

Offenders' Social-Cognitive Skills as Predictors of Criminality and Recidivism

by

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ABSTRACT

The Social Cognitive Screening Battery (SCSB; Ross & Fabiano, 1985; Ross & Ross, 1995) and three statistical control measures (estimates of educational attainment, intelligence and depression) were assessed for their ability to distinguish between participants incarcerated in a provincial correctional institution and community members with no history of incarceration. These same measures also were tested to determine whether incarcerated participants' degree of recidivism could be predicted. The sample consisted of 29 participants, 19 of whom were incarcerated and 10 were non-incarcerated. The sample was comprised of both males (n = 20) and females (n = 9) and of people of Aboriginal (n = 5) and Caucasian (n = 24) descent. Two of the SCSB instruments (Conceptual Level Paragraph Completion Method; Watson-Glaser Critical Thinking Appraisal) significantly contributed to the prediction of group membership over and above that of the three control variables, which were also significantly predictive of group membership. Two other SCSB variables (Locus of Control; Rigidity) closely approached statistically significant contribution to prediction. None of the variables were significantly correlated with incarcerated participant's level of recidivism as measured by number of contacts with the criminal justice system. Implications of the results with regard to improved identification of offenders amenable to treatment using the Reasoning and Rehabilitation Program (Ross & Fabiano, 1985; Ross & Ross, 1995) are discussed.

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DEDICATION

This dissertation is dedicated to my
fiancé, Gord Carey, for his steadfast patience
and understanding despite the many times over the past
ten years that my studies and research endeavors
have required our being apart.

CHAPTER 1

Introduction

Prison life is made up of social interactions that are confused, entangled, complicated, and so subtle in their effects that any detailed attempts to tell what happens in them sounds like the ravings of a crazy man (Cressey, 1973, in Wormith, 1984a, p. 427).

Notwithstanding the above quote, in this chapter the topics of offender rehabilitation and recidivism are introduced, and a case is made for the importance of developing an accurate means for identifying offenders who may benefit from specific types of rehabilitation. Deficits in the literature with regard to such identification are noted, and a description of the purpose of the present study is provided. The limitations on the scope of the research are also addressed. The chapter concludes with a general outline of the present study.

Offender Rehabilitation and Recidivism

The rehabilitation of adult criminal offenders remains a most challenging endeavor. In the year 1993 alone, over 456,000 men and women were charged with offences against Canada's criminal code (Statistics Canada, 1994). During the years 1992 and 1993, the average daily number of offenders residing within Canadian federal prisons

and provincial jails was 36,127 (Canadian Centre for Justice Statistics, 1994). Further, it has been estimated that the recidivism rate for male first incarcerates in Canadian correctional facilities ranges from 46% (two years post-release; Gendreau & Leipziger, 1978), to 62% (five years post-release; Carlson, 1973). There is some evidence that female recidivism rates are of similar magnitude (i.e., 38.7% after two years; Hoffman, 1982). Moreover, Smith and Berlin (1988) have noted that as many as 80% of North American incarcerates have served previous sentences. Finally, estimates of the proportion of offenders receiving rehabilitative services are as low as 5% (Gendreau & Ross, 1979; Gendreau, 1981).

Such high rates of recidivism, and low rates of rehabilitative effort, are indicative of the failure of North American correctional systems, as they are typically operated, to protect society adequately beyond the expiration of the sentences imposed upon their incarcerates. Fortunately, this situation is changing for the better, albeit slowly and in small increments (Palmer, 1995). Despite marked earlier pessimism regarding the future of correctional rehabilitative efforts, research continues to provide insight into the answer to the question: "Which methods work best for *which* types of offenders, and under *what* conditions or in what types of settings" (Palmer, 1975, p. 150).

One of the most successful approaches to such rehabilitation has been the Reasoning and Rehabilitation (R&R) program (Elizabeth Fabiano, February 22, 1996, personal communication; Ross & Fabiano, 1985; Ross & Ross, 1995). The R&R

program¹ has been evaluated extensively with different correctional populations and in different settings and consistently has been shown to have a positive impact on criminal recidivism (Raynor & Vanstone, 1996; Ross & Fabiano, 1985; Ross, Fabiano & Ewles, 1988; Ross & Ross, 1995).

However, the R&R program is not a 'cure-all' from which all offenders would necessarily benefit. Instead, the R&R program specifically has been designed to target those offenders who demonstrate deficits in social-cognitive skills, deficits that are likely to predispose such offenders to be at risk for engagement in subsequent criminal behavior (Ross & Ross, 1995). Not all offenders exhibit social-cognitive skills deficits. The criminal behaviour of cognitively skilled offenders is, therefore, not likely to be remediated through the use of social-cognitive skills training programs. Given that the R&R program will be of most benefit to those offenders who are most deficient in social-cognitive skills, and of little benefit to those who already possess these skills, it is therefore essential to be able to accurately and reliably identify offenders who are the most likely to benefit from participation in the R&R program. It is toward the goal of such reliable and accurate identification that the present research is pointed.

Purpose

The primary purpose of the present study is to address the lack of research pertaining to the use of Ross and Fabiano's (1985) social-cognitive skills screening

¹ This program will be outlined in greater detail later in Chapter 2.

battery (SCSB). In their book, Time to think: A cognitive model of delinquency prevention and offender rehabilitation, Ross and Fabiano described a battery of eight instruments which they have suggested are the best instruments available for the assessment of offenders' social-cognitive skills. Ross and his colleagues (1985, 1995) proposed that the screening battery will assist in the identification of those offenders who will be the most likely, upon completion of the Reasoning and Rehabilitation program, to demonstrate lower recidivism rates than similar groups of offenders not exposed to the training. Concomitantly, those offenders who chronically engage in, and are incarcerated for criminal behaviour are those most likely to evidence social-cognitive skills deficits. As Ross and Ross (1995) pointed out, "cognitive inadequacies are probably most strongly associated with persistent criminal behaviour, and recidivists are the ones who are most likely to evidence cognitive inadequacies" (p. 131).

The proposed social-cognitive screening battery, however, has not been subject to an evaluation of its overall efficacy with incarcerated populations. According to Ross and Ross (1995):

...[A]ll of the tests in the battery require much more psychometric work before they can be considered adequate. Unfortunately, little research has been forthcoming which would allow us to recommend that the battery be used except on an exploratory basis to help the practitioner begin to examine the various cognitive functions of his [or her] clients" (p. 136).

Given the above noted lack of research, the present study seeks to broaden the evaluative work completed to date on the Ross and Fabiano (1985) Social-Cognitive Screening Battery (SCSB). Specifically, the present study evaluated the ability of the SCSB to discriminate between offenders and non-offenders and to predict offenders' degree of recidivism (as measured by the number past contacts with the Alberta criminal justice system). Further, the subtests in the battery were evaluated for their contribution to the overall discriminative efficacy of the SCSB. Finally, the practical utility and feasibility of the screening battery in the context of a provincial correctional institution were assessed.

Delimitations

As stated above, the main purpose of the present paper is to evaluate the overall efficacy and feasibility of the SCSB. If it accurately identifies recidivistic individuals - which according to Ross and Ross (1995) are those who should be the least skilled in social-cognitive domains - then the SCSB might be used to select those offenders most likely to benefit from the R&R program. Given this specific purpose, there are several areas of rehabilitation and several types of offenders which fall outside the scope of the present study. These delimitations are outlined more fully below.

Programs/Approaches Under Consideration.

This study focuses on the evaluation of the SCSB because, should it be efficacious, it would facilitate placement of recidivistic offenders into the R&R program, a program which has been shown to be markedly effective in reducing criminal recidivism (see Raynor & Vanstone, 1996; Ross & Ross, 1995). The R&R program focuses on cognitive-behavioural skills training, and can be categorized as one of several available psychoeducational, offender-centred approaches to rehabilitation. Such approaches are those which directly address any or all of an offender's cognitive, affective and behavioral needs or deficits for the purpose of reducing the likelihood of his or her subsequent criminal behaviour. These approaches make use of methods that "*utilize, develop, or redirect the powers and mechanisms of the individual's mind and body, not reduce, physically traumatize, disorganize, or devastate them, by whatever means*" (Palmer, 1983, p. 247). Other types of psychoeducational, offender-centred intervention strategies include: insight-oriented, individualized counselling and therapy; group/milieu counselling and therapy; and moral reasoning training programs.

The above definition necessarily excludes several types of intervention strategies. Among those not considered were: purely academic and vocational programs; medical, surgical, or pharmacological interventions, and religious programs or theological/spiritual aid. Further excluded from the present research are those interventions that focus on persons other than the offender him or herself, (i.e., the offender's immediate family or family of origin) or on larger systemic concerns (e.g., school-based anti-violence

programs, community-wide anti-poverty programs, etc.). Finally, the present study does not address those rehabilitative efforts which take place outside of an incarcerated, institutional setting (e.g., community corrections, programs offered by parole/probation officers).

Type of Offender Under Consideration.

Just as the R&R program takes a specific theoretical approach to treatment (i.e., cognitive-behavioral), it also targets a specific group of offenders. Therefore, the present study is also limited as to type of offender. Not under consideration are: juvenile offenders (those aged less than 18 years) or those offenders diagnosed with either psychopathy or with any form of psychosis. Further excluded are those offenders whose criminal activity is secondary to, or a result of, substance addiction(s).

The type of offender 'left over' after the exclusions is likely to be a typical provincially-incarcerated inmate: a male or female adult offender who is serving, probably not for the first time, a sentence of less than two years in length. Such an inmate probably has committed either a property crime (e.g., fraud, shoplifting, theft, auto theft, possession of stolen property, breaking and entering, etc.), a personal crime (e.g., robbery, simple assault, assault with a weapon, uttering threats, criminal negligence, manslaughter, etc.), a drug-related offence (e.g., cultivation, possession for the purpose of trafficking), or a prostitution-related offence (e.g., attempt to solicit, living off the avails of prostitution). This type of inmate may be addicted to a substance, but the addiction is not the sole reason for his or her criminal activity. Further, the type of inmate under

consideration may also have been labelled with a psychiatric diagnosis (e.g., clinical depression, obsessive-compulsive disorder, eating disorder), but the label is neither one of psychosis nor of psychopathy. In short, the type of offender under consideration can be labelled a misdemeanor or a minor felon.

The Present Study

In Chapter 2, a sample of the literature pertinent to the current study is presented using a two-pronged approach. Effective reduction of criminal recidivism requires the fitting together of two separate conditions: (a) effective rehabilitative techniques, matched with (b) offenders who have been identified as likely to respond to such rehabilitation. As such, Chapter 2 presents a review of the history of research and rehabilitation efforts that have occurred in correctional settings and identifies the factors that must be present in order for a rehabilitative strategy to be effective. Also contained in this chapter is a description of the Reasoning and Rehabilitation Program, which has been shown to contain these essential factors. A case is then made demonstrating the lack of research with regard to the second crucial condition for effective rehabilitation, that of accurate and reliable identification of offenders whose recidivism level is likely to decrease when treated with the R&R program. Chapter 3 presents the specific research questions and resultant hypotheses that the present study is designed to address. The procedures used in the study, along with information with regard to the instrumentation, outcome measures, sample and scoring are also included in the chapter. The results of the study, specific to

each hypothesis, are presented in Chapter 4. In Chapter 5, the results of the study are discussed in relation to the body of literature in the area of correctional rehabilitation research. The limitations, methodological and otherwise, also are addressed in the chapter. The concluding chapter contains a summary of the present research project, and directions for future research are also discussed. Comments on the moral and ethical responsibility of continued research in the area of correctional rehabilitation also are made.

CHAPTER 2

Literature Review

The purpose of this chapter is to review relevant literature in the areas of corrections and to demonstrate how the present study addresses some of the gaps in the literature base. The review is premised on the assertion (Palmer, 1975) that a two-faceted approach to correctional rehabilitative efforts is required in order to effect a reduction in criminal recidivism. The two required conditions are: (1) high quality rehabilitation programs and, (2) the application of such rehabilitation programs to offenders whose criminal behaviour has been shown to be related to areas of deficit the particular program has been designed to address. In short, the literature review is structured to answer, at least in part, Palmer's (1975) question: "Which methods work best for which types of offenders, and under what conditions or in what types of settings" (p. 150).

With Palmer's question in mind, the present chapter opens with a broad overview of the history of correctional research endeavors, and comments are made on the political climates within which past and present research has been and is being conducted. Next, an overview is provided with regard to the variety of psychoeducational, offender-centered rehabilitation programs that have been applied in correctional settings. From research conducted on these programs, it has been possible to discern which aspects of the interventions are associated with a higher probability of success (i.e., reduced recidivism), and these aspects subsequently are outlined. The focus of Chapter 2 is then

shifted to the second condition of effective recidivism reduction, that of identifying which offenders are the most likely to respond positively to a high-quality treatment program. To this end, various systems of offender classification are reviewed.

The chapter continues with a discussion of the Reasoning and Rehabilitation (R&R) program (Ross & Fabiano, 1985), a program which has been shown to incorporate both programmatic and classificatory considerations in its design, and to effect reduced rates of recidivism in certain groups of offenders in both institutional and community-based settings. The chapter concludes by outlining the potential benefit of one specific type of offender classification/identification system, the Social Cognitive Screening Battery, as proposed by Ross and his colleagues (1985, 1995), should this battery be demonstrated to be efficacious in its classificatory purpose.

Through the evaluation of the efficacy and feasibility of the SCSB, the present study seeks to address the lack of information currently available on the classificatory efficacy of the SCSB in provincial correctional settings. In doing so the present study contributes in an indirect but significant way to the overall goal of correctional intervention: the reduction of criminal recidivism.

Historical Overview

The systematic evaluation of the effectiveness of North American correctional rehabilitation efforts has been under way for approximately 70 years (see Palmer, 1983); however, much of the earlier research is limited in both scope and sophistication. In

addition, early research took place in a conservative socio-political climate supporting a correctional system whose function was purely punitive. Since the 1950's, however, "an unprecedented amount of attention has been devoted to penal and correctional reform" (Annis, 1981, p. 321). The more liberal socio-political climate of the 1960's facilitated the rise of the treatment model in corrections, and during that decade the rehabilitation of the criminal, not his or her punishment, was considered the primary goal of corrections (Halleck & Witte, 1977). The 'rehabilitative' or 'therapeutic' ideal enjoyed widespread favour for the duration of the 1960's and into the early 1970's (Hickey & Scharf, 1980).

The treatments applied to offenders during the period of optimism largely were borrowed from the field of mental health (e.g., insight-oriented individual and group counselling/therapy). "The promise was that these 'progressive' rehabilitation techniques would render criminal offenders responsible citizens and thereby lower crime rates" (Annis, 1981, p. 321). The assumed efficacy of these techniques often led to the widespread prescription of such supposed 'cure-alls' to all offenders (Glaser, 1975). When the results of various longitudinal research projects began to accumulate in the mid-1970's, however, it became apparent that the blanket application of these psychological remediation efforts failed to live up to the promise of reduced overall rates of recidivism. In an extensive review of the then published literature (1945-1967), commissioned by New York State's Governor's Special Committee on Criminal Offenders, regarding the effectiveness of criminal rehabilitation programs (e.g., group and individual counselling, milieu therapies, academic and vocational training, medical

treatment, probation/parole vs. incarceration), Martinson and his colleagues (Lipton, Martinson & Wilks, 1975; Martinson, 1974) concluded: "With few and isolated exceptions, the rehabilitative efforts that have been reported so far have not had an appreciable effect on recidivism" (Martinson, 1974, p. 24). This report very nearly "sounded the death knell" (Palmer, 1975, p. 133) for correctional treatment efforts. Martinson himself has been referred to as a 'funeral director' (Ross & McKay, 1978). However, Martinson's report was less of a commentary on the ineffectiveness of correctional treatment as it was a pronouncement of the extremely poor quality of the outcome research that was intended to evaluate such treatment (Gendreau & Ross, 1987). The report, nevertheless, was interpreted widely as saying that 'nothing works' in correctional intervention. The 'nothing works' doctrine soon became all-pervasive among researchers, clinicians and policy-makers alike. Consequently, during the remainder of the 1970's, the rehabilitative ideal was nearly non-existent. Corrections once again solely focused on the deterrence, incapacitation and punishment of offenders.

According to Halleck and Witte (1977), the decline of the rehabilitative ideal was facilitated by four trends. The first was the dramatic rise in the North American crime rate from the years 1960 to 1972, which in the mind of the general populace, illustrated that correctional rehabilitation was 'not working.' Second, the evaluation literature (e.g., Conrad, 1982; Lipton, Martinson, & Wilks, 1975; Martinson, 1974, Robison & Smith, 1971; Sechrest, White, & Brown, 1979; Wilks & Martinson, 1976) was pessimistic in its review of correctional rehabilitative efficacy. Third, other researchers in the fields of

criminology and sociology had found some indication that punishment alone would deter crime.² The last trend contributing to the decline of the rehabilitative ideal came from civil liberties workers, who initially had been in favour of earlier prison reforms and rehabilitative efforts. However, civil liberties workers, as well as many liberal academicians and researchers, now concluded that correctional treatment programs denied prisoners their right not to be rehabilitated, and stressed that many forms of abuse were taking place in the correctional system under the guise of rehabilitation (a charge to which there was at least some truth; see Caron, 1978, 1985). In short, "rehabilitation came to be seen by liberals as a euphemism for coercing offenders and by conservatives as one for letting hardened criminals off easily" (Andrews, Zinger, Hoge, Bonta, Gendreau & Cullen, 1990b, p. 370). Consequently, the years 1975 through 1981 have been characterized as ones of widespread gloom (Palmer, 1995).

In spite of the all-pervading pessimism of the late 1970's, several researchers continued to scour the rehabilitation literature for clues as to how to optimize correctional treatment (e.g., Adams, 1977; Andrews, 1990; Andrews & Kiessling, 1980; Gendreau, 1981; Gendreau & Ross, 1979, 1983, 1987; Palmer, 1975, 1983, 1984; Ross & Gendreau, 1980; Wormith, 1984b). In the decade of the 1980's, the rehabilitative ideal can be said to have made a modest recovery. As stated by Gendreau and Ross (1987): "At the very

² This assertion since has been undermined, however (Antonowicz & Ross, 1994).

least, the recent trends in the literature support a grudging acceptance of the renewed possibilities of a potent rehabilitation agenda” (p. 351).

The continued work of Andrews and his colleagues (Andrews, 1990; Andrews, Bonta, & Hoge, 1990a; Andrews, et al. 1990b) of Palmer (1992, 1994, 1995), and of Raynor and Vanstone (1997) has extended the climate of modest optimism into the present decade. Andrews and his colleagues stated that evidence for the effectiveness of appropriate treatment with certain groups of offenders was present from even the early, and largely pessimistic, evaluations of correctional rehabilitation. They further stated that, despite a persistent 'anti-rehabilitation bias' (Andrews, 1990; Andrews & Wormith, 1989; e.g., Doob & Brodeur, 1989), such positive evidence continues to mount, and that it "constitutes a persuasive case against the 'nothing works' doctrine" (Andrews, et al. 1990b, p. 371). Palmer (1995) echoed this sentiment, stating that the current climate surrounding correctional intervention is "one of considerable hope and interest" (p. 121). Further, a review of the public at large (Cullen, Skovron, Scott, & Burton, 1990) indicated that, similar to the academic renewal of hope, the public also continues to endorse the validity of the rehabilitative ideal.

The key to the renewed optimism of recent years is the accumulating evidence for the efficacy of differential intervention strategies, which can be distinguished from the "cure-all" approaches taken in the past. In effect, current correctional rehabilitation research seeks a finely tuned answer, not to Martinson's unidimensional question of 'what

works?,' but to Palmer's multidimensional and insightful question cited earlier: which treatment efforts 'work' for what types of offenders under which conditions?

Overview of Psychoeducational, Offender-Centred Rehabilitation Programs

According to Palmer (1983), there are two main goals of correctional intervention. The primary goal is socially centred: to protect society and its citizenry. This goal is achieved when "the offender's behaviour is modified so that it conforms to the law" (Palmer, 1983, p. 3). Absolute conformity to the law is the ideal form of this goal; however, rehabilitation usually is considered successful if the recidivism rate of a group of 'treated' offenders is substantially reduced over that of control or comparison group(s).

The secondary, or offender-centred, goal of correctional treatment is to modify the offender's attitudes, values, beliefs, and cognitive skills, such that he or she becomes "more satisfied and self-fulfilled within the context of society's values" (Palmer, 1984, p. 245). Palmer also pointed out that the particular attitudes, values, beliefs and cognitions that become the foci of a particular treatment depend upon an assessment of two related questions: (a) which of the offender's attitudes, values, beliefs and cognitions are likely contributors to the offender's criminal behaviour, and (b) which of these, when changed in a prosocial direction, will be most likely to effect similarly prosocial change in the offender's future behaviour?

The means through which the primary and secondary goals of correctional interventions are met may take many forms. Interventions that focus on the primary,

socially-centred goal are likely to emphasize behavioral change, while those focusing on the offender-centred goal, tend to address cognitive variables with the assumption that short- and long-term changes in behaviour will follow (Palmer, 1984). Most of the psychoeducational, offender-centred interventions considered herein adopt the latter focus, although behaviour is often directly addressed as well.

