Predicting Sex Offender Program Attrition: The Role of Denial, Motivation, and Treatment Readiness

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Abstract

The responsivity principle is of great importance for effective correctional programming, but has been relatively understudied compared to the risk and need principles (Andrews & Bonta, 2003; Bonta, 1995; Kennedy, 2000). The responsivity principle suggests that by attending to responsivity factors (e.g. I.Q., motivation) during the planning and deliverance phases of treatment the probability is that an offender will complete the intervention is increased, which in turn will reduce the likelihood of recidivism (Dowden & Serin, 2001). The current study examined denial, minimization, motivation, and treatment readiness in relation to sex offender treatment outcome in a heterogeneous sample of 449 sex offenders. Additionally, motivation, treatment attrition, and treatment readiness were examined across sex offender type. Key findings demonstrate that denial, minimization, and possibly treatment readiness are predictors of treatment non-completion in sex offenders. Further, differences in motivation and treatment readiness were observed across sex offender type. The findings indicate that denial, minimization, motivation, and treatment readiness are worthy of assessment prior to assigning sex offenders to a specific treatment program. These responsivity factors seemingly effect whether or not an offender completes treatment even after taking risk into account. . It is important to determine those offenders that would benefit from pre-treatment sessions with the goal of reducing or removing those factors involved in preventing the offender from fully benefiting from treatment.

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Introduction

Sex offences are regarded by society as one of the most repugnant criminal acts and consequently have attracted a high degree of political attention. As a result of public concern, in Canada, there has been widespread implementation of sexual offender treatment programs aimed at reducing sexual re-offending (Polizzi, MacKenzie, & Hickman, 1999; Wormith & Hanson, 1992). Regardless of ongoing debate, recent research demonstrates that sex offenders treated with current cognitve behavioural approaches will benefit from treatment and result in modest reduced recidivism rates for this population (Hanson, Gordon, Harris, Marques, Murphy, Quinsey, & Seto, 2002; Abracen & Looman, 2004). The contentious question of treatment efficacy with sex offenders has overshadowed and prevented the advancement of more detailed research regarding constructs related to treatment program outcome with sex offenders (e.g. treatment readiness, motivation, denial). Systematic investigation of these constructs is required to determine their immediate effects on sex offender treatment and their long term effects on sex offender recidivism.

Personal, Interpersonal, and Community-Reinforcement (PIC-R) Theory

The personal, interpersonal community reinforcement (PIC-R) theory (Andrews, 2003) is an empirically-based perspective that emphasizes behavioural and social learning perspectives to explain individual differences in criminal conduct. The PIC-R encompasses knowledge from multiple disciplines including biology (e.g. temperament), sociology (e.g. social values) and psychology (e.g. cognitions favorable to crime) while also integrating contributions from other theories such as social

learning theory and differential association theory. From the PIC-R perspective, criminal behaviour at its most fundamental level is the result of the perceived rewards outweighing the costs in the immediate situation of action. However, the perceived balance between rewards and costs is not only influenced by immediate situational factors, but is also influenced by distal factors such as social structure and culture. According to the PIC-R theory, these factors (both immediate and distal) may be divided into one of the following categories: situational (e.g. facilitators, inhibitors), personal (e.g. cognitions favorable to crime, antisocial attitudes) interpersonal (e.g. antisocial associates), or community (e.g. neighborhood). These categories impact on the individuals' belief system and the development of cognitions favourable to criminal behaviour which translates into antisocial behaviour.

A natural extension of the PIC-R, Andrews and Bonta (2003) developed and applied the risk, need, and responsivity principles to assess, classify, manage, and treat offenders in the most effective and efficient manner while ensuring humane treatment of offenders. The knowledge base on effective correctional practices indicates that the most effective interventions with offenders are based upon the risk, need and responsivity principles (Andrews & Bonta, 2003).

The risk principle refers to the matching of treatment intensity level with offender risk for recidivism (Andrews & Bonta, 2003; Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990). This principle is founded on the evidence that criminal behaviour can be predicted. Moreover, research demonstrates that higher levels of treatment services are most effective when delivered to higher risk cases and that lower

risk cases are best assigned minimal or no treatment (Andrews, Bonta, & Hoge, 1990). Given their relatively high levels of recidivism, higher risk offenders by definition offer the greatest possibility for a significant reduction in recidivism with appropriate treatment. Furthermore, providing overly intensive treatment services to lower risk offenders results in minimal effects or may have the counterintuitive effect of increasing risk (Andrews & Bonta, 2003).

The need principle differentiates between criminogenic and non-criminogenic needs (Andrews & Bonta, 2003; Andrews et al., 1990). Criminogenic needs are dynamic risk factors which have been empirically identified as being associated with criminal behaviour and recidivism. Specifically, when these factors are targeted and modified through treatment there is an associated change in the probability of recidivism. Conversely, non-criminogenic needs are weakly connected to criminal behaviour and recidivism. In order for correctional programs to be effective (i.e. reduce risk of recidivism) treatment must target criminogenic needs. Examples of highly validated criminogenic needs include antisocial attitudes, antisocial associates, antisocial personality pattern, problematic circumstances at home (family/marital), problematic circumstances at school or work, problematic leisure circumstances, and substance abuse (Andrews & Bonta, 2003).

The responsivity principle specifies that interventions must be delivered in a manner that is compatible to the learning styles, abilities, and aptitudes of offenders (Andrews & Bonta, 2003; Bonta, 1995). From this perspective, treatment is viewed as a learning experience and factors that either facilitate or obstruct the treatment process

are labelled as responsivity factors (Howells & Day, 2003). For example, exposing interpersonally anxious offenders to a highly confrontational group therapy will in all likelihood impede any positive response to the intervention.

Although there has been insufficient research to conclude that the components of effective correctional treatment for general offenders directly apply to sex offenders, there is growing evidence for the validity of this assumption (Hanson, et al., 2002; Serin & Mailloux, 2003). Andrews and Bonta (2003) argue that sex offenders are not necessarily unique when compared to other offender groups. The literature indicates that intrafamilial child molesters and rapists typically commit non-sexual crimes in addition to sexual crimes which indicate the presence of overlapping criminogenic needs and risk factors with other offenders (Andrews & Bonta, 2003; Abracen & Looman, 2004). Obviously, there are dynamic factors (e.g. deviant sexual fantasies) directly associated to sexual behaviour which distinguish sex offenders from the general offender population, however, there is no reason to assume that the principles of effective correctional treatment are not equally applicable (Andrews & Bonta, 2003). In fact, non-sexual violent recidivism is predicted by the identical factors (e.g. diverse criminal behaviour, unmarried) in both sexual and general offenders (Hanson & Bussière, 1998). Furthermore, meta-analyses demonstrate that sex offenders are more likely to recidivate with a non-sexual offence than a sexual offence (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2004; Motiuk & Brown, 1996). Finally, there are common factors such as an unstable antisocial lifestyle that are important

predictors for all types of recidivism including sexual, violent and general recidivism (Hanson & Morton-Bourgon, 2004).

The research on "what works" in correctional interventions indicates that programs that adhere to the above mentioned principles results in an average reduction of between 20% and 40% in recidivism (Andrews & Bonta, 2003; Andrews et al., 1990). Andrews and Bonta (1998) also found that each of the principles contributed to the effect on recidivism and as the number of principles evident in a program increased, the larger the effect size.

Responsivity

Although the responsivity principle is of paramount importance for effective correctional programming, it has been a relatively neglected area of study (Andrews & Bonta, 2003; Bonta, 1995; Kennedy, 2000; Van Voorhis, Cullen, & Applegate, 1997). The responsivity principle has been relegated to a secondary interest within corrections research with the majority of attention and efforts being placed on the risk and need principles. Only a small number of identified responsivity factors have been empirically examined and there remains an incomplete list of treatment mediating factors (Andrews & Bonta, 2001; Bonta, 1995). This is surprising considering that a substantial increase in treatment effectiveness is a legitimate corollary of the identification of factors which mediate treatment response. Furthermore, attending to responsivity factors during the planning and deliverance phases of treatment increases the probability that an offender will complete the intervention which in turn will reduce the likelihood of re-offending (Dowden & Serin, 2001).

Andrews (2001) distinguished between two types of responsivity: general and specific responsivity. General responsivity factors refer to the strategies and techniques which have been empirically demonstrated to yield the highest level of treatment response with individuals (Andrews, 2001; Andrews & Bonta, 2003). Andrews (2001) points out, irrespective of the behaviour targeted for change (e.g. smoking, anger, obesity), cognitive behavioural/social learning strategies have been established as being more effective than other types of interventions. The components of these interventions such as reinforcement, modeling, and cognitive restructuring are enhanced by positive therapist characteristics including a warm, non-hostile, engaging approach and the location or setting of the treatment sessions (e.g. community vs institution) (Marshall, Serran, Moulden, Mulloy, Fernandez, Mann, & Thorton; McGuire, 2002; Serran, Fernandez, & Marshall, 2003).

Specific responsivity factors are individual characteristics which may either enhance or impede the effects of treatment (Andrews, 2001; Andrews & Bonta, 2003). The majority of these factors are not offender-specific and include the following: anxiety sensitivity, self-esteem, depression, mental illness, age, gender, race/ethnicity, poor social skills, poor problem solving skills, concrete oriented thinking, poor verbal intelligence, and cognitive maturity (Andrews, 2001; Andrews & Bonta, 2003; Bonta, 1995). This tentative list of specific responsivity factors proposed by Bonta (1995) is by no means all inclusive.

More recently, Serin and Kennedy (1997) sub-divided responsivity factors into internal and external factors. Internal responsivity factors are those characteristics that

are specific to the individual and according to Serin and Kennedy (1997) include motivation, personality characteristics (e.g., psychopathy, mental illness, self esteem, poor social skills), cognitive intellectual deficits (e.g., low intelligence, poor verbal skills, inadequate problem solving skills), and other demographic variables (age, gender race, ethnicity). External responsivity factors include the characteristics associated with the therapist and the treatment setting (e.g., institution versus community, individual versus group).

A number of specific responsivity factors not only influence treatment response but are also risk and need factors. For example, an offender who scores high on psychopathy would be considered a higher risk than an offender who scores low on psychopathy (holding all other variables constant). The therapist would also want to consider using a different interpersonal style (responsivity factor) during treatment as high psychopathy has been demonstrated to negatively affect treatment engagement and outcome (see Seto & Barbaree, 1999). Similar to risk and need factors, a number of responsivity factors are considered changeable (e.g. motivation, self-esteem) while others are constant (e.g. gender). Responsivity factors are distinguishable from both risk and need factors on a functional level as they effect the quality of the offender's treatment experience and outcome, but do not typically serve as treatment targets for the purpose of reducing recidivism (Bonta, 1995).

The issue of treatment readiness and motivation for treatment is an emerging area of study and perhaps a key factor mediating the success of offender treatment programs (Andrews & Bonta, 2003; Howells, Day, Williamson, Bubner, Jauncey,

Parker, et al., 2005; Kennedy, 2000; Serin & Kennedy, 1997; Ward, Day, Howells, & Birgden, 2004). In sex offenders, denial and minimization have often been used as proxy indicators of motivation and treatment readiness (Abracen & Looman, 2002; Kennedy & Grubin, 1992). However, instead of modifying treatment to take into consideration the unique requirements of these sex offenders, as the responsivity principle suggests, denial has sometimes been used as an exclusionary criterion for treatment (Cooper, 2005; O'Donohue & Letourneau, 1993). Although it has been suggested that sex offenders who deny their offence are not amenable to treatment, others have suggested that an offender's motivation to change exists independently of their denial (Roberts & Baim, 1999). The precise role and function of these responsivity variables remains elusive and further research is required to clarify the mechanisms by which these factors mediate the offenders' response to treatment interventions (Serin & Kennedy, 1997).

Treatment Readiness

The concept of treatment readiness refers to the willingness of the individual to undertake and engage in programming (Howells et al., 2005; Serin, Kennedy, & Mailloux, 2002; Watson & Beech, 2001). The term overlaps to some extent with the similar constructs of responsivity and motivation. Treatment readiness is a broader construct, which encompasses motivation, in addition to external supports for change and other treatment process variables related to the individual. Within the offender rehabilitation literature, low readiness can be potentially viewed as a subset of offender responsivity factors.

The construct of treatment readiness was initially examined within the field of addictions by Prochasca, DiClemente, and Norcorss (1992) as part of the Transtheoretical Stages of Change model. Its application to the area of corrections is attributed to Serin and his colleagues (1997, 1998) as part of their efforts to operationalize and measure the concept of treatment readiness. The development of their theory-driven, clinical rating treatment readiness measure is based on a combination of cognitive-behavioural approaches. Serin (1998) originally identified 11 components of treatment readiness based on the theories of treatability, motivational interviewing, and the Transtheoretical Stages of Change model. These 11 components include: (1) problem recognition, (2) goal setting, (3) motivation, (4) self-appraisal, (5) expectations, (6) behavioural consistency, (7) views about treatment, (8) self-efficacy, (9) dissonance, (10) external supports, and (11) affective reactions.

These components form the newly developed, interview based, Treatment Readiness Scale (Serin, Mailloux, & Kennedy, 2002). This semi-structured assessment instrument is a behaviourally anchored rating scale that has demonstrated encouraging preliminary results (Howell et al., 2005; Serin & Mailloux, 2003; Watson & Beech, 2002). In sex offenders, treatment readiness is significantly correlated with denial (r = .45, $p < .001$) and criminal risk as measured by the Level of Service Inventory Revised (LSI-R) (r = -.27, $p < .01$) (Serin & Mailloux, 2003). Furthermore, rapists and intrafamilial child molesters demonstrate lower treatment readiness scores prior to commencing treatment as compared to non-sex offenders (Serin & Mailloux, 2003).

Knight, Hiller, Broome, and Simpson (2000) recently examined the effect of treatment readiness and legal pressure on treatment engagement and retention in a sample of 2194 participants admitted to 18 long term community based, drug abuse treatment facilities. Legal pressure was measured as a dichotomous variable, either present or absent. Treatment readiness was measured using a 20 item subscale of the Circumstance, Motivation, Readiness, and Suitability Scale (DeLeon, Melnick, Kressel, & Jainchill, 1994). Treatment retention was also measured as a dichotomous variable, as the authors previously determined that a minimum of 90 days in the treatment program was necessary to derive treatment benefits. Therefore, retention was coded as either less than 90 days or 90 days or more in treatment. Finally, treatment engagement was determined using a questionnaire measuring the participants' confidence in treatment, commitment to treatment, and rapport with the counsellor.

The results demonstrated that treatment readiness was related to retention, independent of legal pressure. Specifically, participants with higher levels of readiness at intake were significantly more likely to remain in treatment for 90 days or more, regardless of legal pressure (Knight et al., 2000). Furthermore, as expected, only treatment readiness was a significant predictor of each of the three subcomponents utilized to measure treatment engagement.

Czuchry and Dansereau (2000) conducted a randomized controlled study designed to examine the effects of a treatment readiness program on a Therapeutic Community (TC) setting in a sample of probationers receiving substance abuse treatment. Participants were randomly assigned to either the treatment readiness

training group or the treatment as usual group (TAU). The treatment readiness training consisted of an 8 hour cognitively-based program and focused on several components of treatment readiness including developing knowledge of what is involved in the change process, developing strategies to initiate and sustain change and identifying personal strengths and external support necessary to realize change (Czuchry and Dansereau, 2000).

The results indicated that the treatment readiness training group rated their communities as more engaged and supportive than the TAU group. Also, the study did not examine whether the higher levels of treatment engagement and support reported by the treatment readiness group translated into better post-treatment outcomes. The study results should be interpreted with caution due to the self-report format of the measures utilized to assess group treatment engagement and support.

