "political act" since it involves "wielding power, wad-

ing in other people's power and...feeling powerless" (Liebling, 2001). This means that there is a risk that the researcher would lose sight of the original purpose of the research, once he or she enters the prison and begins interacting with prisoners and staff. The researcher may be tempted to represent one or the other party in the inevitable conflicts that arise. Withstanding such invitations or temptations requires an attitude of "prudent, perhaps reserved, engagement" according to Liebling (2001).

Continuing to do prison research is vital in view of the existential human issues that arise when the autonomous human being finds his or her latitude of decision severely curtailed by incarceration. Researchers in the prison environment need to keep their research goals in mind at all times and they need to apply the rigorous methods of scientific research while retaining constant awareness of the inmates' status as subjects, worthy of what philosopher Martin Buber termed an "I-Thou" relationship. The researcher who minimizes the importance of the inmates' human status risks treating them as objects, in an instrumental "I-it" relationship that denudes both the student and the studied of their humanity (Buber, 1923). Awareness of the importance of the I-Thou way of relating also needs to extend to prison staff, who are vulnerable in that they may be treated in I-it ways by inmates, colleagues and superiors. It is a major challenge to describe and explore the prison setting and prison inmates' experiences in such a way that research questions are answered with evidence-based causal explanations a perspective of conscious subjectivity is still maintained. Studies II-IV have offered considerable challenges in design and analysis as to how to ask the right questions, plan a suitable design, analyze and explain the findings, and justify the conclusions. The following is a discussion of the methodological issues that arose from these challenges.

Causality

Experimentation is part of our daily lives. If you feel fatigued after reading for a while, you can try to become more alert by taking a nap, drinking coffee, or exercising or doing something else for a while. After you have tested one of these options you will probably draw a conclusion about whether or not it "worked" and, most importantly, *why*. If taking a nap made you more alert and able to continue reading with interest, you will probably say that the nap led to your becoming alert. If, on the other hand, you remained tired, you might say that the nap was too short or too long, or that you were disturbed by outside noises. If the latter is the case, you will probably continue to experiment until you find a way of relieving your tiredness. If the former is the case, you might stop there in your experimentation and take a nap every time you feel tired during the day. In both cases, you will have engaged in a small single case study with a basic question, a "treatment" (the nap), results, and

conclusions.

While questions about what treatment causes what effect have been studied for many centuries, systematic study of causes and effects according to experimental design did not become common until the latter part of the 19th century. In physical, biological, and agricultural research, it became clear that drawing valid causal conclusions depended on a design that compared the effect of one treatment to the effect of another treatment - treatment as usual or no treatment at all. Without comparison, it would be impossible to say whether the effect occurred because of the treatment, or whether it might have happened anyway because of the passing of time, or because of some other, unknown, factor.

The issue of what or whom to compare to is a crucial one. The objective of the comparison is to isolate the effect of the treatment itself. If the compared objects or groups are like one another in all respects, it is likely that any post-treatment effect will be due to the treatment. Ensuring that the compared groups are equal in all respects (*ceteris paribus* – all other things being equal), can be achieved by *random assignment*. Quartz samples, rats, agricultural fields, school classes, hospital patients or individual prison inmates are examples of samples where random assignment can determine what or who receives which treatment. By *randomly* assigning treatment allocation, the *a priori* characteristics of each group to be compared tend to be equal, on the average (Armitage, 2003).

In the laboratory setting, it is up to the researcher to assign the study objects, be they stones or rats, to the treatment. The laboratory setting is thus *controlled* by the researcher. When it comes to studying human beings, random assignment is much more difficult to carry out; human beings are free to move, speak and act as they will – even in a prison – and it is not unlikely that they might protest random assignment. For this reason, *quasi-experimental* methods have been developed to allow comparison between groups that are not randomly assigned.

Quasi-experimental assignment involves giving treatment to groups that are already formed, rather than creating a new, experimental group by random assignment. Quasi-experimentally assigned groups may differ from each other in ways that randomly assigned groups would not. Identifying and recording the differences between quasi-experimentally defined groups thus becomes an urgent priority so as to minimize the threat of drawing faulty causal conclusions from the results of the study, i.e., assuming that treatment has caused the effect, whereas in reality there were other causal forces that were hidden in the differences between the groups (Cook & Campbell, 1979).

The concept of control in research designs is always related to minimizing or eliminating threats to valid causal inference. Cook and Campbell (1979) point out three

different senses of control that are at play in research designs. In the first sense, researchers attempt to control the research *setting* so as to minimize extraneous factors affecting the research – the issue here is *how much* control is possible, not whether or not the setting is controlled at all. Control in the second sense involves the assignment of groups to treatment, whether random or quasi-experimental. In the third sense, control involves measuring a construct or characteristic that has been identified as a threat to valid inference. To return to our example of the napping experiment above, control in the third sense could mean measuring the length of the nap. That might vary from person to person, and thus change the nature of the “effect.” Research in real-life, or “field” settings, implies very little possibility of control in the first sense, but considerable control possibilities in the second and third senses.

Experiments, and attempts to draw conclusions from their results, lead to statements about causes and effects. The positivistic concept of cause was defined in the 18th century by Hume (1711-76), who stated that causality exists if the following three conditions are fulfilled:

- Cause and effect occur in temporal proximity (*inevitability*)
- Cause occurs before effect (*necessity*)
- Cause is always present when effect occurs (*infallibility*)

Hume’s definition is limited by two problems: cause as he defined it is only that which can be *observed*, and correlations which may fulfill his conditions do not automatically imply a causal relationship. For example, being tired after lunch every day may not be due to the lunch but rather to the unobservable factor of consistent lack of sleep at night. Eating lunch and becoming tired would, however, correlate very highly.

The question of observable and unobservable causes raises the issue of *measurement*. Even observable causes are subject to error in measurement, whereas unobservable causes imply numerous sources of errors in measurement since measuring an unobservable cause is, at least at the start, basically a matter of guesswork. Cook and Campbell (1979) sum up this problem by stating that “*all* measures involve many known theoretical variables, many as yet unknown ones, and many unproven presumptions...none can be ‘definitional’ of a single theoretical variable” (p. 14).

Hume’s definition of causality is *essentialist* in that the cause is essential for the effect to occur. John Stuart Mill (1806-73) added a fourth criterion for causality that takes into account the unobservable nature of many phenomena:

- Other explanations of the cause-effect relationship must be eliminated

Hume's and Mill's definitions of causality form the foundation of logical positivism, the research paradigm that still defines what counts as evidence in clinical trials involving human beings.³¹ Karl Popper's work on falsification as the true challenge facing researchers goes one step beyond Mills. Popper's point is that nothing is proved true, strictly speaking, unless *all alternative explanations are proved false*. Popper's theses are particularly relevant in a field like epidemiology, where causes are not manipulated but rather observed (McIntyre, 1988), but his theses are also useful when independent variables can be manipulated in order to test whether assumed theories are false.

In the social sciences, and particularly in public policy, the manipulation of causes known to produce certain desirable effects provides much of the motivation for applied research. Carrying Cook and Campbell's (1979) comments further, we are in search of a *recipe* for producing happiness for all citizens. However, causation in human societies is highly complex, and the best we can hope for is a gradual elucidation of causal connections which eventually may form a picture that is more or less recognizable, understandable and valid, though shifting. The positivist paradigm is basically *essentialist*: one or more causes are seen as essential and sufficient to cause a particular effect. Cook and Campbell propose a *probabilistic* view of causation, where findings on causal relationships are put together in order to yield a view of what cause *probably* leads to what effect. They perceive positivists and essentialists as seeking a level of explanation that is unrealistic in field settings involving human beings.

Random assignment and quasi-experimentation

The above discussion of causality is mostly based on Cook and Campbell's (1979) exposition of the topic in the context of experimentation in "field" settings where people are involved. Their work is still highly relevant 25 years after publication. They propose what is basically a positivist paradigm in what they call a "critical-realist" perspective. Their discussion is useful in the context of quantitative human research, in particular what is now termed "evidence-based practice", which involves considerable probabilistic piecing together of evidence from various research studies.

Research traditions from the natural sciences have evolved into stringent practice in medical, psychological, and social scientific settings, where the ideal trial allocates the participants to treatments by random assignment. Guidelines like the Consolidated Standards of Reporting Trials (CONSORT) are being continually refined to reduce biased estimates of treatment effect and to improve the reliability and validity of the results of randomized controlled trials (Moher, Schulz, & Altman, 2001). In addition, the knowledge gained from trials with human beings, whether

randomized or not, is gradually being collected and systematized - in narrative, systematic and meta-analytic reviews - in the well-developed Cochrane Collaboration in the medical field (www.cochranelibrary.com), and in the more recently initiated Campbell collaboration in the fields of education, criminal justice, and social welfare (www.campbellcollaboration.org).

Validity

The primary issue regarding the usefulness of experimentation in general and non-randomized trials in particular regards their validity, i.e., to what degree what we conclude from our experiments can be assumed to be actually close to the truth. Various distinctions can be made with regard to validity. Cook and Campbell divide the concept into internal, construct, external, and statistical conclusion validity. The relative importance of the different types of validity varies according to the research approach. While a researcher who is interested mainly in testing theory could prioritize internal validity, followed by construct, statistical conclusion³² and external validity, the order of priorities for the applied researcher would be internal validity followed by external, construct validity of the effect, statistical conclusion validity and construct validity of the cause. Studies I-IV belong to the realm of applied research and validity priorities are thus internal, external, construct-effect, statistical conclusion and construct-cause.

Internal validity

The basic question addressed in issues of internal validity is *whether causality exists* between the variables studied where covariance is found (i.e., a high correlation between the occurrence of A and the occurrence of B), and, if so, in which direction (simply put, does the chicken cause the egg, or does the egg cause the chicken?). Threats to *internal validity* are factors outside the researcher's field of control that might have caused the effect and can make it appear as if causality exists when in fact it does not. Such threats include the following:

- *History*, when another co-occurring event causes the measured effect.
- *Maturation*, when the passage of time has caused the effect.
- *Testing*, when the pre-test raises study participants' awareness and causes them to change before they receive the treatment.
- *Instrumentation*, when for example a clinician's assessment abilities have improved in subtlety by the time of the post-test.
- *Regression to the mean*, when measures are unreliable and pre-test differences between the participant sample and population norms are large

- *Selection*, when one sort of participant ends up in one group, and another sort ends up in another.
- *Mortality, or dropout*, when participants with particular characteristics drop out of the study, thus changing the character of the treatment group during the experiment.
- *Ambiguity about the direction of causal influence*, when a high correlation occurs between variables defined as independent and dependent but it is not clear what caused what.
- *Imitation*, when participants from two treatment groups interact and share information about treatment that affects the outcome.
- *Compensatory equalization of treatment*, when one group is perceived by administrators as receiving a “worse” treatment and is compensated in some way that equalizes the treatment effects.
- *Compensatory rivalry by participants receiving less desirable treatments*, when participants who perceive themselves as having received the short end of the bargain make special efforts to achieve parity with the other treatment group.
- *Resentment from participants receiving less desirable treatments*, when participants act in protest and produce a difference in outcome that would ordinarily not occur.

External validity

External validity concerns the extent to which results from a study can be *generalized* from the sample under investigation to a larger group or population with similar characteristics. In other words, to what extent the intervention that was tested can be assumed to have an effect that corresponds to the study results. Threats to external validity are interactions between selection and treatment (systemic recruitment factors that lead to a severely biased sample, e.g., only prison inmates who have committed economic crimes); interactions between setting and treatment (e.g., a particular prison recruiting a specific type of inmate such as DUI offenders); and interaction of history and treatment (e.g., testing during a particular period of time when budget cuts have been made and the atmosphere is negatively affected by this in unknown ways). Cook and Campbell (1979) suggest three strategies for increasing external validity:

- Random sampling for representativeness (e.g., the population sample in Study I).
- Non-random deliberate sampling for heterogeneity to test whether a

treatment is effective with two or three different types of groups according to gender, social class, ethnicity, etc. (e.g., the in-depth interview sample in Study III and the support unit and standard psychiatric unit samples in Study IV).

- Impressionistic modal instance sampling, which involves selecting instances of the kinds of groups that are most interesting to generalize to, which for this dissertation means samples of prison inmates who use drugs (e.g., the drug user sample with heavy prevalence of drug use in Study I, the drug-using male and female inmates in medium-security prisons in Study II, and the inmates from prisons of a variety of security levels in Study III, among whom about 60% use drugs).

Internal and external validity issues in Studies II-IV

The threats to internal validity outlined above are typical in settings such as schools, hospitals and prisons. A few of these threats are particularly plausible in Studies II-IV. Maturation may have been a threat in Studies II-IV, where the passage of time could have conceivably led to the improvements noted on outcome measures. Selection may well have been a threat in Study III, where the experimental group was a selected group following a recruitment procedure. Furthermore, the volunteer control group for short term change (I) and the rigorously matched control group for recidivism (II) may have differed from the experimental group in ways that were not measured. A final possible threat to internal validity was imitation in Study II, where the experimental and control groups were merged about halfway into the trial due to organizational pressures, i.e., the elimination of one of the treatment rooms in the men's prison and demands on the treatment providers' time in the women's prison. It was possible to merge the groups in the men's prison because a sports gymnasium was available with virtually unlimited treatment space, and the two treatment groups were merged in the women's prison because together they comprised fewer than 10 participants.

The implication of these various types of sampling is that quasi-experimental research in prison settings *can* lead to conclusions that are reasonably justifiable and generalizable, even if the samples are not fully randomized and participation is obligatory, as in the "ideal" randomized controlled trial. Cook and Campbell (1979) point out that there is a trade-off between internal and external validity. For example, the particular threats to internal validity in Studies II-IV (maturation, selection and imitation) might have been minimized had the studies been designed in a controllable setting outside the prison with individuals who willingly and reliably filled in a large number of assessment measures and where dropout might have been

much smaller. While the internal validity regarding conclusions as to causality (program outcome) might have been higher, the external validity (i.e., generalizability) for prison inmates would have been much lower. Similarly, had the sampling procedure in Study III, for example, been randomized and participation made obligatory (this might have been possible if an alternative treatment program similar to R&R had been available, but this was not the case), the external validity might have been increased, but very possibly at the expense of increased threats to the internal validity, for example, due to compensatory equalization (especially if one group received no treatment beyond treatment as usual), compensatory rivalry or resentment from participants who protested their placement.

Research with human beings in their natural settings requires a balance between internal and external validity, and the conclusions from Studies I-IV, while reasonably valid, should not be regarded as in themselves standing alone, but rather as parts of a puzzle that becomes clearer as more studies are completed – studies using the DUDIT, exploring auricular acupuncture for different groups and at different stages, and delivering R&R to prison inmates. The puzzle becomes especially clear once the number of available studies on a certain type of intervention permits a meta-analytic study.

Construct validity

While internal validity refers to *whether causality exists* between A and B, and external validity refers to *whether the causal relationship will hold fast* in a similar setting and among a similar group, *construct validity* refers to certainty regarding the constructs between which a causal relationship has been identified. That is, whether an identified causal relationship does not exist between A and B, but rather between C and B, or A and D, or C and D, i.e., the cause is different from what is first apparent, or else the effect is different from what is first apparent, or both.

Questions of construct validity arise regarding exactly what causes what. A classic example is the placebo-controlled study where the chemical action of the pill alone is isolated from the doctor's caring concern and from the placebo effect of the belief that taking a pill would remedy one's ills. Another example is the so-called Hawthorne effect, when an increase in productivity could have been ascribed to the manipulated variable, an increase in illumination, but may have resulted from administrative concern over the women workers' working conditions (the "Hawthorne" effect) or from the positive reinforcement given the women about their increased productivity. These examples refer to construct validity of the *cause*. Construct validity of the *effect* has to do with rigorous measurement of outcomes, so that it is apparent that when, for example, recidivism is being measured, it reflects actual criminal activity.