For each of the four modalities considered in the present review (insight oriented, individualized counselling and therapy, group/milieu counselling and therapy, cognitive-behavioral skill-training approaches, moral reasoning training), the following discussion provides: a short history of the modality's use in adult correctional settings, an example describing its implementation, the conditions under which it is most and least effective, and an overall evaluation of its efficacy and potential.

Individualized, Insight-Oriented Therapy/Counselling

The approaches considered in this section represent those which typically take place in a one-on-one setting, that focus on the offender's emotions or affect, and that assume insight into one's problems will facilitate positive behaviour change (Bartollas, 1985). Such approaches include psychoanalytic therapy, client-centred/Rogerian counselling, and transactional analysis. (Cognitive and cognitive-behavioral approaches utilized in individualized settings will be discussed separately below.)

History.

Smith and Berlin (1988) and Bartollas (1985) have noted that individualized, insight-oriented counselling and therapy have been used in the correctional system for several decades. This mode of intervention was especially popular during the 1950's and 1960's, when the rehabilitative ideal was at its height. However, in the correctional system at present, insight-oriented therapy and counselling approaches are less frequently used for purposes of rehabilitation and recidivism reduction. The reason for the reduced frequency of this approach will become apparent further below.

Example of a Specific Intervention.

In a study by Adams (1961), 200 young adult male institutionalized offenders were provided with one or two sessions of individual psychotherapy per week, over a period of eight to nine months. Therapy was provided by clinical psychology graduate students or psychiatric social workers. The offenders' performance on a number of behavioral outcome measures was compared to a group of similar offenders (n = 200) who received ordinary institutional care and supervision. Both treatment and control group offenders were classified as to their amenability or unamenability to treatment. Adams defined amenability as those offenders deemed by treatment staff as having a "perceived capacity to respond to treatment by changes in a positive or constructive direction" (Adams, 1961, in Lipton, et al. 1975, p. 208). All offenders were followed for a period of 33 months following the cessation of therapy.

In general, it was found that treated offenders displayed lower rates of various measures of recidivism (e.g., parole revocation, time to reincarceration, and severity of new sentence) than did non-treated offenders. However, this overall finding was not maintained when offenders' amenability ratings were taken into account. Treated amenable offenders had the best outcome, with the lowest rate of parole revocation (30%) and the longest time to reincarceration (19.3 months), followed by untreated amenable offenders (36% parole revocation; 13.0 months to reincarceration). The unamenable control group members had a revocation rate of 44%, and were reincarcerated after an average of 12.3 months. The treated unamenable group had the worst outcome: a revocation rate of 49% and a mean time to reincarceration time 11.3 months.

These results demonstrate a finding in reference to the effect of insight-oriented therapy and counselling on recidivism that frequently has been replicated and verified by more recent research. This finding is discussed in more detail below.

Conditions of Enhanced and Decreased Efficacy.

Insight-oriented individualized counselling and therapy have been shown to effect lowered recidivism, but only with a specific and relatively rare subgroup of offenders (Adams, 1961; Andrews, et al. 1990a). This group of offenders is comprised of those who are highly verbal, who have relatively well-developed interpersonal skills, who have not identified with the criminal lifestyle, and whose discomfort with their criminal behaviour has induced anxiety and a strong motivation to change such behaviour. Using Adam's (1961) terminology, such offenders may be considered 'amenable' to treatment.

Conversely, if other types of offenders (i.e., 'unamenables': those who are less verbally adept, immature, undersocialized, egocentric, and comfortable with a criminal lifestyle) are treated using insight-oriented, client-centred therapy, the likelihood of a detrimental outcome may be increased. As such, use of this treatment modality is to be actively avoided with the latter, more common, type of offender (Lipton, et al. 1975). As Andrews and his colleagues (1990b) noted, "these therapies [psychodynamic and client-centred] are designed to free people from the personally inhibiting controls of 'superego' and 'society,' but neurotic misery and overcontrol are not criminogenic problems for a majority of offenders" (p. 376).

Overall Evaluation.

Insight-oriented therapy and counselling do have a role in the rehabilitation of criminal offenders. However, this role is a minor one. Great care must be taken in the provision of such service to an offender, due to the potential for increasing his or her recidivistic behaviour. Correctional therapists and counsellors would do well to direct increased attention to alternative intervention strategies outlined further below.

Group-based or Milieu Therapy/Counselling

The interventions considered under this heading include those that take place in small group settings (e.g., six to eight participants) or that attempt to create a therapeutic community setting within the correctional environment. Such approaches assume the mechanism of prosocial behaviour change is that of group process. They further assume

that a group setting functions as a representation of society, and is therefore an appropriate mode of intervention to facilitate reintegration into the larger society.

History.

Group therapy was first used in correctional settings during the Second World War (Kratcoski, 1981). It was first used with military offenders, and later introduced into the civilian correctional system. However, the rationale behind the use of group therapy in corrections initially was not based on the above theoretical assumptions or on evidence for its efficacy with correctional clientele. Rather, the initial reason for its use was that of expediency. According to Kratcoski (1981), this treatment modality was introduced during the 1940's and 1950's "for reasons of increased efficiency in handling prisoners rather than because treatment personnel had strong convictions that it would be more effective than individual counselling" (p. 354). Hatcher (1978) further stated that group treatment programs have been developed because of limited staff time, similarly limited financial resources, as well as because of the small number of professionally trained personnel available to conduct individualized counselling and therapy.

Example of a Specific Intervention.

An example of a correctional treatment strategy using a group/milieu mode of intervention is that of Lambert and Madden (1976). The program took place at the Vanier Centre, a Canadian provincial correctional centre for adult female offenders. According to the authors, "the Centre was established on the model of a therapeutic community, based on a philosophy of open communication between staff and residents

along with some sharing of decision-making by both groups" (p. 320). The goals of the program went beyond decreasing recidivism (defined here as reconviction or parole violation), to that of effecting prosocial attitude change and increasing the women's awareness of the consequences of their behaviour.

The attitudes and behaviours of 338 women were tracked from their admission to the centre until two years following their release. The study did not include a control group. However, the intensity of the therapeutic community ideals varied among the living units to which the women were assigned, and comparisons were made between these groups.

It was found that women assigned to the most dynamic and intensely therapeutic living unit demonstrated lower levels of recidivism (zero percent after one year; 22.2% after two years) than the women from the other four living units (14.3% to 32.9% after one year; 28.6% to 48.6% after two years; $p < .05$). The authors stated that the factor most likely to contribute to both institutional and post-release behavioral improvement was the close personal interaction of correctional officers with the offenders, and the open and honest living conditions that these relationships engendered.

Other findings included the positive effects of matching the level of program structure to the residents' level of personal difficulty, and the benefit of longer (4-8 months), rather than shorter (less than 4 months), terms of participation in the milieu setting of Vanier Centre. Further, the authors found that females with a low risk to recidivate (i.e., women who were older, had shorter criminal history, few criminal

associates, more education, minor substance abuse problems, of non-Aboriginal ethnicity) required less intense intervention than did females with a high risk to recidivate (i.e., the opposite of the above characteristics). The authors concluded that the creation of a therapeutic community was a realistic goal, and that "where the goal was most successfully reached, resident outcomes tended to be most positive" (p. 324).

Conditions of Enhanced or Decreased Efficacy.

The results of the above intervention, and other reviews of group/milieu intervention strategies have yielded information as to the conditions under which such interventions are more, and less, efficacious. Lambert and Madden's (1976) study indicated that positive interpersonal relationships between staff and offender were crucial to a favourable post-release outcome. Further, in his review of the literature, Martinson (1974) found that group programs staffed by therapists who were "specially chosen for their 'empathy' and 'non-possessive warmth'" (p. 32) tended to decrease recidivism in their participants. Martinson's review also uncovered that such programs tend to work best when they are new.

Other research has provided information as to the conditions under which group/milieu therapy may not be beneficial, and may even contribute to a higher incidence of recidivism. Wormith (1984b) found that when offenders' self-esteem ratings rose following eight weeks of group therapy focusing on discussions of "responsibility and the social implications of one's behavior" (p. 602), these offenders' recidivism rates tended to rise as well. The author concluded that when group therapy contributes to an

offender's sense of identification with other criminals, this mode of therapy may be "disastrous" (p. 613). Andrews, et al. (1990b) concurred in this view, and stated that the "opening up of communication within offender groups may well be criminogenic" (p. 376). Andrews and his colleagues went so far as to suggest that group programming be approached very cautiously, due to the fact that unless the group leader/therapist is very skilled in maintaining control over the reinforcement of pro/anti-criminal sentiments and behaviours within the group, such modes of intervention may be more harmful than helpful.

Overall Evaluation.

Group/milieu modes of correctional intervention can effect reductions in offenders' recidivism rates, but only under very specific and controlled conditions. It is best if the program is new, and enthusiasm for the program is high -- on the part of both staff and participants. Program staff must be open and honest with the participants, and must be able to engage in close personal relationships with them, while keeping in mind each offender's particular strengths and weaknesses. At the same time, the program must be sufficiently structured so as to gain and maintain control over the contingencies for pro/anti-criminal attitudes and behaviour: the program must dismantle the 'inmate code.' These conditions are very difficult to meet. Yet, as the research by Wormith (1984b) and Andrews, et al. (1990b) demonstrated, if such conditions can not be met, it is better to avoid the use of group/milieu modes of intervention.

Moral Reasoning Training Programs

While moral reasoning training programs may be considered under the umbrella of cognitive behavioural approaches, they are considered as a separate category of intervention here due to the scope and depth of their own theoretical and empirical literature base.

Moral reasoning training programs largely are based on Kohlberg's (1969, 1976) theory of moral development, or on Gibbs' revision thereof (Gibbs, 1977, 1979; Gibbs, Basinger & Fuller, 1992). Much research exists to support the conclusion that offenders' moral development lags behind that of their non-offending peers (Arbuthnot & Gordon, 1983; Arbuthnot, 1984; Basinger, Gibbs & Fuller, 1991; Hayes & Walker, 1986).

Moral training programs make several assumptions. First, such approaches assume that deficits in moral reasoning ability are causally linked to criminality (Ayers, Duguid, Montague & Wolowidnyk, 1980). As such, moral reasoning training programs, like cognitive behavioural programs, do not focus on re-habilitation, but on habilitation instead. That is, such programs do not attempt to qualitatively transform the offender, but instead strive to enhance their acquisition of a specific cognitive perspective-taking skill the development of which has thus far been retarded.

Second, the mechanism through which such development is facilitated is assumed to be that of cognitive disequilibrium, which is "aroused by the perceived inability to satisfactorily resolve a dilemma with one's current reasoning skills and social perspectives" (Arbuthnot, 1984, p. 114). Such disequilibrium typically is induced by the

discussion of moral dilemmas requiring a level of moral reasoning one stage above that currently in use by the offender (Blatt & Kohlberg, 1975).³ Finally, moral training approaches also assume that once an offender's moral reasoning ability has improved, his or her criminal behaviour will subsequently decrease.

History.

The first use of Kohlberg's theory of moral development in a correctional setting was begun in 1970 by Joseph Hickey and Peter Scharf at the Connecticut Correctional Institution at Cheshire, a maximum security facility for males (Hickey & Scharf, 1980). At that time, stated the authors, "we had a psychological theory that had barely been tested in schools, much less prisons" (Hickey & Scharf, 1980, p. 45). However, these researchers were optimistic, since they saw themselves offering inmates a radically different therapy from any that existed at that time. Instead of seeking psychodynamic insight into the inmate's criminal motivations, or attempting to use behavioral methods to extinguish their antisocial behaviour, Hickey and Scharf sought to engage inmates in Socratic dialogue that would "stimulate their conception of their moral relationships with their friends, family, and peers" (p. 46).

³ Less than a one-stage discrepancy typically will not result in the required dissonance between the offender's present moral level and the level of moral reasoning taking place during the discussion of the moral dilemmas. Conversely, more than a one-stage discrepancy is likely to result in the offender's lack of understanding of the moral rationale under discussion, and may precipitate his or her disengagement from the therapeutic process.

Examples of Specific Interventions.

In their groundbreaking first study, the Hickey and Scharf (1980) randomly selected 40 inmates from the 465 who had volunteered to participate. These participants were then assigned randomly to an experimental or control group. Inmates from both the control and the experimental groups were pretested with an early version of Kohlberg's Moral Judgement Interview (MJI; see Colby, Kohlberg, Gibbs, & Lieberman, 1983 for a revised version of this instrument). The mean pretest moral maturity scores (MMS) for the control group (251.0) and the experimental group (250.8) were not significantly different. The means indicate that both groups typically reasoned in a pre-conventional, self-interested manner, and that only occasionally were the perspectives of others considered when judgements of morally 'right' behaviour were made.

The discussion groups were led by the two researchers. Of the 20 inmates in the experimental group, two separate discussion groups of ten inmates each were formed. These groups met separately for 36 two-hour sessions (three sessions per week over 12 weeks). All sessions were audio taped, and consisted of provocative discussions of hypothetical moral dilemmas, similar to those used in Kohlberg's MJI. After a few weeks, the authors reported that trust level among group members had increased to the point where inmates felt comfortable sharing their own moral dilemmas, from both inside the institution, and 'on the street.' Eventually, all dilemmas under discussion were inmate-generated.

The initial results regarding enhanced moral development were considered promising. Thirty-two percent of the inmates in the experimental group progressed from Stage 2 (pre-conventional) to Stage 3 (conventional) reasoning, and many other inmates shifted upwards in terms of their dominant mode of moral reasoning. Inmates that demonstrated the largest gains were also those who participated more frequently in group discussions. In contrast, inmates in the control group did not demonstrate any forward progression in moral development, with most of these inmates remaining at Stage 2. Overall, the mean MMS for inmates in the experimental group was 268.0, while inmates assigned to the control group had a mean MMS of 244.1 ($t = 2.62, p < .05$).

Follow-up interviews revealed a complex pattern of post-release behaviour. After two years in the community, approximately 40% of inmates in the experimental program had returned to prison. In contrast, 55% of the control group had done so. But, the authors note that few of the 'successful' (nonrecidivist) participants had attained positive, happy lives. Even when parolees had been set up with a good job placement, or admission to college, "failures seemed far too frequent to us" (Hickey & Scharf, 1980, p. 56). When interviewed, even successful inmates affirmed that their success was in spite of, rather than as a product of, their experience in jail.

Conditions of Enhanced or Decreased Efficacy.

Since the 1970's, moral training programs have been implemented in a number of settings and with various types of offenders, and several recommendations for the enhancement of such intervention strategies have been made. First, as demonstrated by

Hickey and Scharf (Hickey & Scharf, 1980; Scharf & Hickey, 1976), the institution in which the intervention has been implemented must not feature the arbitrary use of power. If it does, any intervention fostering democratic thought is likely to be severely impeded due to the hypocrisy of such a situation.

Second, those offenders participating in treatment must be "heteronomous in both stage and dilemma opinion" (Gibbs, Arnold, Ahlhorn & Cheeseman, 1984). As such, offenders will be exposed to a variety of opinions and will be provided with opportunities to both defend their point of view, and to be exposed to others' points of view. Such an environment is essential for the facilitation of cognitive disequilibrium, the mechanism of developmental advance.

Third, the ethical dilemmas under discussion must be personally relevant and meaningful for each of the offenders (MacPhail, 1989). That is, moral training programs should provide the opportunity for offenders to discuss dilemmas relating to their own life experiences, rather than limiting such discussions to abstract situations such as those initially provided by Kohlberg (e.g., the now famous 'Heinz' dilemma). In this manner, the offenders' gains in moral reasoning skills are more likely to transfer to their personal circumstances.

Fourth, the intervention program must be of sufficient duration, preferably weekly discussion over a span of twelve weeks or more (MacPhail, 1989). Without the inclusion of these crucial elements, the results of any moral reasoning intervention program are likely to be short-lived.

Overall Evaluation.

Arbuthnot and Gordon (1983) noted that moral reasoning training programs are not used commonly with adult offenders. When they are, it is likely that the intervention targets cognitive and attitudinal variables (i.e., changes in moral developmental level) rather than behavioural variables, such as reduced recidivism. This mode of intervention assumes that such cognitive change will then lead to positive behaviour change. The ability of moral reasoning training programs to effect moral developmental advance in adults has been documented. However, there is less support for the translation of such cognitive advance into the reduction in adult offenders' recidivism levels.

Cognitive-Behavioral Approaches

Interventions using a cognitive-behavioral approach to offender rehabilitation assume that many offenders are developmentally delayed in their acquisition of numerous cognitive skills, and that facilitating such development will lead to increased social adaptation, and decreased criminal behaviour (Friesen & Andrews, 1982). Such approaches further assume that it is not the offender's trajectory of cognitive development that is deficient (a qualitative distinction). Instead, it is their slower rate of cognitive development that requires remediation (a quantitative distinction). As such, cognitive-behavioral interventions are concerned with the habilitation, rather than the re-habilitation of offenders.

Cognitive behavioural approaches recognize the interconnection among affect, cognition and behaviour, and the need to address all three of these components in order to effect long-term behaviour change. In the words of Ross, Fabiano, and Ewles (1988), cognitive-behavioral programs target "not only the offender's behaviour, his feelings, his vocational or interpersonal skills, but his cognition, his self-evaluation, his expectations, his understanding and his appraisal of his world and his values" (p. 29-30). Examples of the types of approaches considered under this heading include self-management skills training, anger-control training, problem-solving/coping skills training, and interpersonal skills training. Rational Emotive Therapy (Ellis, 1975; Ellis & Grieger, 1977) and Reality Therapy (Glasser, 1964, 1965) may also be included under this heading, although examples of the latter two intervention strategies are not provided here.

History.

Cognitive-behavioral approaches to offender rehabilitation have been introduced into the correctional system relatively recently. For instance, as recently as 1988, Ross and his colleagues described their comprehensive cognitive-behavioral approach as "unorthodox" and similar programs as "atypical" (p. 29).

The Reasoning and Rehabilitation Program.

Rather than describing separate programs that address one or two of the cognitive-behavioural skill development areas listed above, one comprehensive program will be described that targeted nearly all of these areas. Ross, Fabiano and Ewles (1988) provided a detailed description and evaluation of their intervention, entitled the

"Reasoning and Rehabilitation Program" (R&R). Their program was by far the most thorough, encompassing and intensive program encountered in the present author's review of the correctional rehabilitation literature.

The program of Ross and his colleagues (1985, 1988, 1995) was developed over a span of nearly a decade, and is based on extensive literature reviews and evaluations of the efficacy of various types of correctional intervention programs. The reviews led to the conclusion that a large proportion of offenders have deficits in their ability to understand the consequences of their behaviour, and lack the ability to use means-end reasoning to achieve their goals. In short, offenders are often "concretistic, action oriented, non-reflective and impulsive" (Ross, et al. 1988, p. 30). In addition, offenders are often egocentric: they lack the ability to take the perspective of others. Ross and his colleagues pointed out that offenders typically do not lack in general intelligence, but in social intelligence which the authors defined as: "the ability to understand other people and...to deal with interpersonal conflicts in an adaptive and pro-social manner" (p. 30). Ross and his colleagues (1988) developed a comprehensive program designed to target these cognitive deficits and to provide offenders with the opportunity to observe new behaviours and practice new skills.

In their 1988 study, Ross and his colleagues compared three groups of offenders. The first group was comprised of 22 male offenders. These offenders, in groups of 4 to 6, participated in the 80-hour R&R program. The program was delivered by probation officers who were trained in the above techniques and were supervised during their

administration of the programs. Two other groups were included in the study for comparison purposes: a no-treatment control group (n = 23) which received regular supervision, and an attention-control group (n = 17) which received a life skills program. Offenders were assigned randomly to groups, and each of the three groups was equivalent in terms of age, number of previous convictions and recidivism risk.

The results of the study were markedly encouraging. Of the offenders receiving no treatment, 69.5% were reconvicted. The life skills (attention control) group recidivated at a rate of 47.5%, while the cognitive-behavioural (R&R) treatment group had a reconviction rate of only 18.1%. The follow-up period for all groups was nine months. The recidivism rate of the treatment group was 51.4% lower than that of the no-treatment group, and 39.4% lower than that of the attention-control group. The authors concluded that cognitive-behavioural training is substantially beneficial and that it can be "remarkably effective in offender rehabilitation" (p. 34).

Conditions of Enhanced or Decreased Efficacy.

Cognitive behavioural interventions that employ clear and specific definitions of the behaviours to be targeted by the interventions are more likely to effect positive behaviour change than such interventions lacking these characteristics. Additionally, changes in the targeted behaviour are more likely to transfer to offenders' out-of-program behaviour if the offenders are provided with ample opportunity to practice their newly learned skills than if they are not provided with such opportunities for practice.

Kendall (1991) and Hollin (1990), in their work on anger management training, described two principles that may be useful in sequencing the application of cognitive-behavioral skills in a manner that facilitates their transfer and generalization to other environments. Kendall (1991) noted that both the training and the practice of new skills should be organized in such a way that participants receive hierarchical exposure to stimuli of increasing threat or intensity. For example, clients would be directed to practice their newly learned skills in situations generating only mild annoyance, before practising in situations typically precipitating extreme rage.