In a sample of rapists, higher levels of treatment readiness (retrospectively coded from treatment files) have also been shown to result in increased time spent in sex offender treatment (Dickie, 2003). Moreover, in this same population, higher levels of pre-treatment readiness were associated with higher levels of treatment gain (Dickie 2003). Treatment gain was measured utilizing the Treatment Gain scale (Serin, Kennedy, & Mailloux, 2002) which was designed to reflect an offender's overall performance in a correctional program by rating items related to the offender's participation, knowledge acquisition, and competencies. Although it is not possible to make any firm conclusions based on a small number of studies, it appears that the relation between treatment readiness and program performance is applicable to

offenders in general and more specifically sex offenders. This relation implies that an offender's treatment readiness level measured prior to treatment commencement may predict poor program performance and program attrition (Serin & Mailloux, 2003). The specific items corresponding to the low treatment readiness score may then be targeted as part of a pre-treatment intervention prior to entering formal sex offender treatment.

In summary, preliminary investigations using various measures to examine the construct of treatment readiness, demonstrate a link between readiness to participate in treatment and both treatment retention and engagement.

Motivation

The notion that motivation is an important factor in the process of change is not new within the general area of psychotherapy (Barrett, Wilson, & Long, 2003; Jenkins-Hall, 1994). A number of studies exist which examine the relationship between client motivation and treatment outcome (Miller, 1985). Unfortunately, there is a lack of research examining the effects of motivation on mandated or coerced treatment (Garland & Dougher, 1991). Perhaps even more surprising is the lack of systematic investigation of motivational factors as they relate specifically to sex offenders (Garland & Dougher, 1991; Jenkins-Hall, 1994). Sex offenders are typically characterized as unmotivated for treatment and uninterested in changing their behaviour (McMurran, 2002). Motivation is thus a crucial issue with regards to sex offender treatment outcome.

Traditionally, motivation was simplistically conceptualised as a static trait or a disposition that was either present or absent in a given individual. More recently, a paradigm shift has occurred that characterises motivation as a multi-dimensional construct that emphasizes the complexity of change (Kennedy & Serin, 1997; Lopez-Viets, Walker, & Miller, 2002; Miller, 1985). In contrast to traditional models of motivation, a more realistic way to conceptualize motivation is as a state of readiness to change (Preston & Murphy, 1997). Motivation may be operationally defined as "the probability that a person will enter into, continue, and adhere to specific strategy." (Miller & Rollnick, 1991, p.19).

In recent years, investigators have become increasingly interested in the distinction between intrinsic and extrinsic sources of motivation for treatment (Farabee, Prendergast, & Anglin, 1998; Simpson & Joe, 1993). Extrinsic or external sources of motivation refer to influences outside of the individual to participate in treatment such as the justice system, family or friends (Lopez-Viets et al., 2002). The major limitation with the utilization of external factors as the primary source of motivation is that treatment gains are typically not maintained with the discontinuation of external contingencies (Miller, 1985).

Intrinsic or internal sources of motivation arise from within the individual, for example personal beliefs, attitudes and goals. Intrinsically motivated change is not dependent on external contingencies and is therefore more likely to be a reliable predictor with respect to long term maintenance of treatment gains (McMurran, 2002).

With respect to offenders, acceptance of treatment within the criminal justice system is invariably connected to externally controlled motivational factors such as privileges, parole, and earlier release (Kennedy, 2003, McMurran & Ward, 2004). Therefore, an additional task in the treatment of offenders is to move emphasis from extrinsic to intrinsic reasons for change (Lopez-Viets, et al., 2002) as intrinsic motivation is better linked to positive treatment outcomes and long term maintenance of change (Deci & Ryan, 2000, McMurran, 2002).

Forensic populations tend to be less motivated for treatment, more resistant and non-complaint while in treatment, and demonstrate fewer positive behavioural changes while in treatment (Preston, 2000). Furthermore, offenders often have little insight or self-awareness concerning their problems they need to address. It is not uncommon for offenders to reduce or eliminate cognitive dissonance by applying techniques of neutralization such as minimizing the effects of their behaviours on others, denying any personal responsibility for their actions, or rationalizing their criminal acts (Langevin, Wright, & Handy, 1988; Kennedy, 2003; VanBeek and Mulder, 1992). Providing treatment to offenders who are unwilling to recognize or address their criminogenic needs without attempting to increase or enhance motivation will undoubtedly result in higher levels of treatment attrition or attenuated therapeutic gain from completed intervention programs (Kennedy, 2003).

Motivational Interventions and Offenders

There is a growing body of literature that focuses on motivation as an intermediate treatment target and provides guidelines for increasing client motivation

for treatment (Stewart & Millson, 1995). MI was initially developed as an alternative to the traditional trait model of motivation in alcohol dependent individuals (Miller and Rollnick, 1991). According to Miller (1985), early perspectives of motivation were based on the premise that alcoholics share a common personality structure which facilitates the use of dishonesty and defence mechanisms such as denial and rationalization to maintain their problem behaviour. When motivation is conceptualized as a static trait, the unmotivated client is considered unable to admit to his or her problem and in need of a direct confrontational approach (Di Cicco, Unterberger & Mack, 1978; Miller, 1985; Miller & Brown, 1997)

The MI approach is persuasive rather than coercive, with the overall goal of increasing intrinsic motivation to change by examining the individual's behaviours in a supportive context (Kear-Colwell & Pollock, 1997; Mann, Ginsburg, & Weekes, 2002; Miller & Rollnick, 1991). The purpose of using MI with offenders is to essentially induce cognitive dissonance through the examination of their criminal behaviour with respect to their values, beliefs and goals (Kear-Colwell & Pollock, 1997; Mann, Ginsburg, & Weekes, 2002; Miller & Rollnick, 1991). The resulting dissonance or psychological discomfort experienced by the offender offers the opportunity to contemplate or explore the possibility of change in the offenders' criminal attitudes and behaviours (Garland & Dougher, 1991; Kear-Colwell & Pollock, 1997)

George and Marlatt (1989) outlined the similarities between sex offending and addictive behaviours and in doing so played an indirect role in future authors advocating the use of MI with sex offenders. As was the case with relapse prevention,

which was originally developed for use with substance abusers, MI could potentially be adapted for use with sex offenders (Mann, Ginsburg, & Weekes, 2002). Garland and Dougher (1991) were the first to advocate the use of Mi with sex offenders. The authors stated that offender motivation for change was the single most important factor of treatment outcome and therefore treatment motivating techniques and strategies were crucial in working with offender populations. Kear-Colwell and Pollack (1997) also suggested the use of MI with child sex offenders. The authors compared MI with the traditional confrontational approach that is typically used with sexual offenders who are in "denial" of their offence. The confrontational approach has been viewed by many as the exclusive method to work with sex offenders, in spite of the lack of empirical evidence supporting the efficacy of this method in this population (McMurran, 2002). Furthermore, Kear-Colwell and Pollack (1997) noted that the confrontational approach places the sex offender in a position of powerlessness by encouraging self-labelling and perceiving them as being incapable of bringing about change in their behaviour.

In spite of the numerous recommendations for the use of motivational interventions with correctional populations, there remain merely a handful of research studies. Mann and Rollnick (1996) described a successful case study involving the use of MI techniques with a sex offender convicted of rape that included providing feedback of the assessment results and emphasizing personal choice and control in making the decision to enter treatment. The offender acknowledged having intercourse with the victim but claimed that there was mutual consent and therefore believed

treatment to be irrelevant in his case. Motivational Interviewing was used with the offender as a means of re-examining his involvement in the offence with the specific goal of the offender making an informed decision on whether or not to enter a group treatment intervention for sexual offenders. Interestingly, the authors noted the commonalities between the sex offender and previous individuals treated for addictive problems with respect to the vulnerability of being blamed and labelled and the need to avoid the use of a confrontational approach (Mann and Rollnick, 1996).

Easton, Swan, and Sinha (2000) evaluated the effectiveness of a motivational enhancement intervention on readiness to change substance use behaviours in a sample of forty-one batterers. The authors assessed substance use prior to initiating the motivational enhancement intervention and determined that 67% of the total sample reported that they abused substances. A brief motivation to change questionnaire based on the Readiness to Change subscale of the Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES) was administered before and after the intervention. Results indicated a significant increase in motivation to change substance use behaviours from pre to post motivational enhancement therapy. Interestingly, in spite of the increase in self-reported motivation none of the participants signed up for an optional session to be further evaluated for substance abuse treatment.

Ginsburg (2000) conducted a randomized study on the use of MI with a sample ($n = 83$) of federally incarcerated offenders who demonstrated symptoms of alcohol dependence. Following an initial assessment session participants were randomly assigned to either the MI or control group. The results indicated that offenders in the

MI group showed significantly greater increases in problem recognition and contemplation related to their drinking behaviour as compared to the control group (Ginsburg, 2000).

In summary, research concerning motivational interviewing (MI) provides evidence that motivation is in fact a dynamic construct and when systematically targeted demonstrates encouraging results in offenders. However, there has been no empirical evaluation of the impact of motivational interventions, including MI, on sexual offender treatment outcome or recidivism. Furthermore, offender self-report measures of motivation for treatment and behaviour change do not always correlate (Preston, 2000). In order to accurately measure motivation, self-report measures must be corroborated with behavioural indices such as treatment participation, attendance, and attrition (Serin & Kennedy, 1997; Preston, 2000).

Motivation and Treatment Outcome in Offenders

Stewart and Millson (1995) examined the relationship between offender treatment motivation and conditional release outcome in a sample of 2400 offenders from the Ontario region. Offender motivation levels were rated from low to high on seven domains linked to criminal behaviour including employment, marital/family, associates, substance abuse, community functioning, and personal/emotion orientation. The initial assessment was completed within thirty days of each offender's release and reassessed at least once every six months. The results indicated that the motivation level for all domains was significantly related to conditional release outcome at the six month follow-up period. Specifically, offenders rated as highly motivated had better

release outcomes than offenders rated as moderately motivated and considerably better outcomes than those with low motivation across all seven domains. For example, in the area of substance abuse, 22.9% of those offenders who were rated as highly motivated to address their needs in this area had their release suspended within six months, compared to 31.1% who were moderately motivated and 36.2% who possessed low levels of motivation

Baxter, Marion, and Goguen (1995) examined the impact of motivation level on treatment outcome in a sample of provincially incarcerated offenders as part of a larger research study that involved the development of an accurate motivation measure with the goal of predicting treatment response in correctional populations. Their scale, the Attitudes Toward Correctional Treatment Scale, is a self-report scale that consists of 33 items measured on a five-point likert-scale, ranging from strongly agree to strongly disagree. The results demonstrated that offenders who scored higher on the motivation indices (items measuring motivation and optimism for treatment outcome) had better treatment outcomes than those offenders who scored low. The authors proposed that by evaluating pre-treatment motivation the benefits of treatment could be maximized with the provision of motivational enhancement techniques prior to the commencement of the intervention (Baxter, Marion, and Goguen, 1995).

Grant and Gillis (1996, 1999) investigated the contribution of motivation for program participation to successful completion of day parole and sentence completion in a sample 1100 offenders. Offenders were initially classified as motivated if they were willing to participate in programs at their residential centre and unmotivated if

they refused to participate. The results indicated that motivation at the time of day parole release was related to day parole success. Sixteen percent of offenders rated as motivated were unsuccessful on day parole compared to 48% of offenders in the unmotivated group. A similar relationship was found for post-day parole failure with 21% of motivated offenders having been readmitted after full release compared to 30% of unmotivated offenders. The authors also examined motivation as a dynamic risk predictor of failure on day parole or full release. Offenders were rated as motivated, unmotivated, or changed depending on a combination the offenders' initial response to supervision when admitted to the penitentiary and motivation to participate in programs at their residential centre. Offenders in the changed group who initially had problems with supervision and were subsequently rated as motivated had a 64% higher success rate than the unmotivated group (78% versus 47% successfully completed day parole). The positive change exhibited by this group of offenders represented a 30% reduction in readmissions and a 35% reduction in new offences. Although this study utilized indirect measures of motivation such as response to supervision and willingness to participate in treatment, the results clearly demonstrate the dynamic nature of motivation and its impact on day parole and full release success.

In summary, five studies involving a total of 4057 offenders demonstrate that motivation is linked to a number of process and outcome measures. However, there exists only one sex offender case study and no quantitative studies involving the effect of motivation on treatment process or treatment outcome in sex offenders. These studies offer further evidence that offender motivation is a dynamic construct that may

be increased when systematically targeted prior to treatment (e.g. motivational interviewing) or during treatment. Furthermore, these studies also offer preliminary evidence demonstrating that motivation is related to treatment outcome, including treatment attrition status, in offenders.

Denial and Minimization

There is a general consensus that denial and minimization are fundamental issues to address in cognitive behavioural treatment programs for sex offenders (O'Donohue & Letourneau, 1993; Schneider & Wright, 2004; Schlank & Shaw, 1996; Winn, 1996; Wright & Schneider, 2004). Many convicted sexual offenders entering treatment completely deny having committed or been involved with any sexual offence, and others deny various aspects of their offence (Kennedy & Grubin, 1992; Marshall et al., 2001; Schneider & Wright, 2004) A commonly held presumption regarding cognitive behavioural treatments with sex offenders is that the effectiveness of the therapy depends on the participant accepting responsibility or accountability for his/hers sexual offence (Barbaree, 1991; Cooper, 2005; Winn, 1996). However, other researchers question the legitimacy of the assumption that it is necessary to overcome denial for treatment to be effective and have developed specific treatment programs for offenders who deny their sexual offence (Marshall, et al., 2001; Shaw & Schlank, 1996). Minimally, empirically-based studies have demonstrated that denial may interfere with the offender's willingness to fully engage in treatment and to increase offender resistance (Hunter & Figueredo, 1999; Levenson & Macgowan, 2004).

Over the years there have been a number of attempts to conceptualize denial which has resulted in various operational definitions in the research literature. Much like motivation, denial was initially perceived as an all or none phenomenon in which an offender either is or is not in denial (Cooper, 2005; Schneider & Wright, 2004). Denial construed as a dichotomy has been referred to by various names including complete, full, categorical, or absolute denial (Barbaree, 1991; Brake & Shannon, 1997; Marshall et al., 2001; Schank & Shaw, 1997). Furthermore, denial is typically perceived as an obstacle at the beginning of treatment with the complete elimination of denial as the goal. Consequently, a number of offenders are considered untreatable by theoretically linking denial with low levels of motivation and poor treatment engagement. As a result these offenders are sometimes excluded from sex offender intervention programs (Cooper, 2005; Schneider & Wright, 2004).

An alternative and perhaps a more realistic approach, conceptualizes denial as a multifaceted construct, comprised of several types and degrees of denial (e.g. Barbaree, 1991; Kennedy & Grubin, 1992; Winn 1996). Initially, several descriptive typologies, ranging from 3 to 14 different types of denial, evolved from clinical observations with sex offenders. These clinically-based typologies of denial were subsequently confirmed by empirical studies which replicated nearly identical categories (Kennedy & Grubin, 1992; Winn 1996). Barbaree (1991) developed a typology and checklist of denial and minimization that is equally applicable to extrafamilial child molesters, rapists, and other types of sexual offenders. According to Barbaree (1991) sex offenders utilize three different types of denial: complete denial of

having committed the offence; denial that the sexual relations/contact was an offence; denial that the nature of the interaction was sexual. Similarly, Barbaree (1991) suggests that minimization may also take three different forms: minimizing victim harm; minimizing previous sexual offending behaviour; minimizing personal responsibility for sexual offending behaviour. This multifaceted typology is consistent with previous typologies (e.g. Pollock & Hashmall, 1991) and has been replicated (e.g. Malcolm, 1995).