If the recidivism measure were based on guesswork on the part of probation officers, it might not be perceived as valid. Unanticipated side-effects of a treatment are also examples of problems with construct validity, since the side-effects may not have been included in the outcomes measured.

Construct validity issues in Studies I-IV

While there are a number of threats to construct validity according to Cook and Campbell (1979, pp. 64-68), in applied research like that represented by Studies I-IV, ensuring the construct validity of the effect is more of a priority than the construct validity of the cause. This is because alleviating a problem is the priority in criminal justice settings:³³ If recidivism is reduced, what caused it is less important than the fact that it happened as an apparent result of a study. In this context, it is important to also make sure that *all* effects have been measured; for this reason multiple effect measures are important. Measurement that confirms construct validity can be both instrumental and statistical.

A solution to threatened construct validity of the effect is therefore to use multiple outcome measures (e.g., in Study II, outcomes were measured by short-term self-report tests, drug use measures, and interviews which unearthed the unexpected side effect of improved sleep quality). The idea of combining quantitative with qualitative methods in “mixed methods” research has recently begun to gain ground (Creswell, 2003; Tashakkori & Teddlie, 1998). Studies I-IV all included qualitative measures, as shown in Table 1, but for reasons of space the published articles cover almost exclusively quantitative data. The qualitative data may be published separately at a later date.

Aside from *types* of measures, varying statistical analyses can be useful in testing various aspects of a construct; also for unearthing unexpected relationships. In Study I, for example, ROC curves serve to establish cut-off scores on the DUDIT for predicting dependence on drugs based on diagnostic interviews, and performing factor analysis on two very different samples (drug users compared to the general population) suggests that the factor structure differs according to the sample tested. In Study II, interview results complement quantitative outcome measures as mentioned above. In Study III, short-term test results suggest R&R participants change their attitudes towards life and criminality, in addition to adjusting their impulsivity downwards, and long-term survival analysis indicates a lower risk of recidivism (measured by reconviction and sentencing to probation or prison) for program completers. However, the primary stated targets of the R&R program – teaching cognitive and social skills – are not measured due to circumstances beyond this researcher’s control, thus creating a problem of construct validity of the cause as well as construct validity

of the effect. Short-term attitude and trait changes, as well as long-term recidivism changes, are outcomes based on mechanisms other than those measured, i.e., the acquisition of cognitive and social skills postulated to affect behaviour. We can only guess that the short- and long-term positive results for program completers arise from the program intervention itself, and support for this assumption comes from other studies suggesting similar effects. Study IV, a pilot study in a sample from a population considered very difficult-to-treat, attempts to fortify construct validity of the effect by measuring cortisol, medication and autonomy levels, as well as reporting various semi-anecdotal qualitative results. The results suggest that further studies would be worthwhile to perform.

To sum up, potential threats to internal, external and construct validity in randomized and quasi-experimental studies in prison settings are considerable. However, if experimental expectations of clarity of results are modified in accordance with the problematic nature of such studies, and if the realization is maintained that the final validity of studies will depend on the results of other studies, the prospect of doing research in prisons becomes a good deal more hopeful. Prison research is vital as a measure of quality control for existing interventions, and also as a way of testing innovations for eventual future introduction. The next chapter describes the rationale, method and major findings of each study in this dissertation, followed by a discussion of the findings for each study. Chapter 4 sets the studies into a theoretical context combining the risk management and good lives perspectives presented in Chapter 1, to conclude with a model for enhancing the health of drug users in prison.

Table 1: Samples and methods used in Studies I-IV

	Study I: DUDIT Evaluation	Study II: Auricular Acupuncture for Prison Inmates	Study III: Reasoning & Rehabilitation for Swedish Male Prisoners	Study IV: Auricular acupuncture in prison psychiatric units
Samples	<ol style="list-style-type: none"> 1. Drug user sample ($n=160$), volunteers from targeted group 2. Population sample ($n=1500$), random 	<p>Prison inmates ($n=174$), volunteers from targeted group, ITT* sample randomized after exclusions, $n=158$</p>	<ol style="list-style-type: none"> 1. Short-term outcome sample: Prison inmates ($n=372$), recruited from targeted group. 2. Recidivism sample: Released participants from sample 1, TCs** ($n=256$) and dropouts ($n=83$) <p>Controls for sample 1: Prison inmates ($n=62$), volunteers Controls for sample 2: Released former inmates ($n=570$), matched</p>	<p>Prison inmates in psychiatric units ($n=22$), 10 from support unit, 12 from standard psychiatric unit; volunteers from targeted group. Controls from separate untreated unit ($n=9$)†</p> <p>Staff from all 3 units for psycho-social climate outcomes ($n=32$)</p>
Quantitative methods of analysis	<ol style="list-style-type: none"> Sample 1: Descriptives, correlations, factor analysis, reliability, ROC curves Sample 2: Descriptives, T-scores, factor analysis, reliability 	<p>Baseline comparisons of dropouts and TCs**, repeated measures ANOVAs on outcome measures, non-parametric drug use analyses</p>	<p>Sample 1: Baseline comparisons with ANOVAs, pre-/post-test comparisons by adjusted p-tests</p> <p>Sample 2: Baseline comparisons (non-parametric & ANOVAs), Cox regression survival analysis, non-parametric recidivism comparisons</p>	<p>ANOVAs for cortisol outcomes, medication levels and tests of psycho-social climate</p>
Interview methods/other "qualitative" methods	<ol style="list-style-type: none"> 1. Think-aloud, $n=21$ (45 min.), unpublished data† 2. Diagnostic interviews in sample 1, (40-90 min.), quantified for ROC analyses 	<ol style="list-style-type: none"> 1. Pre-treatment semi-structured interviews with TCs $n=73$ (20-30 min.) 2. Post-treatment semi-structured interviews with TCs $n=69$ (20-30 min.) <p>Results on sleep quality reported, otherwise unpublished data† (see Berman, 1999)</p>	<ol style="list-style-type: none"> 1. Semi-structured in-depth interviews, $n=18$ (60-120 min.), unpublished†† (see Berman, 2002) 2. Focus groups for preparation of staff questionnaires, $n=6$, $n=7$ (90 min.), unpublished†† (see Berman, 2002) 	<ol style="list-style-type: none"> 1. Qualitative treatment assessment form for inmates, $n=4$ 2. Semi-structured brief interview with inmate, $n=1$ (20 min.) 3. Semi-structured brief interviews with unit staff, $n=5$ (15 min.) 4. Conversation with staff at second unit, $n=3$ (30 min.) 5. Brief telephone interview with unit psychiatrist $n=1$ (ca 7 min.) 6. Observation of staff meeting in second unit, $n=10$ (90 min.) <p>Published qualitative descriptive results</p>

*ITT= Intent-to-treat;

**TC= Treatment completers

†Untreated controls for medication levels ($n=8$) consisted of 4 inmates from separate control unit, 4 untreated inmates from treated psychiatric unit.

††“Unpublished data” are not included in the published or submitted Study. However, the unpublished data in this table are described in Swedish-language pre-publication reports.

Chapter 3

Enhancing health for drug users in prison – practical aspects studied

The empirical findings summarized in Chapter 1 about effective offender rehabilitation stress the need to assess offenders' risk level, specific criminogenic needs contributing to criminality for each particular offender, and the type of program suited to each offender's capacity to respond and take in rehabilitative measures. Once a criminogenic "need" such as drug use is confirmed and specified, *treatment* should address the need(s) with the objective of reducing the risk of recidivism. A broader, more individualized approach could also address offenders' physical, social, emotional and spiritual distress in order to facilitate holistic recovery. Effective methods for addressing this distress in prison vary, as described in Chapter 1.

In this section each study included in the dissertation is briefly described as to its rationale, method and major findings. A short discussion of the implications of the study follows. The studies focus on specific areas of need and are not by any means intended as a comprehensive exploration of what an ideal enhancement of health on all levels for drug users in prison would entail. Rather, each study illuminates a small aspect of the larger problem and adds something to the total empirical knowledge base on health enhancement for drug users in prison.

Study I

How do we know an inmate uses drugs?

Rationale

Screening for health problems is a common method of identifying which individuals require further assessment, diagnosis and treatment. Any routine medical examination involves a number of screening moments or techniques, from hammering in order to elicit the knee jerk reflex, to invasive blood tests. Screening of offenders at prison intake generally includes a physical examination and possibly self-report questionnaires or interviews. Within the Swedish prison system, only offenders sentenced to four years in prison or more are systematically assessed in terms of personality and risk factors, with the purpose of facilitating appropriate placement. Current assessment ambitions for offenders with sentences of less than four years aim to administer to all offenders the Addiction Severity Index (ASI) (McLellan et al., 1992) and MAPS (Monitoring Area and Phase System), a motivational and stage of change interview (Öberg & Sallmén, 1999; Krantz et al., 2000). However, still lacking are

the staff resources required to administer interviews on such a large scale. In view of the gap between ambitions and practice in an interview-all approach, simple screening of an important criminogenic factor such as drug abuse is an urgent priority.

For many years, statistics regarding the prevalence of drug abuse in Swedish prisons have been collected via staff reports. It is now generally known that approximately 60% of Swedish prison and probation offenders have an alcohol or drug problem (Krantz et al., 2003). Similar figures apply in other European countries (EMCDDA, 2002b). Identifying the offenders who use drugs with high sensitivity and specificity can be invaluable for quickly distinguishing between drug users and non-drug users and for gathering data on the resources needed for further assessment and diagnosis and, finally, drug treatment in prison. Study I addresses this problem by presenting a psychometric evaluation of the recently developed Drug Use Disorders Identification Test (DUDIT).

Method

The DUDIT was developed on the basis of a preliminary screening instrument (AUDRUG) that was designed for use within the criminal justice system (Schlyter, 1999). The AUDRUG consisted of the 10 Alcohol Use Disorders Identification Test (AUDIT) items on alcohol use and alcohol-related problems (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001) and 23 items on drug use and drug-related problems. The latter items were based on ICD-10 criteria for harmful use and drug dependence and included the five items from Gossop's et al. (1990) Severity of Dependence Scale (SDS) in a Swedish translation (Andrén, 1995).

Factor analysis of AUDRUG data from a sample of 391 prison inmates was followed by a literature survey that included searches in Medline, Pubmed, Psychological Abstracts and the Social Sciences Citation Index from 1983 to 2000. The survey yielded 21 self-report instruments and 13 interview forms either wholly or partly covering drug use. Of these, 18 self-report instruments and seven interview forms were accessible as sources for a pool of items from which DUDIT items were later selected. Table 2 summarizes the results of the literature survey.

Because of the ambition to create an additional instrument for problem assessment³⁴, six "readiness-to-change" (RTC) self-report forms were included: the *Readiness to Change Questionnaire (RTCQ)* (Forsberg & Göransson, 1999; Heather, Gold, & Rollnick, 1991), the *Alcreadi* (Carbonari, DiClemente, Addy, & Pollak, 1996), *The University of Rhode Island Change Assessment Scale* (McConaughy, DiClemente, Prochaska, & Velicer, 1983; Öberg, 2000), *SOCRATES* (Miller & Tonigan, 1996) and the *Texas Christian University Treatment Motivation Scales* (Knight, Holcom, & Simpson, 1994). For positive statements about drug use, the *Consequences of alcohol*

Table 2 Screening instruments for substance abuse/dependences. An asterisk (*) denotes an instrument or form that was included in the pool of items for construction of DUDIT.

INSTRUMENT	AUTHORS	FORMAT	PSYCHOMETRIC INFORMATION
ADIS – Adolescent Drug Involvement Scale	Wisniewski, Glenwick & Graham, 1985	14 questions	Not psychometrically tested. Tests utility of MAC scale in the MMPI as a screening instrument for alcohol and drug use in adolescent populations.
AOD Simple Screening Instrument*	Knight, Goodman, Pulverwiz & DuRant, 2000	16 questions	Not psychometrically tested for validity. Good internal consistency (alpha=.83). Test-retest reliability after one week ($r=.82-.90$)
AUDRUG [in Swedish]*	Schlyter, 1999	11 questions	Internal consistency Factor 1 (alpha=.88) & for Factor 2 (alpha=.82) for 11 questions. No other psychometric evaluation completed.
CAF - Client Assessment Form*	Cook, 1988	4 questions making a Drug Problems Scale that is one of seven scales	Internal consistency (alpha=.71.). Correct prediction of drug problems for 93% of respondents, sensitivity 71%, negative prediction for 97% of respondents.
CAGE-AA	Knight et al., 2000	4 CAGE questions adjusted for adolescents	Alpha=.60, alpha varies according to gender and ethnicity. Test-retest reliability after one week ($r=.82-.90$)
CAGE-AID *	Brown & Rounds,1995	4 questions	Sensitivity 79% with cut-off at least one positive response. Specificity 77%, $n =105$
DAP – Drug and Alcohol Problem Quick Screen Instrument*	Klitzner, Schwartz, Gruenewald & Blasinsky, 1987	42 questions – yes/no/unsure responses	86% of questions distinguished between risk or no-risk of drug abuse.
DAP-Quick Screen*	Schwartz & Wirtz, 1990	30 questions for adolescents	4 of 30 questions explain 70% of the variance between respondents with low or high risk of alcohol and drug abuse
DAP-4*	Knight et al. 2000	4 questions for adolescents	Alpha =.46. Test-retest reliability after one week ($r=.82-.90$)
DAST-10*	Skinner, 2001	10 questions	Correlation with DAST-20, $r=.98$. Internal consistency alpha=.92 (alpha=.74 for drug abuse sample, $r=.256$).
DAST-20*	Skinner, 1982; Gavin, Ross & Skinner, 1989	20 questions	Correlation with DAST-28 = .99. Internal consistency alpha=.95 (alpha=.86 for drug abuse sample, $r=.256$). One-dimensional scale according to factor analysis.
DAST-28*	Skinner, 1982	28 questions Not widely used in primary care settings	Internal consistency alpha=.92. One-dimensional scale according to factor analysis. Sensitivity 96%, specificity 79-81% (Maly, 1993)
DUII – Drug Use Screening Inventory*	Tarter & Hegedus, 1991	149 questions in several areas. Takes about 20 min. to complete. Administration of only drug questions not recommended by authors.	2 of 10 dimensions cover drug dependency. Internal reliability alpha=.74 for men, .78 for women. Test-retest reliability .95 for men, .88 for women. Specificity: 80-97% for non-clinical population, 68-86% for drug dependent respondents according to DSM-III-R.