Hollin (1990) proposed setting the conditions for generalization along a different gradient. He advocated that program participants engage in the training and the practice of skills beginning in a 'laboratory' or classroom setting, graduating toward *in vivo* use of skills. For instance, offenders would begin by observing group leaders/therapists engaging in various skills, progress through using the skills themselves during training sessions, and eventually graduate to using these skills in their own environment -- both inside, and eventually outside, of the institution.

Overall Evaluation.

Cognitive and cognitive-behavioural modes of intervention have been implemented with a number of offender types, and evidence for the effectiveness of such programs in the reduction of recidivism with most types of adult offenders continues to accumulate (Andrews, et al. 1990b, Antonowicz & Ross, 1994). Cognitive-behavioural interventions are currently the most promising avenues for effective correctional

rehabilitation. Further, the R&R program, which targets specifically several types of social-cognitive deficits, and which is designed to facilitate the transfer of training from social-cognitive change to behavioural change, is the most promising of cognitive-behavioral programs the researcher has, to date, reviewed.

Summary

As evident from the preceding discussion, a wide range of correctional rehabilitation efforts exists even when such a discussion is limited to psychoeducational, offender-centred interventions. The interventions range from working on specific problems with individual offenders to addressing multifaceted concerns with larger groups of offenders. It is also clear that each of the modes of intervention under consideration may have positive, neutral or detrimental effects on offenders' recidivism rates, depending upon the conditions under which the treatment or program is administered, and the type of offender receiving the treatment. Further, recent research continues to demonstrate that cognitive-behavioural approaches to correctional rehabilitation are the most likely to be effective with a wide range of offenders. In the following section, a systematic discussion is undertaken regarding those conditions that research has indicated must be present in order to design, and to implement, a correctional intervention program with the highest possible probability of success.

Factors Associated With A Higher Probability Of Success

In the following section, research that has contributed to the answer to Palmer's (1975) question -- what works best for whom in what setting -- is reviewed. The factors that impinge upon the effectiveness of correctional intervention strategies can be divided into three distinct areas. The first of these refers to the content and structure of the intervention program itself, and herein will be referred to as programmatic factors. The second consideration revolves around the consideration of the type of offender being treated, and his or her specific treatment needs and potential for change. These types of considerations will be called classificatory factors. The third consideration pertains to the setting in which a treatment is administered. The two settings assessed here are institutionalized settings versus community-based settings. Each of the specific factors within these three broad areas which pertain to the success of correctional treatment strategies are outlined in more detail below.

Programmatic Considerations: Content and Structure of the Intervention

Multimodal Approaches.

The first element of programmatic success is the use of multimodal approaches to intervention strategies. Several reviewers have noted the positive effect that multimodal approaches have had on correctional outcome, compared to those using only a single treatment modality (Gendreau & Ross, 1983). For example, in their review of the literature, Gendreau and Ross (1979) noted that behaviour modification programs that

employed a variety of complementary techniques (e.g., behavioral contracting, token economies, modelling, role playing and modification of peer group interaction) were markedly more successful in reducing recidivism than those programs using a single behavioral strategy.

Wormith (1984b) also found evidence in support of the efficacy of multimodal over unimodal treatment. He posited that interventions targeting attitudinal change alone had the potential to worsen inmates' behaviour, because, while their level of motivation to change had increased, they lacked the concomitant behavioral skills necessary to make use of their newly-acquired prosocial attitudes. Only when inmates participated in a combination of treatments designed to increase prosocial attitudes, and to provide them with behavioral self-control skills, did the inmates' level of serious recidivism show a decrease.

In a meta-analysis describing the essential components of successful correctional rehabilitation programs, Antonowicz and Ross (1994) found that programs utilizing a multifaceted approach were significantly more likely to generate reductions in recidivism than were unimodal programs. They found that 70% of successful programs were multimodal, whereas only 38% of unsuccessful programs could be so categorized ($\chi^2(1) = 4.62, p = .032$).

Palmer (1983, 1984, 1995) concurred with the above and noted that "single-modality approaches may be too narrowly focused to deal with the complex or multiple problems of most serious offenders. Instead, combinations of methods, e.g., vocational

training and individual therapy or counseling, may be required" (Palmer, 1984, p. 254). Evident in the quote by Palmer is the use of multiple and inter-modal interventions, in addition to the intra-modal ones described above. Further, Palmer (1983, 1984) noted that even those who have been doubtful as to the efficacy of correctional rehabilitation have advocated the use of multimodal intervention strategies.

Importance of a Cognitive Component.

In addition to the enhancement provided by multimodal intervention, Ross, Fabiano and Ewles (1988) recommended that at least one of the modes of intervention have a cognitive focus. This recommendation is based on their extensive review of correctional rehabilitation programs undertaken between the years 1973 and 1978 (see Gendreau & Ross, 1979; Ross & Gendreau, 1980). When the effective programs were compared with those that were ineffective, it was found that, "although each successful program included a different selection and combination of interventions techniques [multimodal treatment], all shared at least one in common: some technique which could be expected to have an impact on the offender's *thinking* [cognitive component]" (Ross, et al. 1988, p. 29). Additionally, in their 1985 work, Ross and Fabiano found that of the 50 studies they reviewed, 94% (15/16) of those using structured cognitive interventions led to a reduction in recidivism. Only 29% (10/34) of the non-cognitive programs could make the same claim.

The research of Andrews, et al. (1990a, 1990b) supported the conclusion that cognitive change is an essential element of effective correctional intervention. However,

they expanded their definition to include cognitive-behavioral and social learning approaches. They noted that, "appropriate types of service typically, but not exclusively, involve the use of behavioral and social learning principles of interpersonal influence, skill enhancement and cognitive change" (1990b, p. 375). The work of Antonowicz and Ross (1994) also supported this combination of approaches. These authors found that of the 44 studies they reviewed, behavioural programs that included cognitive components were successful 75% of the time. In contrast, none of the behavioural programs without a cognitive component were successful in reducing recidivism.

In sum, the program content of effective psychoeducational, offender-centred correctional interventions will involve several different types of treatment modalities (inter- as well as intra-modal), but at least one of these modalities will be premised on cognitive-behavioral or social learning principles.

The Duration of Treatment.

The third factor associated with a greater probability of successful intervention outcome relates to the length of treatment. Several studies have assessed the relationship between the amount of time in treatment and recidivistic outcome. For instance, Lambert and Madden's (1976) observed that female offenders participating in a therapeutic community environment for 4-8 months demonstrated lower recidivism rates than those spending less than four months in that setting. Further, based on his 1989 research, MacPhail recommended that offenders spend at least 12 weeks in a moral training program.

In addition, DeLeon, Hollands and Rosenthal, (1972) found that inmates who spent three months in a treatment program had a recidivism rate that was 60% higher than those who spent 11 months in the same program. Similarly, Wexler, Falkin, and Lipton, (1990) found that the longer male and female inmates participated in a therapeutic community aimed at reducing substance abuse, the lower their recidivism rate. Those participating for less than three months demonstrated a 49% positive parole discharge rate (51% recidivism), while those participating for between nine and twelve months demonstrated the best outcome -- a positive parole discharge rate of 77% (23% recidivism). The same pattern held when months until arrest was used as the outcome variable, indicating that the longer one participated in the therapeutic community program, the longer the elapsed time until the next arrest. For both recidivism outcome measures (parole discharge status and time until next arrest) the effect tapered off dramatically after twelve months of treatment. The authors interpreted these findings as suggestive of a dosage model, "wherein greater exposure to treatment produces a positive effect up to the point of satiation" (Wexler, et al. 1990, p. 89).

As evidenced by the above, correctional treatment outcome may be enhanced by lengthening the duration of treatment, but not by extending it indefinitely. Further, the studies cited above suggest that 'quick fixes' are not likely to be found effective. In fact, such an expectation would be illogical, especially in recidivistic adult criminal populations, as criminal behaviour patterns are likely to have both begun early (Andrews,

1990; Kitchener, Schmidt, & Glaser, 1977; Mandelzys, 1979) and to have been subject to a lengthy reinforcement history.

The Intensity of Treatment.

According to Gendreau (1981), the dilution of treatment intensity to fit the constraints of the correctional environment is "the most serious failing in correctional research today" (p. 332). Programs of various types that meet the above criteria for success (i.e., they are multimodal, contain a cognitive-behavioral component and are of sufficient duration) do so only 'on paper.' When implemented in the often inhospitable atmosphere of a correctional institution (Quay, 1977), such treatments may only remotely resemble that which was originally planned. This may be due to a number of factors including the contradictory demands placed upon correctional staff (punishment/security concerns vs. treatment/rehabilitation concerns), and the lack of staff expertise in the provision of treatment(s).

The Integrity of Treatment.

The fifth and final programmatic element associated with a higher probability of successful program outcome is that of treatment integrity. Quay (1977) pointed out that the focus of program evaluation usually revolves around the methodological adequacy of its research design, and the specificity of its outcome measure. The dimension of program integrity is often overlooked. Assessing program integrity essentially entails answering the question: "What actually happened?" (p. 344). Did the actual

manifestation of the treatment involve the accurate delivery of the planned intervention to the planned target population?

Quay (1977) noted several components of service delivery that must be present in order to answer the latter question in the affirmative. Regarding the intervention itself, the treatments must be of adequate duration and intensity, as discussed above. Also, there must be a sound theoretical foundation for the intervention. Additionally, an empirical basis for the intervention is necessary; the treatment strategy should have demonstrated its efficacy both with other client populations, and in other settings. Further, one must ascertain that the planned treatment actually took place, and was not superseded by some other event (as happens frequently in correctional settings).

Quay (1977) placed a strong emphasis on the need to utilize trained and enthusiastic treatment personnel in any intervention program. Those who will be delivering the treatment must receive supervision commensurate with their level of expertise in the area. Further, treatment personnel must also be able to demonstrate competence in the knowledge and skills necessary to implement the program. If the staff who will be delivering the treatment do not possess the requisite skills and knowledge, those in charge of the program's implementation must provide them with sufficient training to rectify the inadequacy.

Classificatory Considerations: Factors Related to the Offender

In addition to the five programmatic considerations discussed above, classificatory factors are also important to the enhancement of treatment efficacy. The first classificatory factor under consideration is that of offender characteristics. The personal characteristics and attributes of an offender must be considered before optimal, individualized treatment can be implemented. Gendreau (1990) stated this succinctly: "Before any treatment begins, classification is essential" (p. 4). The systematic consideration of offender characteristics has been deemed the 'classification for treatment' approach. The use of classification schemes rests on several overall assumptions (Palmer, 1984): "that offenders differ from each other, that some such differences may produce differing responses to specified types of treatment, and that these differences among offenders should therefore be reflected in the type of treatment which is offered" (p. 255-256).

The classification of offenders into various types has been a long-standing tradition in correctional research, and several classification schemes have been developed. Three such schemes pertaining to the classification of adults are described below, the last of which will be discussed in detail.

The earliest tool used to classify offenders into types was the Minnesota Multiphasic Personality Inventory (MMPI; e.g., Christensen & Le Unes, 1974; Dunham, 1954; Holland & Levi, 1983; Mack, 1979; Megargee & Bohn, 1979). However, the primary usage of this instrument was to predict recidivism, not to optimize treatment.

While there is some evidence to indicate that elevations on the D (depression), Pd (psychopathic deviate) and Ma (mania) scales of the MMPI are marginally predictive of recidivism, other measures focusing on environmental rather than characterological conditions have proven to be substantially more useful.

Secondly, Baird and Neuenfeldt (1990) describe a classification system that was developed in 1975, called the Client Management Classification System (CMC). They described the goal of the CMC as the development of a system that would, "provide probation and parole officers with a better method of initially evaluating offenders and developing case plans based on more effective supervision strategies" (p. 1). According to the authors, evaluation of the CMC has been positive. Offenders on probation or parole who had been differentially supervised according to their offender type as determined by the CMC were less likely than offenders receiving regular supervision to have their parole/probation status revoked. Further, CMC-supervised parolees and probationers had a significantly lower rates of reincarceration after one year than did non-CMC parolees and probationers.

Baird and Neuenfeldt (1990) also have developed a similar system for assessing and classifying incarcerated inmates, the Prisoner Management Classification System (PMC). The purpose of this system was to provide prison staff with a mechanism of identifying those inmates in need of both specialized supervision, and "appropriate placement in counseling and other institutional programs" (p. 6). Inmates who were treated differentially according to PMC results engaged in significantly fewer major

institutional infractions than did inmates whose institutional treatment and supervision was not based on the PMC. The authors considered these results to be quite promising.

A third approach to offender classification has been developed by Andrews and his colleagues (Andrews, et al. 1990a; Andrews, et al. 1990b). These authors have developed a typology of four principles of classification, based on research in Canadian correctional institutions. Their system will be described in more detail for a variety of reasons: (a) it is tailored to the Canadian correctional system, (b) it is based on the assessment of a combination of static and dynamic offender characteristics, (c) it is broad enough to encompass most other classification schemes, yet (d) it allows for very specific tailoring of inmate characteristics to appropriate treatment. Further, (e) its principles relate directly to the Social Cognitive Screening Battery. The four principles of classification for effective treatment are: risk of recidivism, criminogenic needs, offender responsibility, and professional override.

Principle 1: Risk of Recidivism.

The risk principle involves two separated but related aspects -- the prediction of recidivism risk, and the matching of treatment/service level to recidivism risk level. The prediction of recidivism risk is based on an assessment of offenders' characteristics prior to treatment. The characteristics that typically are used for such assessment revolve around what Andrews, et al. (1990a) defined as "the five key indicators of antisocial propensity: behaviors, feelings, cognitions, personality and associates" (p. 26). As such, a history of early and varied antisocial behaviours that results in contact with the criminal

justice system is predictive of recidivism, as is evidence of attitudes, values and beliefs that endorse a criminal lifestyle. Evidence of lengthy association with other criminals is also predictive of recidivism. Evidence for these pre-treatment risk factors has been obtained through the use of cross-sectional research techniques.

Once an offender's level of risk has been established, it can be used to match the offender with the appropriate level of service/treatment intensity. In many cases, offenders who present with a profile suggesting a low risk of recidivism do not benefit from intensive service (e.g., Lambert & Madden, 1976), and in some cases have been shown to demonstrate poorer outcome than if they had not received treatment.

Conversely, those who are assessed as of moderate risk to higher risk tend to benefit the most from treatment, as long as the treatment given is appropriate for the offender (i.e., the principles of risk, need and responsivity are utilized to prescribe optimal intervention strategies). The relationship between the interaction of risk level/treatment level and outcome is not linear, however. Offenders in the highest risk category (perhaps, for example, those diagnosed with psychopathy) do not demonstrate consistently favourable outcome regardless of the intensity of treatment provided.

In short, according to Andrews, et al. (1990a), the assessment of pre-treatment offender characteristics alone can reliably and accurately predict recidivism. In addition, if information regarding an offender's risk is used to determine what level of treatment he or she receives, the prediction of post-treatment outcome is also enhanced (Ross &

Gendreau, 1980). Further increases in the probability of successful outcome can be obtained through the use of the second classification principle: criminogenic need.

Principle 2: Criminogenic Need.

Criminogenic needs are a subset of risk factors. However, contrary to the above risk factors, which are measured prior to the commencement of treatment, the principle of criminogenic need refers to the assessment of factors which change as a result of treatment. Such change is assessed through the use of pre- and post-testing. In order for a need to be considered criminogenic, such pre-to-post change must be associated with enhanced prediction of outcome. For instance, a recently incarcerated offender may exhibit depressed mood in association with the loss of contact with his or her family. If after receiving cognitive-behavioral counselling the feelings of depression lift, but this change in affective health is not associated with a lowered probability of recidivism, it can not be considered a criminogenic need.

Through the use of both cross-sectional and longitudinal research, several types of criminogenic needs have been established. The variable in which change over time has been most strongly associated with positive treatment outcome is an offender's attitude toward the acceptability of deviant and criminal behaviour. That is, offenders who, after treatment, become less likely to endorse attitudes, values and cognitions that favour criminal behaviour are more likely to demonstrate a positive outcome (i.e., lower recidivism rates) than are offenders whose attitudes do not change in this direction. The finding that changes in cognitively mediated factors are the most salient predictors of

post-release success supports the use of cognitive-behavioral interventions as an essential part of effective treatment, as discussed earlier.

In addition to change in procriminal sentiments, Andrews and colleagues (1990a) noted that other criminogenic needs have also been discovered. Changes in the number of criminal associates, amount of substance abuse, and in antisocial personality characteristics were also predictive of recidivism, over and above that provided by measurement of pre-treatment risk factors alone.

Interestingly, some offender characteristics in which positive change had been assumed to be related to decreased recidivism were not so related. For instance, contrary to widely-held opinion (e.g., Astone, 1982), Wormith (1984b) found that increasing offenders' self-esteem did not contribute to reduced recidivism. In fact, when offenders' self-esteem increased concomitantly with increases in identification with members of a criminal group, recidivism rates for this group increased. In addition, Andrews, et al. (1990a) noted that decreases in offenders' levels of anxiety and in feelings of personal distress did not contribute to an increased probability of lowered recidivism. In sum, as found by Gendreau, Cullen and Bonta (1994) in their review of the literature, treatment programs which target symptoms of anxiety, depression and low self-esteem in offenders typically are not effective in reducing criminal recidivism.

Principle 3: Offender Responsivity.

Andrews and colleagues' (1990a, 1990b) third principle of classification for effective treatment refers to the consideration of the differential manner in which

offenders respond to varying modes and styles of intervention. Such differing responses are dependant on the offender's cognitive abilities and learning style (Ross & Gendreau, 1980). The authors describe one style of intervention that appears to be generally efficacious, and several other styles that are differentially effective within certain subtypes of offenders.

The style of treatment to which offenders generally respond well is that of highly structured intervention strategies. Andrews, et al. (1990a) noted that in a review of the literature, structured programs were found to be over four times as likely to lead to recidivism reduction than were unstructured programs. Structured treatment was defined as that which included authoritative program leaders, an anticriminal modelling element, and a concrete problem solving element.

Several specific types of offender responsivity are also addressed by the Andrews group. For instance, in regards to the highly structured programs noted above, their efficacy is especially apparent with offenders of low cognitive and interpersonal maturity. Further, programs that are low in structure (i.e., that are interpersonally and verbally demanding) only should be used with those offenders evidencing relatively high levels of conceptual maturity, interpersonal maturity and empathy, and should be actively avoided in the case of offenders demonstrating narcissistic or antisocial tendencies. In short, when in doubt of an offender's level of functioning, the Andrews group recommended opting for a high structure intervention, since the empirical basis for its efficacy with most types of offenders is well established.

As to other types of offenders, the authors recommended against using highly confrontative modes of treatment with offenders demonstrating high levels of anxiety, stating that inmates "have been found to deteriorate" (p. 42) under these conditions. Conversely, less anxious offenders appear to profit from such techniques.

Especially poor responders to any type of treatment are offenders presenting with psychopathy. The authors posited that this may be due to the offender type's particular combination of risk factors and criminogenic needs. For instance, they are considered one of the highest risks to recidivate (i.e., many criminal associates, lengthy history of criminal involvement), and present with a plethora of criminogenic needs (i.e., markedly procriminal attitudes, high levels of impulsivity, low tolerance for boredom, low empathy, low motivation, low anxiety/interpersonal distress and low interpersonal maturity).

Conversely, offenders that seem to be especially amenable to treatment have few criminal associates and a limited criminal history, experience high levels of interpersonal distress and anxiety as a result of their criminal behaviour, are verbally adept, demonstrate reasonable levels of empathy, are able to delay gratification, have a vested interest in conventional and prosocial goals, and do not endorse the legitimacy of criminal behaviour. As such, these offenders are usually very motivated to change their behaviour. Most offenders however, fall between the two poles of extremely amenable to treatment, and virtually non-amenable. The foregoing aspects of offender responsivity represent some guidelines as to the treatment of the intermediate group.

Principle 4: Professional Override.

As with most classification schemes, allowances must be made for cases which are apparently unclassifiable. The fourth principle of classification for effective treatment represents such an allowance. The authors stated that regardless of the ongoing progress being made in the power and specificity of the principles of risk, need and responsivity, "rehabilitation professionals will always be called upon to step beyond extant knowledge in their decision making" (p. 44). In other words, the correctional worker must always use his or her best judgement in recommending treatment for a particular offender, which may result at times, in the provision of a treatment that runs counter to that suggested by assessing the offender's risk, need and responsivity considerations. When such occasions arise, the authors recommend a detailed evaluation of the treatment process and outcome, such that information regarding offender responsivity may continue to build.

Definition of Appropriate Treatment.

The Andrews group (1990a, 1990b) has tested their classification scheme to determine whether or not its usage would indeed maximize treatment effectiveness. After constructing their scheme on their own sample of offenders (Andrews, et al. 1990a), they used meta-analytic techniques to test its validity on other offender populations (Andrews, et al. 1990b). In the latter study, the authors used their scheme to classify the interventions given to adults and juveniles in 80 studies undertaken from the years 1950 through 1989 as being either appropriate, inappropriate or consisting of criminal sanctioning alone.