More recently, efforts have been made to design a self-report measure that encompasses the multiple facets of denial. The Facets of Sexual Offender Denial (FoSOD) includes six facets of denial pertaining to the sexual offence: denial of the offence, denial of extent, denial of intent, denial due to perceived victim desire, denial of planning, and denial of risk of relapse (Schneider & Wright, 2001). The facets of the scale were derived with factor analysis techniques and the psychometric properties, including construct, convergent, discriminant, and predictive validity, as well as reliability were established (Schneider & Wright, 2001). The FoSOD demonstrates further support for the multifaceted construct and dynamic nature of denial.

It is not infrequent for a convicted offender to deny their involvement in the offence which led to their incarceration, however, this phenomenon is most common in sex offenders and has been well documented. As many as 98% of convicted sex offenders deny or minimize their offence during their admission interview (Barbaree, 1991). Kennedy and Grubin (1992) reported that one third of their sex offender sample denied any involvement in the sex offence which led to their conviction. Furthermore,

of those offenders who did admit to committing their sexual offence, one-half denied full responsibility by means of blaming the victim. Similarly, Marshall (1994) found that 31% of their sex offender sample completely denied having committed a sex offence and 32% either minimized their responsibility or the impact of the offence. Rates of denial in sex offenders appear high but it remains difficult to determine a precise estimate of the incidence of denial in sex offenders because of the varying operational definitions utilized by various researchers (Cooper, 2005).

In the past, denial of the offence has frequently been used as an exclusion criterion for sex offender treatment programs. More recently, a significant reduction in excluding offenders who deny the commission of their offence has occurred mainly because research demonstrates that those who fail to complete treatment have an increased risk of recidivism relative to those who complete treatment interventions (Hall, 1995; Hanson & Bussiere, 1998). Furthermore, the practice of excluding deniers from treatment violates the risk principle by essentially releasing some of the most at-risk offenders without the opportunity to participate in treatment programs (Marshall, 1994).

Sex offender denial is increasingly addressed using one of two techniques: by pre-treatment interventions designed to reduce offender denial prior to entering sex offender treatment, or by trying to modify the offender's denial during the beginning stages of sex offender treatment. Both methods have demonstrated moderate success in reducing offender denial (Barbaree, 1991; Marshall, 1994; O'Donohue & Letourneau, 1993; Schlank & Shaw, 1996). However, the results of these reports should be

interpreted with caution due to the small sample sizes, lack of controlled design, and lack of standardized measures utilized to measure the denial construct (Schneider & Wright, 2004). More recently, a separate program was designed for offenders who completely deny any participation in their offence (Marshall et al, 2001). The program focuses specifically on criminogenic factors associated with sexual offending such as unstable lifestyle, victim harm, and coping strategies, while avoiding discussing denial or the participant's offence (Marshall et al., 2001). Although, the program has not been subjected to an empirical evaluation, the authors reported that the participants remained fully engaged for the duration of the program (Marshall et al, 2001).

Denial and Treatment Attrition

The relationship between denial and treatment attrition remains elusive, mainly due to a lack of research. The existing research has limited generalizability because of the differing operational definitions utilized to measure both attrition and denial. This further complicates the identification of predictor variables of attrition across studies. In spite of these limitations, several studies report a link between higher levels of denial and treatment drop-out in sex offenders. For example, Geer, Becker, Gray, and Krauss (2001), reported that offenders who completed sex offender treatment exhibited significantly lower levels of denial, as measured by the Multiphasic Sexuality Index (MSI), than treatment non-completers. Similarly, McKenzie, Witte, Beyko, Wong, and Olver (2002) reported that denial of index offence was a significant predictor of treatment attrition in a randomly selected sample (n=60) of federally incarcerated sex offenders. Finally, Craissati and Beech (2001) reported that moderate levels of denial,

as measured by the MSI, predicted treatment completion in a sample of extrafamilial child molesters. It appears highly feasible that a link exists between denial and treatment attrition, however, further research is required to ascertain the complexities of the relationship.

Denial and Recidivism

The association between denial and recidivism is implicitly assumed, however, research is inconclusive concerning the true nature of the relation. Hanson and Bussière (1998) conducted a large scale meta-analysis examining a number of risk factors and their power to predict sexual recidivism. The study demonstrated no discernible relation between denial of offence and sexual recidivism (Hanson & Bussière, 1998). The results of this meta-analysis have not gone unchallenged. The lack of relationship between denial and recidivism has been attributed to the heterogeneity in the definitions of denial across the seven studies included in the meta-analysis (Lund, 2000). Furthermore, the studies differed on the inclusion/exclusion of offenders who completely denied their offence, treatment settings, and various methodological limitations such as low base rates and small sample sizes (Lund, 2000).

Although there are numerous studies examining the construct of denial within the sex offender population there remains many unexplored aspects in terms of the link between denial and other related variables. The existing research is limited by differences in the definition and conceptualization of denial across studies. It remains difficult to draw any firm conclusions based on the current available literature regarding how offender denial impacts on treatment readiness, motivation, attrition and

ultimately recidivism. Further research is necessary to elucidate the effects of denial as a multifaceted construct on sex offender treatment related issues.

Treatment Attrition in Sex Offenders

Treatment non-completion or drop-out is common among sex offenders. Attrition rates are highly variable across programs, offender types and institutions rendering it difficult to yield a precise estimate. Attrition rates in sex offender treatment programs range from 20-58% in institutional settings (Geer et al., 2001; Marques, 1999; Terry & Mitchell, 2001) and 17-47% in community based programs (Chaffin, 1992; Craissati & Beech, 2001). Research reveals that attrition rates vary within sex offender type. Rapists consistently demonstrate higher levels of treatment drop-out/non-completion than pedophiles, intrafamilial child molesters, and mixed type sex offenders (Beyko, 2000; McKenzie et al., 2002; Serin & Mailloux, 2003). For example, Beyko and Wong (in press) examined predictors of treatment attrition in a sample of 64 adult male sex offenders and reported a 56% non-completion rate for rapists (n = 27), compared to 19% for pedophiles (n = 16), 25% for mixed (n = 15), and 0% for intrafamilial child molesters (n =5). Interestingly, no one factor emerged as a better predictor of attrition for one of the specific sex offender subtypes, however, this is most likely explained by the small sample size.

The majority of treatment attrition studies with sex offenders have examined community samples. Abel, Mittelman, Becker, Rathner, and Rouleau (1988), conducted the first large scale study examining treatment completion in a sample of 192 pedophiles. They reported a 35% non-completion rate from their 30 session sex

offender treatment program. Approximately 75% of drop-outs were client initiated, 12.5% were expulsions for group disruption, mental disorder, or alcohol abuse, and the remaining 12.5% consisted of non-completers due to various administrative reasons. A number of variables were examined in relation to treatment non-completion, however, only three of these variables were able to predict treatment non-completion: greater perceived pressure to participate in treatment, a diagnosis of antisocial personality disorder, and lack of discrimination in choice of victim (e.g. both male and female victims).

Browne, Foreman, and Middleton (1998) found a similar rate of non-completion (37%) in their sample of 96 extrafamilial child molesters participating in a community-based sex offender treatment program. Of the 30 risk factors examined, nine predicted failure to complete treatment: a violent index offence, prior conviction for violent offences, a criminal record, non-contact sexual offences, prior incarceration, lack of employment, alcohol or substance abuse dependency, violation of program rules, and deterioration while in treatment. These nine factors yielded a 78% accuracy rate in predicting completers from non-completers (Browne et al., 1998).

Miner and Dwyer (1995) examined treatment non-completion in a heterogeneous sample of sex offenders which included among others intrafamilial child molesters, extrafamilial child molesters and exhibitionists. Treatment completion was subjectively determined by the clinical staff based on whether an offender was judged to have adequately fulfilled the treatment goals and addressed personal risk factors related to their sexual offending. According to this definition 54.3% of the total sample

(n=173) failed to completed treatment. Non-completers were more likely to be divorced, have lower incomes, a greater number of prior arrests for sexual offences and were more likely to be exhibitionists. Furthermore non-completers exhibited higher scores on the MMPI-L subscale and lower scores on the MMPI-K subscale (Miner & Dwyer, 1995).

Shaw, Herkov, and Greer (1995) examined factors relating to treatment non-completion in a heterogeneous group of incarcerated sex offenders. The sample (n=114) consisted of intrafamilial child molesters, rapists, and extrafamilial child molesters. Participants were allocated to one of three groups based on their completer status: offenders who did not advance past the evaluation phase; offenders who did not complete the majority of the 10 sessions or behaved inappropriately; offenders who completed all or the majority of the program. The attrition rate was high with 86% failing to complete the treatment program. Surprisingly, only higher scores on a reading achievement test and a marital status of "currently married" differentiated completers from the two non-completer groups. Other non-significant factors examined in the study included a diagnosis of antisocial personality disorder, age, and index offence (Shaw et al., 1995).

Moore, Bergman, and Knox (1999) investigated treatment outcome in a group of incarcerated sexual offenders and examined a number of predictors related to treatment completion. The authors randomly selected 126 participants, (63 completers and 63 non-completers) which represented 44% of all participants who had entered the treatment program. Completers and non-completers were compared on a number of

demographic, psychiatric, offender history, and offender type variables but did not differ on any of these variables. The authors, however, noted that non-completers were more likely to have never been married, be diagnosed with antisocial personality, have prior arrests for violent crimes, and have older victims (Moore et al., 1999).

Craissati and Beech (2001) examined psychological dysfunction associated with treatment completion/non-completion in a sample of 78 extrafamilial child molesters receiving treatment for a minimum of 1 year. In addition, the authors also included theoretically relevant variables including denial, offending history, previous convictions, victim gender, and legal status (voluntary or court ordered participation). Treatment non-completion was defined as two or more missed sessions. Surprisingly, only three variables significantly predicted treatment non-completion: being single/never married, past sexual victimization, and a history of two or more childhood disturbances. There was no clear relationship between denial and treatment non-completion, however, moderate levels of denial in terms of partial acceptance and responsibility for the sex offence, predicted treatment completion. A major limitation to the study involves the use of self-report without corroboration with respect to past childhood victimization and childhood disturbances. Furthermore, the definition for treatment non-completion (missing two or more sessions) seems arbitrary because the authors do not provide any reasoning for utilizing two days as the cut-off. It seems plausible that a portion of the offenders may have had legitimate reasons for missing these sessions and perhaps would have continued in treatment if offered the opportunity for a make-up session.

Geer, Becker, Gray, and Krauss (2001) explored predictors of treatment completion in 179 incarcerated sex offenders. Participants were divided into treatment completers and non-completers. The results from the logistic regression revealed four significant variables capable of predicting group membership: years of education; whether the participant was a victim of sexual abuse; previous number of incarceration; the denier subscale of the Multiphasic Sex Inventory II. Specifically, completers obtained higher education levels, were less likely to have a history of sexual abuse, had fewer years of incarceration, and were less likely to minimize or excuse their sexual offending (Geer et al., 2001).

Beyko and Wong (in press) provide the most recent evidence that specific responsivity factors provide important predictors of treatment attrition. The treatment attrition variables were divided into one of three categories: risk (measured by Static 99), need (dynamic variables of Violent Risk Scale: Sexual Offender Version – VRS-SO), or responsivity (VRS-SO). Discriminant function analysis was used to determine which variables predicted treatment non-completion in their heterogeneous sample of 64 sex offenders. The results indicated that four variables related to need and responsivity significantly differentiated treatment non-completers from completers. Specifically, non-completers had significantly more institutional misconducts, were less treatment compliant, poorly motivation, and denied their offence(s).

A general criticism of the research concerning treatment attrition is the lack of consistency and clarity in the definitions of attrition utilized across studies. It has been postulated that non-completers may represent a heterogeneous group and that only a

portion of these may be differentiated from completers in terms of risk, need and motivation for treatment (Nunes and Cortoni, 2005). Recent research (Nunes & Cortoni, 2005) demonstrated significant differences between completers and drop-outs/expulsions on a number of demographic variables (e.g. age and marital status) and the motivation index, obtained from the Offender Management System (OMS), for a large, heterogeneous sample (n = 7712) of federally incarcerated male offenders. Furthermore, significant differences between non-completers due to personal or administrative reason(s) and drop-outs/expulsions were observed for these same variables. There were no significant differences between completers and non-completers due to personal or administrative reason(s). Based on these findings the current study will divide sex offender treatment participants into three groups: 1) completers, 2) non-completers due to any personal or administrative reason (e.g. program cancellation, conflict with another program or offenders' employment), 3) non-completers due to offender initiated drop-out or agency expulsion from treatment.

A number of factors have been linked with treatment completion and non-completion as demonstrated by the reviewed studies, including reading ability, age, marital status, antisocial personality disorder, offender type, pervious history of sexual abuse, lack of preference for male or female victims, poor employment histories, substance abuse histories, aggression, offence type and history, and attitudes toward treatment. Unfortunately, of the reviewed studies only three examined denial as a possible predictor of treatment attrition. Interestingly, two of the three studies provide evidence that denial status may in fact be an important predictor of treatment non-

completion (Beyko and Wong, in press; Geer et al., 2001). The third study indicated that moderate (partial) denial predicted treatment completion.

In summary, treatment attrition predictors demonstrated variability across studies due to the different samples examined (i.e. incarcerated offenders versus community participants) and to the heterogeneous operational definitions of attrition utilized by the different studies. Regardless, there are variables which demonstrate distinguishing properties between offenders who complete treatment and offenders who do not complete treatment

The Present Study

Sexual offender treatment programming is an important means of rehabilitation with sex offenders, therefore when an offender does not complete treatment the risk for sexual re-offending is increased. The responsivity principle is an important concept directly related to increasing offender behavioural change and warrants greater systematic investigation. Treatment readiness and motivation are specific responsivity factors which have started to be investigated in the correctional literature as potential mediators/predictors of treatment outcome. However, they have received scant empirical investigation in the sexual offender literature. The purpose of this study is to further investigate the relationship between treatment readiness, motivation, denial, minimization, and treatment outcome (i.e. attrition status) in a heterogeneous sample of incarcerated sex offenders. Specifically, this study will examine the relationship between treatment readiness, motivation, minimization, and denial status (specific responsivity variables) and determine if these variables predict sex offender treatment

outcome. In addition, this study will explore if treatment readiness, motivation, and attrition status will predict group membership between rapists, extrafamilial child molesters, intrafamilial child molesters, and mixed sex offenders (adult and child victims). The nature of treatment attrition will be explored to establish whether a dichotomous (completion or non-completion) definition is appropriate.

Hypotheses

1) Past research utilizing both post hoc file ratings and interview based methods demonstrates that treatment readiness, motivation, and denial are related to treatment attrition (Dickie, 2003; McKenzie et al., 2002; Serin & Mailloux, 2003). It is expected for this study that treatment readiness, motivation, minimization and denial status will predict program attrition.
2) Based on past research (Beyko & Wong, in press; Mckenzie et al., 2002; Moore et al., 1999) it is expected in this study that rapists will have higher treatment attrition rates than extrafamilial child molesters, intrafamilial child molesters, and mixed sex offenders. Furthermore, rapists will demonstrate lower levels of treatment readiness, motivation, and higher Static-99 scores compared to extrafamilial child molesters, intrafamilial child molesters, and mixed sex offenders.
3) Past research examining treatment attrition in sex offenders has typically divided participants into completers and drop-outs. It is expected in this study that treatment outcome status will be accurately described by a three level definition (completers, drop-outs, and non-completers due to administrative or

personal reasons) as opposed to a two level, dichotomous outcome (completer and drop-out). It is expected that program drop-outs will score significantly lower on motivation and the treatment readiness scale, and significantly higher on the Static-99 compared to the program completion group. It is expected that the program non-completers (personal or admin reasons) will not significantly differ from the completer group on motivation, Static-99, or treatment readiness scale scores.