IAP – Individual Assessment Profile	Flynn et al., 1995 *	121 questions. Takes 50 minutes to complete. Purpose is to examine behaviors and characteristics in patients beginning substance abuse treatment.	Test-retest reliability .60 for 82% of items. For 6% of items <.50, for 12% between .50 & .59. Sensitivity 95.3% for heroin, 53.8% for cocaine, 15.2% for benzodiazepines. Specificity 61.4% for heroin, 77.4% for cocaine, 97.6% for benzodiazepines, 98.8% for PCP, 99.6% for illegal methadone, and 100% for amphetamines, <i>n</i> =81
MMPI-A Alcohol/Drug Problem Scales for Adolescents*	Weed, Butcher & Williams, 1992	PRO Alcohol/Drug Problem Prone-ness Scale (36 questions) and ACK, Alcohol/Drug Problem Acknowledgement Scale (3 questions)	Low alpha coefficients. .76 for PRO, .70 for ACK. Test-retest reliability .70 for PRO, .45 for ACK.
POSIT *	Gruenewald & Klitzner, 1990	139 questions, takes 20-25 min. to complete. For use with adolescents in many contexts.	Reliability has been tested but not published (Dembo et al. 1996)
SASSI-3*	Lazowski, Miller, Boye, & Miller, 1998	26 specific alcohol (12)/drug (14) questions, 67 other distinguishing questions	Gives two scales on alcohol and drug use. In addition, 7 other scales illustrating personality factors related to possible drug abuse/dependency. Sensitivity and specificity over 90%.
Severity of Dependence Scale (SDS) *	Gossop, Darke, Griffiths, Hando, Powis, Hall & Strang, 1995	5 questions measuring psychological dependency and compulsive use. Takes 1 minute to complete. One factor.	Cut-off values have been studied for cannabis (Swift et al. 1998), amphetamine (Topp & Mattick, 1997), and benzodiazepines (de las Cuevas et al., 2000) Benz. Sens. 97.9% , spec. 94.2%, c-o 6 Cann. Sens. 63.8%, spec. 82.3%, c-o 3 Amph. Sens, 71.3%, spec. 77.1%, c-o 4
SISAP – Screening Instrument for Substance Abuse Potential	Coombs, Jarry, Santhipillai, Abrahamsohn & Alance, 1996	5 questions – especially opioids	Sensitivity 91% Specificity 77%
SMART-AID*	Brown & Rounds 1995 *	13 questions	Sensitivity 51% with a cut-off level of at least 2 positive responses, specificity 92%. <i>r</i> =105
TCUDS*	Peters et al., 2000	15 questions, takes 5 minutes for criminal justice clients.	Some psychometric evaluation
AAF – Addiction Assessment Form*	Chychula, 1984	Interview	No psychometric evaluation. Begins with a question on whether patients are taking medicine according to a doctor's prescription..
ADAD – Adolescent Drug Abuse Diagnosis	Friedman & Utada, 1989	Interview 150 questions, 9 areas of life	Test-retest reliability >.90 except for employment area
ASI – Addiction Severity Index*	McLellan et al., 1992	Interview	Test-retest reliability .83. Good inter-rater reliability.
AUDADIS-ADR*	Üstun et al., 1997	Interview	Test-retest reliability .44 (cannabis) to .73 (opiates and sedatives) for ICD-10 dependence. Similar figures for DSM-4 dependence. Less reliable (up to .60 for sedatives) for diagnoses of harmful use (ICD-10) and abuse (DSM-4). Agreement on lifetime ICD-10 dependence diagnoses between AUDADIS-ADR, CIDI & SCAN good for alcohol and opiates but poor for cannabis, sedative & cocaine dependence. Unsatisfactory agreement for harmful use and abuse diagnoses.

CASI – A Comprehensive Adolescent Severity Inventory	Meyers, McLellan, Jaeger & Pettinati, 1995	Interview for adolescents, 45-90 min. Alcohol/drug module measuring use severity, progression of use, use patterns, methods to obtain, consequences, treatment history, alcohol/drug needs and denial.	Concordance of 90% or more between clinical charts and CASI-A drug/alcohol use module. Internal consistency reliability .78 for use severity, .58 for drug/alcohol procurement and .80 for drug/alcohol consequences. Adolescents showed high satisfaction and enjoyment from participating in interviews.
CIDI*	Üstun et al., 1997	Interview.	Test-retest reliability .48 (sedatives) to .80 (opiates) for ICD-10 dependence. Somewhat less reliable for harmful use (up to .72 for hallucinogens and .62 for amphetamines). No information on DSM-4 diagnoses. Agreement on lifetime ICD-10 dependence diagnoses between CIDI, AUDADIS-ADR & SCAN, see entry for AUDADIS-ADR.
CIDI-SAM (CIDI-Substance Abuse Module) *	Robins, Cottler & Babor, 1986	Interview	Drug questions have a reliability of between .84 and .94. Questions on marijuana showed reliability coefficients between .08 & 1.00. These have been revised and are presently being tested.
M-CIDI Substance Use Sections	Lachner et al., 1988	Interview with substance-specific questions on negative consequences, onset & recency of use and expanded diagnostic coverage. Covers alcohol, drugs and nicotine.	Test-retest reliability .55 for drug abuse.
CIDI-short form*	Kessler, Andrews, Mroczek, Ustun & Wittchen, 2000	Interview	Unavailable for drug questions.
CUAD – Chemical Use, Abuse, and Dependence Scale	Appleby, Dyson, Altman, McGovern & Luchins, 1996	Screening of patients w/severe mental illness, semi-structured interview that takes 20 minutes.	Sensitivity for the past 30 days 87%, Specificity 88% for alcohol, 73% for drugs n=100, psychiatric patients Lower coefficients for lifetime diagnoses
PRISM – Psychiatric Research Interview for Substance and Mental Disorders	Hasin et al., 1996	Interview	According to Dennis (1998), PRISM is specifically intended for use by doctors in primary care settings.
SCAN	WHO	Interview	Test-retest reliability .63 (amphetamines) to .93 (opiates) for ICD-10 dependence. Less reliable for abuse according to DSM-4 (up to .63 for amphetamines) and harmful use according to ICD-10 (up to .44 for hallucinogens and .40 for cannabis). Agreement on lifetime ICD-10 dependence diagnoses between CIDI, AUDADIS-ADR & SCAN, see entry for AUDADIS-ADR.
Substance Dependence Severity Scale (SDSS) *	Miele, Carpenter, Cockerham, Trautman, Blaine & Hasin, 2000	Interview	Test-retest reliability good to excellent for cocaine, heroin, and sedatives for various time periods and fair to good for cannabis. Internal consistency and joint rating reliabilities were comparable to test-retest findings. Preliminary findings indicate potential for good concurrent validity.

Note: A reference list for the studies cited in Table 2 is available upon request.

and drug use questionnaire and *Beliefs about dependence-inducing substances* (Rönberg, 1995) were used, in addition to the Swedish language *Alcohol Use Inventory-Revised-2* (AVI-R-2) (Bergman, Hammarberg, Berglund, Wennberg, & Hubicka, 2001).

Unique items from all available instruments were pooled and then classified in eleven categories. Then, based on diagnostic criteria, parallelism with AUDIT items and RTC content, the item pool was reduced from 201 to 77 items and re-classified into five categories. In the next step, three one-page test versions of the DUDIT were designed and tested in “think-aloud” procedures with 21 respondents from populations with known drug use. This phase resulted in two instruments, the DUDIT with 11 items and a separate new instrument, the DUDIT-E, including items on frequency of drug use, reasons for using drugs and readiness for change/attitudes towards treatment. Figure 1 shows the process of reducing the item pool to the three test versions.

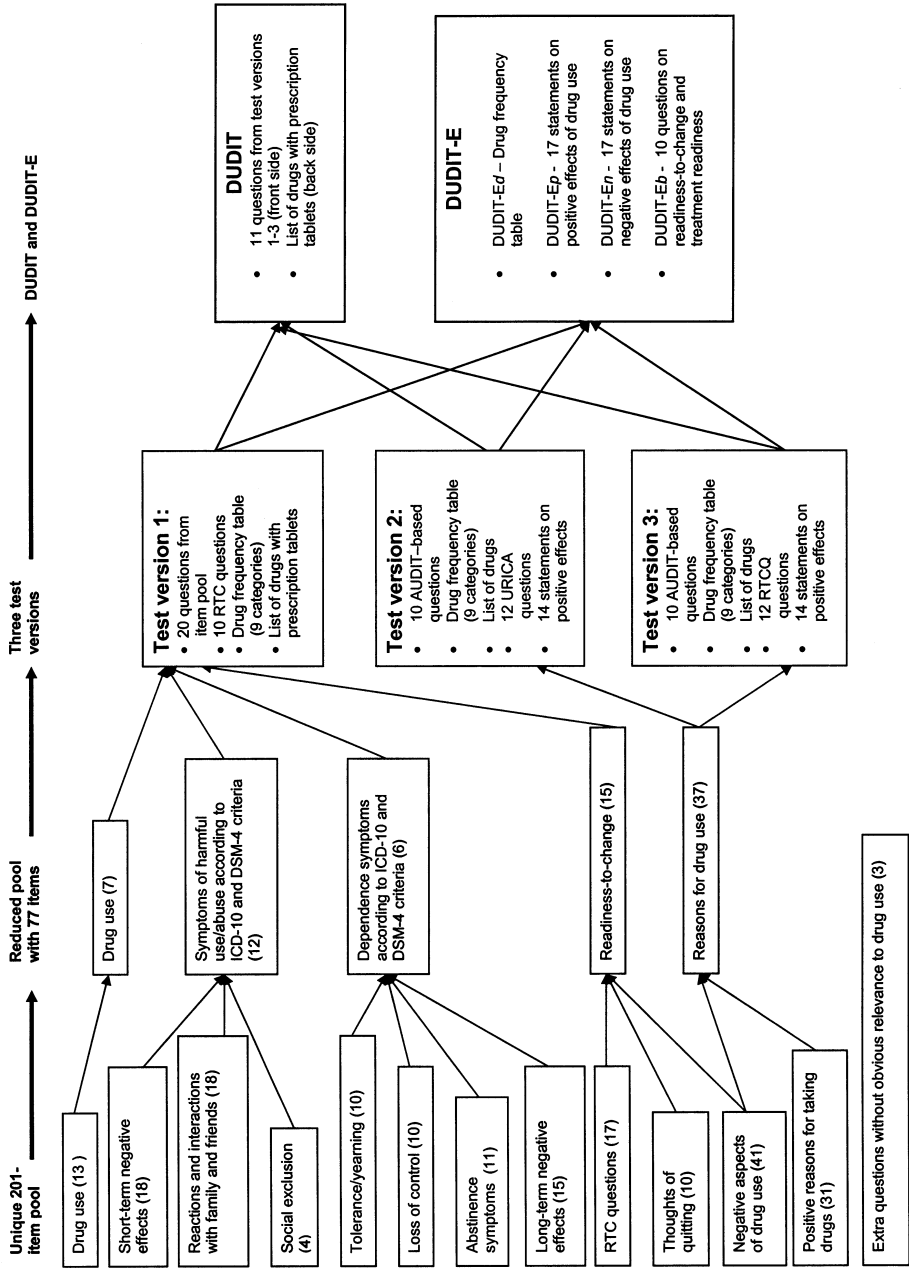
In the second phase, the DUDIT and DUDIT-E were tested for reliability and validity using SCAN diagnostic interviews with drug-using respondents. In the third and final phase, the DUDIT was tested in the general population in order to establish reference values, reliability coefficients and factor structure. The development of the DUDIT and of the DUDIT-E, briefly outlined above, will be described in detail in two separate forthcoming articles. Study I describes the psychometric evaluation of the DUDIT data from phases two and three, i.e., testing in a sample of drug users and in a randomly selected population sample.

Major findings

Testing in a sample of 160 respondents with known drug use from among inpatients at an addiction treatment center, prison inmates and probation clients showed that the DUDIT had excellent sensitivity (90%) and good specificity (88%/78%) in screening for diagnosed dependence on one or more drugs (according to the ICD-10 and DSM-4 diagnostic systems). The cut-off score was 25 of a possible maximum score of 44 on the DUDIT. Reliability analysis yielded an acceptable Cronbach alpha value of 0.80 for the total DUDIT score.

Testing in the population sample yielded a 75% response rate, slightly higher than the 72.5% response rate for alcohol screening in the general Swedish population with the AUDIT. Among the respondents in the population sample, 3.1% had a positive DUDIT score of one point or more. The proportion of drug users in the sample increased after each of two reminder letters, suggesting that non-respondents might have a higher level of drug use than respondents. Prevalence of drug use was higher among respondents aged between 16 and 25 and among men. T-score cal-

Figure 1 Item reduction process leading to design of the Drug Use Disorders Identification Test (DUDIT) and its adjunct instrument, the DUDIT-E



culations showed that, at two standard deviations from the mean, scores of 6 points for men and 2 for women might screen for drug-related problems. In the absence of testing in lower prevalence samples, these cut-off scores are suggested as preliminary indicators of drug-related problems for clinical and research purposes, although the cut-off scores can be varied according to specific clinical or research contexts.

Factor analysis in the drug user sample showed three factors explaining a total of 58% of the variance: *dependence* (37.8%; items 1, 4, 5, 6, 7, 8), *drug-related problems* (12%; items 2, 10, 11) and *intensity of use* (11.2%; items 3 and 9). The factor structure in the drug user sample differed from that in the population sample. The latter yielded two factors explaining 73.8% of the variance: *dependence* (58.9%; items 2, 4, 5, 6, 7, 8) and *drug-related problems* (14.9%; items 1, 3, 9, 10, 11). The factor analyses in both samples were performed using principle component extraction with oblique rotation.³⁵

Discussion

A number of screening instruments have recently been developed to respond to the need for quick information on who uses what drugs among individuals who come into contact with primary care, psychiatry, addiction treatment and the criminal justice system (Ali et al., 2002; Hoffman, Hunt, Rhodes, & Riley, 2003; Wish, Petronis, & Yacoubian, 2002). Until now, researchers as well as clinicians and staff have relied on the variety of instruments shown in Table 2. One of these instruments, the Drug Abuse Screening Test (DAST) (Skinner, 1982) has attained widespread use with its 10 questions (reduced from an original 32). The DAST has shown good psychometric properties in terms of reliability and validity (Gavin, Ross, & Skinner, 1989; Staley & el-Guebaly, 1990). It has a reliability of .92 and a unidimensional factor structure and does not specifically target any particular group. However, the responses are dichotomous yes/no options, yielding a low total score. The limitation of dichotomous responses is shared by the self-report UNCOPE that targets arrestees (Hoffman et al., 2003), by the ASSIST interview schedule that targets primary care patients (Ali et al., 2002) and by the two CADS interview schedules that focus on screening for specific drug dependence - heroin and cocaine - among arrestees (Wish et al., 2002).

The unique contribution of the DUDIT is twofold: the response scale is a 5-point spectrum indicating the frequency of occurrence of each item, and its user-friendly layout parallels the AUDIT developed by WHO (Babor et al., 2001). If the DUDIT is used in combination with the AUDIT and the currently routine urine analysis for screening of drug-related problems among all offenders, the result can potentially facilitate to a considerable degree the allocation of appropriate resources for further

assessment and diagnosis of drug users, in addition to offering efficient documentation of self-reported drug use among offenders. One caveat is that social desirability factors or fear of sanctions may cause under-reporting of drug use (Richards & Pai, 2003); however, offenders are already identified as members of a problem group after sentencing and they may therefore be more likely to report drug use accurately (at least drug use outside the prison) since no particular reprisal can follow. One additional limitation is that the DUDIT requires reading and writing skills that may be beyond the capacity of some offenders. The DUDIT can, however, be used as an interview schedule with such individuals as necessary.

An observation on the value of a collaborative assessment process for sexual offenders applies equally to drug users: “a well-conducted assessment can in itself lead a client to start thinking about change or to gain insight into problems not previously recognized” (Ward & Mann, in press). What is important is that the clinician or prison officer who conducts the assessment sees the client as a partner in the process and, building on a working alliance that should be established during an assessment process within the “good lives” model, looks at the nature of the obstacles experienced by the client in working towards appropriate solutions. As Ward & Mann (in press) point out, it is crucial to maintain respect for “the fundamental autonomy and dignity” of the client, even though his behavior has harmed others.

The ASI/MAPS assessment scheme initiated by the Swedish Prison and Probation Administration (Krantz et al., 2000) is in line with this thinking, although the focus of ASI/MAPS is problem-oriented rather than strength-oriented. The DUDIT and its adjunct, the DUDIT-E, comprise a screening package that could be part of an intake routine preceding the more time-consuming ASI/MAPS assessment. A “good lives” conception could follow upon the ASI/MAPS procedure or be worked out in parallel with it. This view of the assessment procedure is an ideal which is far from being implemented within prison services in Sweden and elsewhere. The present focus as regards drug users following initial intake is how to quickly assess the drug use (e.g., using the DUDIT), and then, what to do.