Appropriate service was defined as that adhering to the principles of risk, need, responsivity and professional override. As such, the following types of interventions were deemed appropriate: those that were delivered to higher risk cases; that were cognitive-behavioral in nature; that were not cognitive-behavioral but expressly targeted criminogenic need; and those that took into account the different responsivity potentials of offenders. Conversely, inappropriate service included: interventions directed toward lower risk cases or that did not match treatment to offender responsivity, interventions utilizing non-directive/unstructured or psychodynamic counselling, interventions without a clear plan for gaining control over anti-criminal modelling and reinforcement, and interventions relying on intimidation (e.g., 'scared straight' programs).

Services defined as criminal sanctions were those that focused on variations in the nature and degree of processing the offender received via the criminal justice system (CJS), but that did not involve any intentional rehabilitative effort apart from the effect of CJS involvement. Services compared in this category included restitution contrasted with no restitution, police cautioning contrasted with regular CJS processing, less probation contrasted with more probation, and probation contrasted with custody.

The results of the meta-analysis supported the use of appropriate treatment as a means of enhancing the probability of reduced recidivism. Appropriate treatment was more effective ($\phi = .30$) than both inappropriate treatment ($\phi = -.06$) and criminal sanctions ($\phi = -.07$) across all settings (institutional vs. community) and populations (juvenile vs. adult), regardless of the strength of the research design, and the mode of

treatment (non-cognitive-behavioral vs. cognitive-behavioral). The effect of appropriate treatment was especially strong in studies undertaken since 1980, which the authors interpreted as a result of recent studies' more sophisticated intervention strategies in which greater attention was paid to cognitive variables.

Andrews and his colleagues (1990b) noted that in the studies they reviewed for their meta analysis, an effect size of .30 for studies using appropriate service translated into an average reduction in recidivism rates of 50%. This magnitude of recidivism reduction points to the fact that when the principles of risk, need, responsivity and professional override are used to provide inmates with interventions that are appropriately matched to their specific situation, such interventions may indeed be highly effective.

Setting Considerations: Location of the Intervention

Completing the set of three considerations related to conditions of enhanced probability of success of correctional intervention strategies is that of the treatment setting. Although there are many possible settings in which correctional intervention may occur (e.g., minimum, medium, maximum security institutions, halfway houses, probation offices, etc.), the following discussion will focus on the overall differences in treatment efficacy between the dichotomous categories of institutional/residential programs and community-based programs.

In their meta-analysis of correctional rehabilitative efforts, Andrews, et al. (1990b) found that appropriate correctional interventions (i.e., those that adhered to the

above noted principles of risk, need and responsivity) were effective in institutional settings, but significantly less so than in community-based settings. The treatment effect sizes (measured as phi) for these two settings were .20 and .35 respectively ($F(1, 52) = 5.89, p < .02$). In addition, treatment that was not optimized on the basis of the risk, need and responsivity principles performed particularly poorly in institutional settings, ($\phi = -.15$) as compared to community settings ($\phi = -.04; F(1,36) = 3.74, p < .06$). The authors interpreted the result to mean that "institutions and residential settings may dampen the positive effects of appropriate service while augmenting the negative impact of inappropriate service" (p. 384). However, Andrews and colleagues cautioned against interpreting such findings as reason to discontinue appropriate service in institutional/residential settings. Indeed, this finding seems to underscore the increased importance of developing appropriate intervention strategies for those offenders who must, due to the sanctions imposed by the legal system, be housed in secure residential or institutional settings.

The Reasoning and Rehabilitation Program: A Well-Considered Intervention

The preceding discussion pointed out several considerations related to maximizing the probability of an intervention's success as measured by the reduced recidivism rates of its participants. These considerations relate to the program itself (i.e., multimodality, cognitive component, duration, intensity, integrity), to the offender (i.e., the principles of risk, need, responsivity and professional override), and to the setting in

which the intervention program is taking place (i.e., in an institution or in the community). Since the Reasoning and Rehabilitation program has been shown to be effective in both community- or institution-based settings (see Ross & Ross, 1995), this consideration will not be discussed further. Rather, the following paragraphs outline the R&R program and describe how it encompasses the necessary programmatic and classificatory considerations.

R&R's Programmatic Factors.

The reader will recall that the five programmatic factors related to effective treatment are: multimodality, incorporation of a cognitive component, and sufficient duration, intensity and integrity of treatment. With regard to the first programmatic factor, multimodality, the R&R program has been designed to address several modes of thought, emotion and behaviour. The components of the program include the following:

Structured Learning Therapy (to teach social skills); Lateral Thinking (to teach creative problem-solving); Critical Thinking (to teach Logical, Rational thinking); Values Education (to teach values and concern for others); Assertiveness Training (to teach non-aggressive, socially appropriate ways to meet their needs); Negotiation Skills Training (to teach alternatives to belligerent or violent behavior in interpersonal conflict situations); Interpersonal Cognitive Problem Solving (to teach the thinking skills required to deal with interpersonal problems and conflicts); Social Perspective Training (to teach how to recognize and understand

other people's views and feelings); Role Playing and Modelling (demonstration and practice of socially acceptable and efficacious interpersonal behaviours) (p. 31).

These skills are taught using a variety of methods including audio-visual presentations, reasoning exercises, games and group discussions.

As to the second programmatic consideration (the inclusion of a cognitive component), the listing above indicates several such components. In fact, four of the nine modules of the R&R program are cognitively focussed. Therefore, the requirement of inclusion of a cognitive component is well met by the R&R program.

With regard to the duration of treatment, the R&R program is of substantial length for programs of this sort. The R&R program is structured to run over 35 sessions each of at least two hours' duration, for a total of 70 hours of programming undertaken over a span of seven to ten weeks. The authors emphasize that 70 hours is the minimum required to deliver the program, but that more instructional time may be required. In the words of Ross and Fabiano (1986), "take as much time as the group needs to understand the skill you are teaching. The goal is to teach the participants to think, not just to get through the whole program in the allotted time" (p. 9).

In terms of treatment intensity, the R&R program also fares well. As noted earlier, Quay (1987) had concerns that even the best-planned programs have their intensity 'diluted' by the constraints present in the correctional system. The R&R program was specifically designed for use in correctional settings however, and instead of

having this dilute the effect of the program, Ross and Fabiano have taken steps to make the structured, constrained correctional environment work as part of the intervention itself. The R&R program is “integrated in such a way that significant individuals in the participant’s environment (correctional officers, probation officers, teachers, parents, spouses, peers etc.) understand the principles of the program, and reinforce and encourage the offender’s skill acquisition” (Ross & Fabiano, 1986, p. 9). Further, the program uses “techniques that lack the appearance of therapy or school activities which may be aversive to many offenders” (Ross & Fabiano, 1986, p. 6). Overall, the program is constructed such that it “is both highly enjoyable and highly demanding for offenders” (Ross & Fabiano, 1986, p. 6).

Lastly, an effective program must demonstrate a high level of integrity. That is, it must have a solid theoretical base, and have empirical evidence demonstrating its efficacy. Further, it must be ensured as much as possible that the program that is planned for delivery is the program that is actually delivered. The R&R program meets these requirements as well. The program is solidly based in cognitive theory, and is premised on two assumptions: (a) that offenders tend to be less than adequately socialized with regard to the values, attitudes, reasoning and social skills which are required for adequate pro-social adjustment; and (b) these skills can be taught. Empirically, a large body of research dating back to the 1970’s (i.e., Ross & McKay, 1978) through the present decade (i.e., Raynor & Vanstone, 1997) has demonstrated the R&R program’s efficacy in reducing offender’s recidivism rates in a variety of institutional and community-based

settings. With regard to program delivery, the R&R program has built-in quality assurance measures. For example, in order to have access to the training manual for the R&R program (Ross & Fabiano, 1986), the researcher was required to complete a one week training course conducted by Elizabeth Fabiano. All potential instructors must attend such a training course. Further, participants who successfully complete the training course must instruct one full R&R program before they are considered R&R instructors by T3 Associates Training and Consulting, Inc.⁴ Finally, in order to facilitate ongoing program integrity, telephone-based support is available from T3 Associates for all R&R instructors on an ongoing basis.

R&R's Classificatory Factors.

The offender classification system of Andrews and his colleagues (1990a, 1990b) outlined earlier described four principles to be taken into account when targeting specific offenders for participation in rehabilitative programming. These four principles are that of offender risk, need, responsivity and professional override. The following paragraphs outline how well the R&R program takes these principles into consideration in order to ensure that it is delivered to the offenders who are most likely to benefit from such training.

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With regard to offenders' static risk factors, the R&R program is targeted for participants whose risk to re-offend has been deemed moderate to high. In the words of Ross and Ross (1995),

The R&R program is an intensive, resource-demanding program. It was designed not for low risk offenders who are unlikely to present serious behaviour problems or to re-offend, but for medium to high-risk offenders.... It is with such categories of offenders that the program is likely to represent the best investment (p. 11).

The R&R program also targets offenders' dynamic risk factors or criminogenic needs. As previously noted, deficits in offenders' social-cognitive functioning have been linked to recidivism, and improvements in their social-cognitive functioning have been shown to lead to a reduction in these offenders' rates of recidivism. The fact that a reduction in offender's criminal behaviour can be predicted by pre- to post-program changes in social-cognitive skill level is what defines social cognitive skills as a dynamic risk factor for a proportion of offenders. What has not yet been established however, is whether the SCSB proposed by the developers of the R&R program (Ross, et al. 1985, 1986, 1995) is an effective means of identifying those offenders whose lower level of social-cognitive skill is related to their criminality, and are therefore most likely to benefit from the program.

With regard to the principle of responsivity, the R&R program makes use of structured delivery of concrete, practice-based program materials. Further, the R&R program is taught by instructors who have been trained to deliver the program in both a authoritative manner, and in a manner which differentially reinforces pro-social (i.e., non/anti-criminal) sentiments. As noted earlier, these techniques have been shown to be the most likely to lead to improvements in the offenders' identified dynamic risk factors.

The R&R program also allows for use of the principle of professional override, when necessary. For instance, prior to participating in the program, offenders are screened by the instructor to determine if they are likely to be suitable for the program (e.g., sufficiently motivated, willing to make the requisite time commitment, not evidencing traits of psychopathy, etc.). Offenders deemed unsuitable for treatment would be excluded from the program regardless of whether their social-cognitive skills were lacking. In addition, the program allows for flexibility in its delivery, such that each group of participants receives instruction and practice in the core elements of the program (i.e., program process) while parts of the program (i.e., program content) may be altered slightly to reflect group interests (e.g., offender-generated ethical dilemmas, emotion-management scenarios, etc.).

Overall, the R&R program fares very well with regard to the necessary programmatic considerations, and reasonably well with regard to the classificatory considerations necessary for implementation of an effective correctional rehabilitation program. However, as briefly noted above one key area is lacking. The developers of the

R&R program have proposed a social-cognitive screening battery (SCSB) designed to assist in the identification of those offenders whose social-cognitive skills deficits constitute a dynamic risk factor or criminogenic need. In order to provide differentially effective intervention to offenders, it is essential to be able to distinguish between offenders whose risk of recidivism will likely decrease as a result of participation in the R&R program, and those whose risk will not likely decrease. However it has not yet been demonstrated that the SCSB is effective in such differentiation. As such, an evaluation of the SCSB as a means of identifying offenders whose social-cognitive deficits constitute a criminogenic need is the primary purpose of the present study.

Further, it has not been demonstrated whether the use of such an instrument, would be efficacious or feasible in a provincial correctional institution, as opposed to in the federal correctional system (where most such research takes place). Research exists in support of the notion that offenders who are typically housed in provincial institutions, particularly those involved in non-violent property crime, are those most likely to make a career out of criminal behaviour (Holland & Levi, 1983). Further, misdemeanants and minor felony offenders (i.e., those in provincial institutions) are far more numerous than are serious felons (i.e., those in federal institutions). In fact, the former type of offender is the primary contributor to what has been called the 'revolving door' phenomenon of corrections (Pallone & Hennessey, 1977). As such, answers to the questions regarding the identification of the criminogenic needs of this specific population of offenders have the potential to substantially contribute to both goals of correctional intervention:

effecting positive and prosocial change in the attitudes, cognitions and behaviours of offenders, and protecting society and the public at large.

CHAPTER 3

Procedures

In this chapter, the hypotheses under investigation are presented. In addition, detailed information as to the reliability, validity, and limitations of the measures used to test the hypotheses is provided. Demographic information with regard to the sample is outlined, and the recruitment, assessment, and scoring procedures are described.

Hypotheses

Five main research questions were investigated in the course of the study. These questions, along with their associated research hypotheses are outlined below.

1. To what degree do provincially incarcerated male and female offenders exhibit social-cognitive skills deficits, in comparison with a sample of non-incarcerated individuals? It is hypothesized that incarcerated individuals' scores on the Social-Cognitive Screening Battery (SCSB) instruments will reflect more deficits in these areas than will those of non-incarcerated individuals.
2. How well does the SCSB predict participants' group membership (incarcerated versus non-incarcerated), once the possible effects of intelligence, educational attainment, and depression on social-cognitive functioning have been statistically controlled? It is hypothesized that the SCSB will significantly

improve prediction of group membership over and above that allowed by use of the three control variables alone.

3. To what degree do incarcerated participants' scores on the SCSB instruments relate to their history of criminal recidivism, as measured by the number of times a participant has had contact with the criminal justice system in Alberta? It is hypothesized that incarcerated participants' level of social-cognitive skills will vary inversely with greater numbers of criminal contacts. In other words, incarcerated participants with longer criminal records will be less skilled in the social-cognitive domains measured by the SCSB than are their less recidivistic incarcerated peers.
4. Which components of the SCSB are the strongest contributors to its overall predictive efficacy and should be retained for inclusion in a streamlined version of the SCSB? There is no literature base from which to generate specific hypotheses in this regard, and therefore none were made. Instead, exploratory analyses, described below, were undertaken to determine each instrument's predictive efficacy.
5. Is the proposed battery of instruments practical in the setting of a provincial correctional centre? Again, no specific hypothesis was proposed with regard to this research question. Rather, information obtained from testing the foregoing hypotheses, along with the researcher's experiences during the assessment process, were used to assess the SCSB's utility and feasibility.

In order to address the first research question, descriptive and inferential statistical techniques were employed to determine if differences between incarcerated and non-incarcerated participants exist with regard to obtained scores on SCSB instruments and control variable instruments. Analyses of results by gender were also undertaken for each of the measures.

The second research question was addressed through the use of a discriminant function analysis. The seven components of the social-cognitive screening battery served as predictor variables in the analyses. The three control variables estimating educational attainment, intelligence and depression, were statistically partialled out of the analyses. The statistical control procedure entailed using self-reported years of formal education along with modified Beck Depression Inventory scores and Raven's Standard Progressive Matrices scores as covariates which were entered into the discriminant function analysis prior to entering the seven predictor variables from the SCSB. The covariates were entered as a set, and the seven predictor variables were also entered as a set. The criterion variable for the discriminant function analysis was group membership (i.e., incarcerated or non-incarcerated). The first test of the utility of the screening battery was to determine how well it correctly classified participants into these two groups.

The third research hypothesis was tested using a setwise hierarchical multiple regression analysis. As stated by Ross and Ross (1995), recidivistic offenders are the most likely group of offenders to evidence social-cognitive deficits. Therefore, offenders with the longest history of recidivism should demonstrate the poorest scores on the

social-cognitive screening battery instruments, and vice versa. Finally, the fourth and fifth hypotheses were tested using a combination of results generated from the previous analyses, along with qualitative information obtained during the researcher's administration and scoring of the SCSB itself.

The above methodological approach was chosen for several reasons. First, very little research has been conducted as to the social-cognitive skills level of provincially incarcerated inmates, both male and female. As such, their potential amenability to the R&R program is also unknown. General descriptive information on the social-cognitive skills of this population will therefore begin to fill a noticeable gap in the literature in this area.

Second, conducting an initial discriminant function analysis on the overall sample, followed by a correlational analysis on the incarcerated sample allows for a two-step test of the discriminative utility of the SCSB. Ross and Ross' (1995) theory stated that recidivistic offenders are the most likely offenders to exhibit deficits in their social-cognitive skills. This being the case, any battery purporting to measure social-cognitive skills should first be able to differentiate between offenders and non-offenders (Hypothesis 2). Additionally, a particularly efficacious battery should be able to further distinguish among offenders of varying criminal histories. Therefore this two-step methodology allows for a more fine-grained test of the SCSB.

Finally, regardless of an instrument's theoretical basis and statistical integrity, it must be a practical tool which is feasible to administer in the setting for which it has been

developed. In fact, it could be argued that an instrument which is nearly psychometrically flawless may be considered practically useless if its administration, scoring and interpretation are too unwieldy. The latter two research questions were included for this reason. That is, they were included in order to determine which of the components of the SCSB were the most efficacious and therefore warrant retention in a streamlined version of the battery (Hypothesis 4), and to determine if even a streamlined version of the SCSB is practical in a provincial correctional setting (Hypothesis 5).

Instrumentation

Seven instruments, which purportedly measure different aspects of social-cognitive functioning, were used in the present study. Three additional measures were used for statistical control purposes only. A description of these measures, along with information as to their psychometric properties, is provided below.

Social-Cognitive Screening Battery Instruments.

The first instrument contained in the screening battery is the Matching Familiar Figures Test (MFFT; Kagan, Moss & Siegel, 1963). The MFFT is widely used to measure impulsivity and self-control. It has been designed to “measure an individual’s style of responding to problem solving situations in which responding too quickly without adequate reflection leads to errors” (Ross & Fabiano, 1985, p. 299). The test presents 12 items in which the subject is shown a single picture of a familiar object and is instructed to select, from an array of eight variants, the one picture that is identical to the stimulus

figure. The test is individually administered. Two types of scores can be obtained from the MFFT: (a) the amount of time elapsed until the subject selects one of the pictures as his or her answer (i.e., latency scores); and (b) the number of selections a subject makes in arriving at the correct answer (i.e., error scores). Short latencies of responding and many errors on this task are indicative of a non-reflective and inaccurate style of responding.

The psychometric properties of the MFFT, when latency scores are used, are adequate. Test-retest correlations for latency scores ranged from .58 to .96, while internal consistency ratings for latency scores were .89 (Messer, 1976). However, the same does not apply to error scores. With regard to the latter, Messer (1976) has indicated that the test-retest correlations are from .34 to .80, and the internal consistency ratings from .58 to .62. In addition, Ault, Mitchell and Hartmann (1976) noted low test-retest correlations for error scores: from .23 to .43 over three-and-a-half week to two-and-a-half year intervals. As such, only latency scores were used in the present study. Further, it should be noted that despite its extensive use, "the MFFT has not been adequately normed and normative studies with offender populations [are] required" (Ross & Fabiano, 1985, p. 300). While the current study can not be construed as providing normative data for offenders, it does provide some additional information pertinent to this population.

The next instrument in the screening battery is Chandler's (1973) Role-Taking Task (RTT). This instrument is used to assess an individual's ability to take the perspective of others. In its individualized administration, participants are presented with

cartoon sequences in which a central character is involved in a particular social situation. The central character's behaviour is explainable in terms of preceding events. Midway into each cartoon sequence, a late-arriving bystander is introduced, who, unlike the subject, is not aware of the preceding events and therefore must interpret the central character's behaviour from another point of view. The participant is asked to tell stories for each cartoon sequence and his or her responses are scored for the degree to which he or she is able to set aside facts known only to him or herself and construct a 'bystander' story which is different from his or her own.

With regard to the Role-Taking Task, Ross and Fabiano (1985) stated that, "of the cognitive role-taking tests in the literature, the most complete set of reliability data are available for this test" (p. 301). Interrater reliabilities have ranged from .78 to .96, with test-retest correlations (2-4 week) of .68. This task has also demonstrated success in discriminating between groups of non-delinquent male adolescents and chronic delinquent male adolescents (Chandler, 1973).

The third task contained in the screening battery, the Conceptual Level – Paragraph Completion Method (CL; Hunt, Butler, Noy & Rosser, 1978) has been designed to assess an individual's ability to reason in an abstract manner. It has also been used to make inferences pertaining to individuals' levels of conceptual complexity and interpersonal maturity. The instrument is semi-projective, assessing thought processes through the use of open-ended sentences that pertain to ambiguous topics such as conflict, uncertainty, rule structures, and authority. These sentence stems are as follows: "What I

think about rules is”; “When I am criticized.....”; “What I think about parents.....”; “ When someone does not agree with me.....” ; “ When I am not sure.....”; and “When I am told what to do.....” To each of these sentence stems, participants must respond with a minimum of three or four sentences, indicating his or her own personal reactions to the sentence fragments. The resultant collection of completed paragraphs is considered to be representative of an individual’s overall conceptual level. The authors posit four such general levels of conceptual development. These general levels are described in Figure 1. (The authors of the CL also posited half-stages, which fall between the general stages; however, these stages will not be described here. The interested reader is directed to Hunt, et al., (1977) for a full discussion).

The psychometric properties of the Conceptual Level may be considered adequate. In a series of 26 reliability studies, the median level of interrater reliability was .86. Three month test-retest reliability estimates of .67 were documented in a group of college students. One year test-retest data was obtained for samples of students in Grade 6 through Grade 11; these reliability coefficients range from .45 for Grade 6 students to .56 for Grade 10 students. In addition, the CL has been shown to discriminate effectively between delinquent and non-delinquent boys (Hunt & Hardt, 1965).