4) Based on the findings of Malcolm (2001) and Serin & Mailloux (2003) that treatment readiness was significantly related to denial in a sample of extrafamilial child molesters and the established relationship between motivation and treatment readiness it is expected that denial, treatment readiness, and motivation will be significantly correlated with one another.

5) It is expected that the short version and long version of the TRS will be highly correlated and will produce comparable results in measuring treatment readiness. It is further hypothesized that the TRS-SV will demonstrate comparable internal consistency to the long version of the TRS

Method

Participants

Participants in the present study consisted of male, adult sex offenders under the responsibility of Correctional Service of Canada (CSC) and assessed at Millhaven Institution. The participants (n = 448) ranged in age from 19 to 76, with a mean age of 43.59 (*SD* = 12.42) at time of admission to treatment. There was no significant difference between completers, drop-outs, and non-completers (admin/personal) in terms of age at admission to treatment, F (2, 445) = 1.75, $p < .18$. The mean age was 43.83 (*SD* = 12.27) for the completers, 40.52 (*SD* = 13.95) for the drop-outs, and 42.28 (*SD* = 13.48) for the non-completers (admin/personal).

The ethnic composition of the total sample was as follows: Caucasian 79.2% (n = 355), Black 9.2% (n = 41), Aboriginal 7.1% (n = 32), and other 4.5% (n = 20). In terms of marital status, most offenders were single 42.2% (n = 189), followed by married 17.6% (n = 79), common law 14.5% (n = 65), separated 12.5% (n = 56), divorced 11.4% (n = 51), other 1.8% (n = 8). Table 1 summarizes the demographic characteristics of the participants by treatment outcome group.

Measures

Denial and Minimization Checklist. The DMCL (Barbaree, 1991) is an interview based 27-item checklist designed to assess denial and minimization. Items are scored dichotomously indicating the presence or absence of the type of denial or minimization indicated by each question. The DMCL includes three subtypes of denial: 1) complete denial of the offence (i.e. no sexual relations/contact with victim);

2) denial that the sexual relations/contact was an offence (i.e. victim consented, did not resist, or received emotional benefit from sexual interaction); 3) denial that the interaction was sexual (i.e. assault was not sexual or legitimate reason for touching victim as in applying ointment for medical reasons). Only one type of denial can be checked-off for an offender.

The DMCL also measures minimization according to three subtypes: 1) minimizing victim harm; 2) minimizing the degree/number of their previous offences (e.g. number of previous sexual offences, victims); 3) minimizing their responsibility for their offence (e.g. blaming the victim, attributing their behaviour to external factors). Several forms of minimization can be attributed to an offender. For this study denial will be coded as a dichotomous variable (yes or no) and minimization will be coded as a continuous variable ranging from 0 to 3.

Static-99. The Static-99 (Hanson & Thornton, 1999) is an instrument designed to predict long term sexual recidivism and consists of 10 items: (1) prior sex offenses, (2) prior sentencing dates, (3) noncontact sex offense convictions, (4) nonsexually violent index offense convictions, (5) prior nonsexual violent convictions, (6) unrelated victim, (7) stranger victim, (8) male victim, (9) young age at time first at risk for recidivism, and (10) never married. Static-99 scores range from 0 to 12 and can be grouped into four risk categories: low (0, 1), medium–low (2, 3), medium–high (4, 5), and high (6 and up).

Table 1

Participant Demographic Characteristics and Sentence Length

Variable	Total		Completers		Dropouts		Non-Completers		χ^2
	%	(n/n)	%	(n/n)	%	(n/n)	%	(n/n)	
				Ethnicity					
Caucasian	79.2	(355/438)	78.1	(311/398)	76.5	(13/17)	93.9	(31/33)	
Black	9.2	(41/438)	9.8	(39/398)	0	(0/17)	6.1	(2/33)	14.33 ns
Aboriginal	7.1	(32/438)	7.0	(28/398)	23.5	(4/17)	0	(0/33)	
Other	4.5	(20/438)	5.0	(20/398)	0	(0/17)	0	(0/33)	
				Marital status					
Single	42.2	(189/438)	42.5	(169/398)	29.5	(5/17)	45.5	(15/33)	
Married	17.6	(79/438)	18.8	(75/398)	11.8	(2/17)	6.1	(2/33)	
Common Law	14.5	(65/438)	14.8	(59/398)	11.8	(2/17)	12.1	(4/33)	14.73 *ns*
Separated	12.5	(56/438)	11.3	(45/398)	17.6	(3/17)	24.2	(8/33)	
Divorced	11.4	(51/438)	10.6	(42/398)	29.4	(5/17)	12.1	(4/33)	
Other	1.8	(11/438)	2.1	(8/398)	0	(0/17)	0	(0/33)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*
Age	43.59	12.42	43.83	12.27	40.52	13.95	42.28	13.48	0.78 *ns*
Sentence length	4.21	3.38	4.25	3.34	5.02	6.03	3.29	1.43	1.75 *ns*

Statistical Information on Recidivism-Revised (SIR-R). The SIR-R scale is an actuarial risk prediction instrument administered to all non-aboriginal offenders by the Correctional Service of Canada (CSC) and the National Parole Board (NBP). The original SIR scale was developed by Nuffield in 1982 and was later adapted and revised by CSC. The scale is comprised of 15 items with a range of scores from –27 (high risk) to +30 (low risk). Further more, offenders are assigned to one of five risk groups based on their raw scores ranging from "very good" (least likely to recidivate) to "poor" (most likely to recidivate). The SIR-R scale has demonstrated good predictive validity with regards to general recidivism (Bonta, Harman, Hann, & Cormier, 1996; Wormith & Goldstone, 1984).

Treatment Readiness Scale-Short and Long Versions. The TRS (Serin & Kennedy, 1997) and TRS-SV (Serin, Mailloux, & Kennedy, 2002) are interview based measures that consists of 11 and 8 items, respectively, and were designed to measure an offender's readiness or willingness to participate in treatment. These newly developed measures have limited reliability and validity data, however, the TRS scale has demonstrated excellent internal consistency producing an alpha of .93 in a sample of sexual offenders and .83 in a sample of 265 male offenders (TRS-SV) entering a cognitive skills program (Serin, Kennedy, & Mailloux, 2002). These measures were constructed to be utilized by correctional staff with offenders prior to the commencement of treatment and may be re-administered at treatment end.

Each item is rated on a 3-point scale from 0-3 and added together to arrive at a total score. Higher scores on this scale are indicative of greater readiness for treatment.

Every item has a corresponding description, behavioural anchor, and example questions to ask the offender to aid in the process of scoring. For this study, the TRS was administered prior to the start of treatment.

Offender Management System. The Correctional Service of Canada's offender Management system (OMS) is a computerized database that contains demographic, case management, and security information on all incarcerated federal offenders. The OMS system will be used to obtain demographic information and code the treatment attrition variable for each offender. In addition the OMS includes an index of motivation (rated by the case management officer) that indicates an offender's willingness or desire to participate in recommended correctional treatment programs. The motivation index is included as part of the offender intake assessment and measured on a 3-point scale ranging from low to high. A motivation rating of low indicates that the offender is opposed to participating in any treatment, a rating of moderate indicates that the offender is willing to participate in treatment, however, does not view his offending behaviour as problematic, a rating of high indicates that the offender is willing to participate in research and address problematic areas related to his offending

Sex Offender Type. Sex offenders will be divided into four groups as follows: 1) extrafamilial child molester – any sexual offender who had a child victim of a sexual offence, but did not have an incest offence, and did not have any adult victims; 2) intrafamilial child molesters – any sexual offender with one or more incest offences; 3) mixed sex offender – any sexual offender who had both child and adult victims of

sexual offences, but did not have an incest offence; 4) rapist – any sexual offender who had an adult victim of a sexual offence, but did not have an incest offence, and did not have any child victims.

Treatment Attrition. Based on the research of Nunes & Cortoni (2005) that demonstrated non-completers to be a heterogeneous group the current study will divide sex offender treatment participants into three groups: 1) completers, 2) non-completers due to offender initialized drop-out or agency expulsion from treatment, 3) non-completers for any personal or administrative reason. An offender was categorized as a program completer if his status was *successful completion*, *attended all sessions*, or *unsuccessful completion*. These entries indicate that all or most sessions were attended. *Successful completion* indicates that an offender was compliant and successful in the program, whereas *attended all sessions* and *unsuccessful completion* indicate that an offender completed the program but was unproductive or failed to fully meet the program requirements.

The second category was labeled *non-completion for administrative reasons or due to personal circumstances*, which reflects program non-completion that was generally beyond the direct control of the offender. This category incorporates the status entries of *transferred, program cancelled, released, temporarily reassigned, Warrant Expiry Date (WED) reached* and *incomplete*. An offender was assigned the status of incomplete if he was unable to complete because of his behaviour outside of the program or because of circumstances unrelated to the program. For example, an offender may no longer be able to attend a program because he was admitted to the

hospital or to segregation for misconduct or for his own protection. In all these cases, participation was interrupted for reasons that were most often unrelated to the offender's behaviour in or out of the program.

The final category was *dropout/expulsion*, which corresponds to *suspension or withdrawn*. This category is assigned to offenders who withdrew or were expelled from a program. Expulsion would most typically be for unacceptable behaviour or performance within the program.

Procedure

This study involved all male sex offenders admitted to Millhaven institution for assessment between December 1999 and September 2005. Participants signed the informed consent form (Appendix A) at the commencement of the initial assessment interview, prior to the administration of questionnaires. The informed consent form clearly explained that all collected information pertaining to sex offender treatment participation and outcome could be used for research purposes, while respecting each offender's right to confidentiality under Canada's Tri-Council Code of Ethics. The DMCL, Static-99, and TRS were individually administered during the initial interview (intake assessment) prior to starting sex offender treatment.

The second stage of the study will involve extracting archival data from Offender Management System. The motivation index, treatment attrition variables and other relevant data such as demographic information, offence history, static risk scale scores (SIR-R1) for all participants in the sample were obtained from a composite CSC database that contains OMS data for all offenders. In compliance with the Tri-

council's regulations on the use of secondary use of data, all identifying information (FPS numbers and names) was erased from the database to ensure that complete anonymity was maintained.

Results

Characteristics of the Data

All analyses for this study were conducted using SPSS 13.0 statistical software package. Prior to analyses all data were examined for accuracy of data entry, missing values, normality, linearity, homoscedasticity and the presence of univariate outliers. The variables were examined separately for completers, drop-outs, and non-completers. This involved the examination of frequencies, histograms, z-scores, values of skewness and values of kurtosis (Tabachnick & Fidell, 2001). Missing data points were limited to the SIR-R1 variable (37 of 448 (8.3%) participants). However, Correctional Service of Canada policy excludes aboriginal offenders (n =35) from assessment using the SIR-R1, which accounted for 35 of the 37 missing values. Eight participants received indeterminate or life sentences by the courts. The aggregate sentence for these participants were coded as having sentences equal to 25 years to avoid being coded as missing data.

The data was within normal range and contained no univariate outliers for any of the three groups. The assumptions of normality, linearity, and homogeneity of variance were all within an acceptable range according to the limits specified in Tabachnick & Fidell (2001). An analysis of the Mahalanobis distances ($\alpha = .001$) revealed no cases of multivariate outliers.

Preliminary Analyses

Over a 5 year period, in which 448 sex offenders were assessed at Millhaven Institution, their program attrition rate was 11.2% during this sentence. As described earlier, study participants were divided into groups based on whether or not they completed the sex offender treatment program. Seventeen of the participants who failed to complete the treatment program either opted to drop the program or were removed from the program due to detrimental behaviour (dropouts). The remaining thirty-three were unable to complete the sex offender program due to either administrative decisions or due to personal circumstances unrelated to program behaviour (non-completers due to admin/personal).

The descriptive statistics for the psychometric tests used in this study are presented in Table 2. The table includes means and standard deviations for the DMCL total minimization score, motivation index, SIR-R1, Static-99, and TRS. There were no significant group differences on the average minimization total scores, [F (2, 445) = 0.05, $p < .95$], and average motivation index scores, [F (2, 445) = 1.55, $p < .22$], both variables were similar across each of the three groups. Conversely, there were statistically significant differences across treatment outcome groups on the SIR-R1, [F (2, 445) = 3.22, $p < .05$], the Static-99, [F (2, 445) = 4.11, $p < .02$], and the TRS, [F (2, 445) = 3.61, $p < .03$]. The drop-out group scored lower on the SIR-R1 (indicating higher risk) and higher on the static-99 than both the completer and non-completer groups. TRS average total scores were highest for the completer group, followed by the non-completer group, and lowest for the dropout group.

Table 2

Participant Age, Sentence Length, and Statistical Information on Recidivism Scale Revised

Variable	Total		Completers		Dropouts		Non-Completers	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Minimization total	2.87	2.49	2.86	2.40	3.06	3.04	2.88	2.89
Motivation level	2.05	0.43	2.06	0.43	1.88	0.33	2.00	0.50
[a]SIR-R1	7.40	11.65	7.68	10.65	-0.62	13.07	7.39	18.95
Static-99	3.21	2.22	3.16	2.21	4.71	1.57	3.06	2.38
TRS total	29.86	14.30	30.49	14.14	23.35	13.56	25.67	15.46

[a]Aboriginals not included, do not have SIR-R1 scores

Tables 3 and 6 present the correlations for the total sample between the DMCL total minimization score, motivation index, Static-99, TRS total scores, and for each of the eleven TRS items and the TRS total score. Bonferonni correction was applied ($p <$ .01) to account for the number of completed correlations between total scores on each measure. Higher levels of treatment readiness were associated with higher levels of motivation (as measured by the motivation index), denial, higher levels of minimization, and treatment outcome. The Static-99 was negatively associated with motivation level. Denial was negatively associated with minimization and treatment readiness.

Tables 4 and 7 presents the identical correlations as Tables 3 and 6 with the addition of the SIR-R1 and includes all non-aboriginal participants. SIR-R1 scores were negatively correlated with static-99 scores and positively correlated with motivation index scores. All other correlations in Table 4 (excluding aboriginal participants) were statistically similar to the correlations presented in Tables 3 and 6.

Tables 5 and 8 presents the identical correlations as Tables 3 and 6 and includes all Aboriginal participants. Higher levels of treatment readiness were associated with higher levels of motivation (as measured by the motivation index). Denial was associated with higher levels of minimization and non-completion of treatment.