Once a strong criminogenic need such as drug use is identified in an imprisoned offender, the question is how to use the prison term to minimize the offender’s experience of an acute need to satisfy his or her craving for drugs *after* prison release. From my personal experience as a prison psychologist and from the interviews carried out with auricular acupuncture participants in Study II, it seems that offenders are often able to set aside their need for drugs during the prison term – at least after acute and short-term abstinence symptoms have subsided - only to find it “re-activated” in undiminished strength upon release. The challenge for prison staff is to find ways of changing offenders’ attitudes and behaviors so that they acquire

the motivation and tools to actually make non-criminal choices upon release from prison. Study II addresses one aspect of this problem on a physical level of need, by exploring how auricular acupuncture can be used as a non-verbal treatment offered to drug-using offenders in prison.

Study II

Can we offer any low-threshold treatment to drug users in prison?

Rationale

Once sentenced to prison, most drug users find themselves with diminished access to their drugs of choice. As a result of this enforced abstinence, they often experience various degrees of physical and psychological suffering (e.g., Alling, 1992; Haney, Ward, Comer, Foltin, & Fischman, 1999; Lowinson, Ruiz, Millman, & Langrod, 1997). This can be exacerbated by the generally lower levels of health for offenders in prison and drug users, compared to the population as a whole (Fazel & Danesh, 2002; Fazel, Hope, O'Donnell, Piper, & Jacoby, 2001; Fridell, Cesarec, Johansson, & Thorsen, 2002; A. Nilsson, 2002). Offenders experiencing distress turn to the prison health service for alleviation of acute discomfort and are often treated with sedatives. The sleep disorders reported by many offenders are treated with hypnotic medications. Even when the acute symptoms of abstinence have subsided, craving sensations can mean that inmates are preoccupied with thoughts of their drugs of choice and this may lead them to seek out and obtain drugs within the prison walls. The situation of imprisonment itself can also, of course, lead to considerable distress expressed in anxiety and depression. Also, inmates who participate in programs designed to address their criminogenic needs undergo, in the best of cases, a process of change that in itself can be anxiety-producing. Generally speaking, prison health resources are limited and only a small percentage of inmates are given fully adequate medical and psychosocial care from a holistic perspective. The large majority of inmates relieve their distress in their habitual, criminogenically oriented ways.

Finding an easily administered, effective, inexpensive way of increasing physical and psychological well-being for as many inmates as possible should therefore be a priority for prison administrators and health services. Study II reviews the literature describing the effects of auricular acupuncture in different settings, and explores whether ear acupuncture according to the NADA-Acudetox protocol (M. Smith, 1979) could offer relief from physical and psychological symptoms of ill-health for

male and female prison inmates with a history of drug use. The primary focus of Study II was to investigate to what degree auricular acupuncture could serve as a viable group treatment alternative for offenders in prison, as regards interest, retention and effects. The secondary focus was to compare the five points in the NADA-Acudetox protocol to five non-specific points on the helix of the ear in a randomized, controlled trial. The third focus was to collect qualitative data on the study participants' experience of the treatments, in particular negative side-effects.

Method

Over a period of one and a half years, auricular acupuncture was offered according to one of two protocols, the *NADA-Acudetox* or the non-specific *helix*, to all inmates at two prisons, one for men and one for women. The acupuncture treatments were given in four-week cycles of 14 treatment sessions. Eleven such cycles were completed over the study period. The acupuncture sessions were held in a group setting and lasted 40-45 minutes.

Baseline and outcome data were collected from all interested participants about subjective experiences of worry, muscle tension, drug craving, physical and psychological well-being, and self-reported psychiatric symptoms. Urine test results were also collected from participants in the men's prison. In addition, interviews yielded information on prior experience of acupuncture, expectations from the treatment, smoking and medication habits, and plans for the future (selected topics; unpublished data). Participants who remained in treatment for at least one week also filled in a treatment credibility questionnaire. The study treatment providers (acupuncturists) documented participation in the study on a treatment session grid.³⁶

Major findings

The most prominent finding of this study is that auricular acupuncture as a group treatment appeals to prison inmates and has no negative side effects besides transitory local pain. Approximately 75% of the participants remained in treatment for over one week, and over 50% received between 10 and a maximum of 14 treatments. The treatment was offered to all inmates at the prison with no exclusion criteria except for psychotic states and pregnancy. The proportion of inmates electing to participate was not documented but can be estimated at approximately 14% to 27% based on the size of the study groups (6 to 12 participants for both treatments combined) and the number of available prison beds (a maximum of 44; during the study between 85% and 100% of the beds were occupied).

Analysis of the pre- and post-test results for the combined NADA-Acudetox and the helix groups showed significantly improved physical and psychological well-be-

ing for all participants receiving over ten treatments. One difference between the NADA-Acudetox and helix protocols was noted: participants' confidence in the NADA protocol increased over time whereas their confidence in the helix protocol declined. Also, interview data showed that sleep quality improved for three-quarters of the participants who received 10 or more NADA treatments, and for half of the participants who received 10 or more helix treatments. In contrast, treatment retention was better for the helix group, compared to the NADA group.

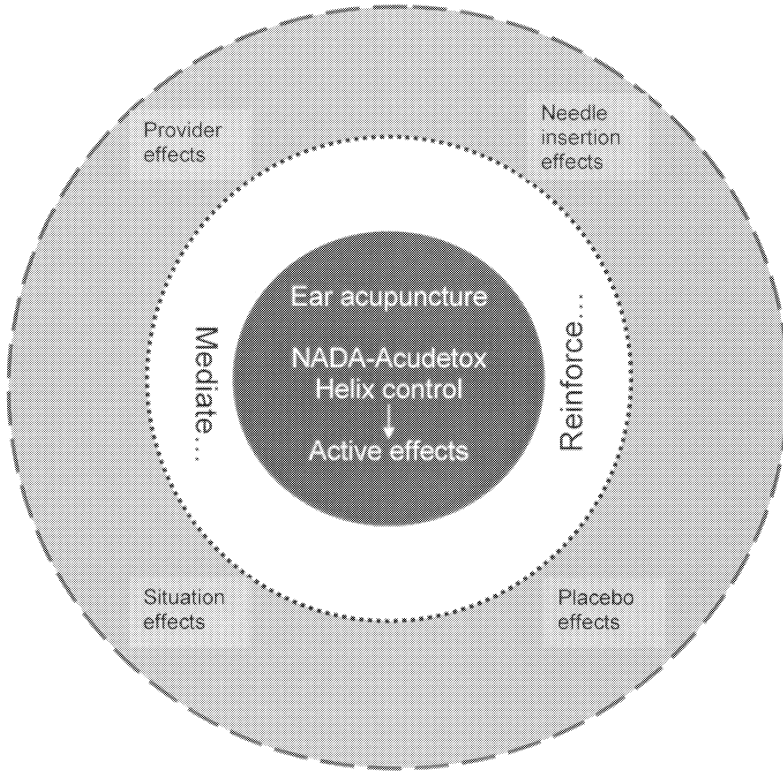
Discussion

Study II showed that auricular acupuncture in fact could be offered to inmates in a group setting with positive results. However, the results with regard to point specificity are equivocal and suggest that perhaps (a) there may not be much difference between the two protocols, or (b) the outcome measures were inappropriate for measuring the actual differences, or (c) longer term treatment is required in order to show a measurable difference between the two protocols. While this study does *not* demonstrate the *specific* effect of ear acupuncture on physical and psychological well-being, muscle tension, drug craving, anxiety and a variety of psychiatric symptoms, it does demonstrate that *something* in what was offered increased the offenders' sense of well-being in several dimensions, even to the point of eliminating some symptoms that apparently have nothing to do with drug problems, such as poor sleep or amenorrhea (Berman, 1999).

One possible explanation for these effects - one that does not exclude the possibility of active acupuncture effects - is that so-called *non-specific factors*, or *moderating variables*, have contributed to a healing process in the study subjects (Margolin, Avants, & Holford, 2002). Such non-specific factors could include the acupuncturist-subject relationship, the perception of acupuncture as possessing special healing powers, the group context, which offered a sense of safety and possibly hope, and the ritual character of the needle insertion and quiet sitting for 45 minutes followed by needle removal. Similar factors are in play in a variety of psychotherapeutic approaches but especially clearly in, for example, psychodrama (Kellerman, 1992). Figure 2 summarizes the interplay between possible active acupuncture effects and non-specific factors.

Once the study was over, the auricular acupuncture program was terminated in both prisons, except for occasional individual treatments in the men's prison and group treatments in the women's prison for inmates participating in the Reasoning & Rehabilitation program at that prison. However, following a pre-publication report (Berman, 1999), KVS issued a directive in July 1999 approving the use of auricular acupuncture according to the NADA-Acudetox protocol in all Swedish

Figure 2 Possible interaction between ear acupuncture and non-specific factors, showing mediation of treatment provider and situational effects as well as reinforcement of needle insertion and placebo effects.



prisons, as an adjunct to regular psychosocial programming. Unfortunately, no known auricular acupuncture programs within the prison service were established as a result of this directive.

The sustainability of auricular acupuncture programs depends on several organizational factors, among them support from the organization's leadership and general staff, adequate staff for provision of treatments at regular hours several times a week, appropriate facilities for receiving varying numbers of clients, adequate funding for needles and other accessories, and integration with counseling, education and mutual help groups (Acudetox Information Center, 2003; Brumbaugh, 1994). The initiative and financing for Study II came from the Stockholm regional office of the National Prison and Probation Administration in Sweden (KVS) and was supported by the Härnösand regional KVS office. Treatment providers came from within the prisons (two nurses and one prison officer) but the project was run externally and

imposed, so to speak, on existing staff at the prisons. Resources were provided for replacement of the treatment providers in their ordinary tasks during the time they worked in the study.

Only some of the conditions generally viewed as necessary to the establishment of sustainable acupuncture programs were thus fulfilled, namely support from the organizations' leadership, adequate staff for provision of treatments at regular hours, appropriate facilities and adequate funding. No counseling, education or therapeutic group work was offered to study participants beyond usual prison activities. Participants were generally occupied either in studies or work. A very small number were receiving psychological counseling while the study was under way and attendance was not documented (a consultant psychologist was available at the men's prison and a psychologist was employed half-time at the women's prison during the study).

In sum, Study II suggests that auricular acupuncture treatment in the prison setting has potential viability for both men and women, but does not provide any evidence for the superiority of any specific point protocol. Since auricular acupuncture as administered in the treatment program was terminated in the prisons where the study was carried out, the conditions for a sustainable program were clearly not met. One important issue not addressed in the study was how to engage staff on all levels in the establishment of such a treatment program, a factor crucial to providing the treatment in a reliable, continuous, stable context (Voyles, 2001).

The treatment context may be crucial for achieving optimal effects using auricular acupuncture; viewed from the point of view of traditional Chinese medicine, "it may be counterproductive to attempt to rectify disharmony within patients amid a disharmonious treatment context; this may be especially true among addicted patients whose lives are usually pervasively chaotic" (Margolin, 2003).³⁷ In addition, the fact that there was no structured verbal treatment focusing on general cognitive skills or specific drug abstinence coping strategies must be seen as a shortcoming. Margolin's (2003) analysis of abstinence figures from four studies of auricular acupuncture for cocaine addicts shows higher abstinence rates in the 8th week of treatment for participants receiving acupuncture *and* coping skills training (CST), compared to CST only, acupuncture only and methadone maintenance only (57%, 40%, 15% and 10%, respectively). These studies did not include testing of participants' motivation for treatment, which may have differed considerably. Factors important to consider in future studies of acupuncture in conjunction with psychosocial treatment would be personal treatment preference (verbal vs. nonverbal), level of cognitive impairment (a possible obstacle to motivation and absorption of psychosocial treatment contents), level of social anxiety (which may reduce motivation for more intensive verbal psychosocial treatments), and coping style ('avoidant' coping style would clash

with the ‘approach’ coping style that is encouraged in cognitively oriented psychosocial treatments) (Margolin, 2003).

There is now considerable evidence (see the meta-analyses described in Chapter 1) that cognitive-behavioral treatment programs that teach problem solving and coping skills do have a positive effect on the likelihood that participants will abstain from recidivating. This applies to offenders in general, and recent evidence indicates that this may also apply to offenders who use drugs (Lipton et al., 2002a; Pearson & Lipton, 1999). The isolated finding cited above that coping-skills treatment *together* with acupuncture yielded higher abstinence rates among cocaine addicts in a community setting suggests that acupuncture may be shown to have a positive adjunctive role in future prison research on treatments of drug users. Recent studies suggest that acupuncture in fact improves treatment program retention among alcohol- and drug-addicted chronic repeat offenders in an outpatient setting (Russell, Sharp, & Gilbertson, 2000; Shwartz, Saitz, Mulvey, & Brannigan, 1999). The addition of acupuncture treatments to prison treatment program regimes should be studied in future research on treatment compliance and other, more long-term effects.

For the time being, it is urgent to evaluate just what kinds of effects cognitive-behavioral programs in prisons can produce for their participants. While meta-analyses show a global positive effect for such programs, individual controlled studies focusing on both short- and long-term effects are scarce. Study III explored short- and long-term outcomes for a psycho-educational treatment program teaching cognitive and coping skills to Swedish prison inmates.

Study III

Do prison inmates (60% drug users) change following structured psychosocial treatment?

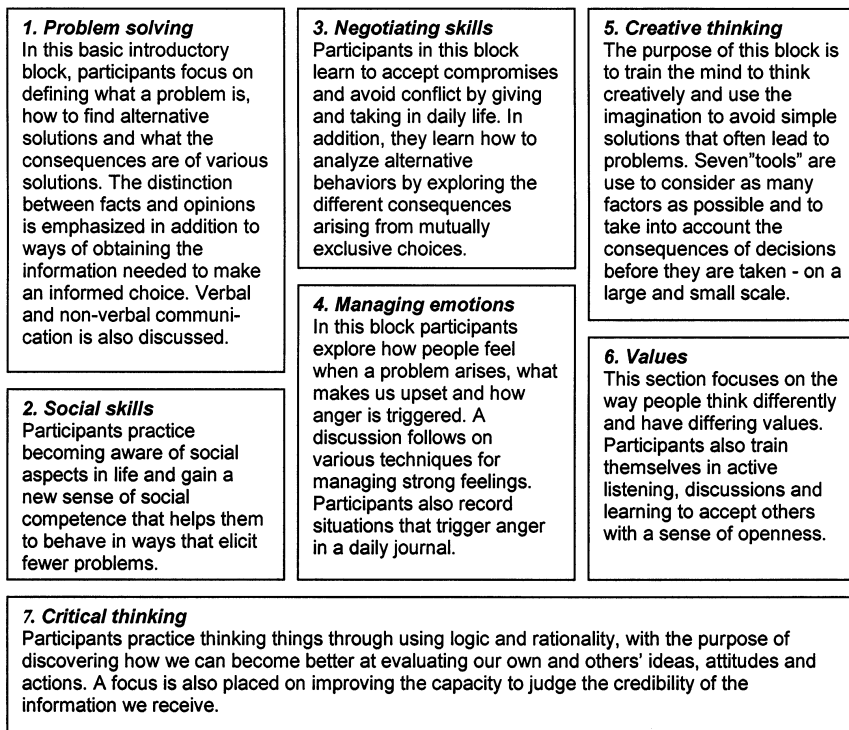
Rationale

The treatment program known as “Reasoning & Rehabilitation” (R&R), and in Sweden as “Cognitive Skills,” is based on a well-researched cognitive-behavioral theoretical foundation (Robinson & Porporino, 2001; Ross, Fabiano, & Ross, 1986/2000; Ross & Ross, 1995). The program was introduced in Canada in the mid 1980s and is now part of a group of coping skills programs offered to inmates in Canadian prisons. The program has won international interest among correctional administrations and has been established in the UK, some US states, New Zealand, Spain and Latin America. It was introduced into Scandinavian correctional institu-

tions in the 1990s and has most recently been introduced in the Netherlands. The program consists of seven modules that are offered to prisoners and probationers by trained ordinary staff according to a highly structured manual in 36 two-hour sessions over a three-month period. Figure 3 shows the seven modules.