A measure of locus of control also has been included in the screening battery. Levenson’s (1973) Locus of Control (LOC) scale is based on Rotter’s (1966) Scale. However, Levenson’s scale provides information on three loci, rather than the usual two(internal and external). The ‘Internal Control’ scale (I) measures the degree to which

Figure 1 Descriptions of Conceptual Development Level

Conceptual Level	Description
Level 0	<ul style="list-style-type: none"> -self-centered: does not consider others' thoughts or feelings -resists being ruled or controlled by others -tends to react aggressively or defensively if thoughts or feelings are challenged
Level 1	<ul style="list-style-type: none"> -concerned with behaving in a socially acceptable way -polarized or dichotomous thinking or behavior -situations evaluated in a concrete fashion according to what is socially acceptable or correct (e.g., right-wrong; good-bad).
Level 2	<ul style="list-style-type: none"> -open to others' ideas but more focused on own thoughts and ideas -evaluates alternatives but does not integrate this evaluation with the solution or decision -increased tolerance for uncertainty, ambiguity and difference of opinion
Level 3	<ul style="list-style-type: none"> -considers and weighs alternatives and then decides on best action -shows concern for his own and others' ideas and feelings -when possible, seeks compromise which is suitable to all -secure, independent and will not sacrifice own values to please others or to conform -accepts full responsibility for consequences of actions

an individual perceives that one's reinforcements are contingent upon one's own behaviour. The 'Powerful Others' scale (P) measures the degree to which an individual believes that consequences for one's actions are contingent upon the wishes of those seen to be in positions of authority over the individual. The 'Chance' scale (C) measures the degree to which an individual perceives that consequences are controlled by luck or fate.

With regard to the psychometric properties of the LOC, internal consistency ratings are only moderately high (Levenson, 1973; I = .67; P = .82; C = .79). Spearman-Brown split-half reliabilities range from .62 to .66 for the three subscales, and test-retest reliabilities range from .60 to .79 (Levenson, 1973). Adequate convergent and discriminant validity has also been demonstrated (Ross & Fabiano, 1985). The Levenson scale has been used with both incarcerated offenders and with non-incarcerated offenders on probation.

Gough's (1957) Rigidity Scale (RS) has been included in the screening battery for the purpose of assessing the degree to which individuals are rigid and fixed in their thinking and their social behaviour. This measure is a subscale of the California Psychological Inventory (CPI) and consists of 22 true-false items. Many of the items consist of statements which "reject the sorts of simple dogmatic assertions that characterize the authoritarian personality" (Ross & Fabiano, 1985, p. 312), or which "tap tolerance for uncertainty and ambiguity" (p. 312).

With regard to the psychometric properties of the Rigidity Scale, Ross and Fabiano (1985) cautioned that while they recommended it as a research tool, they noted

that it is the least valid of the CPI scales. They stated that the Rigidity Scale, while directly correlated with other measures of rigidity, has not been demonstrated to correlate inversely with measures of cognitive flexibility.

The next instrument included in the social-cognitive screening battery is the Watson-Glaser Critical Thinking Appraisal (CTA; Watson & Glaser, 1980). This paper-and-pencil instrument consists of 80 items designed to assess the following skills: "inference (discriminating among degrees of truth or falsity of inferences drawn from given data), recognition of assumptions (recognizing unstated assumptions or presuppositions in given statements or assertions), deduction (determining whether certain conclusions necessarily follow from information in given statements or premises), interpretation (weighing evidence and deciding if generalizations or conclusions based on the data are warranted), and evaluation of arguments (distinguishing between arguments that are strong and relevant and those that are weak or irrelevant)." (Watson & Glaser, 1980, p. 2). The CTA is available in two equivalent forms (A and B); Form A was used in the present study. The following psychometric data pertain to this Form.

In terms of its psychometric properties, the CTA has demonstrated split-half reliability coefficients of .69 (Grade 9 students) to .85 (third year medical students). Three month test-retest reliability was tested to be .73. Its internal consistency has also been rated as high, and it has demonstrated acceptable concurrent validity (Crites, 1965), correlating strongly with the Otis-Lennon Mental Ability Test and the Stanford Achievement Test.

The final instrument included in the social-cognitive screening battery is Hogan's (1975) Empathy Scale (ES). This scale is a combination of 25 items from the California Psychological Inventory (CPI), and 39 items from the Minnesota Multiphasic Personality Inventory (MMPI). Together, these 64 items measure "the intellectual comprehension of another's condition or state of mind without necessarily experiencing that person's feelings" (Ross & Fabiano, 1985). The aspect of intellectual comprehension is what distinguishes Hogan's Empathy scale from other empathy scales. According to Ross and Fabiano (1985), other empathy scales appear to assess participants' concern for others rather than assessing an "ability to understand others or to comprehend how other people view him [or her]" (p. 316).

Research has demonstrated that the reliability of the empathy scale ranges from .71 to .84 (Ross & Fabiano, 1985). In terms of validity, Hogan (1975) indicated that it predicts clinicians' ratings of empathy better than all other existing measures. In addition, the scale has been found to "correlate quite well with ratings of social acuity [and]...is negatively correlated with dogmatism and authoritarianism (Ross & Fabiano, 1985, p. 315-316).

The screening battery utilized by Ross and Fabiano (1985) also included the Means-Ends Problem Solving Procedures (MEPS; Spivack, Platt & Shure, 1976). Specifically, the MEPS "measures the ability to plan step-by-step means to reach a stated goal in a given situation" (Ross & Fabiano, 1985, p. 305). Administration of the instrument entails providing participants with the beginning and the end of nine stories

for which he or she must provide the intervening material. Responses are evaluated in terms of the “logic and consistency displayed in connecting the beginning with the end of the story” (Ross & Fabiano, 1985, p. 305). After consultation with Elizabeth Fabiano (February 26, 1996 and May 20, 1998, personal communication), it was decided not to include this measure in the present study for a number of reasons. First, the measure is very cumbersome and time consuming to use, as is evident by the above description of the instrument. Second, the scoring of the instrument is very complex, and it requires scoring by more than one person for each protocol. Given the limited resources available for the present study, recruiting additional scoring personnel was not possible. Third, and most important, those scoring the instrument are required to construct their own scoring criteria based on vague scoring guidelines. Therefore, in addition to not being “field practical” (Elizabeth Fabiano, May 20, 1998, personal communication), the MEPS may be considered to be questionable in terms of its reliability and validity.

Instrumentation for Statistical Control Purposes.

In order to be more certain that any obtained differences in social-cognitive skills between incarcerated and non-incarcerated participants are due to real differences in social-cognitive processes in these populations, it was necessary to control for variables that have been shown to be related to cognitive functioning.

The first variable to be controlled statistically is educational attainment, since educational level is likely related to cognitive functioning. Given the smaller than anticipated sample size, it was not possible to match the educational attainment level of

non-incarcerated and incarcerated participants as was originally intended. Instead, this variable was measured using self-reported years of formal schooling. For incarcerated participants, this information was obtained during the semi-structured interview (see Appendix V) conducted prior to administration of the test battery. Confirmation of this information was obtained from participant's institutional files, who are asked to provide this information during part of the institutional admission process. The same information was obtained from non-incarcerated participants during the semi-structured interview alone. The use of years of formal schooling as a measure of educational attainment was undertaken for two reasons. The first reason is because of the ease with which such self-report data can be collected, and the second is that it provides data that are conceptually meaningful (i.e., Grade levels).

Depression scores from the Beck Depression Inventory (BDI; Beck & Steer, 1993) also were obtained. Since the presence of depression has been shown to be related to decreased cognitive functioning (Beck, Rush, Shaw & Emery, 1979), it is plausible that it may be related to social-cognitive functioning as well. Given that incarceration can have a depressing effect on offenders (e.g., Toch, 1992), it is also possible that incarcerated participants may be experiencing more depressive symptoms than their non-incarcerated counterparts. Partialling out any possible effects of depression beforehand will therefore allow for a more straightforward analysis of social-cognitive skills between groups.

The BDI demonstrates acceptable psychometric properties. Its internal consistency is high, with Cronbach's coefficient alphas ranging from .81 in non-

psychiatric populations to .86 in psychiatric populations (Beck, Steer & Garbin, 1988). With regard to stability, two-week test-retest correlations of the BDI with non-clinical samples have been reported to be as high as .90 (Lightfoot & Oliver, 1985). In terms of validity, the BDI discriminates well between psychiatric patients and normals (Beck & Steer, 1993). The BDI also has been shown to correlate highly with the construct of helplessness, as measured by the Beck Helplessness scale. In further demonstration of its construct validity, the BDI correlates significantly with the MMPI-D scale ($r = .61$) and with the Hamilton Psychiatric Rating Scale for Depression ($r = .73$; Hamilton, 1960).

In order to control for the slight but consistent difference in measured intelligence (approximately eight points) between offender and non-offender populations (Quay, 1987), Raven's Standard Progressive Matrices (RAV) were used to obtain an estimate of participants' intelligence. Raven's Matrices were chosen for this purpose since they estimate intelligence without the use of verbal subtests and since they are deemed to be less culturally biased (Sattler, 1993) than more traditional, and more verbally based measures of intelligence (i.e., the Wechsler Scales). Given these characteristics, the Raven's Matrices are more appropriate than other measures for the estimation of intelligence in correctional populations.

The psychometric properties of the Raven's Standard Progressive Matrices are good. Raven, Court & Raven (1983) stated that the split-half reliabilities for the standard form of the test is .86. Test-retest reliability coefficients range from .71 to .93, with the

lowest reliabilities being for young children (Sattler, 1993). In terms of concurrent validity, correlations of all forms of the Matrices with other intelligence tests range in the .50's to the .80's; correlations with achievement tests are in the .30 to .60 range (Sattler, 1993).

Criterion Measures.

Two criterion measures were used in this study. The first of these is group membership (incarcerated versus non-incarcerated participants) and the second is number of criminal contacts. Both of these measures can be considered measures of recidivism. Given the controversy that the use of measures of recidivism has engendered in correctional research, some comments on the validity of recidivism as an outcome measure are warranted. These are provided in Appendix I.

The first criterion measure was chosen because it is the most fundamental dimension along which the social-cognitive skills measured by the proposed battery are hypothesized to differ. That is, according to Ross & Ross (1995), individuals who are more recidivistic demonstrate a greater number of social-cognitive skills deficits than those who are less recidivistic. Since the recidivism rate of non-offending non-incarcerated individuals is as low as is possible (i.e., no recidivism whatsoever), such individuals should, according to the Ross' theory, demonstrate the fewest social-cognitive skills deficits. Therefore, in order to test a battery claiming to be able to identify recidivists by their level of social-cognitive skill, this battery should be able to distinguish between individuals who have no criminal record (i.e., non-offending non-incarcerates)

from those who do (i.e., incarcerated offenders). This is not to imply that all incarcerated individuals necessarily have low social-cognitive skills and all non-incarcerated individuals have high social-cognitive skills, but rather that it is between these two distinct groups where such differences, if they exist, are more likely to be found.

The second outcome measure, number of criminal contacts, can be considered a more fine-grained measure of recidivism. In the present study, recidivism was measured using incarcerated participants' number of Alberta-based contacts with the criminal justice system. Each offender's number of criminal contacts are recorded on the Alberta Department of Justice's computer data base, the Correctional Management Information System (CoMIS). It is from this database that, with participants' written consent, information was obtained on their criminal contacts. When an individual is charged with a criminal offence, arrested, and brought into custody in Alberta, they are deemed as having had one contact with the criminal justice system. Should that individual retain multiple criminal charges for the same alleged events, this would still be counted as only one criminal contact. Similarly, should an individual be arrested and charged with regard to two or more events that allegedly occurred at different times, this too would only constitute one criminal contact. The number of criminal contacts recorded for any given offender does not necessarily represent the number of times they have been convicted of an offence. For example, an individual may have been charged with an offense, and had the matter stayed or withdrawn by the courts. This would still be recorded as a criminal contact on CoMIS however, since there was contact between the subject and the justice

system. In general, the number of criminal contacts recorded by the CoMIS system provides a general indication of the severity of an offender's criminal history, with higher numbers of criminal contacts corresponding to lengthier criminal histories.

The manner in which the instrumentation and outcome variables described above were put to use is outlined in the following section.

Method

Sample.

When the present research initially was being conceptualized, the inclusion of a much larger sample size (approximately $N = 150$) and a broader sample of participants (both Aboriginal and non-Aboriginal incarcerates and non-incarcerates) was intended. It was intended to include incarcerated Aboriginal participants because Aboriginal offenders comprise a substantial proportion of incarcerated offenders. For example, according to Correctional Services Canada (1997), 38.3% of male and 48.1% of female federal incarcerates in the Prairie region were Aboriginal. Further, when comparisons between incarcerated and non-incarcerated groups are made in correctional research, Aboriginal incarcerates have tended to be compared to non-Aboriginal non-incarcerated reference groups. This practice may provided a distorted picture of the group in question, since it is being compared to a non-equivalent reference group. For this reason, it was intended to include non-incarcerated people of Aboriginal descent in the present sample. However, soon after the collection of data began, it became apparent that the

administration time of the assessment battery had been underestimated, and the rate at which potential participants would volunteer had been overestimated. As such, the scope and design of the project were altered to reflect this reality. The following paragraphs describe the characteristics of the smaller obtained sample.

The overall sample (N=29) was comprised of 20 males and nine females. Ten of the participants (34.5%) were community members who had no previous contacts with the criminal justice system. The remaining 19 participants (65.5%) were incarcerated. Complete data for one incarcerated male participant was not available, as this individual was unexpectedly transferred to another correctional institution prior to his completion of all the instruments. The sample size noted in conjunction with statistical procedures has been altered when necessary to reflect this fact. Details with regard to the demographic breakdown of the sample by gender and ethnic group are provided in Table 1.

The mean age of the incarcerated ($\bar{x} = 32.5$ years; $S = 8.5$) and non-incarcerated ($\bar{x} = 31.6$ years; $S = 13.8$) samples were not significantly different ($t(1.27) = -.22$, $p > .05$). Neither were there any gender-based age differences; males' mean age was 32.9 years ($S = 9.7$) while the mean age for females was 30.8 years ($S = 12.3$; $t(1.27) = -.49$, $p > .05$)

Procedure.

Incarcerated participants were recruited from the Fort Saskatchewan Correctional Centre (FSCC), located in Fort Saskatchewan, Alberta. FSCC is a provincial correctional

Table 1 Sample Characteristics

TOTAL (N = 29)	Incarcerated Group (n=19)	Non-incarcerated Group (n =10)
Males (n = 19)	Aboriginal (n = 2) Caucasian (n = 11) Other (n = 1)	Caucasian (n =5)
Females (n = 10)	Aboriginal (n = 2) Caucasian (n =3)	Caucasian (n = 5)

institution, housing both male and female offenders who are serving sentences of no longer than two years less one day (i.e., up to 729 days). In some instances, FSCC houses federally incarcerated individuals (i.e., those serving sentences longer than 729 days), however this is not the norm. FSCC houses offenders largely from the central and northern regions of Alberta, although offenders from southern regions may be housed there as well, if required. At times FSCC also houses offenders from the North West Territories. No federally incarcerated offenders were included in the present study, since one of its goals was to focus on the less-studied provincial inmate population. However, three of the male incarcerates participating in the study (3/14 = 21.4%) previously had served federal sentences. None of the female incarcerated participants previously had received federal sentences.

Incarcerated participants were recruited through the use of posters (see Appendix II) placed on each of the eight housing units (seven male units; one female unit) in the institution. As indicated on the recruitment poster, offenders volunteered for the study by submitting a request form (a standardized form used in the institution) to the FSCC Psychology Department. These requests were screened, and those offenders for whom social-cognitive training would be both inappropriate and ineffective (see Ross & Ross, 1995; i.e., those with a documented history of psychopathic tendencies and those diagnosed with severe psychiatric disorders) were not included in the study. Using these criteria, one volunteer (an incarcerated male) was excluded from the study due to documented psychopathic tendencies. The non-incarcerated participants were recruited in a similar manner to the incarcerated volunteers. Staff members at FSCC were approached for voluntary participation through the use of recruitment posters similar to those used for offenders (See Appendix III), and through personal verbal requests. Members of the local community were also approached in this manner.

Upon recruitment, appointments for individualized assessment sessions were made with participants. At the beginning of each session, a short description of the nature of the study was provided, and written informed consent was obtained (see consent forms in Appendices IV and V). For incarcerated participants, consent was also obtained allowing the researcher permission to access participants' institutional files. Such access was required in order to verify information pertaining to participants' current offense(s), length of incarceration, offense history, number of contacts with the Alberta criminal

justice system and educational attainment. After informed consent was given, a short, structured interview (see Appendices VI and VII) was used to obtain information with regard to age, gender, occupation, and educational attainment. None of those who initially indicated a desire to participate later declined to take part in the study. One incarcerated participant (a female) declined to provide permission for the researcher to access her institutional file for collateral information. In this case, the information given by this participant to the researcher with regard to educational attainment and number of criminal contacts was taken as accurate.

For a number of reasons, not all individuals who volunteered could be included in the study. With regard to incarcerated volunteers, many individuals either were released to the community or transferred to another facility before arrangements could be made for them to participate. As to community-based volunteers, at times their life circumstances had changed in the period of time subsequent to their initial expression of interest, rendering them unavailable for participation. As much as possible, however, volunteers were scheduled to participate in the study on a first-come first-served basis.

Following the structured interview portion of the assessment, participants were administered the Social-Cognitive Screening Battery (SCSB) instruments along with the remaining two instruments included for control purposes: the Beck Depression Inventory (Beck, 1987) and Raven's Standard Progressive Matrices (Raven, Court & Raven, 1986). As noted earlier, the third control variable (Educational Level as measured by years of formal education) was obtained via self-report (from two sources: during the structured

interview prior to administration of the battery and from file information given by the offender upon intake to the criminal justice system). For each instrument, the researcher read the instructions aloud, and led the participant through any sample items. Three of the nine instruments (Matching Familiar Figures Test, Chandler's Role Taking Task and the Raven's Standard Progressive Matrices) required that the researcher administer some or all of the items one-on-one; for the remaining paper-and-pencil instruments, the researcher remained in the same room or in an adjacent area in order to be available should the participant raise any questions.

In order to control for possible order of administration effects, all instruments were administered in three different orders of counterbalanced blocks. Each of the three blocks were designed to include one 'performance-oriented' task and two 'verbal-oriented' tasks. The blocks were so arranged as a means to maintain participants' interest in the tasks and to minimize their level of fatigue. The three counterbalanced orders of administration are outlined in Figure 2.

Prior to commencing the study, it was estimated that the entire individualized assessment procedure would require a time commitment of 2.5 hours on the part of each participant. This estimate was based on approximate administration times provided in the instruments' manuals and through the researcher's practice administrations of the instruments ($n=2$). In reality, however, the total administration time (including breaks,

Figure 2 Counterbalanced Orders of Administration

Order A	Order B	Order C
-Matching Familiar Figures Test -Conceptual Level - Paragraph Completion -Hogan's Empathy Scale	-Chandler's Role-Taking Task -Levenson's Locus of Control Scale -Critical Thinking Appraisal	-Raven's Standard Progressive Matrices -Gough's Rigidity Scale -Beck Depression Inventory
-Raven's Standard Progressive Matrices -Gough's Rigidity Scale -Beck Depression Inventory	-Matching Familiar Figures Test -Conceptual Level - Paragraph Completion -Hogan's Empathy Scale	-Chandler's Role-Taking Task -Levenson's Locus of Control Scale -Critical Thinking Appraisal
-Chandler's Role-Taking Task -Levenson's Locus of Control Scale -Critical Thinking Appraisal	-Raven's Standard Progressive Matrices -Gough's Rigidity Scale -Beck Depression Inventory	-Matching Familiar Figures Test -Conceptual Level - Paragraph Completion -Hogan's Empathy Scale

and the opportunity to have questions answered or to discuss the research project in general) varied from approximately 3.5 hours to nearly 7 hours. Further, due to the extensive time required to complete the assessment, it was not always possible to administer the battery in one session. Of the 29 completed assessments, 16 (55.2%) were completed in the span of one day. A further 12 (41.4%) were completed over two days, and the remaining 2 (6.9%) were conducted over three separate days.

Administration of the battery to incarcerated participants took place in one of three sites in the Fort Saskatchewan Correctional Centre. The site where most of the testing was conducted was in an office in a quiet area of the institution, where participants largely could work uninterrupted. The second most frequently used site for testing incarcerated participants was an office in the Psychology Department. This site was somewhat busier, but participants were able to work undisturbed for the most part, since participants were located in a private office. On one occasion the battery was administered to a participant in an office located near the disciplinary segregation unit of the institution, since one of the male participants was serving time in this unit due to an institutional disciplinary infraction. This participant was to be released into the community directly from the disciplinary segregation unit and would not have been able to participate in the study unless the battery was administered in this setting.⁵ Non-incarcerated participants completed the battery

⁵ Given the difficulty in obtaining participants, it was deemed worthwhile to include this participant, despite the somewhat different circumstances.

either at the home of the researcher, or in their own home. In all cases arrangements were made such that distractions were kept to a minimum during the assessment period.