Table 3

Correlation Coefficients for the Treatment Readiness Scale (TRS)

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Problem recognition	1												
2. Goal setting	.67**	1											
3. Motivation	.68**	.73**	1										
4. Self appraisal	.56**	.56**	.59**	1									
5. Expectations	.74**	.76**	.69**	.54**	1								
6. Behavioural consistency	.52**	.58**	.58**	.51**	.52**	1							
7. Views about treatment	.64**	.72**	.72**	.59**	.68**	.66**	1						
8. Self efficacy	.47**	.51**	.45**	.64**	.45**	.63**	.61**	1					
9. Dissonance	.69**	.65**	.63**	.60**	.67**	.64**	.65**	.65**	1				
10. External Support	.50**	.53**	.51**	.48**	.48**	.54**	.58**	.52**	.57**	1			
11. Affective Component	.52**	.58**	.69**	.47**	.52**	.52**	.67**	.41**	.45**	.51**	1		
12. TRS total	.80**	.84**	.83**	.76**	.81**	.77**	.87**	.74**	.83**	.71**	.72**	1	
13. Program outcome	-.10*	-.13**	-.09	-.09	-.08	-.10*	-.13**	-.07	-.08	-.12**	-.10*	-.12**	1

Note: $*p < .05$, $**p < .01$

Table 4

Correlation Coefficients for Non-Aboriginal Offenders on the Treatment Readiness Scale (TRS)

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Problem recognition	1												
2. Goal setting	.67**	1											
3. Motivation	.68**	.73**	1										
4. Self appraisal	.56**	.56**	.59**	1									
5. Expectations	.74**	.76**	.69**	.54**	1								
6. Behavioural consistency	.52**	.58**	.58**	.51**	.52**	1							
7. Views about treatment	.64**	.72**	.72**	.59**	.68**	.66**	1						
8. Self efficacy	.47**	.51**	.45**	.64**	.45**	.63**	.61**	1					
9. Dissonance	.69**	.65**	.63**	.60**	.67**	.64**	.65**	.65**	1				
10. External Support	.50**	.53**	.51**	.48**	.48**	.54**	.58**	.52**	.57**	1			
11. Affective Component	.52**	.58**	.69**	.47**	.52**	.52**	.67**	.41**	.45**	.51**	1		
12. TRS total	.80**	.84**	.83**	.76**	.81**	.77**	.87**	.74**	.83**	.71**	.72**	1	
13. Program Outcome	-.10*	-.13**	-.09	-.09	-.08	-.10*	-.15**	-..06	-.08	-.14**	-.13**	-.13**	1

Note: $*p < .05$, $**p < .01$

Table 5

Correlation Coefficients for Aboriginal Offenders on the Treatment Readiness Scale (TRS)

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Problem recognition	1												
2. Goal setting	.66**	1											
3. Motivation	.81**	.72**	1										
4. Self appraisal	.68**	.70**	.75**	1									
5. Expectations	.73**	.78**	.83**	.61**	1								
6. Behavioural consistency	.57**	.67**	.71**	.58**	.65**	1							
7. Views about treatment	.60**	.80**	.69**	.63**	.72**	.59**	1						
8. Self efficacy	.60**	.69**	.53**	.72**	.60**	.57**	.62**	1					
9. Dissonance	.57**	.67**	.58**	.55**	.65**	.65**	.59**	.82**	1				
10. External Support	.50**	.51**	.62**	.57**	.58**	.52**	.59**	.42**	.44**	1			
11. Affective Component	.52**	.69**	.72**	.65**	.73**	.66**	.77**	.49**	.62**	.64**	1		
12. TRS total	.81**	.88**	.88**	.83**	.88**	.79**	.85**	.79**	.79**	.70**	.83**	1	
13. Program outcome	-.07	-.10	.01	-.03	-.11	-.09	-.05	-.26	-.16	.19	.28	-.04	1

Note: $*p < .05$, $**p < .01$

Table 6

Correlation Coefficients for the Treatment Readiness Scale and Other Responsivity Factors

	1	2	3	4	5	6
1. [a]TRS total	1					
2. [a]Static-99	-.09	1				
3. [a]Denial	-.37**	-.01	1			
4. [a]Minimization total	.20**	-.03	-.52**	1		
5. [a]Motivation level	.44**	-.24**	-.24	.09	1	
6. [a]Program outcome	-.12**	.07	.14**	.01	-.07	1

Note: $*p < .05$, $**p < .01$; [a]Bonferonni Correction Family Wise, $p < .01$

Table 7

Correlation Coefficients for Non-Aboriginal Offenders on the TRS, SIR-R1 and other Responsivity Factors

	1	2	3	4	5	6	7
1. [a]TRS total	1						
2. [a]Static-99 total	-.09	1					
3. [a]Denial	-.42**	-.04	1				
4. [a]Minimization total	.20**	-.03**	-.50**	1			
5. [a]Motivation level	.44**	-.24**	-.23**	.54**	1		
6. [a]SIR-R1	.07**	-.51**	-.01	.01**	.21**	1	
7. Program outcome	-.13**	.06	.11*	.02	-.08	-.07	1

Note: $*p < .05$, $**p < .01$; [a]Bonferonni Correction Family Wise, $p < .01$

Table 8

Correlation Coefficients for Aboriginal Participants on the TRS and Other Responsivity Factors

	1	2	3	4	5	6
1. [a]TRS total	1					
2. [a]Static-99	-.13	1				
3. [a]Denial -.29	.31	1				
4. [a] Minimization total	.20	-.22	-.77**	1		
5. [a]Motivation level	.50**	-.17	-.44*	.41*	1	
6. [a]Program outcome	-.04	.18	.46**	-.15	.00	1

Note: $*p < .05$, $**p < .01$; [a]Bonferonni Correction Family Wise, $p < .01$

Specific Hypotheses

Treatment Outcome Predictors (Hypothesis 1). A sequential logistic regression was conducted with treatment attrition status as the outcome variable and age, denial, minimization, motivation index, static-99, and treatment readiness as predictor variables. Logistic regression permits the prediction of a discrete outcome from a set of predictor variables that may be continuous, discrete, dichotomous, or a combination of these. Treatment attrition was coded as a discrete outcome due to the small number of drop-outs (n = 17), they were combined with the non-completer (admin/personal) group. Static-99 scores and offender age at beginning of treatment were entered first to ensure that the other predictors in the equation were predicting treatment attrition independently of the risk related variables. The static-99 was selected instead of the

SIR-R1 scores because as explained earlier aboriginal offenders are precluded from being assigned SIR-R1 scores and it was important to include all sex offender participants in the analysis irrespective of race. In the second block, denial (yes, no), minimization total scores, motivation index scores, and treatment readiness total scores were entered together into the equation.

The initial model that included only the static-99 and age of offender as predictors did not result in a good model fit (discrimination among groups) $\chi^2(2, N = 448) = 2.53, p < .29$, Negelkerke $R^2 = 0.01$. There was a significant improvement in model fit with the addition of the denial, minimization, motivation index, static-99, and treatment readiness variables $\chi^2(4, N = 448) = 17.56, p < .003$, Negelkerke $R^2 = 0.09$. The model correctly classified treatment attrition status for 88.8% of the 448 participants. Table 5 shows regression coefficients, Wald statistics, odds ratios, and 95% confidence intervals for odds ratios for each of the six predictors. According to the Wald statistic denial and minimization were significant predictors of treatment attrition status, while there was a trend towards significance for the TRS ($p = .06$). Offender age, the motivation index, and the Static-99 score did not significantly predict treatment attrition status.

Table 9

Results of Logistic Regression Analysis Predicting Treatment Attrition Status

Variable	*ß*	*SE ß*	Wald	Odds Ratio	CI Odds
Step 1					
Age	-0.01	0.01	0.63	0.99	0.97 – 1.02
Static-99	0.08	0.07	1.20	1.08	0.94 – 1.24
Step 2					
Denial	-1.20	0.38	9.92**	0.30	0.14 – 0.64
Minimization	0.18	0.07	6.41**	1.19	1.04 – 1.37
Motivation	0.14	0.43	0.11	1.15	0.49 – 2.68
TRS	-0.02	0.01	3.38[a]	0.98	0.95 – 1.01

** $p < .01$; [a] $p < .07$

Table 10

Sex Offender Type by Completer Status

Group	Completers		Non-Completers		χ^2
	%	(n/n)	%	(n/n)	
Sex Offender Type					
Extrafamilial molester	89.1	(123/138)	10.9	(15/138)	
Intrafamilial molester	92.5	(148/160)	7.5	(12/160)	5.10 *ns*
Mixed sex	89.7	(35/39)	10.3	(4/39)	
Rapist	83.7	(87/104)	16.3	(17/104)	

Note: ns = not significant

Sex Offender Type and Treatment Outcome (Hypothesis 2). A chi-square was conducted to determine whether there was a significant association between sex offender type and treatment attrition status. Table 6 shows a break down of completer status by sex offender type and shows a reasonably similar distribution of completers and non-completers for each type of sex offender. The result of the chi-square statistic was not significant $\chi^2(3, N = 441) = 5.10, p < .17$ indicating that there was no significant difference in the distribution of completers and non-completers among the four types of sex offenders.

A one-way multivariate analysis of variance (MANOVA) was conducted to investigate the differences on the motivation index, TRS, and Static-99 (dependent variables) across the four different types of sex offenders (independent variable). The total sample of 448 was reduced to 441 due to 7 participants having a label of "unclassified" with regards to the sex offender type variable. Significant differences were found among the four types of sex offenders on the dependent measures, Wilks's $\Lambda = .68, F(9, 1059) = 19.89, p < .001, \eta^2 = .12$.

Analyses of variances (ANOVA) were conducted on the motivation index, TRS, and Static-99 as follow up tests to the MANOVA. Using a bonferonni correction, each ANOVA was tested at the .01 level. These analyses revealed a significant effect for the motivation index, [$F(3, 437) = 6.59, p < .001, \eta^2 = .04$], the TRS, [$F(3, 437) = 5.14, p < .003, \eta^2 = .03$] and the Static-99, [$F(3, 437) = 58.94, p < .001, \eta^2 = .29$]. Table 7 presents the means and standard deviations on the dependent variables for the three groups.

Post hoc analyses revealed that the rapist group scores significantly lower on the motivation index than the intrafamilial child molester group. In addition, the rapist group scored significantly lower than the intrafamilial child molester group and mixed sex offender group on the TRS total score. Finally, the rapist group scored significantly higher than the intrafamilial child molester group, but significantly lower than the mixed sex offender group on the Static-99.

Table 11

Motivation Index, Treatment Readiness Scale and TRS by Sex Offender Type

Variable	Intrafamalial Molester		Extrafamilial Offender		Mixed Sex Offender		Rapist		*F*
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	
Motivation index	1.98	0.46	2.15[a]	0.42	2.13	0.52	1.95[a]	0.32	6.59**
TRS	28.16	13.68	31.91[a]	13.99	35.36[b]	14.00	27.05[ab]	13.59	5.14*
Static-99	3.95	2.10	1.71	1.60	5.10[a]	2.05	3.79[a]	1.80	58.94**

Note: Groups sharing at least one letter in common significantly differ (Bonferonni correction, alpha set at $p < .05$) $*p < .002$ $**p < .001$

Treatment Attrition Definition (Hypothesis 3). A one-way multivariate analysis of variance (MANOVA) was conducted to investigate the differences on the motivation index, TRS, and Static-99 (dependent variables) across the three types of sex offender program status (independent variable). There were no missing values, univariate, or multivariate outliers at $p < .01$. Results of evaluation of normality, homogeneity of

variance-covariance matrices, linearity and multicollinearity indicated no violations of these assumptions. The SPSS MANOVA sequential adjustment for nonorthogonality (method III) was applied to the sums of squares because of unequal sample sizes.

Significant differences were found among the three program status groups on the dependent measures Wilks's $\Lambda = .97$, $F\,(6, 886) = 2.45, p < .03$. The results reflected a small association between group membership (program status group) and the combined dependent variables $\eta^2 = .02$.

Analyses of variances were conducted on the motivation index, TRS, and Static-99 as follow up tests to the MANOVA. Using the bonferonni correction, each ANOVA was tested at the .01 level. Contrary to expectations, the ANOVA on the TRS did not reveal a significant effect, [$F\,(2, 445) = 3.61, p < .03, \eta^2 = .02$], nor did the ANOVA on the Static-99, [$F\,(2, 445) = 4.11, p < .02, \eta^2 = .02$]. The motivation index had by far the smallest impact, [$F\,(2, 445) = 1.55, p < .22, \eta^2 = .007$]. Table 8 presents the means and standard deviations on the dependent variables for the three groups.

Table 12

Motivation Index, Treatment Readiness Scale and TRS by Treatment Attrition Status

Variable	Completers		Dropouts		Non-Completers		*F*
	M	*SD*	*M*	*SD*	*M*	*SD*	
Motivation index	2.06	0.43	1.88	0.33	2.00	0.50	1.55 *ns*
TRS	30.49	14.14	23.35	13.56	25.67	15.46	3.61 *ns*
Static-99	3.16	2.21	4.70	1.57	3.06	2.38	4.11 *ns*

Note: ns = not significant

Denial, Motivation, and Treatment Readiness (Hypothesis 4). Correlation coefficients were computed between denial, motivation and treatment readiness to examine the relationship between these variables. Point-biserial correlations were calculated between denial (discrete variable) and the two continuous variables (i.e. motivation and TRS scores). A Pearson product moment correlation was calculated between motivation and TRS scores. Table 9 contains the correlations between denial, motivation and treatment readiness.

Although there is no definite standard for interpreting size of correlation, Cohen (1977) has provided some guidelines stating that a coefficient of about .50 is large, a coefficient of about .30 is moderate, and a correlation of about .10 is small. According to these standards, the correlation between the motivation index and the TRS is a moderate to high positive correlation, $r(438) = .44$, $p < .01$. Similarly, the negative

correlation between denial and the TRS may also be considered a moderate to high correlation, $r(438) = -.37, p < .01$. The negative correlation between denial and the motivation index, although significant, was in the small to moderate range, $r(438) = -.24, p < .01$.

Table 13

Correlation Coefficients for Denial, Motivation Index, and TRS

	1	2	3
1. Denial	1		
2. Motivation	-.24**	1	
3. TRS Total	-.37**	.44**	1

*$p < .01$

Treatment Readiness Scale – Short Version (Hypothesis 5). The Cronbach's alpha coefficient was 0.78 for the TRS-SV (8-item version) compared to 0.94 for the TRS (22-item version). Further, as expected the two versions of the scale were highly correlated $r = 0.97, p < .001$.

A second sequential logistic regression was conducted with treatment attrition status as the outcome variable and age, denial, minimization, motivation index, static-99, and treatment readiness as predictor variables. The TRS scores were replaced with the TRS-SV scores as the treatment readiness variable. As in hypothesis 1, treatment attrition was coded as a discrete outcome due to the small number of drop-outs (n = 17), they were combined with the non-completer (admin/personal) group. Static-99

scores and offender age at beginning of treatment were entered first to ensure that the other predictors in the equation were predicting treatment attrition independently of the risk related variables. In the second block, denial (yes, no), minimization total scores, motivation index scores, and TRS-SV total scores were entered together into the equation.

The initial model that included only the static-99 and age of offender as predictors did not result in a good model fit $\chi^2(2, N = 448) = 2.53, p < .29$, Negelkerke $R^2 = 0.01$. There was a significant improvement in model fit with the addition of the denial, minimization, motivation index, static-99, and treatment readiness variables $\chi^2(4, N = 448) = 17.33, p < .003$, Negelkerke $R^2 = 0.09$. The model correctly classified treatment attrition status for 88.8% of the 448 participants. Table 5 shows regression coefficients, Wald statistics, odds ratios, and 95% confidence intervals for odds ratios for each of the six predictors. According to the Wald statistic denial and minimization were significant predictors of treatment attrition status, while there was a trend towards significance for the TRS-SV ($p < .08$). Offender age, the motivation index, and the Static-99 score did not significantly predict treatment attrition status.