Support for the effectiveness of the program from the start came from theory and research in non-inmate populations. Its introduction in criminal justice settings has been followed by a number of evaluations with varying scientific rigor. Most of these studies focused on recidivism as an outcome measure. Intermediate targets such as actual improvement in cognitive or social skills have generally not been reported until very recently (Blud, Travers, Nugent, & Thornton, 2003; Wilson, Attrill, & Nugent, 2003). Study III aimed to illuminate possible program effects prior to eventual recidivism and, also, specifically regarding recidivism outcomes. It evaluated

Figure 3 Summary of the contents of the Reasoning & Rehabilitation (R&R) program (Ross, Fabiano & Ross, 1986/2000)



the R&R program as delivered to male Swedish prisoners between 1995 and 2000 in terms of short-term changes in psychosocial attitudes and long-term recidivism outcomes.³⁸

Method

Short-term program effects were measured by comparison of participants' pre-/post-treatment mean scores on three questionnaires: the Sense of Coherence scale (SOC, Antonovsky, 1987), the Eysenck Impulsivity, Venturesomeness and Empathy Scale (IVE, Eysenck, Pearson, Easting, & Allsopp, 1985), and the Criminal Sentiments Scale (CSS, Reckless, 1967; Rettinger, 1994), all originally selected for outcome measurement by KVS. The questionnaires were administered once prior to program start and a second time following its end to program completers. The three scales explore personal traits or attitudes assumed to be affected by program participation. Data on specific acquisition of the cognitive and social skills taught in the program were not collected during program delivery. Study III also included a recidivism analysis, comparing program participants to a control group selected through a meticulous individual matching procedure according to theoretically and empirically well-founded criteria (see Table 1 in Study III).

Major findings

Generally speaking, the results of Study III show that the R&R program has positive short-term effects regarding the personal traits and attitudes that were measured. Group mean scores on all dimensions except *empathy* changed in a pro-social direction following participation in the complete program.

The degree to which these program effects were translated directly into behavioral abstention from crime was somewhat less clear (see the discussion below about the relationship between short- and long-term changes), but survival analysis identified a 25% lower risk for reconviction among program completers followed up to 36 months in comparison with controls matched to both completers and dropouts. Program completers maintained a 16% lower risk for reconviction compared to specifically matched completer controls, although this figure is not statistically significant (95% CI .66-1.1). Total reconviction figures with a follow-up time of up to 36 months were also significantly lower for program completers (48%) compared to controls (60%), a difference of 12 percentage points. Comparing program completers (48%) with specifically matched controls (55%) yielded a difference of 7 percentage points ($\chi^2=2.99, p<.10$).³⁹

In view of the importance of the treatment climate in the prison for optimal program delivery (Friendship, Falshaw, & Beech, 2003), data are included here regard-

ing results of a separate study on R&R program facilitators and ordinary staff members working with R&R participants (Berman, 2002). These two groups evidenced general appreciation of the program and its potential for helping participants change their behavior, but pointed out the following shortcomings:

- lack of time for individual counseling sessions with participants
- lack of adequate professional supervision
- ordinary staff and significant others' ignorance of program contents
- lack of reinforcement in the prison environment for the participants' new skills
- lack of long-term follow-up and reinforcement of program skills, within the prison and after release.

Further important complementary data came from interviews with 18 former program participants (9 men from the prison context, 7 from the probation context and 2 women), reported in Berman (2002). The interviews showed that inmates perceived the R&R program as unquestionably valuable in enhancing the quality of their prison stay, regardless of whether or not it contributed to their capacity to abstain from crime. In the in-depth interviews, the participants indicated that they had come to see program facilitators as individual human beings rather than uniformed prison guards. In addition, over half of the interviewees found the program at least somewhat useful for acquiring problem-solving and/or social skills.

Discussion

The pro-social short-term changes among R&R participants are encouraging. However, unpublished analyses exploring possible relationships between the short-term changes and recidivism did not show any significant associations except for criminal identification and impulsivity.

Logistic regression analyses explored the predictive weight of pre- and post-program test scores among program completers regarding reconviction (unpublished data), showing a significant predictive power for pre-program criminal identification ($p < .01$) as well as post-program impulsivity ($p < .05$) and criminal identification ($p < .01$). These findings agree with an earlier finding in a study of Canadian federal sex and violence offenders (Mills & Kroner, 1997), where a correlation was indicated between criminal identification at prison intake and number of prior convictions, a variable that generally strongly predicts reconviction (Gendreau et al., 1996). While attitude changes on the CSS might thus conceivably affect later offending behavior, there seems to be conflicting evidence for this. Namely, Mills & Kroner

(1997) found that the CSS did *not* predict *recidivism* among violent and sexual offenders despite the correlation between criminal identification and prior convictions. Earlier research have shown that CSS predicts recidivism rates for probationers and prisoners with sentences of less than two years (Rettinger, 1994), but it is unclear whether these findings refer to the dimensions of criminal identification or tolerance for crime, or to attitudes towards the law, courts and police. The predictive relationship between single pre- and post-program test scores and reconviction in Study III seems in any case too weak to draw firm conclusions, and no other published studies concerning testing of R&R offenders report any such correlation between test results and reconviction (e.g., Blud et al., 2003).

Regarding the IVE scale, it may be that only the impulsivity dimension of this scale might be measuring an attribute demonstrably related to criminal behavior. Neurobiologically, impulsivity has been found to be strongly related to reduced serotonin function and impaired executive brain function among inmates in maximum security psychiatric hospitals (Dolan, Anderson, & Deakin, 2001; Dolan, Deakin, Roberts, & Anderson, 2002). It has also been suggested that serotonin metabolism is abnormal among forensic patients diagnosed with personality disorders accompanied by violent behavior and impulsivity (Virkkunen & Linnoila, 1993). There is evidence indicating that impulsivity could be genetically determined and even among healthy subjects (blood donors), impulsivity exemplified by spur-of-the-moment decisions and acting without prior planning has been correlated with low monoamine oxidase (MAO) enzyme levels, which are associated with low serotonin metabolism (Schalling, 1993). Genetic and psychobiological determination of impulsivity suggests that reducing this trait may constitute a particularly difficult challenge. Interestingly, the test results of Study III suggest that impulsivity has been affected, at least in the short term. This offers hope that in spite of at least partial psychobiological determination, impulsivity can be reduced through cognitive-behaviorally based interventions.⁴⁰

Other investigators recommend examining the relationship between clinically significant change (i.e., change that shows that program participants have improved to a functional level within normal population ranges) and reconviction (Friendship et al., 2003). The short-term changes observed among the R&R program participants in Study III did not appear to bring the participants to within such a functional range, according to the comparative psychometric data obtained in Study III.⁴¹ In view of the explicit purpose of teaching specific cognitive and social skills in the R&R program, future evaluations should specifically measure the acquisition of these skills and attempt to link the results to actual incidences of later desistance from offending. An example of a test that could measure such skill acquisition is the PICTS (Walters, 1995, 2001), which has been used in some R&R evaluation studies

outside Sweden (Blud et al., 2003; Suomela, 2000; Wilson et al., 2003).

The research findings unearthed by meta-analyses and also individual outcome and evaluation studies carried out over the past two decades in the spirit of finding out “what works” for whom and in what setting, indicate that small but positive effects can be achieved when program administrators and facilitators follow the risk, need, responsivity and professional discretion principles (Ward, 2002b). Study III indicates positive effects, even though it is unclear to what extent program administrators and facilitators followed the risk and need principles. Program facilitators in Study III recruited participants based on a cognitive assessment interview and selected group participants after judging their level of cognitive skills, learning ability, educational background and estimated motivation and interest. Program facilitators further considered whether program candidates they would be serving enough time to complete the program and would “fit in” with the potential program group. Potential participants were excluded if they showed evidence of psychopathic qualities and if the risk for criminal recidivism was “too high.” Questionnaire results from program facilitators and ordinary staff members indicated, however, that staff members lacked the necessary tools, training and support to adequately assess risk and need in potential participants (Berman, 2002).

As for responsivity, the R&R program is designed for maximum responsivity to incarcerated offenders, but it is not clear to what degree the program structure can be adapted to accommodate special needs among participants. Regarding fulfillment of the principle of professional discretion in Study III (Andrews & Bonta, 1998), program facilitators had limited access to professional supervision which might have helped them make less intuitive judgments. Furthermore, while the prison officers selected to train as program facilitators were generally considered to possess good relationship-building skills, they did not have the clinical and research training necessary to make the discretionary judgments that might be necessary for optimal treatment of offenders with a more complicated history. It is thus unclear to what extent administrators of the R&R program described in Study III were able to follow the four principles for effective treatment. Evidently, the program has done some good and if organizational conditions around the program were improved, recidivism figures might drop in a more significant way following program participation. However, it is unlikely that substantial gains will be made unless broader needs are recognized and addressed (Ward, 2002b). This will be more fully discussed in Chapter 4.

Drug use among program participants was not specifically addressed in Study III. Accurate data on drug use among participants were not available. However, five of the nine prison interviewees described in Berman (2002) reported having used drugs (56%), a figure that is very close to the 60% reported prevalence of drug use among

prisoners (Krantz et al., 2003). The R&R program is recommended by its initiators for use with drug users. The Canadian Correctional Services use the R&R program as a core program offered to offenders prior to participation in offense-specific programs. The supposition that the R&R program would be beneficial for offenders with drug problems is certainly not weakened by Study III. On the contrary, if close to 60% of the participants are drug users, the results seem to indicate that the program is at least somewhat beneficial for this population. Roberts (1995) suggests that programs on reasoning and cognition should be followed by offense-specific programs, followed in turn by focus on other criminogenic needs, such as drug use, anger management, or family therapy. In that case, Study III gives some support to prior research evidence that the R&R program can be one component contributing to future behavior change among offenders – both those who use drugs and those who do not - who eventually might decide to stop their criminal behavior.

Finally, the methodological caveats mentioned in Study III (see pp.186-187 in the Study) should be emphasized. The study was quasi-experimental and without the safeguard of randomization to ensure equality between the experimental and control groups, it is impossible to say that the findings of reduced recidivism resulted explicitly from the R&R program. Two major factors detract from the strength of the results: the recruitment selection bias as well as the lack of measurement of unspecified factors such as motivation for change and prior treatment experience. Seen together with the meta-analytic findings described in Chapter 1, however, the results of Study III nicely agree with the 10-15 percentage points differentiating in recidivism figures for program participants compared to controls. Only future well-designed research will contribute to elucidating the mechanisms behind these reduced recidivism figures.

Generally, speaking, offering program participants continued treatment that addresses their criminogenic needs, employment, housing, and family relations issues is likely to reduce recidivism at least to some extent for at least some offenders. However, a group whose problems are not sufficiently addressed by programs such as R&R is that of offenders with dual diagnoses, i.e., both drug use and psychiatric problems. Such offenders present greater challenges to prison staff, since they are unlikely to benefit from an approach that does not specifically address substance abuse and mental health issues. Study IV explores some of the needs of this special group of offenders and possible approaches to treatment.

Study IV

How do we help inmates with special needs?

Rationale

Diagnoses of psychotic illnesses and major depression are about two to four times as common among prisoners as among the general population in western countries, and diagnosed anti-social personality disorder (ASPD) is about 10 times as common. Psychotic illnesses occur among about 4% of male and female prisoners, major depression occurs among 10% of male prisoners and 12% of female prisoners, and ASPD occurs among 47% of male prisoners and 21% of women, with 65% of male prisoners and 42% of female prisoners showing evidence of some kind of personality disorder, including ASPD (Fazel & Danesh, 2002). Estimates from the U.S. range between 3% and 26% of prisoners having *both* a diagnosable psychiatric disorder and a co-occurring substance abuse disorder (Springer et al., 2003). The prevalence of drug use disorders among prisoners with psychiatric diagnoses is, however, difficult to estimate; one explanation for this is that mental health professionals overlook substance abuse problems and that substance abuse professionals overlook psychiatric disorders. Among prisoners placed in a separate psychiatric unit for diagnostic or behavioral reasons, the prevalence of co-occurring substance abuse is most probably rather high, given the 60% prevalence of prior drug use among the general prison population.

Psychological health problems among Swedish prison inmates, defined as anxiety, depression and insomnia, are self-reported by 49%, compared to 8% of the general population (A. Nilsson, 2002). Findings from the U.S. Epidemiological Catchment Area study of 20,291 individuals indicated that co-morbidity of addictive problems and severe mental disorders was approximately 90% in the prison population, and that ASPD, schizophrenia, and bipolar disorders were particularly frequent (Regier et al., 1990), but the validity of the diagnostic data from this study has been questioned (Beeder & Millman, 1992). Among the highly selected inmates of prison support and psychiatric units who participated in Study IV, about 75% reported co-morbid drug use.

The co-occurrence of psychiatric disorders with drug use disorders (also a psychiatric diagnosis according to both the DSM-4 and ICD-10 diagnostic systems) is generally referred to as dual diagnosis. Treating individuals with dual diagnoses can safely be said to require attention to the particular pattern of dysfunction they show. For example, persons with personality disorders such as ASPD, borderline, or narcissistic disorders who also use drugs require a different approach than those who

suffer from mental illnesses such as depression, schizophrenia or eating disorders and simultaneously use drugs. Few outcome studies have been reported. However, anecdotal evidence has suggested that factors favorably affecting treatment outcome are “the presence of family support, higher levels of education, likability, and ability to relate to others” (Beeder & Millman, 1992). Springer (2003) summarized possible treatment paths as psychoeducational, pharmacotherapeutic, self-help, or integrated treatment. The effectiveness of each of these paths is unclear, and the few available outcome studies show conflicting results.

In view of the individualized patterns of symptoms that seem to occur in dually diagnosed persons, and in view of the challenges this group presents to treatment administrators, the question has arisen whether a simple non-verbal treatment might contribute to establishing a working alliance between dually diagnosed individuals and staff and improve ordinary treatment compliance and retention (Atwood, 1994; Gurevich, Duckworth, Imhof, & Katz, 1996; M. Smith, Atwood, & Turley, 1993; Taub, 1993).

Taub (1993) tested the use of acupuncture in a jail mental health unit, where 52% of dually diagnosed inmates volunteered to receive between 12 and 82 treatments over a period of five months in a group setting. He presents three case vignettes of inmates who evidenced dramatic improvements in such self-reported areas as drug cravings, insomnia, muddled thinking, anxiety and depression following 82, 42, and 25 respective treatments. One case vignette also illustrates the vulnerability of this client population by describing a fragile process of interwoven signs of recovery and setback in a 27-year old male inmate diagnosed with schizophrenia and using cocaine and alcohol. Smith et al. (1993) and Atwood (1994) report that 11 of 16 patients with serious mental illness (schizophrenia, major affective disorders and personality disorders) in a case management program accepted regular auricular acupuncture in a group setting for help in smoking cessation. Medication levels did not change, but the number of acute hospital admissions declined radically, from eight per year to a total of two over a period of about 18 months. Gurevich et al. (1996) compared 47 dually diagnosed inpatients with multiple drug use in a psychiatric hospital unit who received five acupuncture treatments or more, to 30 patients from the same unit who refused acupuncture or received four treatments or less. The treatment and control groups in this study may have differed significantly in a number of important variables, so that the positive results are inconclusive. Nonetheless, Gurevich et al. found that patients treated with acupuncture complied more often with their general treatment plan, accepted discharge recommendations to a greater extent, remained in follow-up treatment and stayed longer at the unit.