Upon completion of the assessment procedure, participants were given the opportunity once more to ask any questions about the research and their participation in it. Participants who requested feedback with regard to their performance on the instruments were provided with verbal feedback within a few days, once the instruments had been scored. Participants were also informed, using the consent form (of which participants retained a copy) of the opportunity request feedback after their participation in the research was completed. Participants could obtain such feedback by contacting the researcher via the Psychology Department of FSCC.

The confidentiality of each participant was maintained through the use of code numbers. Each assessment protocol received a code number from 1 to 30. The master list containing participants' names and code numbers was stored in a secure filing cabinet at the researcher's residence for the duration of the data collection period. Maintaining a master list was necessary in order that participants requesting feedback could be contacted and informed of the results of their social-cognitive assessment. In the 18 months following completion of data collection, no requests for information or results other than that already provided were received.

Completed and coded assessment protocols also were kept secure at the researcher's residence. Since institutional staff have access to all filing cabinets at FSCC, the latter precaution was taken in order to ensure the confidentiality of all participants.

To further ensure confidentiality, the master list of participants will be destroyed, and any remaining identification removed from the database two years subsequent to the data collection completion date.

Scoring.

Most of the instruments in the battery involve paper and pencil tasks which were scored objectively by referring to the instruments' scoring manuals; however two of the instruments were scored in a more subjective fashion. For these two instruments, the Role Taking Task (Chandler, 1973) and the Conceptual Level Paragraph Completion task (Hunt, et al., 1978), a detailed account of their scoring procedures is outlined below.

As was noted earlier, administration of Chandler's Role Taking Task involves asking the participant to tell stories for a series of cartoon sequences from the points of view of the main character and a late-arriving bystander. The participant's responses are scored for the degree to which one is able to set aside facts known only to the main character and construct a bystander story which is different from that of the main character. The scoring criteria, as provided in the manual for the Role Taking Test are reproduced in Figure 3. Using these criteria, the researcher scored each participant's responses. While the scoring of this instrument is not wholly objective, the scoring criteria provided by Chandler are quite explicit and readily applied to participants' stories.

Figure 3 Role Taking Test Scoring Criteria

Score	Criteria
4	Stories in which no recognition is given to the fact that subject and bystander have access to different amounts of information and where the subject explicitly attributes to the only partially informed bystander, knowledge of details which could only be known by himself/herself.
3	Stories in which unwarranted attributions of privileged information are made, but where these egocentric intrusions are couched in probabilistic or conditional language suggestive of some uncertainty regarding the comparability of the two perspectives which the subject is required to adopt.
2	Stories in which the subject offers, as descriptive of the bystander's points of view, alternate explanations, one of which explicitly includes elements of privileged information available to the subject, but not to the only partially informed witness.
1	Stories which, while essentially free of gross egocentric intrusions, include peripheral or incidental elements of privileged information available only to the subject, which 'contaminate' the bystander's report.
0	Stories which reflect the subject's awareness that the bystander, exposed to less information than himself, would be led to different conclusions about the chain of events. Such stories contain no evidence of intrusion of unavailable information.

According to the authors (Hunt, et al., 1977), the Conceptual Level Paragraph Completion Method,

...is a semi-projective method to assess Conceptual Level (CL).

Completion responses are considered to be thought samples which are scored according to how a person thinks. Scoring the [CL] requires the rater's use of clinical judgement which in turn requires study and practice (p. 1).

The authors of the CL further indicated that the "purpose of [the scoring] manual is to provide sufficient information to learn to score the [CL]" (p. 1). The scoring manual includes a set of 109 responses which the novice rater uses to develop skill in scoring the CL. The rater's scores can then be compared with those provided in the manual, to provide an estimate of the reliability of the rater's scores.

The researcher engaged in 3.5 hours of scoring practice utilizing the 109 sample items.⁶ Figure 4 provides information comparing the accuracy and reliability of the researcher's scoring compared to the correct answers provided in

⁶ The CL is scored in a similar manner to that of the Sociomoral Reflection Measure - Revised (Gibbs, Basinger, & Fuller, 1992), a similarity that is due to the fact that both instruments are designed to measure aspects of individuals' cognitive processes. The researcher became very familiar with the latter instrument when conducting research for her Master's thesis, amassing over 30 hours of scoring practice over a period of eight weeks. This previous practice in scoring facilitated a more rapid 'learning curve' in becoming proficient at scoring the CL. Other individuals without similar scoring practice may take longer to learn to score this instrument, a fact that is considered during discussion of SCSB's practicality.

Figure 4 Reliability of CL Practice Items

Reliability Indicator	Recommended Standard	Obtained Standard
Correlation Coefficient	-median: $r = .86$ -range: $r = .74$ to $.96$.92
Percentage exact Level agreement	-none suggested by authors -50% used by Gibbs, et al.. (1992)	8/20 = 40%
Percentage agreement within ½ Level	- none suggested by authors	17/20 = 85%
Percentage agreement within 1 Level	-none suggested by authors -80% used by Gibbs, et al., (1992)	19/20 = 95%

the manual. The information provided in the figure refers to the final twenty practice items only, as it was deemed that scores obtained on these latter items would be the best representation of the researcher's scoring proficiency.

As noted in Figure 4, the researcher's reliability in scoring the practice CL protocols meets or exceeds the recommended standards in three of the four categories. While the percentage of exact stage agreement between the researcher's scores and the correct scores was less than 50%, the agreement at the $\frac{1}{2}$ Level and 1 Level stages was very high, as reflected in the overall correlation coefficient. Given this result, it is reasonable to conclude that the scores obtained from the participants' CL protocols are acceptably reliable estimations of their true CL. Once all of the SCSB and control instruments were scored for each participant, analysis of these data could begin. The results of the analyses are provided in the following chapter.

CHAPTER 4

Results

This chapter outlines the obtained results of the various statistical procedures that were conducted. The chapter begins with an outline of analyses for gender differences. The chapter continues with a description of results pertaining to the three control variables, including a *post hoc* analysis that was undertaken on one of these variables. The chapter then proceeds with a brief review of each of the research questions and their associated hypotheses, and an indication is provided as to whether support for each hypothesis was obtained. The statistical and other evaluative procedures used to test each hypothesis then are outlined, and the specific outcome of each statistical analysis and evaluative procedure is reported.

Gendered Analysis of Control and SCSB Instruments

Since one of the main shortcomings of research in the area of corrections is the lack of information pertaining to female offenders (Chesney-Lind, 1997), scores from the SCSB instruments were first analyzed separately for males and females in order to be able to detect possible gender differences. When *t* tests for independent samples were conducted on each of the seven components of the SCSB, no gender differences were found.⁷ Therefore, analyses comparing incarcerated and non-incarcerated samples' SCSB

⁷ Analyses for gender differences were not undertaken for the incarcerated and non-

scores were conducted on the pooled sample of male and female participants. Table 2 contains complete information on results for male and female participants.

Results Pertaining to Control Variables

The rationale for including the three control variables (i.e., educational attainment, depression and intelligence) has been discussed previously. Significant differences were found between incarcerated and non-incarcerated individuals on each of these variables.

Incarcerated individuals reported significantly lower educational levels ($\bar{x} = 10.2$ years of formal education; $S = 1.83$) than did their non-incarcerated counterparts ($\bar{x} = 12.7$ years; $S = 1.89$; $t(26) = 3.51$, $p < .01$). As to estimates of intelligence, incarcerated participants again differed significantly from non-incarcerated participants ($t(26) = 3.29$, $p < .01$). Incarcerated participants' mean score on the Raven's Standard Progressive Matrices was 47.8 ($S = 4.68$), which given the mean age of the sample (32.5 years) corresponds to a score roughly at the 25th percentile (Raven, et al., 1992). The non-incarcerated participants' mean Raven's score was 53.4 ($S = 3.44$), which at the participants' mean age of 31.6 years roughly corresponds to a score at the 50th percentile (Raven, et al., 1992).

incarcerated groups separately, because there were few females in each of these groups (i.e., four in the incarcerate group and five in the non-incarcerated group). Had such analyses been undertaken, either the presence or absence of differences may have been misleading given the small number of females in each of these groups.

Table 2 Control and SCSB Variables by Gender

Variable	Females		Males	
	\bar{x}	S	\bar{x}	S
Modified Beck Depression Inventory	8.67	6.04	10.79	7.20
Educational Level	11.00	2.45	11.05	2.14
Standard Progressive Matrices	47.67	5.98	50.84	4.29
Empathy Scale	32.89	4.35	35.11	4.27
Conceptual Level	1.92	0.51	1.82*	0.51
Matching Familiar Figures Test	42.87	24.25	38.41*	19.23
Rigidity Scale	14.11	3.30	12.72	3.52
Locus of Control	53.77	14.32	57.20*	14.53
Role Taking Task	1.11	1.36	1.05*	1.43
Critical Thinking Appraisal	53.88	8.40	53.75*	11.01

Note: n = 9 for females; n = 19 for males unless noted with an asterisk, in which case n = 20.

With regard to the Beck Depression Inventory (BDI), an anomaly was noted while scoring participants' BDI protocols. One of the items on the BDI refers to one's perception of being punished, with a higher score for this item being endorsed the greater one feels one is being punished. Since all of the incarcerated participants were indeed being 'punished' by being in jail (this being one of the purposes of the sentences imposed on them), it is possible that incarcerated participants' scores on the BDI could be artificially inflated. Therefore, their BDI scores may not necessarily reflect their true level of depressive symptomology. As such, each participants' BDI (both incarcerated and non-incarcerated) was re-scored with the 'punishment' item excluded. A t test for dependent groups was then conducted to determine if this resulted in a statistically significant difference between participants' original BDI scores and their BDI scores with the punishment item removed. The difference in scores was indeed significant ($t(27) = 4.17, p < .001$). The mean obtained score for non-incarcerated participants remained unchanged ($\bar{x} = 5.6; S = 2.22$), but the incarcerated participant's scores decreased from a mean of 14.3 ($S = 7.79$) to a mean of 12.6 ($S = 7.24$). Given the difference between these two sets of scores, participants' BDI scores with the punishment item removed (termed Modified Beck Depression Inventory scores; MBDI) were used in subsequent analyses. When MBDI scores were used, incarcerated participants were found to have a significantly higher depression rating than were their non-incarcerated counterparts ($t(26) = 2.96, p < .01$).

Hypothesis 1: Group Differences in SCSB Scores

The first hypothesis posited that incarcerated individuals' SCSB scores will reflect lesser developed social-cognitive skills than those demonstrated by the non-incarcerated sample. Significant differences between incarcerated and non-incarcerated participants were found on three of the seven instruments included in the SCSB. One additional instrument approached statistical significance. Specific information with regard to these differences is provided below.

Conceptual Level: Paragraph Completion Method.

With regard to the instrument measuring Conceptual Level (CL: Hunt, et al., 1977), incarcerated individuals' scores reflected a significantly lower level of conceptual development ($t(27) = 4.44, p < .001$) than that of non-incarcerated participants. Incarcerated individuals' mean CL score was 1.62 ($S = .40$) which reflected a level of conceptual development in which an individual has moved beyond polarized and dichotomous thinking, but has not yet come to embrace tolerance of ambiguity and difference in opinion (see Figure 1, Chapter 3). The mean CL score for non-incarcerated individuals was 2.30 ($S = .37$), which reflected a conceptual level which has moved beyond tolerance of ambiguity and difference in opinion but has not yet fully developed the ability to consider and weigh alternatives among these differing views (see Figure 1, Chapter 3).

Locus of Control.

Significant differences were also found between incarcerated and non-incarcerated participants with regard to Levenson's (1973) measure of locus of control ($t(27) = -2.13,$

$p < .05$). Incarcerated participants' scores were significantly higher ($\bar{x} = 60.0$; $S = 15.17$) than those of non-incarcerated participants' ($\bar{x} = 48.8$; $S = 9.21$). As noted previously, Levenson's scale measures three aspects of locus of control: Internal control, control by Powerful Others and Chance control. Higher scores on Levenson's scale indicate a combination of a higher degree of endorsement of items reflecting an external locus of control (Powerful Others and Chance) and a lower degree of endorsement of Internal control items. Therefore, given the mean scores noted above, incarcerated participants' tended to attribute more control to external influences and less to internal influences than did non-incarcerated participants.

Watson-Glaser Critical Thinking Appraisal.

Incarcerated and non-incarcerated participants also differed significantly with regard to critical thinking skills ($t(27) = 3.81$, $p < .001$). Incarcerated participants obtained lower scores on this instrument ($\bar{x} = 49.5$; $S = 8.28$) than did non-incarcerated participants ($\bar{x} = 61.9$; $S = 8.40$), indicating that incarcerated participants were significantly less skilled in the area of critical thinking than were non-incarcerated participants.

Gough's Rigidity Scale.

Differences between incarcerated and non-incarcerated individuals with regard to their measured level of rigidity closely approached statistical significance. Non-incarcerated individuals' mean score was 11.5 ($S = 3.95$) and incarcerated individuals' mean score was 14.1 ($S = 2.85$). This may suggest that incarcerated individuals in this

sample tended to be more rigid in their thinking pattern than were non-incarcerated individuals.

Hypothesis 2: Prediction of Group Membership

The second research hypothesis stated that participants' scores on the SCSB instruments will significantly enhance the prediction of an individual's group membership (incarcerated versus non-incarcerated) over that of the three control variables (Modified Beck Depression Inventory scores [MBDI], Educational Level [EL], Raven's Progressive Matrices scores [RAV]). To test this hypothesis a hierarchical discriminant function analysis was conducted.

Prior to the analysis, an investigation was undertaken as to how well the obtained data met the statistical assumptions required for this procedure. All variables approximated being normally distributed except for Chandler's (1973) Role Taking Task, which was moderately positively skewed. Given that this instrument was originally designed for children however, such positive skew (i.e., where only few of the participants in the present study, all adults, provided responses generating the higher scores representative of egocentric thinking) was to be expected. Residuals for both groups and the overall sample were normally and linearly distributed. An inspection of the zero-order correlation matrix indicated no threat of singularity or multicollinearity. Homogeneity of variance-covariance matrices was supported ($F(6, 2227.4) = 2.03, p > .05$). Although the subject-to-variable ratio for this analysis was smaller than ideal

(Tabachnick & Fidell, 1989), as just noted the assumptions required by the hierarchical discriminative function analysis were quite well met.

In order to control for the possible effects of the three control variables, these variables were the first to be entered, as a set, into the hierarchical discriminant function analysis. This set of variables was found to discriminate significantly between incarcerated and non-incarcerated participants ($F(3, 24) = 8.90, p < .001$), a not surprising result considering the t-tests conducted to test the first hypothesis. The canonical correlation for this function was .702, indicating that 49.3% of the variance between the discriminant function and the set of control variables was accounted for in this step of the analysis.

When the set of SCSB variables was added to the model, it added a statistically significant degree of predictive value to the overall model ($F(4, 23) = 10.68, p < .01$; F Change = 8.11, $p < .009$). One discriminant function was calculated for the model, which significantly discriminated between groups ($\chi^2(10) = 24.11, p < .01$). The canonical correlation for this function was .826, which when squared indicated that the final model accounted for 68.2% of the variance between the discriminant function and the four retained predictor variables.

Upon closer inspection of the univariate F values for each of the SCSB instruments, it became evident that two of the instruments carried significantly predictive weight in the overall model (i.e., the Conceptual Level Paragraph Completion Method [CL] and the Watson-Glaser Critical Thinking Appraisal [CTA]), and an additional two

of the instruments closely approached statistical significance (i.e., Gough's Rigidity Scale [RS] and Levenson's Locus of Control Measure [LOC]). The remaining three instruments (Chandler's Role Taking Task [RTT], the Matching Familiar Figures Test [MFFT] and Hogan's Empathy Measure [EM]) did not contribute to overall prediction of group membership in this sample. Table 3 presents additional data with regard to the results of the hierarchical discriminant function analysis.

When the discriminant function was used to attempt to correctly classify participants into their respective groups, the set of three control variables alone was significantly efficacious in this task. Overall, 85.7% of individuals were correctly classified using the control variables. When the SCSB was added to the model, a total of 89.3% of participants were correctly classified into their original groups. However, this change was found to be due to the reclassification of only one participant. In the first model, 15 of 18 incarcerated individuals were correctly classified as such. In the second model, 16 of 18 participants were correctly classified, a rate of 88.9% correct classification compared to the chance rate. There was no change in the proportion of correctly classified non-incarcerated participants between the two models tested: in each case nine of ten individuals were correctly identified as belonging to the non-incarcerated group. When a McNemar's repeated-measures chi square analysis (Tabachnick & Fidell, 1989) was conducted on these data, it was found that this magnitude of classificatory change was not statistically significant ($\chi^2(1) = 0, p > .05$)

Table 3 Results of Hierarchical Discriminant Function Analysis

Step	Variable	r with discrim funct.	Uni- variate F (1, 26)	Zero Order correlations among variables								
				EL	RAV	CL	CTA	RS	LOC	EM	MFFT	RTT
1	MBDI	-.40	8.8**	-.28	-.38*	-.20	-.34	-.06	.50**	-.16	-.30	-.05
1	EL	.45	11.3**		.43*	.39	.52**	-.37	-.06	.37	.19	.53**
1	RAV	.44	10.8**			.40*	.51**	-.57**	-.37	.20	.16	-.15
2	CL	.57	18.3***				.54**	-.30	-.13	.35	.33	-.22
2	CTA	.51	14.9**					-.36	-.36	.37	.01	-.24
2	RS	-.27	4.0						.15	-.25	.15	.29
2	LOC	-.26	3.9							-.11	.21	.20
2	EM	.22	2.6								.00	-.20
2	MFFT	.19	2.0									-.04
2	RTT	-.10	.6									

* p < .05

** p < .01

*** p < .0001

N = 28 for all variables

Therefore, it appears that the addition of the Conceptual Level Paragraph Completion Measure and the Watson-Glaser Critical Thinking Appraisal yielded an edge, over the control variables alone, in accounting for the variance in scores attributable to group membership. This increase in accounted-for variance did not, however, translate into an improved ability to correctly assign participants to their respective groups.

Hypothesis 3: Prediction of Recidivism

The third hypothesis investigated was that offender's social-cognitive skills (as measured by the SCSB) would vary inversely with their degree of recidivism (as measured by number of Alberta-based criminal contacts.) That is, offenders with more contacts with the criminal justice system would demonstrate poorer social-cognitive skills. This analysis represents a more stringent test of the SCSB because finer distinctions between the scores of incarcerated participants are required, rather than merely distinguishing between the scores of incarcerated participants versus those of non-incarcerated participants.

To test this hypothesis, a set-wise hierarchical multiple regression analysis was conducted, in which the set of SCSB variables was tested for its ability to predict participant's numbers of Alberta-based criminal contacts over and above that of the set of three control variables. Due to the limited size of this sub-sample of participants ($n = 18$), and the resultant low subject-to-variable ratio, it was not possible to evaluate the individual contributions of each of the SCSB instruments to the prediction of recidivism.

Using the above method, no support for the third hypothesis was found. Within the sample of incarcerated individuals, neither the set of SCSB instruments nor the set of control variables was found to be significantly related to incarcerated participants' amount of Alberta-based criminal contacts. While several univariate correlations of a reasonable magnitude were found (i.e., greater than .35), the small sample size ($n = 18$) of this subgroup of participants necessitated that correlations of only large magnitude would be found to be statistically significant. Therefore, it does not appear as though the SCSB instruments or the instruments used for control purposes could detect a significant effect in this sample when a more fine-grained discrimination was required.

Hypothesis 4: Strongest Predictors

There was no specific experimental hypothesis posed with regard to which of the components of the SCSB would emerge as being significantly predictive of group membership or length of criminal history. Instead, the results of the foregoing analyses were used to determine which if any of the SCSB instruments would be retained in a streamlined version of the SCSB. Based on these analyses, it is reasonable to conclude that Modified Beck Depression Inventory scores, Educational Level and scores on the Raven's Standard Progressive Matrices, are notably related to incarceration status. The inclusion of scores from the Conceptual Level Paragraph Completion Method and of the Watson-Glaser Critical Thinking Appraisal significantly increased the degree of accuracy with which participants could be correctly classified into groups. However, when

correlations were calculated to determine whether SCSB scores and control variable scores were related to incarcerated participants' number of criminal contacts, none of these instruments emerged as significantly correlated. As such, while it appears that the Conceptual Level Paragraph Completion Method and the Watson-Glaser Critical Thinking Appraisal may warrant retention in a substantially streamlined version of the SCSB, even these instruments are not able to predict participants' number of previous criminal contacts in this sample.

Hypothesis 5: Practicality and Utility

The fifth hypothesis tested in the present study posed the overall question: Would a streamlined version of the SCSB be practical and useful in the context of a provincial correctional setting? This question is more qualitative in nature than the previous four research questions, and to address it both the quantitative results of the previous series of analyses and a measure of subjective judgement are necessary. The following paragraphs outline each of these sources of information in turn. The results are then combined and an answer to the question of utility and practicality is offered.

Quantitative Information.