Table 14

Correlation Coefficients for the Treatment Readiness Scale Short Version (TRS-SV)

	1	2	3	4	5	6	7	8	9	10	11
1. Problem recognition	1										
2. Benefits of treatment	.46**	1									
3. Treatment interest	.46**	.52**	1								
4. Treatment distress	.50**	.57**	.43**	1							
5. Treatment goals	.41**	.64**	.55**	.44**	1						
6. Treatment behaviors	.40**	.52**	.57**	.45**	.57**	1					
7. Motivational consistency	.41**	.50**	.34**	.48**	.47**	.45**	1				
8. Treatment Support	.37**	.40**	.43**	.45**	.36**	.35**	.37**	1			
9. [a]TRS-SV total	.70**	.79**	.75**	.74**	.76**	.74**	.68**	.63**	1		
10. [a]TRS total	.69**	.75**	.70**	.76**	.71**	.71**	.67**	.61**	.96**	1	
11. Program outcome	-.09	-.09	-.13**	-.08	-.12**	-.06	-.06	-.10*	-.13**	-.12**	1

Note: $*p < .05$, $**p < .01$; [a]Bonferonni Correction Family Wise, $p < .01$

Table 15

Correlation Coefficients for TRS-SV and other Responsivity Factors

	1	2	3	4	5	6	7
1. [a]TRS-SV total	1						
2. [a]TRS total	.96**	1					
3. [a]Static-99 total	-.05	-.09	1				
4. [a]Denial	-.41**	-.37**	-.01	1			
5. [a]Minimization total	.20**	.20**	-.03	-.52	1		
6. [a]Motivation level	.44**	.44**	-.24**	-.24**	.09	1	
7. [a]Program Outcome	-.13**	-.12**	.07	.14**	.01	-.07	1

Note: $*p < .05$, $**p < .01$; [a]Bonferonni Correction Family Wise, $p < .01$

Table 16

Results of Logistic Regression Analysis Predicting Treatment Attrition Status

Variable	*ß*	*SE ß*	Wald	Odds Ratio	CI Odds
Step 1					
Age	-0.02	0.01	2.33	0.99	0.95 – 1.01
Static-99	0.08	0.07	1.15	1.08	0.94 – 1.25
Step 2					
Denial	-1.16	0.39	9.09**	0.30	0.15 – 0.67
Minimization	0.17	0.07	6.12**	1.19	1.04 – 1.36
Motivation	0.14	0.43	0.11	1.15	0.49 – 2.70
TRS-SV	-0.06	0.04	3.12[a]	0.98	0.88 – 1.01

** $p < .01$; [a] $p < .08$

Discussion

The responsivity principle is an important concept albeit under-researched directly related to enhancing offender behavioural change by means of increasing treatment compliance and requires greater systematic investigation. Treatment readiness and motivation are among the specific responsivity factors which have started to be investigated in the correctional literature as potential mediators/predictors of treatment outcome. Nonetheless, there remains a gap in the sexual offender literature with respect to the influence of specific responsivity factors (e.g. treatment readiness) on successful completion of treatment. The present study examined the effect of specific responsivity factors on sex offender treatment outcome in a heterogeneous group of sex offenders that included extrafamilial child molesters, intrafamilial child molesters, mixed sex offenders (child and adult victims), and rapists. The aim was to explore if differences in motivation, treatment readiness, denial and minimization would predict sex offender treatment outcome using multiple definitions of program completion. A secondary goal of the study was to examine sex offender treatment outcome between the various types of sex offenders in terms of differences in motivation and treatment readiness.

The discussion will include a brief outline regarding the study's sample followed by an in-depth discussion addressing the degree to which the hypotheses were supported by the findings of this study. The section will conclude with the implications of these findings and the limitations of this study.

Sample Characteristics

In the present study, the sample consisted of consecutively admitted sex offenders. The overall attrition rate was 11.8%, a very low rate compared to other sex offender treatment programs where the attrition rates ranged from 20-58% in institutional settings (Geer et al., 2001; Marques, 1999; Terry & Mitchell, 2001). This low attrition rate may reflect the recent move towards motivational-based sex offender intervention as opposed to previously used confrontational methods with sex offenders. The shift towards motivational type treatment includes focusing on developing a therapeutic alliance between the offender and the individual(s) involved in delivering the sex offender treatment and has been demonstrated to be far more effective in both correctional and non-correctional treatment situations than utilizing confrontational techniques. Another possibility regarding the low attrition rate is that sex offenders were not being excluded from treatment because they denied their offence or the sex offenders in this study responded positively to treatment and were able to admit their sex offence(s) either fully or to an appropriate degree. Because denial was assessed only once, prior to treatment, denial status could not be analysed post-treatment.

Furthermore, attrition rates in the current sample were similar between the four types of sex offenders ranging from 7.5% for intrafamilial child molesters to 16.3% for rapists. The proportion of participants identified as deniers (35%) and minimizers (73%) in the current sample was comparable to previously reported rates. For example, Marshall (1994) reported that 31% of the study sample was categorized as deniers. The low attrition rate in this sample is particularly intriguing when considering that the percentage of offenders who denied and/or minimized their sexual offence(s) at the

commencement of treatment is similar to previous research studies that reported considerably higher attrition rates.

The current programming model implemented by Correctional Service of Canada may also contribute to the lower rate of attrition in sex offenders. Sex offender programs take a cognitive-behavioural approach with an emphasis on reducing the risk of sexual recidivism by means of self-management and implementing external controls. Furthermore, the program intensity is matched to each offender's risk and need level, so that higher risk offenders are assigned to longer and more intensive treatment. This means that lower risk offenders are not subjected to long, intense treatment programs which may result in their dropping out because of being forced to continue treatment after having reached acceptable levels of treatment functioning with respect to treatment targets.

Hypothesis 1: Treatment Outcome Predictors

In order to examine potential specific responsivity factors that may have contributed to sex offender treatment outcome (completion versus non-completion), a sequential logistic regression was conducted. Consistent with prior research using different measures, treatment readiness and motivation were expected to significantly predict treatment status. Sex offenders with higher motivation would be more likely to complete the sex offender treatment program Howells et al., 2005; Serin, et al., 2002). Similarly, denial and minimization were also expected to emerge as significant predictors of treatment outcome because offenders who admitted their sexual assault

would be more likely to deal with self-recognized problematic behaviours (Beyko, 2001; McKenzie, et al., 2002).

Consistent with the current study's hypothesis, denial and minimization both emerged as significant predictors of treatment outcome status. Specifically, offenders who admitted the sexual assault that led to their criminal conviction were significantly more likely to complete treatment than those who were classified as deniers. This finding was consistent with previous research that reported that denial was predictive of treatment attrition in sex offenders (Beyko, 2001; Beyko & Wong, in press; Mckenzie, 2000). Similarly, minimization was also predictive of treatment outcome. Minimization was entered into the equation as a continuous variable to reflect the DMCL which permits a specific offender to be assigned with numerous types of minimization as opposed to denial which is a dichotomized classification. Specifically, lower levels of minimization were associated with treatment completion. Past research has not utilized minimization as a predictor of treatment attrition and has usually discussed minimization as part of the denial construct. These results suggest that minimization may be appropriately conceptualized as a continuous variable in terms of treatment outcome research.

However, contrary to what was predicted, the motivation index and treatment readiness variables were not significantly associated with treatment outcome. Treatment readiness demonstrated a trend towards significance ($p = .06$), however, it is highly plausible that it did not reach significance because of the low attrition rate. As expected, completers scored higher on the TRS than non-completers. The motivation

index was not significantly related to treatment outcome, and surprisingly, completers and non-completers demonstrated comparable scores (M = 2.06 versus 1.96). The motivation index may be of limited value in predicting treatment attrition because it is rated on a three-point scale and therefore has limited sensitivity and variability. Furthermore, unlike the TRS, the motivation index is not partially based on offender behaviour and relies solely on the verbal response provided by the offender.

Hypothesis 2: Sex Offender Type and Treatment Outcome

Attrition rates in sex offender programs have been reported to vary within sex offender type. Previous research demonstrates that rapists consistently drop-out of treatment at a higher rate than extrafamilial child molesters, intrafamilial child molesters, and mixed sex offenders (Beyko & Wong, in press; Mckenzie et al., 2002; Moore et al., 1999). Based on these results it was expected that rapists would have a significantly higher attrition rate compared to extrafamilial child molesters, intrafamilial child molesters, and mixed sex offenders. Additionally, it was expected that rapists would demonstrate lower levels of motivation, treatment readiness, and higher levels of risk based on Static-99 scores, compared to extrafamilial child molesters, intrafamilial child molesters, and mixed sex offenders.

The current study's hypothesis was partially confirmed. Rapists scored significantly lower on the TRS compared to intrafamilial child molesters and mixed sex offenders, however, the difference between rapists and extrafamilial child molesters on the TRS was not significant. These results are comparable to past findings that rapists

appear to be the most difficult to engage and participate in treatment compared to other types of sex offenders (Marques et al., 1994).

Similarly, according to the Static-99, rapists were significantly higher risk than both incest and mixed offenders, but not statistically different from extrafamilial child molesters. Typically, sex offenders have been treated as a homogeneous group due to small sample sizes, however, these results are consistent with a recent report which showed that rapists scored significantly higher than both incest and mixed sex offenders on the Static-99 (Cooke, Perderson, & Pham, 2004). The results also lend indirect support to reports that rapists generally re-offend more quickly and at higher rates than other types of sexual offenders and are therefore typically rated as higher risk to re-offend when scored on actuarial assessments (Hanson, 2001; Taft & Wilkinson, 2001).

Further, although rapists displayed significantly lower levels of motivation compared to intrafamilial child molesters, differences on the motivation index did not reach significance when rapists were compared to both extrafamilial child molesters and mixed sex offenders. This was not surprising when taking into account the results of the motivation index in Hypothesis 1. The motivation index does not appear to be a sensitive measure in distinguishing motivation level between sex offender types.

Surprisingly, and opposite to prediction, rapists were not significantly more probable to terminate sex offender treatment. This result is in contrast to past research reports that rapists drop out of treatment significantly more than other types of sex offenders (Beyko & Wong, in press; Moore et al., 1999). Although, the results were

not significant, they were in the expected direction with rapists attaining the highest treatment non-completion rate (16.3%) followed by extrafamilial child molesters (10.9%), mixed sex offenders (10.3%) and intrafamilial child molesters (7.5%). The fact that the overall attrition rate in the current study was much lower than previously reported research is the most probable reason that the difference in attrition rates between sex offender type did not reach significance.

Hypothesis 3: Treatment Attrition Definition

Treatment attrition research has been criticized in terms of cross-study comparability, attributable to the lack of consistency and clarity in defining attrition (Nunes & Cortoni, 2005). Several recently conducted studies suggested that offenders who fail to complete treatment are in fact a heterogeneous group and should be defined according to empirically-based results (Nunes & Cortoni, 2005; Wormith & Olver, 2002). Nunes and Cortoni (2005) demonstrated significant differences on the risk, need and motivation variables between two types of attrition groups. The first attrition group included offenders who failed to complete treatment because of administrative or personal circumstances and the second included offenders who quit treatment of their own volition or were removed from treatment because of disruptive behaviour. Similarly, it was expected that treatment drop-outs would demonstrate lower levels of motivation and treatment readiness, as well as higher levels of risk compared to treatment completers. Further, it was expected that offenders who were unable to complete treatment because of personal or administrative circumstances beyond their control would not differ from treatment completer on these same variables.

This hypothesis was not directly supported by the results of the current study. The omnibus F test indicated significant differences between the three groups, but a more stringent alpha level due to the number of comparisons, the group differences disappeared. There was a trend towards significance for both the Static-99 and treatment readiness variables. Furthermore, the results were in the expected direction with treatment drop-outs scoring lowest on motivation and treatment readiness and highest on the Static-99. The treatment completer and non-completer (admin/personal) groups demonstrated similar scores on both the Static-99 and the motivation index.

Although not statistically significant, these findings suggest there may be two types of attrition groups that are distinguishable on risk and responsivity variables. This would have direct implications to attrition research, which in the past has typically collapsed across all types of attrition, to identify predictors of treatment attrition and to studying treatment effectiveness. Unfortunately, in the current study's sample the number of drop-outs (n = 17) and non-completers (n = 33) were low and do not permit meaningful conclusions. Additional research with larger sample sizes of drop-outs and non-completers are required to clarify whether there is strong empirical evidence to support a two level operational definition of treatment attrition.

Hypothesis 4: Denial, Motivation, and Treatment Readiness

The literature suggests that denial is related to treatment attrition (Geer et al., 2001; Mckenzie et al., 2002). Malcolm (2001) reported that treatment readiness was significantly related to denial in a sample of extrafamilial child molesters. Consistent with this finding, there was a significant negative correlation between denial and

treatment readiness in the current study's heterogenous sample that included extrafamilial child molesters, intrafamilial child molesters, mixed sex offenders, and rapists. The correlation qualified as a moderate to high correlation, which points to denial as being a potentially important area to target at the commencement of treatment in terms of increasing treatment readiness related factors such as motivation and positive views of treatment. Similarly, denial and the motivation index were significantly correlated, however, the negative correlation represented a small to moderate relationship. It is not surprising that the treatment readiness scale yielded a stronger relationship to denial as it is a multifaceted measure of which motivation is only one component. As previously mentioned, the TRS score is also partially based on behavioural indicators to corroborate verbal responses.

As predicted, motivation and treatment readiness demonstrated a moderate to high positive relationship. Treatment readiness includes motivation as one of eleven components and therefore a strong relationship is to be expected. The relation is also imperfect because the motivation index is less structured and not behaviourally anchored. In addition, motivation and treatment readiness are dynamic constructs and because the motivation index was measured during the OIA, prior to the TRS, it is reasonable to assume that offender motivation and treatment readiness will fluctuate to some degree.

Hypothesis 5: Treatment Readiness Scale – Short Version

As expected, the TRS-SV demonstrated good internal consistency (0.78) and a similar Cronbach alpha value to the authors' original report (0.83) tested in a male

sample of 265 male offenders (Serin, Kennedy, & Mailloux, 2002). Although, the Cronbach alpha for the TRS is higher (0.94) compared to the TRS-SV for the current sample, there is a significantly longer time commitment associated with the TRS (additional 14 questions to rate).

The correlation between the two scales was high demonstrating that the TRS-SV and TRS are similar in measuring the treatment readiness construct, in spite of the 14 eliminated questions in creating the TRS-SV. As with the TRS, the TRS-SV also demonstrated a trend towards significance in predicting treatment outcome. A small decrease in significance was observed, however, the trade-off appears to be meaningful in terms of the reduction in time to administer the TRS-SV. The number of measures administered during the initial interview is highly demanding of both the individual administering and responding to the questionnaires and therefore it is necessary that any measure considered for addition must yield high returns with respect to the additional time commitment. The TRS-SV appears to be an excellent alternative to the 22-item TRS in terms of reliability and prediction of treatment outcome.

Implications

The results of the present study strengthen the argument for the consideration of specific responsivity factors that influence treatment attrition. In order to minimize treatment attrition the assessment of specific responsivity factors prior to the commencement of treatment is recommended. Forensic populations tend to be less motivated for treatment and more resistant or non-compliant while in treatment, as well as demonstrate fewer positive behavioural changes while in treatment. Indeed,

systematic targeting, prior to the commencement of treatment, of denial and treatment readiness (including motivation) for offenders with deficits in these areas may provide the necessary catalyst for change. Furthermore, systematic targeting of treatment readiness may help offenders shift from extrinsically motivated acceptance of treatment (e.g. early parole) towards intrinsically motivated behaviour change. Importantly, intrinsic motivation is linked to greater positive treatment outcome and long term maintenance of change (Deci & Ryan, 2000).

The study's results provide evidence that sex offenders are not a homogeneous group with respect to motivation, risk, and treatment readiness. In order to provide improved treatment effectiveness, greater program flexibility may be needed that target specific treatment needs of different sex offender types. The results suggest that rapists are higher risk and enter treatment with the lowest levels of motivation and treatment readiness compared to other types of sexual offenders. Therefore, rapists may need more preparation or pre-treatment sessions to augment motivation levels, augment positive views of treatment and behavioural change before starting formal sex offender treatment in order to maximize treatment efficacy.