In view of the promising results suggested by these three prior studies (Atwood,

1994; Gurevich et al., 1996; Taub, 1993), Study IV was carried out to test whether inmates in Swedish prison psychiatric units would respond to auricular acupuncture treatment and whether outcomes could be measured in reduced cortisol and medication levels and increased physical and mental well-being.

Method

Two psychiatric units with rather different recruitment criteria were chosen for the study. One was typical of psychiatric units within the Swedish Prison and Probation Administration (KVS). Its inmates were prisoners whose behavior indicated that they could not adapt to ordinary prison life and they were placed in the unit subsequent to psychiatric diagnosis. The second unit was a psychiatric “support” unit which received inmates who were particularly prone to aggressive outbreaks. A third psychiatric unit was chosen for control at a high-security prison where standard recruitment criteria prevailed.

Auricular acupuncture was offered three times a week to inmates in both of the treatment units, over periods of nine and seven months, respectively. Cortisol stress hormone levels were measured every six weeks, and medication levels were obtained from routine medical charts. Perception of the psycho-social climate in the unit was measured using the Correctional Institutions Environmental Scale (CIES) (Krantz & Somander, 1995), and inmates receiving treatment for eight weeks or more filled in a qualitative assessment form that was designed on the basis of interview data from inmates in Study II who participated in continued treatment beyond the first 14 sessions. The control unit provided cortisol levels from two occasions, medication levels, and CIES results. Additional comparative data regarding medication levels were obtained from inmates at the psychiatric unit who did not receive acupuncture treatments.

Major findings

Study IV demonstrated that inmates in ordinary psychiatric units and in special psychiatric units for violence-prone individuals can accept and benefit from auricular acupuncture treatments. These findings agree with the findings reported for dually diagnosed jail inmates by Taub (1993), for mentally ill patients by Smith, Atwood & Turley (1993), Atwood (1994), and for dually diagnosed hospital inpatients by Gurevich et al. (1996). The study continued for nine and seven months, respectively. It was terminated at the psychiatric unit for budgetary reasons, and at the support unit for organizational reasons having nothing to do with the study.

Of the 22 inmates who participated in Study IV, 11 received acupuncture for over 8 weeks. These 11 inmates indicated improved inner harmony and calm and bet-

ter clarity over future plans. In comparison to a control group that did not receive acupuncture treatment, inmates who received 25 treatments or more were prescribed fewer psychopharmacological medications. No changes over time occurred in cortisol levels, although the support unit participants had higher cortisol levels than the psychiatric unit participants and the controls. Finally, inmates treated in the psychiatric unit increased their perception of autonomy in the unit over time.

Discussion

Study IV was unique in several respects: the participants belonged to a group that is known to be difficult to treat, the control group was relatively well-matched to the psychiatric treatment unit, and the outcome measures (cortisol, perception of the institutional environment, medication levels, simple qualitative assessment of long-term treatment, and interviews with participants and staff) have not been previously used in published studies on auricular acupuncture.

The findings suggest that dually diagnosed inmates who volunteer for auricular acupuncture treatment and receive 25 treatments or more experience positive psychological effects, as expressed in lower psychopharmacological medication levels and an improved subjective sense of inner calm. Obviously, the auricular acupuncture effects cannot be presumed to *cure* the study participants of their psychiatric symptoms or drug problems. Instead, the auricular acupuncture appears to *relieve* the participants' psychological distress. The acupuncturists at the support and psychiatric units, both experienced prison nurses, reported that participants communicated with them to a far greater extent than they had expected.

A few comments should be made regarding the measurement of cortisol levels in this study. Cortisol was measured in Study IV from an exploratory standpoint. Cortisol is a hormone which is secreted in higher levels in response to stress, although the correlation between cortisol activation and stress can vary according to factors such as gender, type of stress and individual differences (Sauro, Jorgensen, & Teal Pedlow, 2003). Interestingly, a cognitive-behavioral stress management intervention can reduce neuroendocrine activation to stress in healthy subjects (Gaab et al., 2003). Auricular acupuncture appears to be a treatment that generally reduces anxiety and stress (see Study II).

We might thus expect cortisol levels to decline over time for individuals treated with acupuncture. However, research findings among offenders with antisocial personality disorder and aggression suggest generally reduced baseline cortisol levels in these groups (Dolan et al., 2001; Fishbein, Dax, Lozovsky, & Jaffe, 1992; McBurnett, Lahey, Rathouz, & Loeber, 2000; Schalling, 1993; Virkkunen & Linnoila, 1993). Our findings showed no changes in cortisol over time, a result that may be

due to the very small samples in this study, or to initially lower cortisol levels that would make cortisol measurement too insensitive for detection of stress-reduction effects. A third possibility is that incarceration in a psychiatric prison unit is a generally anxiety- and stress-reducing situation for inmates with dual diagnoses, and that in this particular setting the acupuncture effects would not show in anxiety-reduction measures but perhaps in other areas (see the next paragraph). The finding of significantly higher cortisol levels among inmates in the support unit compared to the psychiatric units would seem rather perplexing in light of the generally lower cortisol levels among offenders. However, findings have also been reported showing higher cortisol levels among alcoholics with a history of violence compared to depressive alcoholics (Buydens-Branchey & Branchey, 1992). While the diagnostic information available regarding Study IV participants was incomplete, it was clear that support unit inmates had problems of aggression, whereas psychiatric unit inmate tended to suffer from anxiety- and depression-related disorders. Our findings may thus serve as a partial corroboration of the findings among alcoholics, and point to the value of further research on the evidently complex psychobiological connections between cortisol and other neuroendocrine correlates, and various psychiatric disorders.

Study IV is the first published study of auricular acupuncture among prison inmates treated for a long period of time. The long-term effects of auricular acupuncture are generally uncharted and may extend further than the acute reduction of anxiety and physical discomfort shown in Study II. It is possible that inmates who received acupuncture over a long period of time became motivated for treatment. The qualitative data from those who received 25 treatments or more suggest that this might be the case. Structured treatment for dually diagnosed inmates is rare. One example of such treatment can be found at the Central New York Psychiatric Center, which offers three different types of substance abuse treatments, some within a treatment continuum extending through parole. In addition to standard medication therapy, inmates are offered a “treatment mall” with a menu of cognitive and social skill building programs including “self-help skills development,” “time management skills,” “anger management” and others. Therapeutic group work is also offered, targeting relaxation and Alcoholics Anonymous (AA) or Narcotics Anonymous (NA) groups (H. Smith, Sawyer, & Way, 2002). In Sweden, dually-diagnosed prison inmates are presently offered medication therapy, occupational therapy and, at some units, individual psychotherapeutic help. Programs have not been introduced for this group. One of the major challenges for the Swedish Prison and Probation Service,

and also for forensic psychiatric clinics under the National Board of Forensic Medicine and county hospitals, is to develop effective rehabilitation programs for this group. One important component of the treatment approach should be auricular acupuncture.

New avenues for future research might be the measurement of specific primary or secondary psychological effects of long-term acupuncture treatment for this group of inmates.

Chapter 4

A health-enhancement model for approaching drug users in prison

Studies I-IV address seemingly disparate aspects of the problems faced by drug users in prison as well as by prison administrators and treatment providers. The purpose of this chapter is to bring together aspects of the risk management and good lives models presented in Chapter 1 and to propose a new model for health enhancement that combines the perspectives of existential psychology, good lives and risk management, where the contribution of each one of the studies will become clear.

The path to the new model lies through defining basic human needs in specific, concrete terms, and then describing how these needs can be satisfied in health-enhancing ways. For offenders, securing healthy need satisfaction is no simple matter, since they have landed in prison thanks to their dysfunctionally satisfied “criminogenic” needs. Offenders who use drugs will need help within a health enhancing rehabilitative treatment framework, to find their own ways of achieving healthy need satisfaction. The health enhancement model proposed in this dissertation points to the areas of need (which will have different levels of priority for different individuals) and to possible ways of either obtaining satisfaction directly or of participating in training or treatment towards healthy need satisfaction. Once it is clear how the health enhancement model fits together, the final section in this chapter shows in what way Studies I-IV address the individual facets of the model.

In summary, the health enhancement model definitions of physical, social, psychological/personal and spiritual needs will provide a framework for offering prison treatments that can help drug-using offenders find ways to secure healthy need satisfaction, thereby reducing their criminal behavior and increasing their chances of living meaningful lives that they experience as good.

Definition of needs

Human needs can be defined in a number of ways. The theoretical presentation of the “good lives” model defines human needs in terms of nine categories of goods that need to be obtained. These categories encompass life, knowledge, excellence in play and work, excellence in agency, inner peace, friendship, community, spirituality, and happiness and creativity (Ward, 2002b). While this definition of needs is very broad, spreading over a wide spectrum of dimensions of human life, it seems awkward to work with as many as nine areas of need in an applied context. For this reason, the needs proposed in the present health enhancement model are based on the existentially rooted dimensions of human existence (May, 1983; van Deurzen, 1997), which cover four areas of human life: the physical (*umwelt*), social (*mittwelt*),

psychological/personal (*eigenwelt*), and the spiritual (*überwelt*).

Each of the four areas of need comprises a spectrum of dimensions in which each human being must secure satisfaction. An individual's developmental cycle starts at birth and lasts till about 18 years of age. During this period, the individual's needs are at first completely satisfied by the parent(s). With time, however, need satisfaction successively becomes the responsibility of the individual. One predictor for the development of criminogenic needs in an adult is growing up in a dysfunctional family, where needs are incompletely satisfied or not at all (Andrews & Bonta, 1998; Gendreau et al., 1996). Adults, however, are considered to be able to exercise choice about how they secure need satisfaction (Jacobsen, 1998/2000; May, 1983; Van Deurzen, 2002), although limited resources may narrow the horizon of choices for offenders who use drugs (A. Nilsson, 2002; Palme et al., 2003). Evidently adults who are drug-using offenders will need various types of help in order to achieve a healthy, non-criminal level of need satisfaction. Figure 4 shows the complete model, from basic needs to the paths that lead to their healthy satisfaction (see p. 104).

Each of the four need areas is now defined below as to specific dimensions of need.

Physical, social, criminogenic and psychological/personal needs

Physical needs are basic survival needs such as food, sleep, shelter, and bodily health, and also needs of well-being such as sexuality, exercise, and relations to the exterior world (natural and man-made environments) which can be enjoyed and offer material and esthetic satisfactions. Some human beings are able to exercise a much greater choice than others regarding the satisfaction of their physical needs. The person who owns several homes in different countries, for example, will obviously have a much greater range of choice than the ordinary worker who lives in one home and seldom, if ever, goes on vacation.

The physical needs of drug-using offenders in prison are to a large extent taken care of within the prison structure. In Swedish prisons, food is provided either by a central kitchen staffed by cooks, or in smaller communal kitchens where inmates are able to exercise choice regarding the content and taste of their meals. Sleep, while possible on the beds in the cells that offer shelter, is not always easily attained due to sleep disturbances. Outlets for exercise and relaxation are generally available in prisons, although the kind of exercise most often offered in men's prisons is of the body-building type.⁴² Medical care is also available in cases of acute illness, including detoxification medication.

Intimate touch in the form of sensual or sexual needs can be satisfied to some extent in the private visiting rooms available in Swedish prisons to offenders who have

intimate partners outside the prison. For the prison inmate, there is relatively little choice in the nuances of physical need satisfaction, but basic physical needs are met and to some extent choice is available in certain prisons.

Human beings can relate to physical needs within the physical world from points at or between various polarities. One example of these polarities is submission to the laws of nature versus trying to achieve total control. In between these two polarities human beings need to relate to the tension between life and death, health and illness, security and insecurity, and strength versus weakness (van Deurzen, 2002). Drug users in prison are constantly making choices rooted in these basic existential fields of tension, and one challenge for treatment providers is to help the offenders attain a greater awareness of their active choices.

Social needs as defined by van Deurzen (1997, 2002) are second in order after the physical needs because human beings relate to others directly from birth, and only later in the developmental path do they discover themselves as beings apart from the others who care for them. Social needs are basically those of recognition and belonging. We all need to feel recognized as unique individuals with a spectrum of positive attributes with which we enrich others' lives and receive enrichment within mutual relationships in the context of work and social relations. With recognition comes a sense of belonging, of having a social home, so to speak, where one is known by name and expected to contribute and respond so that others feel cared for and one feels cared for. For adults, the social world is not about intimate, close relationships (which belong to the psychological/personal sphere), but rather about the social needs we have in relation to workmates, friends, sports mates, and more distant persons; these are the relations where our behavior is steered by certain social codes. Such relations may satisfy needs that concern money, education, power and social position.

Within the prison, drug-using inmates also need to satisfy their social needs. Obtaining recognition and a sense of belonging that is anchored in the mainstream of society is a paradoxical aim within the prison society, where virtually none of the available associates are non-criminal (as pointed out in the very beginning of this dissertation, p. 18). Given this paradox, inmates need to be helped and encouraged to strengthen ties outside the prison with *pro-social* friends, former contacts from work or educational institutions, and associates from recreational organizations and religious groups to which the inmate might belong. The greater the extent to which the sense of recognition and belonging is tied to such individuals, the weaker the ties to the anti-social associates and the sub-culture within the prison.

The polarities within which social needs are secured concern the tension between our being alike as opposed to being different from others, feeling love as opposed to

hate for others, being accepting or rejecting, as well as being dominating or submissive. Furthermore, the world of social needs concerns the degree to which one is willing to give to others (altruism) as opposed to seeing to one's own satisfaction of needs with others' help or at their expense (egoism). Prison officials and administrators face daunting challenges in counteracting the strong forces within the prison towards satisfying social needs in anti-social ways; much of their success rests on the capacity to organize the inmates in collaborative, accepting structures which encourage mutual relationships. Therapeutic communities are an example of such efforts, but the 50% dropout rate reported in prison therapeutic communities, where careful recruitment is the rule, may well reflect the difficulty of the task. In the absence of the resources necessary to establish and maintain therapeutic communities, other kinds of pro-social models can be introduced. Self-administrative units currently being introduced in some Swedish prisons are one example (G. Nilsson, 2003).

Criminogenic needs fall under social needs in the present health enhancement model, because criminal behavior often begins with the social needs of recognition and belonging (e.g., in gangs among juvenile delinquents). Once the criminal identity is more established, criminogenic needs will also overlap with physical and psychological/personal needs. Examples of criminogenic needs have been given in Chapter 1; Figure 4 shows impulsivity, drug abuse, anti-social associates, employment skills and poor family relations as relevant and "treatable" examples of criminogenic needs that have arisen as responses to needs of recognition and belonging. Criminogenic needs are viewed as treatable, from cognitive-behavioral (Andrews & Bonta, 1998), existential (van Deurzen, 1997) and behavioral-economic perspectives (Vuchinich & Heather, 2003). Each of these perspectives emphasizes that the offender has a *choice* as to whether to satisfy his needs prosocially or anti-socially.

Psycho-educational as well as other structured treatment programs have a pedagogic tone that emphasizes self-efficacy and autonomy of decision regarding need satisfaction. For example, programs that are based on the cognitive-behavioral approach, like the R&R program evaluated in Study III, teach basic cognitive skills such as how to identify a problem and how to develop solutions in 10 steps, and also basic social skills such as "asking for help" in four or five steps. Therapeutic communities teach cooperative living, and 12-step meetings offer drug users who are in recovery a sense of recognition, and also a sense of belonging to a community of persons who are going through similar struggles. Work/study programs within prisons likewise offer the promise of future recognition and belonging and they also teach skills that directly increase access to resources in the labor market.⁴³ Parent training programs potentially improve family relations by increasing the sense of recognition and belonging in the family as well as the sense of competence as a parent. Such

programs may lead to a reduction of potential criminogenic need solutions among offenders' children.