As noted in discussing the first hypothesis, support has been obtained for the notion that compared to non-incarcerated individuals, incarcerated individuals tend to have a number of less well developed social skills (e.g., a lower level of conceptual development, a more externalized locus of control, and a lower level of critical thinking

skills). Additionally, a near-significant result with regard to Gough's Rigidity Measure suggested that incarcerated individuals may be more inflexible in their thinking patterns than non-incarcerated individuals in this sample. Further, when the SCSB was used to classify participants into incarcerated versus non-incarcerated groups, two of these four measures (i.e., the Conceptual Level Paragraph Completion Method and the Watson-Glaser Critical Thinking Appraisal) were found to be the most efficacious additions to the classification model over and above the three control variables. The other two measures (i.e., Gough's Rigidity Scale and Levenson's Locus of Control Scale) were found to approach statistical significance with regard to their contribution to the overall classificatory model. However, none of the control variables or the SCSB variables, the preceding four included, were found to be significantly related to incarcerated participants' number of criminal contacts. Given the above, it seems reasonable to propose that the combination of these four measures (i.e., the combined scores from the Conceptual Level Paragraph Completion Method, the Watson-Glaser Critical Thinking Appraisal, Gough's Rigidity Scale and Levenson's Locus of Control Scale) would provide a means with which to begin to identify offenders who would be the most likely to benefit from Reasoning and Rehabilitation program. However, given the lack of these instruments' relationship to offenders' number of criminal contacts, it seems wise to refrain from using the streamlined version of the SCSB for purposes beyond that of initial screening.

Qualitative Information.

From the foregoing, it is plausible that the four retained instruments from the SCSB have some empirical utility as a screening device. Whether or not it is practical to use such a screening device in the context of a provincial correctional institution is a more qualitative question. At least two factors must be considered when assessing the practicality of the streamlined SCSB. The first of these is time and the second is financial cost.

While the time to administer, score and interpret each of the measures was not specifically recorded (only an approximate total administration time and number of sessions required for administration were recorded), these times can be estimated based on the researcher's experience in administering and scoring the battery and on the completion time estimated in each instruments' associated administration and scoring manual. These estimates are provided in Figure 5.

As noted in the Figure 5, even the streamlined version of the SCSB may take from at least one and a half hours to over two and a half hours to administer and score. Further, as noted previously, the Conceptual Level Paragraph Completion Method takes several additional hours to learn how to score. While representing a definite improvement over the seven-instrument SCSB, the four-instrument version still requires a substantial time commitment on behalf of both the participant and the person preparing for, administering, and scoring the instruments. Of note is the fact that the time required to score and interpret the retained instruments is nearly as long as the time required for

Figure 5 Estimated Administration and Scoring Times

Instrument	Administration Time	Scoring Time	Total Time
Conceptual Level Paragraph Completion Method	10 - 15 minutes	30-45 minutes	40 - 60 minutes
Watson-Glaser Critical Thinking Appraisal	30 - 45 minutes	5 - 10 minutes	35 - 55 minutes
Gough's Rigidity Scale	5 - 10 minutes	5 - 10 minutes	10 - 20 minutes
Levenson's Locus of Control Scale	5 - 10 minutes	5 - 10 minutes	10 - 20 minutes
Grand Totals	50 - 80 minutes	45 - 75 minutes	95 - 155 minutes

participants to complete them. This time commitment may or may not be of concern to the incarcerated individuals asked to complete the instruments. However, it has been the experience of the researcher that the resources (of which time is one) of individuals providing programs to offenders in the institution currently is quite limited, and that an additional commitment of 45 - 75 minutes per offender being screened for program participation, plus at least an additional three to four hours of training time for the CL regardless of the number of offenders being screened, may stretch these resources beyond what is presently feasible.

A second consideration is financial cost. Of the four retained SCSB instruments, the most expensive is the Watson-Glaser Critical Thinking Appraisal. Materials to administer and hand-score 25 CTA protocols can be purchased for approximately \$225. The CL is substantially less costly; the required materials can be purchased for under \$20. Gough's Rigidity Measure consists of a subset of items from the California Psychological Inventory, an instrument which is not uncommon in the test collection of most correctional and other institutions. Levenson's LOC is in the public domain, at no cost. All tolled, the cost of the streamlined SCSB is approximately \$250. This cost, while not insignificant in the current climate of budgetary restraint, is far from prohibitive. Further, relative to other types of psychological assessment instruments purchased by correctional institutions (e.g., the MMPI-2, the Wechsler Scales) it is quite reasonable in cost.

When the two factors of time (hours per offender) and cost (dollars per offender) are considered, the even streamlined version of the SCSB may be considered unwieldy under the present conservative Alberta political climate. However, when compared with the financial and social costs of incarcerating offenders, the time and financial costs associated with the streamlined SCSB seem more than reasonable. Therefore, the answer to the fifth and final research question is, as is often the case when speaking about the correctional system, a question of values. Is the expenditure of time and effort toward reducing recidivism 'worth it'? Those who support the modified rehabilitative ideal outlined in Chapter 2 would likely respond in the affirmative. However, those in favor of a more punitive correctional system would be far less likely to agree. The present researcher is a member of the former group, however, and so answers 'yes' to the fifth research question: the streamlined version of the SCSB is practical in the context of a provincial correctional institution.

CHAPTER 5

Discussion and Limitations

In this chapter, the obtained results are examined and possible explanations are provided. A discussion of how the obtained results fit with the current body of literature is also undertaken. Finally, comments on the limitations of the study are made.

DiscussionGender Differences.

Until relatively recently very little research has been conducted on females who have had contact with the criminal justice system, for the most part because criminality has long been seen as a 'male problem' (Artz, 1998; Chesney-Lind, 1997). Therefore, it was deemed important to investigate whether gender differences would be found in the present sample. When the entire sample (N = 29) was taken as a whole, there were no gender differences found on any of the SCSB instruments or on the three control variables. Stated differently, there were no detectable differences between the males and females in this sample with regard to obtained estimates of: impulsivity, conceptual reasoning level, empathy, cognitive rigidity, role taking ability, locus of control, critical thinking ability, intelligence, depression, or educational level.

While the lack of gender differences with regard to many of these variables is not surprising, the lack of measured differences in some of the variables is intriguing. For

instance, there were no gender differences detected on Hogan's (1975) empathy measure. In his normative study, Hogan (1975) found that females did, on average, score higher than males, a result which he felt "accord[ed] well with conventional wisdom on this topic." It may be that 'conventional wisdom' no longer applies with regard to this construct. Alternatively, it may be that Hogan's normative sample, which included male prison inmates and delinquents but not female offenders, may have been skewed toward the lower end of the distribution for males due to their lower than average empathy score. Male prison inmates and male delinquents ranked lowest on Hogan's listing of ten male sample groups: the highest male ratings were obtained by college students majoring in Psychology. In contrast, Hogan sampled three different groups of females, the lowest scoring of which obtained a higher average score than the male prison inmates and delinquents in the male sample. It is unfortunate that the present study's sample of incarcerated males and females was too small to make within-group gender comparisons feasible. As such, the proposed explanation for the gender differences obtained by Hogan remains speculative. Further comments on the limitations imposed by a small sample size are provided later in the chapter.

Another intriguing result was the lack of gender differences between males and females with regard to depression (both with and without the 'punishment item' included in the analyses). There is substantial evidence to support the notion that females, on average, tend to report more depressive symptomology than do males (Gilbert, 1992).

For example, the DSM-IV (American Psychiatric Association, 1994) noted that "Major

Depressive Disorder (Single or Recurrent) is twice as common in adolescent and adult females as in adolescent and adult males” (p. 341), with the lifetime risk being 10% to 25% for females and 5% to 12% for males. Further, the DSM-IV indicated that the rates of depression in both men and women are highest in the 25 to 44 year old age group, an age range within which most (86.2%) of the participants in the present study are included. Why then, were there no gender differences found in the present sample? Once again, a firm answer is not possible due to the difficulties posed by the small sample size. It may be that there truly were no differences between males’ and females’ endorsements of depressive symptomology. Or, it may be that such differences did exist but the effect size was not large enough to be detected in such a small sample.

Control Variables.

The three control variables included in this study (Educational Level, Raven’s Standard Progressive Matrices scores and Modified Beck Depression Inventory scores) were so included because of expectations raised from the literature that intellectual and educational variables may be correlated in some fashion with incarceration (Quay, 1987) and that depression may be related to social-cognitive functioning since it is related to general cognitive functioning (e.g., Beck, Rush, Shaw & Emery, 1979). Since these variables could ‘muddy the waters’ when differences in social-cognitive skills between incarcerated and non-incarcerated individuals are studied, they were statistically controlled. The results of the present study lend support to the notion that these factors must be taken into account when the social-cognitive skills of incarcerated offenders are

studied. In line with the above research, estimates of intellectual functioning and educational level were found to be related to incarceration status. That is, incarcerated offenders were found to display lower levels of educational attainment and estimated intelligence than their non-incarcerated counterparts.

Also in line with literature-based expectations, participants' reported levels of depressive symptomatology were related to their cognition as measured by the Raven's Progressive Matrices and to one aspect of their social-cognition: locus of control scores. (see Table 2 in Chapter 4). That is, participants who endorsed more depressive symptoms tended to have lower Raven's scores and more external loci of control.

Not predicted beforehand was the relationship between participants' reported levels of depression and group membership: incarcerated participants endorsed more symptoms of depression than did non-incarcerated participants, even when an item referring ambiguously to 'punishment' was removed. Despite not being specifically predicted, this result is not surprising to the present researcher nor to other researchers in the field of corrections (e.g., Toch, 1992). Currently and in the past the nature of correctional institutions, even ones predominantly housing non-violent offenders, is one of restriction of individuality, control over one's day-to-day activities, and at times the imposition of arbitrary consequences to one's actions. Such conditions foster a degree of disempowerment and even helplessness. From here, it is a short journey to depression. It is also conceivable that those who suffer from depression are more likely to become incarcerated. That is, that depression is a factor precipitating incarceration rather than

resulting from it. The present study was not designed to discern between these two hypotheses, and therefore it is not possible to determine which, if either, of these two possibilities is more plausible.

Social Cognitive Skills Deficits and Incarceration Status.

The most encouraging finding of the present study is that despite the significant contribution of the three control variables to the prediction of group membership, a statistically significant improvement in prediction was obtained through the use of a subset of the instruments contained in Ross and Fabiano's (1985) SCSB. This finding is encouraging for both theoretical and practical reasons. Theoretically speaking, the fact that discrimination of this nature was possible even within a sample limited in size supports the notion, hypothesized by Ross and his colleagues (1985, 1988, 1995), that incarcerated individuals do evidence measurable deficits in several social-cognitive domains when compared to non-incarcerated individuals. Practically speaking, this finding is encouraging because it points to the specific social-cognitive domains which, with further study, may be fruitful in making the finer distinctions within incarcerated populations which are necessary in order to be able to specifically target certain offenders for participation in the R&R program. Only then will the most important goal of correctional rehabilitation efforts be facilitated - that of decreasing the rate at which incarcerated individuals re-offend.

The characteristics associated with the three control variables and the retained subset of the SCSB, along with information obtained from the researcher's experiences in

correctional settings, can be used to construct a description of the 'typical' incarcerated participant in this study, and to speculate with regard to the 'social-cognitive world' in which the average offender might find him or herself.

First of all, the typical incarcerated offender likely will have obtained a slightly lower measured level of intelligence than what is considered average. This slightly lower than average estimate of intelligence may represent an actual difference in intellect between the typical offender and the typical community member, or it may be due to bias in the instrument used to measure this construct (since no such test is completely culturally unbiased). Regardless of the source of the difference, the offender is likely to have experienced some scholastic difficulties, since intelligence and educational attainment are related.

Similarly, the typical incarcerated participant is likely to have attained a lower level of formal education than his or her non-incarcerated counterpart, and has likely not graduated from high school. The incarcerate may have had more negative academic and social experiences at school than someone who is not incarcerated, and is not likely to hold a positive opinion of academia in general. Further, the offender's lower level of educational attainment had likely impinged negatively on his or her employment history and present job prospects.

In addition, the incarcerated offender probably is experiencing a greater number of symptoms of depression than the average community member. Whether the symptoms of depression have been with the offender prior to his or her incarceration, or have arisen

subsequent to it, it is likely that the incarcerated is feeling more sad, self-critical, irritable, helpless and even more hopeless about the future than would be someone from the community.

In terms of the typical offender's level of conceptual reasoning, the average offender is likely to think about rule structure and authority, conflict and uncertainty in a different manner than would a typical non-incarcerated individual. Offenders' Conceptual Level scores were such that the typical offender is still somewhat focussed on external prescriptions of right and wrong. Additionally, incarcerated offenders are more apt to see rules and authority only in terms of how they constrain individual behaviour, rather than how they serve the larger purpose of facilitating socially responsible behavior. Incarcerated individuals are also more likely to see their own opinions as paramount when faced with conflict and to be overly-dependent on external sources of information when faced with ambiguity or uncertainty.

The above level of conceptual reasoning fits well with the incarcerated offender's typical stance with regard to locus of control. The incarcerated is more likely than the non-incarcerate to see the events of his or her life as being more controlled by external sources such as chance or powerful others, than being internally controlled. As such, when events occur in the offender's life, either positive or negative events, the offender is likely to see these as beyond his or her control. Given this, it is plausible that the typical incarcerated would be more likely to blame others when life events did not work out to his or her satisfaction. Similarly, the typical offender would see little point in attempting to change

one's life circumstances, if the effort required to do so is not perceived as being likely to effect such change, and if the present situation is not perceived as being one's own responsibility.

The typical incarcerated participant also is likely to demonstrate a lower level of critical reasoning skill than the average community member. This means that the typical offender is less able to recognize the existence of problems. Even if a problem of some sort has been identified as such, the incarcerated offender is generally less able to discern what has caused the problem, or how to weigh the available evidence in an effort to identify how to solve the problem. In short, the incarcerated is likely to find him or herself somewhat confused as to what does or does not constitute a problem in his or her lifestyle, and is unlikely to be able to distinguish among the available information to make this determination. Chances are the offender will make erroneous conclusions not based on fact, but based instead on assumptions or biased opinions, a process that is likely to lead to very poor decision-making.

Finally, as compared to the typical community member, the average incarcerated offender is likely to be quite rigid in his or her opinions, despite that, as just noted, these opinions probably are not based in fact. The offender is not likely to be dissuaded from his or her opinions easily, making it likely that poor decisions, and inflexible and even maladaptive opinions are likely to be long-lived.

The foregoing 'translation' of obtained statistical results into likely descriptors of the average incarcerated participant paints a clearer picture of the difficulties with which

those working towards improving offenders' social-cognitive skills are faced. In sum, typical incarcerates are likely to present as egocentric, externally motivated, lacking in logical discernment, and chronically rigid in their thinking patterns. Further, their life experiences have likely served to entrench these social-cognitive perceptions of the world. Facilitating prosocial change in this type of clientele is certainly a 'tall order.' However, as discussed earlier, such change can be effected given combination of the 'right' program (e.g., Reasoning and Rehabilitation) with the 'right' type of offender (those demonstrating social-cognitive deficits). The present research represents a small step toward this convergence of necessary conditions.

Practicality and Utility of the SCSB.

The second purpose of the present study was to make a determination as to whether use of a streamlined version of the SCSB would be useful and practical in the context of a provincial correctional institution. Two factors, time commitment and financial cost, were weighed and a value judgement was made by the researcher that the benefits of using the streamlined SCSB toward identification of offenders amenable to the R&R program outweighed these costs.

This and any other 'feasibility study' involves a weighing of both objective (i.e., empirical statistical findings) and subjective factors (i.e., values, opinions, beliefs), in order to come to a final determination of practicality and utility. While the objective factors may be said to be relatively constant in such an analysis, the subjective factors depend on who is doing the 'weighing.' Perhaps if this same study had been conducted

by a different researcher, or even by the same researcher in some previous decade, the streamlined SCSB may have been found to be not practical. Such an alternate outcome would not be unlikely due to the fact that for many decades, there has been an all-pervasive devaluing of correctional clientele. For example, it is highly unlikely that the shoddy research practices uncovered by Martinson and his colleagues (Lipton, Martinson, & Wilks, 1975; Martinson, 1974) would have been allowed to continue for so long in any other field of study except that of corrections, a field whose focus is a population of individuals that society continues to hold in very low regard.

While such blatant devaluation may have been more prominent in the past (e.g., Caron, 1978, 1985), its subtle forms are still evident today. A recent example of treatment lacking in integrity in its implementation is that reported by Dhaliwal, Porporino & Ross (1994). In their study, despite system-wide implementation of a classificatory scheme designed to match offenders with treatment programs addressing their criminogenic needs, offenders were often denied access to these programs or required to attend programs not relevant to their identified criminogenic needs. The authors' study provided an example of the devaluing philosophy that remains ingrained in the correctional system, one which may effectively neutralize even the most powerful of intervention strategies, or prevent such strategies from being seen as 'feasible.'

Devaluation of correctional clientele often is a feature of the overall organization of the correctional system itself (Ham & Shrink, 1989), and is represented in the prioritization of its goals. Security concerns always override treatment concerns. A

correctional institution is first and foremost a secure warehouse; its rehabilitative function is secondary at best. The duties of correctional staff, even if such staff happen to be members of the mental health or medical professions, are primarily those of peace officers. The correctional system's ordering of priorities is not lost on its incarcerates -- they are well aware of their high value as commodities and their low value as human beings. It is ironic that this institutional and political 'mind set' represents the same rigid, egocentric and self-serving cognitive characteristics that programs such as R&R have been designed to change in individual offenders.

Limitations

The present study is limited in several ways. These limitations fall into two main categories, these being limitations with regard to the sample itself and methodological limitations.

Sample-based limitations.

The most prominent limitation of the study is its small sample. As mentioned earlier, a sample size of 150 was planned initially. There are two primary reasons for the small sample size. The first of these is the lengthier-than-expected administration time of the assessment battery (2.5 hours was estimated; actual administration time ranged from 3.5 to nearly 7 hours) - there simply was not enough time to administer the battery to a larger number of participants within the time frame of the study. The second reason for the small sample was that despite the fact that correctional populations provide a

'captive' pool of prospective research participants, in reality offenders' time is quite rigorously scheduled with other activities. For instance, during the day a typical offender will work at his or her assigned duties (e.g., janitorial activities, food preparation, institutional maintenance work, grounds-keeping or work in the institutional vegetable gardens) or attend school (academic or vocational studies). In the evenings, a typical offender will attend rehabilitative programming of some kind (e.g., Drug Awareness, Anger Management, Family Violence Prevention, AA/NA meetings), participate in Chaplaincy activities or attend scheduled visits with family members or friends. As a result, scheduling an offender's participation in the present study was not always straightforward. Soliciting participation from community members met with similar barriers.

A second shortcoming of the sample was the paucity of incarcerated female participants. Contrary to most patterns of volunteerism, very few incarcerated females indicated a desire to participate in the study. In fact, only two female incarcerates responded to the recruitment posters placed on the female housing unit. The other three female offenders volunteered only after the second of the first two volunteers, one of the more prominent female offenders, encouraged some of her peers to volunteer.

A third limitation of the sample is the lack of aboriginal individuals in the non-incarcerated sample. Another main shortcoming of research in corrections is the lack of inclusion of Aboriginal peoples. In most such studies, if Aboriginal peoples are included at all, they are often compared with non-Aboriginal reference groups. While the present

study did include a few Aboriginal individuals in the incarcerated sample, no such individuals were included in the control sample. Therefore, no conclusions can be drawn from the study with regard to Aboriginal peoples' social-cognitive skills.

Further limiting the sample is its non-random nature. While it is technically possible to obtain random samples of incarcerated and non-incarcerated individuals, such a procedure was not feasible in the context of the present study. Barring this, a random selection of subjects within the sample of volunteers in each group would have been advantageous, but again this was not feasible given the limited number of volunteers obtained. As such, the obtained sample is purely one of convenience, and care must be taken in making generalizations about the results described herein.

Methodological Limitations.

In addition to the above noted drawbacks, the small overall size of the sample also impacted the study's methodology. Specifically, the small sample size resulted in limitations with regard to the nature of the statistical analyses that could be conducted to test the two primary hypotheses. As noted previously, Tabachnick and Fidell (1989) recommend a minimum ratio of five subjects per variable when conducting more complex statistical procedures such as discriminant function analysis and multiple regression techniques. The present study utilized a ratio of just under three subjects per variable (28:10) for the discriminant function analysis used to test Hypothesis 2. As a result, conclusions drawn from this analysis must be considered tentative at best. Further,

only a limited test of Hypothesis 3 was possible, since the analysis used to do so was run on incarcerated participants alone, a sample of only 18 complete data sets.

Another methodological limitation to the study is the absence of independent raters for the instruments that required an element of subjective scoring (i.e., the Conceptual Level: Paragraph Completion Method and Chandler's Role Taking Task). While the scores obtained from these instruments can be considered reasonable estimates of the constructs that each instrument purports to measure, confidence in the accuracy and reliability of the obtained scores would have been increased with the addition of independent raters.