It is important to remember that the true effects and value of specific responsivity factors on treatment performance related variables such as attrition and participation must be measured in terms of reductions in recidivism. Similarly, in order to demonstrate that treatment readiness and motivation related constructs carry greater importance than intermediate measures of treatment outcome it is necessary to examine recidivism. If offenders who maintain higher levels of motivation and actively attend

and participate in programmed treatment demonstrate lower recidivism rates compared to offenders who do not, then attending to responsivity factors will increase treatment effectiveness as well as indirectly impact the risk to the public associated with releasing an offender and ultimately provide better protection to society.

Limitations

The design of the study is retrospective and therefore measures were not selected prior to the study design which may have had an effect on the results. The motivation index showed little sensitivity and variance between groups, which is most likely due to the nature of this crude measure. Further, interrater reliability could not be assessed because the database did not contain an identity with regards to the individual administering the measures. In the future, interrater reliability analyses should be conducted to ensure that the TRS and TRS-SV yield similar ratings across individuals administering these measures.

The sample was also one of convenience and therefore was not randomly selected which introduces a potential bias. Further, although a large heterogeneous sample was utilized in this study, the very low attrition rate observed in the study most likely influenced the lack of significance associated with certain variables. In spite of this, there were recognizable trends and results were consistently in the expected direction. Future research will need to be conducted to verify whether the observed attrition rate is an artifact or if it reflects a more precise treatment outcome of programs conducted within institutions.

Related to the treatment attrition rate, it may also be necessary to devise a more sensitive measure of treatment outcome. It may be that offenders within the institutions are permitted greater flexibility with regards to treatment attendance and behaviour, therefore increasing the completer rate. A behaviour related measure would be useful to verify not only that the offender has physically attended all sessions, but also has participated and grasped the concepts taught within treatment.

Future, prospectively designed research should consider taking into account additional variables which was not possible in this study due to the retrospective design. The PIC-R framework identifies the "Big Four" risk factors, which are antisocial attitudes, antisocial associates, antisocial behavioural history, and antisocial personality (Andrews & Bonta, 2005). Additional variables should reflect these risk factors to determine whether they predict treatment attrition with similar consistency to recidivism. Past treatment performance (attrition and behaviour, hours completed, etc.) theoretically may yield a more precise model of treatment attrition. Similarly, institutional misconducts maybe an additional indicator of antisocial behavioural history as well as an additional means of identifying motivation for change by the offender.

Further, the TRS includes items that are related to the "Big Four", for example, item 8 (TRS-SV) examines the offender's family and associates and their degree of support for change by the offender. This relates back to antisocial associates because the question is determining who is important to the offender and whether they are supporting the offender in moving towards positive change. Future studies may

consider examining individual items of the TRS or TRS-SV and how they relate to treatment outcome status and to the "Big Four".

Conclusions

The fundamental mechanism utilized by correctional services to rehabilitate convicted offenders is by means of treatment programming. In order for treatment to be effective, programs must adhere to the risk, need, and responsivity principles (Andrews & Bonta, Andrews et al., 1990). To date, research has focused on the identification of risk and need factors, while neglecting specific responsivity factors that potentially mediate the effectiveness of treatment and therefore contribute indirectly in reducing recidivism. Further more, attending to specific responsivity factors during the planning and deliverance phases of treatment increases the probability that an offender will complete the intervention which in turn also will reduce the likelihood of re-offending.

The current study identified denial, minimization, motivation, and treatment readiness as specific responsivity factors worthy of assessment prior to assigning sex offenders to a specific treatment program. These responsivity factors seemingly effect whether or not an offender completes treatment even after taking risk into account. Furthermore, the responsivity factors included in this study may effect treatment outcome status to a different degree across sex offender type. In this study, rapists and extrafamilial child molesters were similar with lower treatment readiness levels and most likely would have benefited from pre-treatment sessions aimed at increasing treatment readiness.

This study provides further evidence that the assessment and targeting of specific responsivity factors is a valuable endeavour. It is crucial to determine those offenders that are liable to complete treatment and those offenders that would benefit from specific pre-treatment sessions with the goal of reducing or removing those factors involved in preventing the offender from fully benefiting from treatment. From a risk management perspective, this is the most effective method to ensure that offenders receive optimal benefits from treatment which in turn reduces the risk of re-offending and increases public safety.

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Appendix A

CONSENT FORM

I, _____ have been asked to take part in a study about sexual offender attitudes and beliefs. Bruce Malcolm, under the supervision of Dr. D. Andrews of the Department of Psychology, Carleton University, is conducting this research.

Participation in this study involves personal interviews, answering questions on a number of self-report questionnaires. Participation in the study will not take any additional time to the current testing being conducted for assessment.

The information collected for research purposes will be kept confidential. Publication of the results will not result in your being identified as a participant. Information obtained, apart from the regular test battery, will not be put on any institutional file.

I consent to the disclosure of information in my institutional files to Bruce Malcolm for the confidential use for research purposes.

I understand that participation in this study will not affect any administrative decisions concerning me such as my institutional placement or parole. My refusal to participate will also not affect my treatment by CSC in any way. I am free to withdraw from the study at any time for any reason without consequence or penalty to me.

I have read the above statement and freely consent to participate in this study.

_____ _____

Signature of Participant Signature of Witness

_____

Date

Appendix B

Manual for the Treatment Readiness Rating Scale

The purpose of this scale is to assist staff to systematically assess treatment readiness prior to and following an offender's participation in a correctional treatment program. These items have been selected from a review of the relevant literature and discussions with clinicians and program staff.

The items have been developed so that 2 exemplars represent a particular domain relating to treatment readiness. Rating scales have specific behavioral anchors and descriptions to assist in scoring. Questions for each item are provided simply as a guide for those staff wishing the format of a semi-structured interview. We recommend the questions simply be incorporated into existing interview-based assessment strategies.

Individual items are summed in order to provide a total score that represents an individual's readiness for treatment. A higher score on this scale reflects greater readiness for treatment while a lower score reflects less readiness for treatment.

1. Problem Recognition

Problem recognition assesses an offender's awareness that specific criminogenic problems exist. The first item considers only recognition of specific difficulties. A score of "3" for an offender would require complete acknowledgement of their problems which is more than simply stating they have a problem. Similarly a score of "0" would imply the offender believes that circumstances or other people are the sole cause of their problems. The second item assesses an offender's understanding of the impact of these problems (i.e., short and long-term consequences, relation to crime and other lifestyle variables such as financial, employment, family, and interpersonal relationships). For this item they must be able to describe various aspects of the problem (i.e., severity, context, and consequences).

Possible Questions:

- Describe to me the events that led to your incarceration?
- What do you think is your biggest problem in your life?
- What do you think you will need to do to stay out of jail when released?
- How do you think crime has impacted your life?

A) Problem Acknowledgement

0	Denies existence of any problems related to their criminal or antisocial behaviour.
1	Some acknowledgement that problems may have contributed to crime, however, answers are hesitant and uncertain.
2	Accepts that problems contributed to crime, but recognition is less complete.
3	Readily acknowledges that personal criminogenic factors played a major role in criminal behaviour. Recognition of a full range of criminogenic factors and able to list them.

B) Problem Understanding

0	Regardless of recognition, displays no understanding of causal relationships between problems and criminal behaviour. Also, if not recognition (above), the understanding is nil.
1	Some demonstration of understanding, agrees at least one criminogenic factor is related to offence, but expressed understanding is vague, nonspecific and a practical and predominant blame is on other external factors.
2	Able to describe how personal problems contribute to criminal behavior.
3	Able to explain the causal connection or chain of factors and their interaction in relation to criminal behaviour.

Total Score

2. Goal Setting

Goal setting assesses an offender's ability to set and realistically identify treatment goals. The first item should consider the knowledge and skills necessary for treatment gain for that particular offender. For example, someone with a lifelong history of substance abuse would score a "0" if their goal was abstinence without lapses following a 4 month program and a "3" if they are realistic about the new skills and knowledge necessary for treatment gain. With respect to the second item, assessing attitudes towards goal setting, offenders who acknowledge the importance of setting goals to meet treatment needs would score a "3" while those who do not acknowledge the importance of goal setting would score a "0".

Possible Questions:

- If you were to participate in a treatment program what would you say were the issues you would need to address? How would you go about addressing these issues?
- How would you describe the treatment process? [try to get at whether they think that showing up for group will suffice or that more work is required than that]
- How do you feel treatment will help you to avoid crime in the future?
- What steps, if any, will you have to take to be successful when released? [Should apply what is gained from treatment to community.]

A) Realistic Goal Setting

0	Unable to set realistic goals.
1	Minimally able to set realistic treatment goals.
2	Somewhat able to set realistic treatment goals.
3	Able to set realistic treatment goals.

B) Goal Importance

0	Does not view goals as important.
1	Views only short term goals as important.
2	Views only long term goals as important.
3	Views both short and long term goals as important to achieve and maintain treatment gains.

Total Score

3. Motivation

This item assesses the offender's perceived need for treatment and indices of motivation. Expressing a need for treatment with emotion (a), in conjunction with an appreciation for the difficulty and complexity of his or her needs, warrants a score of "3". Behavioral indication of good motivation (b) should reflect, where applicable, timely attendance at interviews and/or groups; homework completion; compliance with prior treatment; and/or positive comments about treatment as a process not an outcome. More than one of these must apply to warrant a score of "3".

Possible Questions:

- Why do you think you need treatment? How do you feel treatment will help you to meet these needs?
- If you were to compare yourself to others in this place would you say you are in greater or lesser need of treatment? Who are you comparing yourself to?
- Have you participated in treatment before? If so, what is different this time?
- How did you find out about treatment? [i.e., what steps did he/she take in order to pursue treatment?]

A) Treatment Need

0	Verbally denies need for treatment.
1	Minimal perception of need for treatment.
2	Moderate perception of need for treatment.
3	Full perception of need for treatment.

B) Treatment Motivation

0	Behavioral indication of poor motivation.
1	Minimal indication of good motivation.
2	Moderate indication of good motivation.
3	Fully consistent behavioral indication of good motivation.

Total Score

4. Self Appraisal

This item assesses the offender's appraisal of and satisfaction with their current situation. Partly, this is assessed in terms of their understanding and ownership of their problems (a). Those offenders who accept full responsibility without rationalization would score a "3". Those who deny responsibility would score a "0". Additionally, those offenders who are able to reflect on an ideal self (b) would score "3" while those offenders who think there is no discrepancy between their present and ideal self would score a "0".

Possible Questions:

- Did you hear a victim impact statement read in court? If so, how did that make you feel?
- How do you feel about yourself? Would you say you are satisfied or unsatisfied with who you are?
- What would you say are your best qualities? Your worst qualities? How would others describe you in terms of your best and worst qualities?
- Who is your role model? [i.e., if you could be anyone who would it be and why]

A) Ownership

0	Views the problem is solely the result of others or circumstances (no ownership).
1	Views the problem as mainly the result of others or circumstances (minimal ownership).
2	Views self as a part of the problem (moderate ownership).
3	Views self as the major part of the problem (full ownership).

B) Satisfaction

0	Satisfied with present self, not discrepant with ideal self. No distress.
1	Generally satisfied with present self. Minimal emotional distress.
2	Somewhat dissatisfied with present self. Moderate emotional distress.
3	Dissatisfied with present versus ideal self. Emotionally distressed.

Total Score

5. Expectations

This item is intended to tap into an offenders specific cost/benefits of treatment participation for themselves. An offender who see no negative consequences or personal/criminal costs of failing to participate in treatment programs (a) would score "0" (criminal refers to things like early release, etc...) while those who can identify a range of costs score a "3". An offender who describes the long (lifestyle stability - employment, relationships, no crime) *and* short term benefits (earlier release, fewer release conditions) of treatment would score a "3" for (b) while those who are unable to generate any benefits would score a "0".

Possible Questions:

- What do you think will happen if you do not participate in treatment? [or if you drop out]
- If you finish this treatment program, what types of benefits might you gain?
- What does successful completion of this program mean to you?

A) Treatment Consequences

0	Unable to identify any consequences of not completing treatment.
1	Able to identify some consequences of not completing treatment (with probing).
2	Able to identify some consequences of not completing treatment (without probing).
3	Able to identify all consequences of not completing treatment.

B) Treatment Benefits

0	Not able to identify any benefits of treatment.
1	Able to identify at least one long term ***and*** short term benefit of treatment.
2	Able to identify ***limited*** long term and short-term benefit of treatment.
3	Able to identify all long term ***and*** short term benefits of treatment.

Total Score

6. Behavioral Consistency

This item highlights the importance of an offender's verbal statements *and* their actions regarding treatment (a). If an offender has not previously participated in treatment then this item refers to behavioral consistency outside of treatment (e.g., meets case worker, etc...). Offenders who state they are motivated towards treatment, but show incongruence by poor attendance (late or infrequent), failure to complete homework, and/or state low motivation to other staff or offenders, warrant a score of "0". Question (b) addresses the offender's ability to follow through on their verbal commitments. Those offenders who make verbal commitments but who consistently fail to honor them would score a "0" while those who consistently follow through would score a "3".

Possible Questions:

- [If you have participated in treatment before] how would the counselor or other group members describe you with respect to your participation? Did you go to all the sessions?
- [If you have not participated in treatment] how would your caseworker describe you? Have you attended all planned meetings with him/her?
- Do you ever do something just to please someone when you really don't want to? Do you ever do something just to get someone out of your face?
- When you say that you are going to meet the (e.g., caseworker) do you *always* go?

A) Consistency

0	Verbal and behavioral expressions of motivation are completely inconsistent.
1	Verbal and behavioral expressions of motivation are often inconsistent.
2	Verbal and behavioral expressions of motivation are somewhat inconsistent.
3	Verbal and behavioral expressions of moitvation are completely consistent.

B) Meeting Commitments

0	No evidence of ever meeting commitments.
1	Some evidence of meeting commitments.
2	Considerable evidence of usually meeting commitments.
3	Full evidence of consistently meeting commitments.

Total Score

7. Views About Treatment

This item addresses offender's views about treatment and attitudes towards the providers of treatment in general. Offenders who describe treatment as beneficial to themselves and to others (e.g., family, friends, community) would score a "3" for Question (a) while those who cannot suggest any benefits would score a "0". Question (b) refers to an offender's attitudes towards program staff. Those offenders who are resistant to therapists (e.g., refuse to disclose, viewing them as solely working for the 'system') would score a "0" while those who view program staff as trustworthy partners in the process would score a "3".

Possible Questions:

- Why do you think someone would participate in a treatment program?
- What are your views about treatment in general? Do you think people benefit from it and how?
- What role does program staff play in successful treatment?
- How would you feel about sharing personal information with treatment staff?
- Have you ever told program staff something personal and it was then used against you? If so how did this make you feel?

A) Treatment and Self

0	Not able to perceive benefits of treatment.
1	Perceives treatment as only beneficial for self only.
2	Perceives treatment as beneficial for others.
3	Perceives treatment as beneficial for self ***and*** others.

B) Therapeutic Alliance

0	Highly resistant to therapeutic alliance. Refuses to disclose feelings and information, feels it will be used against them.
1	Somewhat resistant to therapeutic alliance. Questions whether therapist is sincere/genuine.
2	Hesitant about therapeutic alliance, but feels therapist is generally sincere/genuine.
3	No resistance to therapeutic alliance and considers therapist an important partner in treatment.