The solutions to securing social need satisfaction in non-criminogenic ways may also contribute to the satisfaction of *psychological/personal* needs. The world of these needs is the one where we feel at home within ourselves and with significant others. Such needs concern the expression of emotions, thoughts, dreams and desires – everything that is part of our private selves, including our innermost reactions to the physical and social worlds. Some of the clear psychological/personal needs are those of autonomy, competence and self-esteem, which form the pillars of psychological well-being (Ward, 2002a, 2002b; Ward & Stewart, 2003a), as well as relatedness to others, and the expression of emotions (van Deurzen, 1997, 2002). Psychological imbalance or ill-health expressed in depression, excessive anxiety,⁴⁴ or psychiatric disorders diagnosable as schizophrenia or manic-depressive disorder, is part of the psychological/personal sphere of needs.

Within the prison, drug-using offenders may not have any personal foundation of experience on which to build a sense of autonomy, competence, self-esteem, relatedness, and emotional expression. In fact, years of drug use may well have contributed to stagnation in these areas, rather than development. The prison environment can contribute to healthy satisfaction of such needs by offering training programs in Activities of Daily Living (ADL), which can help to build a sense of autonomy and competence in home care and self-care. Leave programs, if well-planned and well-run, can contribute to maintaining or building relatedness with significant others outside the prison. A sense of self-esteem is built by achievements in personal as well as social areas, and the more opportunities the prison provides for pro-social building of sustainable self-esteem, the better. Activities in teamwork contribute to a sense of relatedness, as do family activities through personal visits, telephone conversations and written contacts.⁴⁵ Emotional imbalances or general imbalance in psychological/personal needs can be addressed in individual or group psychotherapy, if available.⁴⁶ Psychiatric treatment (medication) is generally available for offenders with co-morbid drug use and psychiatric disorders. Study IV is an example of an alternative approach to the psychological/personal needs of the offender with co-morbid problems.

The issues of the psychological/personal world concern the qualities of authenticity, of being true to one's self, and of developing a flexible openness towards one's inner self. Typical polarities refer to one's being judgmental versus forgiving, rigid or flexible, emotional or intellectual, thankful for one's gifts or resentful, seeing the positive or the negative aspects of the self, as well as being decisive, indecisive or indifferent. The drug-using offender may have chosen to avoid developing a familiarity

with the various aspects of the self, especially when painful feelings and self-perceptions arise in a sober state. The prison administration has a particularly heavy burden to provide safe personal spaces where inmates can engage in the sort of personal exploration required in order to gain a comfortable familiarity with the self. In fact, this may not be possible until after release from prison, in which case it is absolutely crucial to establish through-care and aftercare structures which can sustain and support the drug-using offender in the struggle to live a different, “good” life. Much of the psychological/personal sphere of needs can be seen from a new perspective when the spiritual, or “ideal” area of needs is addressed (van Deurzen, 1997).

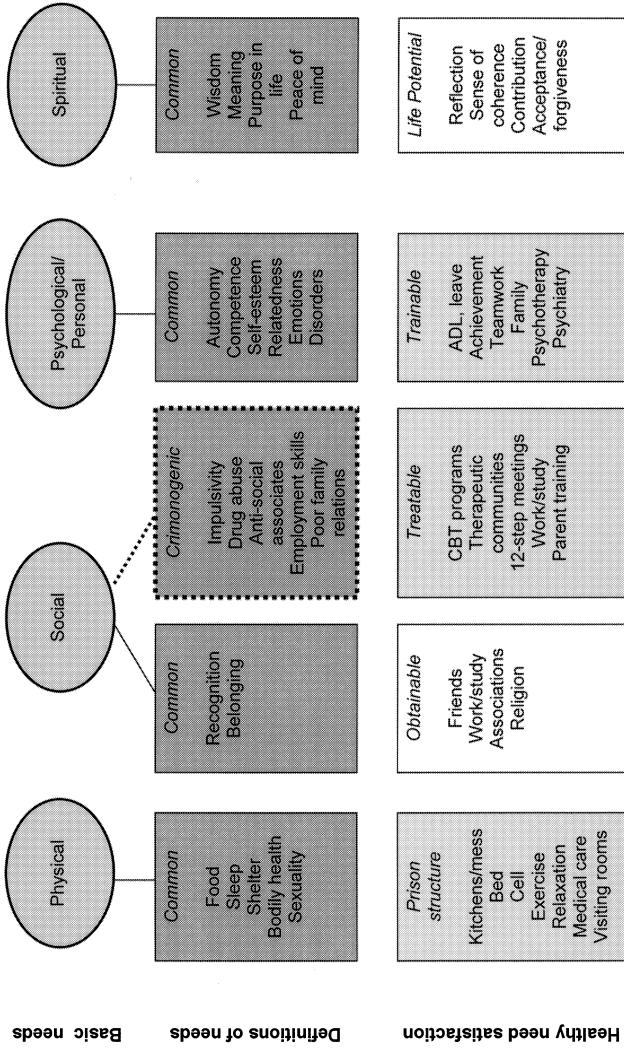
Spiritual needs

Spiritual needs were not studied within the framework of Studies I-IV, but they are included in the health enhancement model since they concern the search for wisdom, meaning, purpose in life and peace of mind. Also, the results of the interviews and qualitative assessments in Studies II and IV on auricular acupuncture yielded material relating to this sphere of needs. Spiritual needs are basic human needs that are necessary from an existential perspective (van Deurzen, 1997), but they are often left out of models of human health.

A citation from a nursing textbook reads as follows: “In every human being there seems to be a spiritual dimension, a quality that goes beyond religious affiliation, [one] that strives for inspiration, reverence, awe, meaning, and purpose even in those who do not believe in God. The spiritual dimension tries to be in harmony with the universe, strives for answers about the infinite, and comes essentially into focus in times of emotional stress, physical [and mental] illness, loss, bereavement, and death” (cited by Culliford, 2002). Spirituality differs from religion in that it is a phenomenon occurring and being expressed at the individual level, rather than at the social level, where religion is typically organized. Spirituality is not easily defined, whereas religion is generally clearly defined by specific beliefs, practices and rituals. Spirituality is also a phenomenon that can occur and be expressed outside the boundaries of religion; religion can in fact sometimes make the expression of spirituality more difficult when its rules and rituals take precedence over the meaning they originally held (Miller, 1998).

The polarities of the spiritual world concern the struggle to orient oneself between conceptions of truth and falsehood, good and evil, forgiveness and condemnation, wisdom and absurdity, meaning and meaninglessness, the sacred and the everyday, as well as hope and despair. Drug users in prison have every reason to address these questions for themselves, although probably few prisons provide conditions where this could be possible. Spiritual needs can be satisfied in a multitude of individually

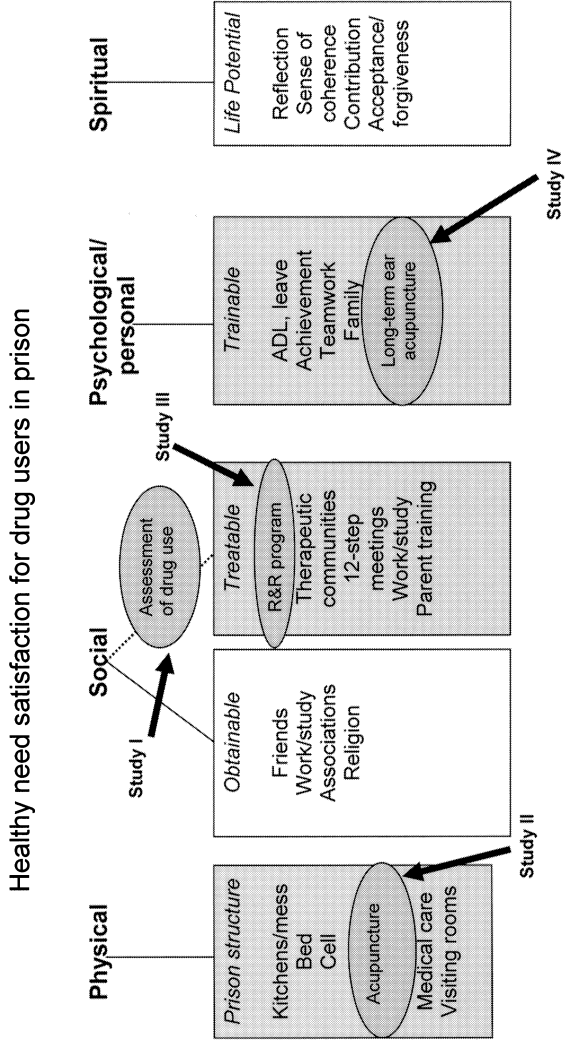
Figure 4: Addressing prisoners' human needs



Sources: Andrews & Bonta (1998), Ward (2000), van Deurzen (1997), Hollin (2002)

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Figure 5: Studies I-IV within the health enhancement model (cf. Figure 4)



chosen ways: regular meditation, communion with nature, silent retreats, AA/NA meetings, or organized religious services. The past several years have seen a growing literature on the subject of integrating spirituality into treatment (Culliford, 2002; Miller, 1999) and in particular into addiction treatment (Arnold, Avants, Margolin, & Marcotte, 2002; Avants, Warburton, & Margolin, 2001; Christo & Franey, 1995; Green, Fullilove, & Fullilove, 1998; McDowell, Galanter, Goldfarb, & Lifshutz, 1996; Miller, 1998).

To illustrate, one study compared attitudes towards spirituality among 101 dually-diagnosed patients with co-morbid drug use and psychiatric disorders, versus the attitudes of 31 nurses who worked in the unit where they were treated. The study showed that while both groups put similar priority on spiritual concerns for themselves, the nurses believed that spiritual issues were much less important for the patients than they actually were. When asked what should be improved in the unit, the nurses believed the patients wanted better food and films, whereas the patients wanted to participate in more groups with a spiritual focus. Regarding recovery, the nurses believed good housing, state grants, and access to medical care were most important for the patients. The patients, however, said that most important was a belief in God as well as regular visits to AA meetings. Least important was a job (Goldfarb, Galanter, McDowell, Lifshutz, & Dermatis, 1996).

A similar study comparing spiritual beliefs among medical students and a patient group like the one just described showed that the medical students were much less religiously and spiritually oriented than the patients and that the students were not aware that spirituality was an important aspect of treatment in this group of patients (Pardini, Plante, Sherman, & Stump, 2000). Another study using focus groups representing 24 participants in 12-step programs showed that insight and contact with an inner spirituality were often perceived as central turning points in a life pattern of drug use and criminality (Miller, 1998).

Even though the studies in this dissertation do not explicitly address the satisfaction of spiritual needs, the literature cited above suggests that such needs constitute a crucial element in health-enhancing treatments of individuals who use drugs. It is crucial to help them find and maintain a sense of meaning, purpose, and connectedness to life without reliance on drugs. This means also facilitating opportunities for them to discover personal meaning in their life journey, including drug use and criminality. How to do this with drug users in prison may be one of the primary addiction research challenges of the coming years.

A final aspect regarding the inclusion of spiritual needs in the health enhancement model is the concept of *hope*. Drug users in prison need to perceive that there is hope for them to live a “good” life for themselves, that they are not condemned to a life of

drug use and criminality (if they see this life as a source of misery and hopelessness). A perspective of hopelessness implies a belief that suffering is personal, permanent and pervasive, while hopefulness is associated with the insight that one's situation is shared with others, is changeable and is limited to only some aspects of one's life. A sense of hope is less about cure and total recovery than about the awakening of a desire to live, to find a way, to find something worth striving for (Ward & Mann, in press; Yahne & Miller, 1999).

A health enhancement model and studies I-IV

The health enhancement model presented in Figure 4 is intended to encompass the risk management approach and the good lives model within an existential psychological framework. Why is it important to see rehabilitation of drug-using offenders from this perspective?

One reason is the difference between avoidance and progress toward goals described in Chapter 1 (p. 50); people are more likely to want to work toward goals defined in terms of what they will "achieve or gain rather than in terms of what they will cease to think or do" (Ward & Mann, in press). Another reason is that the treatments provided within the risk management model, while evidently far more successful than early attempts to rehabilitate offenders by means of analytically-oriented psychotherapy, still have relatively high dropout rates. Furthermore, while the reductions in reconviction rates following such treatments are encouraging, they still leave much to be desired. A third reason is that prison administrators and treatment providers may find the working environment more attractive when working collaboratively with offenders towards the development of meaningful lives, and working within a model that is simple enough to understand for almost anyone and may prove strong enough to sustain a framework of positive change within prison treatment programs. The issue of organizational readiness to change is addressed within the framework of current U.S. initiatives to improve drug treatment outcomes. Openness to innovative new approaches is viewed as an important contributing factor to a positive work climate where patients can feel that they have a good rapport with counselors (Lehman, Greener, & Simpson, 2002).

Studies I-IV illustrate particular facets of the health enhancement model, as shown in Figure 5 (see p. 105).

Study I focuses on the assessment of criminogenic needs, selecting drug use as a prime example of a dynamic risk factor with high predictive power for reconviction. Accordingly, in Figure 5 Study I is shown in the title area of criminogenic needs, indicating the importance of accurate assessment of such needs. The prevalence of drug use among offenders in prison makes screening with the DUDIT a first choice in order to reduce the waste of resources on extensive assessment of individuals with-

out drug use problems, and in order to facilitate a quick resolution of placement and treatment issues. More extensive assessment of the drug-using offender's bio-psychosocial circumstances can take place after the initial intake and preferably before incarceration for the sentence term.

Study II focuses on the area of physical needs, for which the prison has limited offerings. The options generally available are exercise, relaxation and medical attention (psychological and physical discomfort is often addressed by medical staff through prescription of sedatives, sleeping pills and painkillers, if at all). These options generally ignore the prisoners' need to feel physically *cared for* in the often harsh prison environment. Auricular acupuncture also provides an opportunity for prison staff to touch prisoners in a non-invasive way that should express care for their distress. Non-threatening touch for individuals in the prison environment can be difficult to experience, especially between staff and inmates. The acupuncture treatment (or participation in the treatment, since active effects were neither demonstrated nor disproved) appears to relieve a number of psychological and physical symptoms of discomfort as well as improving sleep quality. The most obvious satisfaction of needs is in the physical sphere, and this is why Study II is placed in the area of the relaxation and medical care parameters in Figure 5 (which is not meant to suggest that acupuncture can entirely satisfy either of these needs; rather, it shows where Study II fits into the model). Future research may show that the clinical success of auricular acupuncture treatment results from its satisfaction of multiple needs in non-threatening, non-invasive ways.

Study III concerns a cognitive-behavioral treatment program focusing on criminogenic needs of cognitive and social skill acquisition, especially impulsivity. Its placement in Figure 5 in the area of cognitive-behaviorally based treatment (CBT) is self-evident.

Study IV, focusing on the difficult-to-treat group with co-morbid drug use and psychiatric disorders, belongs in the area of psychological-personal need in Figure 5, along with psychiatric treatment. The reduction in psychopharmacological prescriptions for study participants who received 25 treatments or more, and also their interest in continuing treatment for up to 32 weeks and receiving up to 83 treatments, suggest that auricular acupuncture can perhaps function as a component of the long-term treatment initiative needed to help drug-using offenders in this category (cf. Hodgins, 2001; Mullen, 2002). While none of the studies in the dissertation focused on the spiritual needs identified in the model, there seems to be some persuasive evidence that treatment efforts should include this domain in the future.

A final question is whether the good lives aspect of the proposed health enhancement model is a utopian goal. A perspective on the connection between the lofty

ideals described in Chapter 1 and the realities of limited resources is provided by Ward (2002b):

In reality, it may only be possible to increase the [individual's] competencies and opportunities slightly.... Offenders may always be faced with inherent limitations in their lives... it may not be possible to fully develop their potentialities. The possibility of human well being is always offender-relative and dependent on each individual's circumstances, histories, opportunities, talents and skills.

Only future research can tell whether the reduced recidivism reported in “What works” research can be amplified by a health enhancement model like the one presented above.