Another potential methodological problem is the use of Alberta-based criminal contacts as a measure of the degree of incarcerated participants' levels of recidivism. As noted earlier, this measure reflects the number of times an individual has come to the attention of the Alberta criminal justice system. The computer data base from which these data were obtained (CoMIS) does not differentiate between offenders' number of arrests and number of convictions, but instead aggregates the two. By definition of course, this system applies to an offender's contacts with the justice system in Alberta; information from other provinces or countries is not available. It is possible that another type of recidivism measure (e.g., number of convictions only, Canada-wide criminal contacts) may be related to social-cognitive skills where Alberta-based criminal contacts were not.

CHAPTER 6

Summary and Conclusions

This chapter provides an overall summary of the rationale for and the general purpose and results of the present study. Suggestions with regard to directions for future research also are provided. The chapter concludes with some comments stressing the moral and ethical necessity of ongoing research into the area of offender rehabilitation and classification for effective treatment.

General Summary

In order to effect reductions in criminal recidivism, two conditions must converge: (a) the development of high quality rehabilitation programs which target the numerous areas related to criminal behavior plus; (b) the identification of specific types of offenders to whom the provision of such programs to the would likely result in reduced criminal recidivism. In short, the 'right' program must be married with the 'right' offender.

With regard to the first condition, a review of the literature elucidated which factors are associated with the differential effectiveness of psychoeducational offender-centered rehabilitation programs and pointed to a particular program that is designed with these factors in mind: the Reasoning and Rehabilitation program.

The present research sought to facilitate the second condition, that of identification of offenders whose social-cognitive deficits rendered them amenable to the specific skills taught by the Reasoning and Rehabilitation program. In order to do so, an evaluation of a screening battery proposed to identify such offenders was undertaken. Ross and his colleagues (1985, 1995) proposed a screening battery designed to determine which offenders are deficient in a variety of social-cognitive skills, and therefore, which offenders would be the most likely to benefit from the R&R program. What had not yet been determined, however, was an empirical demonstration as to whether the proposed screening battery effectively distinguished between groups of offenders and non-offenders, and even more specifically, whether it distinguished between those offenders whose social-cognitive deficits are likely to be pervasive and severe (i.e., recidivists) and those offenders who are likely to demonstrate fewer and less severe deficits.

Given the foregoing, the first purpose of the present study was to evaluate whether the proposed battery could distinguish between offenders and non-offenders, and if more recidivistic offenders could be identified from less recidivistic ones. The second purpose of the study was to determine if the proposed battery, or a subset thereof, was feasible for utilization in a provincial correctional facility.

With regard to the first purpose, analyses were conducted to determine which if any of the seven instruments in the SCSB was efficacious (over and above that of estimates of educational attainment, intelligence and depression) in the accurate classification of participants into incarcerated and non-incarcerated groups and in the

prediction of incarcerated participants' level of recidivism. To address the second purpose of the study, the results of the quantitative analyses, along with qualitative information with regard to administration and scoring procedures, were used to make a judgement as to whether the SCSB, or components thereof, would be feasible in the context of a provincial correctional setting.

Prior to undertaking any analyses, the sample was screened for gender and age differences. No gender differences were found on any of the SCSB or control instruments in the overall sample. Neither were any relationships between age and group membership or between age and scores on any of the SCSB or control measures found. Two of the SCSB instruments, the Conceptual Level Paragraph Completion Method and the Watson-Glaser Critical Thinking Appraisal, were found to be statistically significant contributors to the prediction of group membership. Two other SCSB instruments, Levenson's Locus of Control Scale and Gough's Rigidity Measure, were found closely to approach statistical significance in this regard. None of the instruments, either control measures or SCSB measures, were found to be significantly correlated with incarcerated participants' history of recidivism as measured by contacts with the Alberta criminal justice system.

When the preceding empirical results were combined with qualitative administration and scoring considerations, a judgement was made that when the rehabilitative ideal was considered more important than a punitive model of corrections, the streamlined version of the SCSB could be considered feasible in the context of a

provincial correctional institution. On the whole, the benefit of the information obtained from the streamlined version of the SCSB (e.g., facilitation of the provision of differentially effective rehabilitative programming) was deemed to outweigh the drawbacks (e.g., time commitment on behalf of both participant and instructor; financial cost to the host institution) of administering, scoring and interpreting the battery.

Despite several limitations, the present study met its overall objective: that of increasing the amount of information available with regard to Ross and his colleagues' (1985, 1995) Social Cognitive Screening Battery. More specifically, the present research enhanced the means through which those offenders who are more likely to respond positively to the R&R program may be more accurately identified. With the matching of amenable offender with effective treatment comes lowered recidivism rates, an outcome which is beneficial to both offender and to society.

Directions for Future Research

The present study represents but a first step toward the development of a means to accurately and reliably identify offenders whose social-cognitive skills deficits are likely to render them amenable to treatment using the Reasoning and Rehabilitation program. The ability of the streamlined version of the SCSB to correctly classify a significant number of participants into groups over and above that of three control variables (which also significantly discriminated between groups) supported the conclusion that elements of the SCSB have definite predictive potential. Improvements can be made, however.

The first such improvement to be undertaken in future study is to markedly increase the overall sample size. This will enable a determination of whether the results found herein are indeed generalizable to the provincial correctional population as a whole, or whether they are artifacts of this particular sample. Future studies incorporating larger samples may also help to clarify the nature of the relationship between incarceration status and the Rigidity and Locus of Control scales; these relationships were found to approach, but not attain, significance in the present study.

The expanded sample should include greater numbers of female participants, both incarcerated and non-incarcerated. More Aboriginal people also should be included in an expanded sample. In particular, Aboriginal people should be included in the non-incarcerated sample, so as to have a relevant reference group for incarcerated Aboriginal people. A larger sample size, expanded in terms of female and Aboriginal participants would allow inferential statistical analyses to be conducted within these subgroups of the sample. Subsequently, if differences in social-cognitive skills were found within these groups, an even more finely-tuned determination of amenability to the R&R program could be made.

Researchers conducting work in a community or academic setting have a variety of means at their disposal to facilitate increased participation (e.g., including advertising in various media, offering monetary or other inducements, and including participation in research as part of students' course work). Increasing the voluntarism of incarcerated offenders may require different approaches. The following paragraphs provide some

suggestions for recruiting greater numbers of incarcerated participants, both male and female, in order that the previous call for larger sample sizes in future studies of this nature realistically may be heeded.

First, it is suggested that investigators who are planning to conduct research within a correctional institution make regular, planned appeals for participants at various points during the course of the data collection period. This will serve to counteract, to some degree, the pattern of voluntarism in the present study (i.e., that of an initial influx of volunteers followed by a marked drop in requests to volunteer). Such regular appeals, while not likely to yield similar levels of volunteer requests as precipitated by the first appeal, may assist in bolstering the latter drop in requests to participate. Further, regular appeals for participation would provide the researcher with an opportunity to ensure that previous recruitment materials are both up-to-date and remain highly visible to potential volunteers (i.e., to ensure that posters/letters have not been removed, covered up by other institutional notices or damaged).

In addition regular, in-person appeals for participation may serve to garner the support of front-line staff. The maintenance of the profile of the study in the eyes of institutional staff would tend to increase the likelihood of their drawing offenders' attention to the opportunity for participation in the research. Finally, regular, in-person appeals for participation would enable potential incarcerated volunteers to become more familiar with the researcher and the research project. Due to the present researcher's experiences with the way in which the females for the present study were recruited (i.e.,

through in-person requests from the researcher and via offender-to-offender requests initiated by the researcher in person) it is speculated that these in-person appearances along with their concomitant opportunities for offenders to ask questions about the study and to 'size up' the people involved, may be especially important with female offenders.

It also may be useful to future correctional researchers to outline some frequently used participation enhancement methods that may not be of use in correctional environments. For instance, monetary or other inducements (e.g., honoraria, raffles, prizes) are often used in community- or university-based research projects. It is the writer's contention that such inducements are not likely to be of overall benefit in a correctional setting. First, such inducements would be difficult to arrange within an institutional setting, since there are strict guidelines with regard to incoming and outgoing inmate funds. As to providing non-monetary rewards or prizes, there are larger security concerns involved (i.e., possible nuisance or dangerous uses of such non-standard, even seemingly innocuous, items). In addition, difficulties may arise from the fact that offenders are not otherwise provided with any tangible inducements to participate in institutional activities of any kind. Therefore, while such efforts may provide some incentive for offender participation, staff perceptions of the research and their concomitant support ultimately may be undermined. Since staff support is essential to the success of any institutional endeavour, the disadvantages of this approach to participation enhancement seem to outweigh the advantages.

The previous suggestions with regard to increased sample size would likely serve to enhance the empirical and psychometric properties of the streamlined SBSB. However, improvements in its feasibility can be effected as well. For instance, an analysis of the items on each of the retained measures may be effective in determining which of the items on each of the retained instruments is contributing to prediction of group membership or to number of criminal contacts. It is possible that only a few items in each instrument are responsible for the predictive value of that instrument. If this is the case, it is possible that the overall length of the battery could be reduced further, thereby increasing its utility in the already resource-limited correctional environment.

Conclusion

Society has continued to support rehabilitation as an important goal of the correctional system (Cullen, et al., 1990). Thoughtful, meticulous research of high integrity is essential if progress toward this goal is to be made, especially since such progress is likely to be "uphill all the way" (Ham & Shrink, 1989, p. 178). However, the prevailing social climate, at least in the province of Alberta, has become one which appears to favour punishment and retribution over that of rehabilitation. Despite this, concerted research efforts in the area of identification of those amenable to differential correctional intervention strategies remain essential. This is due to the fact that one of the primary responsibilities of any society based on law is the reintegration into that society those who deviate from it (Arbuthnot & Gordon, 1983; Arbuthnot, 1984). As such, a

moral and ethical responsibility exists to continue, and to improve upon, current research efforts in the area of corrections. To abdicate this responsibility would be nothing less than criminal.

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APPENDIX I

Issues in the Use of Recidivism as an Outcome Measure

Difficulties arise in the use of any definition of recidivism as a means of evaluating correctional rehabilitation outcome. The difficulties arise as a result of three issues: (a) the inconsistent manner in which recidivism is often defined, (b) the validity of the use of official statistics to measure recidivism, and (c) the validity of the use of recidivism altogether, officially measured or otherwise. Despite such difficulties in the use of recidivism as the primary outcome measure of correctional rehabilitation research, it remains the most common outcome measure. A fuller discussion of the methodological issues surrounding the measurement and usage of recidivism as an outcome measure is beyond the scope of the present study. However, the three previously noted issues are discussed briefly below.

Inconsistent Definitions.

Gendreau and Leipziger (1983) noted that there are many problems with the use of recidivism as a valid outcome measure for correctional treatment research. They stated, "recidivism is one of the least understood and elusive of measures employed in criminal justice research" (p. 3). Recidivism has most often been used as a dichotomous variable, but with many incomparable forms. For instance, one study may consider re-arrest to be evidence of recidivism, while another study may use the more liberal definition of reincarceration. The former study is much more likely to obtain higher failure rates (more

recidivism) than is the second study, regardless of the type of treatment provided to its participants.⁸ Yet, both such studies will claim to have measured recidivism.

Use of Official Statistics.

Unfortunately, the use of recidivism as an outcome measure remains problematic. Some authors doubt its validity altogether. Self-reported behaviour is considered by some (i.e., Hindelang, Hirschi, & Weis, 1981) to be a more valid measure of criminal deeds than is officially recorded recidivism. The following statement by Schur (1973) illustrates the concern with the use of 'official' indicators of crime:

Researchers realized that if one wanted a true picture of the extent and distribution of law-violating behaviour, it would be necessary to obtain data from samples drawn from the general population, instead of relying on the patently misrepresentative "samples" made up of persons who had been institutionalized or processed through the courts (p. 156).

Hindelang, et al. (1981) noted that several self-report measures of delinquency and illegal behaviour have been shown to be adequately valid and reliable. That is, they are reasonably accurate representations of actual patterns of behaviour, despite the fact that the very persons providing the information are not known for their unfailing honesty.

In short, the measurement of recidivism through the use of 'official' statistics only provides researchers with an indication of the extent to which rehabilitation programs

⁸ Proponents of the 'nothing works' doctrine prefer the former version of the outcome criteria, and those supportive of the rehabilitative ideal, the latter.

impact on the amount of crime that is visible to the authorities. The effect of rehabilitation efforts on what some consider to be more accurate estimations of deviant behaviour (i.e., self-report measures) is beyond assessment by such instruments.

Despite the above concern, official recidivism remains the benchmark outcome measure in correctional research. This is likely due to the fact that it is criminal behaviour that is serious enough to result in its repeated visibility to the criminal justice system that is the primary focus of correctional rehabilitation efforts. Further, Hindelang, et al. (1981) reported that self-report instruments are more valid for the assessment of non-serious delinquency than they are for more serious criminal acts.

Overall Validity of Recidivism.

The third, and most fundamental, challenge to the use of recidivism as an outcome measure comes from those in the field of mainstream criminology (i.e., those advocating deterrence through punishment as remediation for criminal behaviour; see Andrews, 1990b). For instance, to statements that certain rehabilitation programs have been shown to reduce recidivism, Martinson (1975) advocated a rude reply of "so what?" (p. 187), and later stated that "a pox should be visited on those...who cheer about...reduction in the recidivism rate" (Wilks & Martinson, 1976, p. 4). He, apparently along with shrewd taxpayers, would prefer an answer to the question, "has your 'program' reduced the crime rate?" (Martinson, 1975, p. 187).

Martinson goes on to illustrate that a reduction in recidivism rates could actually lead to an increased crime rate. Such an occurrence is possible, if, for example, a

program that 'works' is administered area-wide to a group of offenders, resulting in a 10% reduction in their recidivism rates. Upon their early release (which has been facilitated by their success in the 'program'), these 'rehabilitated' offenders each commit 10% fewer crimes. However, the influx of such a large number of ex-offenders into the community has, according to Martinson, increased the overall number of crimes being committed. Citizens are now "too busy avoiding hoodlums and ducking bullets" (p. 188) to appreciate the 'success of the program'.

Martinson's hypothetical example is indeed a disturbing challenge to the use of recidivism as an appropriate outcome measure for correctional rehabilitation programs. Fortunately his example remains a hypothetical one. First, successful programs typically reduce recidivism by a far greater amount than 10% (Gendreau, 1981). A recent estimate of the effect of appropriate correctional treatment is an average reduction in recidivism of 50% (Andrews, et al. 1990b), with reductions as high as 90% having been reported (Antonowicz & Ross, 1994). Second, offenders are not generally released *en masse* as Martinson has purported. Early release of offenders is considered on a case-by-case basis, and in the opinion of the writer, is becoming less frequent. Most offenders, especially recidivists, serve the two-thirds of their sentence as required by Canadian law. Third, according to Palmer (1984), intervention programs only can be held accountable for the behaviour of those individuals who actually participate in the programs. They are not responsible for the criminal behaviour of those who do not come to the attention of the criminal justice system, and therefore have not been exposed to treatment efforts.

Palmer stated that the overall crime rate is largely produced, not by the relatively few adjudicated and treated offenders, but by the proportionately larger number of individuals who are neither processed nor treated by the criminal justice system. As such, measuring the crime rate would not assess the effectiveness of any intervention program. These three facts combine to offset Martinson's concern that recidivism is an invalid measure of correctional outcome.

Despite the noted difficulties, recidivism remains the most widely used measure of correctional rehabilitation outcome (Maltz, 1984). Its measurement is becoming more standardized, and despite challenges to its validity, it is still the best representation of our ability to facilitate change in the behaviour of individual offenders. In the words of Palmer, (interview in Bartollas, 1985), "recidivism is the most important effectiveness index from the public policy perspective" (p. 24). Given the foregoing rationale for the use of recidivism as an acceptable outcome measure for correctional research, the use of a measure of recidivism was retained for the present study.

APPENDIX II

*Volunteer Recruitment Poster 1
Incarcerated Participants*



Something Different...

Would you like to do something a bit different?

I am a student who is interested learning what
you have to teach me!

- If you are interested in helping me learn more about how **you** see the world and how it works, please let me know!
- My questions will take a few hours to answer, but I think they are pretty interesting questions, and you might think so too!

For more information, just fill out a request form and ask to see Theresa, from the Thinking About Thinking Project



APPENDIX III

Volunteer Recruitment Poster 2
Non-incarcerated Participants

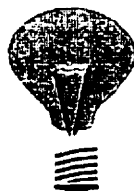


Something Different...

Would you like to do something a bit different?

I am looking for volunteers for my research project,
entitled: “**Thinking About Thinking**”

- The purpose of the project is to obtain information about inmates thinking patterns on a variety of topics
- For comparison purposes, I will also be looking at the views and opinions of community members.
- If you would like more information, or if you are interested in participating, please call **Theresa** (in the Psychology Department) at **extension 2501**.



APPENDIX IV

Consent Form 1 - Incarcerated Participants

Before agreeing to answer any of my questions, you have the right to know who I am, why I am asking these questions and what I will do with your answers.

My name is **Theresa Van Domselaar**, and in addition to my job as a Psychology Assistant, I am also a student at the University of Victoria. I am interested in learning about what people think are the best ways to get along with other people. I will then write a report about what I learn. Writing this report is part of what I need to do in order to graduate.

In order to do all of this, I will be asking you to fill out some surveys, and to answer some questions. This will take about 2 ½ hours of your time. You do not have to answer any questions you don't want to answer, and you can stop answering questions at any time. All of your answers are **confidential and private**. This means that nothing you say or write will be told to anyone else, and nothing you say or write will go into your file. Also, your name will not be put on any of the surveys. Instead, only a code number will be put on them. This code number will **not** be your CoMIS number, but just a number from 1 to 150. **It would also be helpful to me if I could have access to your institutional file so that I can make a note of your current charge and any previous charges. However, I will only do this with your permission.**

If you decide that you would like to have more information about the surveys after you have finished them, I will keep your name and code number on a list so I can contact you about that. Once I have finished asking everyone my questions, the list will be destroyed. In the meantime, the list and all of the surveys will be kept in a locked filing cabinet.

Also, whether or not you decide to volunteer for this project will not change the types of services (health care, psychology, casework, programs, etc.) that you receive here at F.S.C.C. or at any other correctional institution.

If you have any questions about what you have just read, or about the project in general, please ask them now. If you have questions in the future, I can be contacted by filling out a request form, or through any of the people in the psychology department at F.S.C.C.

APPENDIX V

Consent Form 2 - Non-incarcerated Participants

Before agreeing to answer any of my questions, you have the right to know who I am, why I am asking these questions and what I will do with your answers.

My name is **Theresa Van Domselaar**, and in addition to my job as a Psychology Assistant, I am also a student at the University of Victoria. I am interested in learning about what people think are the best ways to get along with other people. When I am finished, I will be writing a report about what I learn. Writing this report is part of what I need to do in order to graduate.

In order to do all of this, I will be asking you to fill out some surveys, and to answer some questions. This will take about 2 ½ hours of your time. You do not have to answer any questions you don't want to answer, and you can stop answering questions at any time. All of your answers are **confidential and private**. This means that nothing you say or write will be told to anyone else.

Also, your name will not be put on any of the surveys. Instead, only a code number will be put on them. If you decide that you would like to have more information about the surveys after you have finished them, I will keep your name and code number on a list so I can contact you about that. Once I have finished asking everyone my questions, the list will be destroyed. In the meantime, the list and all of the surveys will be kept in a locked filing cabinet.

If you have any questions about what you have just read, or about the project in general, please ask them now. If you have questions in the future, I can be contacted at the Psychology Department at the Fort Saskatchewan Correctional Centre (992-2501), or at the Edmonton Remand Centre (427-1670).

If you would like to take part in this project, please sign your name in the space provided below:

Participant's Signature **Date**

Researcher's Signature **Date**

- Copy given to participant: _____ (participant's initials)
- Copy retained by researcher: _____ (researcher's initials)

Thank you for your help !

APPENDIX VI

Information Interview Form 1 - Incarcerated Participants

Code # _____

Date: _____

- 1) Are you right or left-handed? R L
- 2) When is your birthday? ___/___/___ So your age is: _____
- 3) What was the last grade you completed? _____
 - a) Are you going to school here at F.S.C.C.? Yes No
 - b) If yes, what courses are you taking? _____
 - c) What grade level(s) are you working on? _____
- 4) Were you employed before coming to F.S.C.C.? Yes No
 - a) If yes, what was your job? _____
 - b) If partner working, what is his/her job? _____
- 5) What charge are you currently incarcerated for? _____
- 6) How long of a sentence did you receive? _____
- 7) Is this your first incarceration? Yes No
 - a) If no, how many other times have you been incarcerated? _____
 - b) Have you served any Federal time? Yes No
 - c) If yes, what were you charged with? _____

APPENDIX VII

Information Interview Form 2 - Non-incarcerated Participants

Code # _____

Date: _____

1) Are you right or left-handed? R L

2) When is your birthday? ___/___/___ So your age is: _____

3) What was the last grade you completed? _____

a) Have you taken any upgrading since then? Yes No

b) If so, what courses? _____

c) What grade level(s) are you working on? _____

4) What is your current occupation? _____

a) If working, how long have you been working there? _____

b) If partner/spouse working, what was his/her job? _____