Total Score

8. Self-Efficacy

This item assesses an offender's general views about change in addition to their views regarding the possibility of change for themselves. Those offenders who score "3" are optimistic about change (a) and believe that they are personally capable of change (b). Those scoring "0" view change with impotence and pessimism both generally and personally.

Possible Questions:

- How do you feel about the possibility of people changing?
- If you think that people can change under what circumstances are they able to change?
- Do you think that people pretty much stay the same throughout life?
- How do you feel about the need for change in *our* lives?
- How do you feel about making changes in *your* life?

A) Treatment Change

0	Does not believe change is possible.
1	Believes change might be possible only under ideal circumstances.
2	Believes change might be possible under some circumstances.
3	Believes change is always possible.

B) Personal Change

0	Does not believe they can change.
1	Doubtful they can change.
2	Wonders if they can change.
3	Believes they can change.

Total Score

9. Dissonance

This item is intended to address an offender's state of emotional distress regarding treatment and more specifically their present situation. Offenders whose commitment to treatment is accompanied or prompted by emotional distress (notably anxiety or depression) warrant a score of "3", but only if they recognize the distress. Those who appear emotionally unconcerned and indifferent about the need for change (a) or their present situation (b) score "0".

Possible Questions:

- How does the idea of participating in treatment make you feel? [If you are in treatment how did you feel before beginning treatment]
- What motivated you to consider participation in a treatment program? [looking for distress cues not cost/benefits]
- How do you feel about your present situation? What impact might this have on seeking treatment?
- Do you think your sentence was fair? Do you think you were represented well?

A) Distress

0	Indifferent (absence of emotional distress) and sees no need for treatment.
1	Distressed, but this does not motivate them to consider change.
2	Distress motivates them to consider changing.
3	Evidence of emotional distress and wants to participate treatment.

B) Dissatisfaction

0	***Generally*** satisfied with present situation.
1	***Mildly*** dissatisfied with present situation.
2	***Somewhat*** dissatisfied with present situation.
3	***Very*** emotionally dissatisfied or disappointed with present situation.

Total Score

10. External Supports

This item assesses the degree of support for treatment participation (a) and change (b) by others significant to the offender. Allow the offender to determine who is important to them (preferably family, friends, employer, or clergy) and then probe for degree of support from them. Those having no support will score a "0" while those reporting strong support score "3".

Possible Questions:

- Who would you say is the most significant person (s) in your life?
- What have you told them about the treatment program? Do they think you need treatment?
- How does this person (s) feel about your desire to participate in treatment?
- What kind of support do you want from this person (s)? Would you say they are providing this support for you? How do they demonstrate this support?
- Does this person (s) believe you can change?

A) Support for Treatment

0	Reports having ***no*** external support for participating in treatment.
1	Reports having ***minimal*** support for participating in treatment
2	Reports having ***moderate*** support for participating in treatment
3	Reports having ***strong*** external support for participating in treatment.

B) Support for Change

0	Reports ***no*** external support for changing.
1	Reports ***minimal*** external support for changing.
2	Reports ***moderate*** external support for changing.
3	Reports ***strong*** external support for changing.

Total Score

11. Affective Component

This item attempts to identify what range of emotions the offender experiences in addition to determining whether they are aware and willing to deal with the emotional demands of treatment. Question (a) assesses the offenders' ability to accurately label and express feelings. Being unable to label or express feelings warrants a score of "0". Offenders with an ability to label a range of emotions and express them appropriately score a "3". Question (b) deals with offenders' awareness of the need to identify and reflect on emotions as they arise during treatment. Those who score "0" view treatment as essentially a didactic exercise that does not require an emotional investment while those who score a "3" are willing to deal with the emotions that arise during treatment.

Possible Questions:

- Would you describe yourself as someone who keeps their feelings inside or one who wears their feelings on their face?
- How would others describe you emotionally? [e.g., withdrawn, quick tempered, oversensitive, etc...] And why?
- When you compare yourself to others do you feel you are more or less emotional? In what ways?
- Do you anticipate that participating in treatment will result in having to deal with difficult emotions?

A) Emotional Expression

0	Completely unable to identify and express feelings.
1	Able to identify or express ***some*** feelings.
2	Able to identify or express ***most*** feelings.
3	Able to accurately label and express a range of feelings.

B) Emotional Demands of Treatment

0	Completely unaware of the emotional demands of treatment. Sees treatment as simply an educational experience.
1	Somewhat aware of but unwilling to deal with emotional demands of treatment.
2	Somewhat aware of and willing to deal with emotional demands of treatment.
3	Aware of and willing to deal with the emotional demands of treatment.

Total Score

Treatment Readiness Scoring Sheet

1. Problem Recognition:	
A) Problem Severity	-3 -2 -1 0 +1 +2 +3
B) Problem Understanding	-3 -2 -1 0 +1 +2 +3
2. Goal Setting:	
A) Realistic Goals	-3 -2 -1 0 +1 +2 +3
B) Goal Importance	-3 -2 -1 0 +1 +2 +3
3. Motivation:	
A) Treatment Need	-3 -2 -1 0 +1 +2 +3
B) Treatment Motivation	-3 -2 -1 0 +1 +2 +3
4. Self Appraisal:	
A) Ownership	-3 -2 -1 0 +1 +2 +3
B) Satisfaction	-3 -2 -1 0 +1 +2 +3
5. Expectations:	
A) Treatment Consequences	-3 -2 -1 0 +1 +2 +3
B) Treatment Benefits	-3 -2 -1 0 +1 +2 +3
6. Behavioral Consistency:	
A) Consistency	-3 -2 -1 0 +1 +2 +3
B) Meets Commitments	-3 -2 -1 0 +1 +2 +3
7. Views About Treatment:	
A) Treatment & Self	-3 -2 -1 0 +1 +2 +3
B) Therapeutic Alliance	-3 -2 -1 0 +1 +2 +3
8. Self Efficacy:	
A) Treatment Change	-3 -2 -1 0 +1 +2 +3
B) Personal Change	-3 -2 -1 0 +1 +2 +3
9. Dissonance:	
A) Distress	-3 -2 -1 0 +1 +2 +3
B) Dissatisfaction	-3 -2 -1 0 +1 +2 +3
10. External Supports:	
A) Support for Treatment	-3 -2 -1 0 +1 +2 +3
B) Support for Change	-3 -2 -1 0 +1 +2 +3
11. Affective Component:	
A) Emotional Expression	-3 -2 -1 0 +1 +2 +3
B) Emotional Demands	-3 -2 -1 0 +1 +2 +3

Total

Appendix C

Denial/Minimization Checklist
(Barbaree, 1991)

I. Denial

A. Deny that he had any interaction with the victim.

1. Victim out to get him for some reason ___

B. Deny that the interaction he had was sexual.

1. He was angry & committed a non-sexual assault ___
2. Was touching for some legitimate reason ___

C. Deny that the sexual interaction was an offence.

1. Victim did not resist ___
2. Victim consented ___
3. Victim said she was older than she was ___
4. Victim benefited from the interaction ___
   a. Sex education ___
   b. Affectional - serving the victim's emotional needs ___

D. Other. _____ ___

II. Minimization

A. Of Responsibility

1. He attributes blame to the victim
   a. Victim came on to him ___
   b. Victim made him angry ___
2. He absolves himself of blame with external attributions
   a. Alcohol or drugs ___
   b. Stressful circumstances ___
   c. Social pressure ___
   d. Provocation ___
3. He absolves himself of blame with internal attributions
   a. emotional/mental disorder/disturbance ___
   b. Hormonal imbalance ___
   c. Bad experiences during childhood ___
   d. Lack of control ___
   e. Past victimization ___

B. Of Extent

1. He minimizes the frequency of past offenses ___
2. He minimizes the number of previous victims ___
3. He minimizes the force he has used ___
4. He minimizes the intrusiveness of his behaviours ___

C. Of Harm

1. Victim not suffering any long term effects ___
2. Victim had so many past partners that it doesn't matter ___
3. Victim learned something from the experience ___

D. Other _____ ___

III. None

Appendix D

STATISTICAL INFORMATION ON RECIDIVISM SCALE-R1 (SIR-R1)
(Nuffield, 1982; Correctional Service of Canada, 1996)

Current Offense:	
Incest, sexual intercourse with the underage, seduction, gross indecency	+4
Homicide: any act resulting in death, except by automobile	+3
Narcotics offenses (Food & Drug Act/Narcotic Control Acts)	+3
Unarmed robbery (armed robbery has 0 score)	+2
Dangerous driving, criminal negligence while operating a motor vehicle, arson, kidnapping, hijacking, abduction, obstructing a peace officer	+2
Receiving or possession of stolen goods	-1
Theft	-1
Break and enter, forcible entry, unlawfully in dwelling, illegal possession of firearm, carrying concealed weapon	-2
Escape	-4
Age at Admission	
40 or over	+2
20 or under	-2
Previous Incarceration	
Has never been in a penal institution before	+4
Has served a sentence in a penal institution on 3 or 4 previous occasions	-1
Has served a sentence in a penal institution on 5 or more previous occasions	-2
Revocation or forfeiture	
Has at any time been revoked or has forfeited day parole, full parole, or statutory release	-2
Act of escape	
Has escaped or attempted to escape on 1 or more occasions	-3
Security Classification	
Is in maximum security at time of parole hearing	-1
Age at first adult conviction	
Was 50 or over at time of first adult conviction	+7
Was between 41 and 49 (inclusive) at time of first adult conviction	+6
Was between 31 and 40 (inclusive) at time of first adult conviction	+3
Was between 23 and 30 (inclusive) at time of first adult conviction	+2
Was 18 or under of first adult conviction	-2
Previous convictions for assault	
Has 1 previous conviction	-2
Has 2 or more convictions for assault	-3
Marital status at most recent admission	
Was married or had common-law spouse	+1
Interval at risk since last offense	
If an offender has spent 24 months or more in the community between the current conviction or reincarceration, and his last prior conviction or last release	+2
If an offender has spend less than 6 months in the community between the current conviction or reincarceration and his last prior conviction or last release	-1

Table continued

Number of dependents at most recent admission	
Had 3 or more dependents	+2
Current Total Aggregate Sentence	
Aggregate sentence is 5 years and up to 6 years	+3
Aggregate sentence is 6 years or more	+2
Previous Convictions for sexual offenses	
Has 2 or more previous convictions for any of rape, or attempted rape, or indecent assault, or sexual assault, or aggravated sexual assault	-4
Previous Convictions for break and enter	
Has no previous convictions for break and enter, or being unlawfully in dwelling house	+2
Has 1 or 2 previous convictions for break and enter, or being unlawfully in dwelling house	-2
Has 3 or 4 previous convictions for break and enter, or being unlawfully in dwelling house	-3
Has 5 or more previous convictions for break and enter, or being unlawfully in dwelling house	-6
Employment status at arrest	
Was employed at time of arrest for current offense(s)	+1

Note: Items should be scored 0 if none of the stated values apply.	Success Rate for Groups of Offenders Scoring: +6 to +27: 4 out every 5 offenders will not commit an indictable offense after release +1 to +5: 2 out of every 3 offenders will not commit an indictable offense after release -4 to 0: 1 out of every 2 offenders will not commit an indictable offense after release -8 to -5:2 out of every 5 offenders will not commit an indictable offense after release -30 to -9: 1 out of every 3 offenders will not commit an indictable offense after release	Total Score: _____

Note. In 1996, CSC implemented 2 amendments to the SIR. First, 'has been convicted of escape or attempted escape on one or more previous occasions' was changed to 'has escaped or attempted to escape on 1 or more occasions'. Similarly, 'had only 1 previous conviction for any rape or attempted rape/indecent assault' was changed to 'has 2 or more previous convictions for any rape, attempted rape, indecent assault, sexual assault, or aggravated sexual assault'. The revised SIR is now called the SIR-R1.

Appendix E

Coding rules for Static-99.

Risk Factor	Codes		Score
Prior Sex Offences (Same rules as in RRASOR)	Charges	Convictions	
	None	None	0
	1-2	1	1
	3-5	2-3	2
	6 +	4 +	3
Prior sentencing dates (excluding index)	3 or less		0
	4 or more		1
Any convictions for non-contact sex offences	No		0
	Yes		1
Index non-sexual violence	No		0
	Yes		1
Prior non-sexual violence	No		0
	Yes		1
Any Unrelated Victims	No		0
	Yes		1
Any Stranger Victims	No		0
	Yes		1
Any Male Victims	No		0
	Yes		1
Young	Aged 25 or older		0
	Aged 18 – 24.99		1
Single	Ever lived with lover for at least two years?		
	Yes		0
	No		1
Total Score	Add up scores from individual risk factors		

Notes
Static 99 is intended for males aged at least 18 who are known to have committed at least one sex offence.

1) Prior sex offences. Count only officially recorded offences. These could include a) arrests and charges, b) convictions, c) institutional rules violations, and d) probation, parole or conditional release violations arising from sexual assault, sexual abuse, sexual misconduct or violence engaged in for sexual gratification.

Non-sexual offences resulting from sexual behaviour would also be included as sexual offences (e.g., voyeur convicted of trespass by night). When the offence behaviour was sexual, but resulted in a conviction for a violent offence (e.g., assault, murder), then the offender is considered to have committed both a sexual and non-sexual violent offence and could receive points for both items.

Count only the number of sexual convictions or charges prior to the index offence. Do not count the sex offences included in the most recent court appearance. Institutional rule violations and conditional release violations count as one charge. Use either charges or convictions, whichever indicates the higher risk. More detailed worked examples of scoring prior offences are given in the RRASOR scoring guidelines (Phenix & Hanson, in press).

2) Prior sentencing dates. Count the number of distinct occasions on which the offender has been sentenced for criminal offences of any kind. The number of charges/convictions does not matter, only the number of sentencing dates. Court appearances that resulted in complete acquittal are not counted. The index sentencing date is not included.

3) Non-Contact Offences. This category includes convictions for non-contact sexual offences, such as exhibitionism, possessing obscene material, obscene telephone calls, and voyeurism. Self-reported offences do not count in this category.

4) Index Non-sexual Violence. Refers to convictions for non-sexual assault that are dealt with on the same sentencing occasion as the index sex offence. These convictions can involve the same victim as the index sex offence or they can involve a different victim. All non-sexual violence convictions are included providing they were dealt with on the same sentencing occasion as the index sex offences. Example offences would include murder, wounding, assault causing bodily harm, assault, robbery, pointing a firearm, arson, and threatening.

5) Prior Non-sexual Violence. The category includes any conviction for non-sexual violence prior to the index sentencing occasion.

The previous items (Items 1-5; prior offences) are based on officially records. The following items are based on all available information, including self-report, victim accounts, and collateral contacts.

6) Unrelated Victim. A related victim is one where the relationship would be sufficiently close that marriage would normally be prohibited, such as parent, uncle, grand-parent, step-sister.

7) Stranger Victim. A victim is considered to be a stranger if the victim did not know the offender 24 hours before the offence.

8) Male Victim. Included in this category are all sexual offences involving male victims. Possession of child pornography involving boys, however, would not count in this category.

9) Young. This item refers to the offender's age at the time of the risk assessment. If the

assessment concerns the offender's current risk level, it would be his current age. If the assessment concerns an anticipated exposure to risk (e.g., release, reduced security at some future date), the relevant age would be his age when exposed to risk. Static-99 is not intended for those who are less than 18 years old at the time of exposure to risk.

10) Single. The offender is considered single if he has never lived with a lover (male or female) for at least two years. Legal marriages involving less than two years of co-habitation do not count.

TRANSLATING STATIC 99 SCORES INTO RISK CATEGORIES

Score	Label for Risk Category
0,1	Low
2,3	Medium-Low
4,5	Medium-High
6 plus	High