Chapter 5

Conclusions

Chapters 1-2 in this dissertation cover a broad range of knowledge about offender rehabilitation, treatment of drug users as well as methodological issues involved when studying the treatment of drug users in prison. Chapter 3 presents Studies I-IV with a discussion of the findings from each study. Chapter 4 proposes a health enhancement model that provides a framework for understanding the aspects of prisoners' needs that should be addressed by rehabilitation efforts and that are partly addressed by Studies I-IV. In view of the large range of material covered, a succinct summary of the conclusions that can be drawn from the dissertation is provided in this concluding chapter. The conclusions, as well as the health enhancement model presented, may serve as an impetus for prison administrators and staff in Sweden (and perhaps elsewhere) to further develop their practice of rehabilitation and to develop and maintain close communication and collaboration with researchers, whose contribution to the effective practice of rehabilitation of drug users in prison should be clearer at this point.

The following conclusions are drawn from Chapters 1-4 together with Studies I-IV:

- Brief, reliable assessment of drug problems is possible and useful.
- Physical and psychological discomfort can be relieved for drug users in prison by means of auricular acupuncture, which harnesses significant

- placebo effects. Which point protocol is used is of lesser importance.
- Participation in cognitive skills training programs like Reasoning and Rehabilitation yields pro-social short-term results and a 25% lower risk of reconviction up to three years after program participation. The quasi-experimental nature of this research moderates these encouraging findings.
 - Drug users in prison with psychiatric co-morbidity offer a greater treatment challenge. Long-term treatment with ear acupuncture appears to reduce reliance on medication somewhat, to help clarify thoughts and feelings and to stimulate the desire to communicate with treatment staff.
 - The studies in this dissertation address selected aspects of a health enhancement model for drug users in prison. Prior research suggests that primary criminogenic needs should determine the focus of rehabilitation from a risk management perspective, but the health enhancement model suggests that no full recovery (or path towards such) is likely to result unless basic human needs are also addressed from a good lives perspective. All aspects of the model need to be addressed in order to achieve better outcomes.
 - Future research should continue to explore the various aspects of the health enhancement model. Research should also address the problem of providing treatment continuity to drug users following prison release. Finally, future research should explore ways of offering treatment with a spiritual or existential orientation for this group.

Notes

- ¹ The reader interested in the specific pattern of drug use common among drug-using offenders is referred to the Results section in Study I. The criminality typical of drug users ranges from drug-related crimes to crimes of violence as well as property crimes. Limited information on criminality patterns for this group is shown in Table 3 in Study III.
- ² Johansson, Allardt and Sen, cited in Fritzell & Lundberg (2000).
- ³ Italics mine. AHB.
- ⁴ My translation of the following Swedish legal text: 4 § Kriminalvården i anstalt skall utformas så att den intagnes anpassning i samhället främjas och skadliga följder av frihetsberövandet motverkas. I den utsträckning det kan ske utan att kravet på samhällsskydd eftersättes bör verksamheten från början inriktas på åtgärder som förbereder den intagne för tillvaron utanför anstalten. Frigivning skall förberedas i god tid. Lag (1981:213).
- ⁵ Gendreau et al. (1996) viewed the results of their meta-analysis on predictive domains as supporting differential association and social learning theories of offender behavior more than anomie/strain, sub-cultural and biologically oriented theories. Separate analyses of predictors of

different types of crime have not been conducted by the authors of meta-analyses.

- 6 A similar scale with the same purpose – the OASys - has been recently developed in England and is currently being introduced on a wide scale.
- 7 The vocational counseling referred to was not connected to work placements in the community (my interpretation of Lipsey (1995)).
- 8 Odds ratios give much higher values than phi coefficients, since odds ratios reflect the likelihood of the treatment group recidivating compared to the control group, whereas phi coefficients are a measure of actual correlation between the treatment (yes/no) and recidivism (present/absent) (see <http://faculty.vassar.edu/lowry/odds2x2.html> for simple computation of phi coefficients and odds ratios).
- 9 This effect size reflects a difference of 25 percentage points between the experimental group that received the treatment and the control group that received no treatment or treatment as usual.
- 10 Another predictor that has been explored in earlier literature is personality profiling according to a number of instruments, among them the Minnesota Multiphasic Personality Inventory (MMPI). But while personality factors predict institutional or program adjustment, there is no evidence that they predict recidivism, i.e., behavior following release into the community (Gerstein, 1999).
- 11 The types of problems involved are educational (less than 9 years of school), occupational (unemployment for 6 months or more), economic (inability to pay bills or legally obtain 14000 SEK within a week), housing-related (no housing), social/familial (no frequent family relations), political (unable to appeal decisions from government authorities and no access to help with this), health (long-term illness), and physical security (exposure to violence during the past year) (A. Nilsson, 2002).
- 12 The incentive could also be humanitarian but this motivation is not mentioned in the EMCDDA report.
- 13 Another type of service offered in some countries to prevent blood-borne diseases is information/ education, Hepatitis B vaccination, provision of disinfectants and needle/syringe exchange programs. None of these are offered in Sweden according to the EMCDDA report; an explanation might lie in the relatively low number of HIV-positive inmates in Swedish prisons, about 25 persons for the entire prison system on any particular day (Krantz et al., 2003, p. 20).
- 14 Part of the new policy also includes attempts to reduce the supply of drugs in prison by introducing staff visitation and control of visitors to prisons and using six narcotics hounds within the service.
- 15 The treatment of drug use is presented from the pragmatic point of view for reasons of space. It could be considered relevant to describe the historical development of drug use as well as theories about the reasons for drug use, but these topics are outside the scope of the dissertation.
- 16 Literature searches have not turned up any other published books on the topic.
- 17 One other large textbook on substance use disorders edited by Galanter and Kleber has been useful, especially a chapter on outcome research on drug abuse (Gerstein, 1999).
- 18 Post-traumatic stress disorder.
- 19 A review of acupuncture treatment programs in criminal justice settings is available in Study II. Also, an overview and analysis of several kinds of “alternative” treatment programs such as art

- therapy or religious therapy for prisoners (not only drug users) is given by Berman (2003).
- 20 An excellent overview of the history and current applications of TCs in U.S. and U.K. prisons can be found in Lipton (2001).
 - 21 Lipton et al. (2002b) also report separately on eight studies of German Social Therapy (termed milieu therapy), finding an effect size of .13 with regard to recidivism. German Social Therapy is offered by psychologists, teachers and social workers to particularly violent offenders and sex offenders with severe emotional or social deficits. They are offered client-centered therapy, psycho-educational groups, social skills training, and educational and vocational training. After a 2-3 year stay they should be able to look forward to release on parole (Egg et al., 2000).
 - 22 Levo-alpha-acetylmethadol (LAAM) was approved in 1993 by U.S. authorities for use in narcotic treatment programs. LAAM has a longer half-life than methadone, thus requiring fewer weekly doses but for various apparently contextual reasons (Ling et al., 2003), its use has not spread, despite considerable scientific support for its safety and efficacy.
 - 23 Auricular acupuncture has been used with some success in attempts at minimizing side use of cocaine by methadone-maintained patients (Margolin, Avants, Chang & Kosten, 1993).
 - 24 The twelve-step model is also applied in groups such as Gamblers Anonymous, Overeaters Anonymous and other support frameworks for recovery from addictive behaviors of various kinds. For the U.S. it is estimated that 3% of the population will, at some point in their lives, attend an AA meeting due to an alcohol problem (Fiorentine & Hillhouse, 2000).
 - 25 See www.na.org for NA world contacts.
 - 26 Differences were not statistically significant due to small numbers (up to 28 in each group), and results are reported in effect sizes.
 - 27 The example Gregrich gives of a “free” change in routine is a finding that “the most consistent and significant predictor of retention, among public treatment clients, was that ‘the client saw the treatment plan.’”
 - 28 Examples are rife of such reviews that can form the basis of later policy decisions if not balanced with meta-analytic results, e.g., Bullock’s (2003) narrative review of treatment programs for drug-using prisoners cited earlier.
 - 29 An encouraging recent development in Scottish prisons is that Scottish Prison Service has developed psychometrically validated instruments for measuring staff attitudes towards drug users (Watson, Maclaren, Shaw & Nolan, 2003), a step towards recognizing the problem and remedying it.
 - 30 Recent literature on “mixed methods” suggests both quantitative and qualitative methods are equally valid approaches within a pragmatic research paradigm (Tashakkori & Teddlie, 1998; Creswell, 2003). My personal experience has been that it is more difficult to publish mixed methods research in current scientific journals which more easily accept findings clearly sorted into quantitative or qualitative categories of research.
 - 31 Tashakkori & Teddlie (1998) propose that four important paradigms now reign in the social and behavioral sciences – positivism, postpositivism (by which they basically mean the quasi-experimental approach defined by Cook & Campbell (1979)), pragmatism and constructivism. Each of these paradigms differs as to methods, logic, epistemology, axiology (values), ontology and the view of causal linkages as real (positivism), reasonably stable and lawful (postpositivism), difficult

to pin down although possibly existent (pragmatism) and impossible to distinguish causes from effects (constructivism).

- 32 “Statistical conclusion validity” is a special case of threat to internal validity which refers to the appropriateness of statistical analyses used in a study and to their correctness. Obviously, if incorrect statistics lead one to erroneously reject the null hypothesis, thus leading to the assumption of a causal relationship which is not, in fact, valid, the internal validity of study results will be drastically reduced if not nullified. Such erroneous conclusions can result either from the threats to internal validity outlined in the text, or from threats to statistical conclusion validity.
- 33 This is also true in educational settings regarding achievement, and in industrial settings regarding productivity, according to Cook and Campbell (1979, p. 83).
- 34 Problem assessment implies more in-depth exploration of a problem once screening has indicated the existence of a problem.
- 35 Factor analysis for both samples was somewhat questionable: for the drug-user sample due to the small sample size in view of Tabachnik & Fidell’s (1996) recommendation that a sample of at least $n=300$ be used to ensure a robust solution; for the population sample due to the skewed nature of the results, with only $n=33$ showing a DUDIT score of more than 1 in a sample of $n=1109$. The results are nonetheless reported in Study I for the sake of comparison in future research using the DUDIT.
- 36 Data were also collected from inmates regarding their perception of the group psychosocial climate among their fellow inmates. Data were further collected from staff regarding their assessment of individual inmates (both study participants and non-participants) and the psychosocial climate for the inmates. Staff also reported their assessment of psychosocial climate among themselves. Data were additionally collected about the 29% of treatment completers who chose to continue treatment following the first cycle of 14 treatment sessions (unpublished data; see Berman, 1999).
- 37 Seen in this light, the steadily worsening psychosocial climate among staff during the study period (see preceding footnote) may have been related to the study recruitment rate which, while relatively high for voluntary prison programs in a research context, could well have been higher. Secondly, the psychosocial climate among staff, in addition to lack of funding support from within the prison, may also have been directly related to termination of the acupuncture programs due to lack of enthusiasm for programs perceived as “new” and “unproven.”
- 38 In addition, long-term subjective experiences of the program as well as process aspects of program delivery (strengths and weaknesses) were explored from the perspectives of program facilitators and ordinary staff (Berman, 2002).
- 39 Earlier analyses reported in Berman (2002) showed significant differences in recidivism between program participants and matched controls with unlimited follow-up time only in two sub-groups, those who had 9 to 20 prior adjudications and those whose last principal crime before entering the program (or before the calendar start of the program for controls) was a violent one. The pattern of difference between cases and controls in these sub-groups was the same for both program completers and for dropouts, compared to their respective controls. This suggested that there may be an a priori difference between program participants and their controls that is unrelated to program effects but which influences recidivist behavior. One explanation of the finding that post-program recidivism figures among program participants who had recently committed a violent crime declined, compared to controls, may be the increased subjectivity that interviewees said they had

acquired. The criminal behavior of offenders who commit acquisitive crimes may not be affected by increased subjectivity because, while acquisitive crime involves inanimate objects whose loss may cause psychic pain to their owners, the acquisition of such objects is usually dissociated from the victims' subjective loss or pain. Acquisitive crime also often results in direct, short-term material gain for the offender. The finding that recidivism figures for offenders recently sentenced for acquisitive or other crimes did not differ from those of controls (in agreement with Robinson, 1995), suggests that such offenders may require more intensive cognitive-behavioral interventions or a different program focus to influence their behavior. Little research has focused exclusively on acquisitive or property crime and much more is needed to establish what could be effective with this group (McGuire, 2000).

The two largest studies that have evaluated the Reasoning & Rehabilitation program (Friendship, Blud, Erikson, Travers & Thornton, 2003; Robinson, 1995) have found sub-group results similar to those in Berman (2002) but they did not distinguish between respective controls for program completers and dropouts, hence there may be an unexplored missing link between participant characteristics, short- and long-term intermediate effects, and the behavioral outcome of reduced recidivism.

The major reason for the difference between the results reported in Berman (2002) and Study III is that follow-up time in Berman (2002) was based on the time between prison release and the data extraction, without taking into account when the reconviction occurred. As a result, cases or controls reconvicted after the follow-up time were excluded, and the sample was somewhat restricted. The survival and other analyses reported in Study III, on the other hand, take into account the length of time from prison release to either (a) the event of reconviction or (b) March 15, 2002, the date when the reconviction data were extracted from the registry. This time-to-event variable expanded the sample size by including many cases and controls that now were identified as having recidivated before the fixed follow-up time, whereas in Berman (2002) they appeared to have recidivated after this date.

- 40 Depression, a syndrome that also has a wide range of psychobiological correlates, can also be successfully treated by cognitive-behavioral methods, suggesting that partial psychobiological determination is not an obstacle for effective treatment.
- 41 A further point of interest is the lack of change in empathy; this may be the result of effective recruitment strategy of high empathizers in combination with a lack of emphasis on changing empathy in the R&R program, which after all stresses recruitment of good empathizers who are taught cognitive and social skills but not explicitly empathy. In fact, basic research on empathy suggests that enhancing this trait would require focused work on understanding another person's predicament, exploring one's own readiness to actively help once empathy is felt, and viewing the other person as a subject rather than an object (Håkansson, 2003). One of the factors found to contribute to offenders' acquisition and assimilation of program content is a good relationship with program facilitators, meaning minor criminal behavior. For this to happen, it is crucial that staff possess good communication skills, team-building skills, close familiarity with program delivery methods, and an understanding of and practical ability in risk-needs assessment (McGuire, 2002). The interview findings from Berman (2002) suggest that program facilitators for Reasoning & Rehabilitation in Sweden possess relationship-building skills that contribute to increased subjectivity in the relationship on the part of the offenders, rather than the instrumental/objective view of staff as uniformed guards. When an offender can come to view a potential crime victim as a

subject like himself, rather than an object with unknown, anonymous attributes, the likelihood of perpetrating a hurtful act decreases. If such a mechanism is at work here, it could suggest that an increase in empathy might occur, although this was not corroborated by test results.

- 42 The widespread practice of bodybuilding among male prisoners is increasingly being questioned in view of the values that may be reflected in the exclusive focus on muscle strength with its “dominant male” connotations, rather than flexibility and healthy all around functioning (G. Nilsson, 2003).
- 43 One example is a stockroom truck licensing course given to women inmates at Sagsjön prison in Southern Sweden.
- 44 Excessive anxiety is that which is beyond the built-in anxiety in living within the existential boundaries, where the continuous choices we make give rise to inevitable and natural anxiety. Examples of excessive anxiety would be panic, or exaggerated anxiety related to depression and unfounded negative expectation patterns.
- 45 The Swedish Prison and Probation Administration maintains a retreat-like establishment (Grubberget) where courses are offered to offenders in various areas of need, sometimes with the participation of family members.
- 46 Psychological consultants are available on a very limited basis within the Swedish Prison and Probation Administration.

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