

**Risk Assessment of
Male Aboriginal
Offenders:
A 2006 Perspective**
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Executive Summary¹

Aboriginal offenders are different from non-Aboriginal offenders in a number of ways. For example, Aboriginal offenders are overrepresented within the criminal justice system relative to their numbers in the general population. In 2004-05, Aboriginal offenders represented 16.2% of the total federal offender population and 20% of the provincial/territorial offender population, while Aboriginal adults accounted for only 2.7% of the Canadian adult population in the last Canadian census. Also, when compared to non-Aboriginal offenders, research has found that Aboriginal offenders are more likely to commit violent crimes, are classified as higher-risk and higher-need, tend to be younger, have a lower level of education and are less likely to be employed when admitted to custody. This disparity has remained stable over the years, despite many efforts to improve the situation.

Given the differences between Aboriginal and non-Aboriginal offenders, coupled with the fact that most risk assessment instruments were originally validated on non-Aboriginal offenders, it is not surprising that some individuals question whether risk factors are comparable across the two groups, and whether the same risk assessment instrument should be used for both populations. While these are valid concerns, research results should quell these concerns, at least to some degree.

Although there is not an abundance of research in this area, research to date suggests that the majority of risk factors *are* applicable to male Aboriginal offenders. Research has also found that some of the more widely-recognized risk assessment instruments, such as the Statistical Information on Recidivism (SIR) scale (Nuffield, 1982) and the Level of Service Inventory – Revised (LSI-R; Bonta & Andrews, 1995), are equally valid and predict recidivism equally well for male Aboriginal offenders, even though they were designed based on a non-Aboriginal population.

The purpose of this review was three-fold. First, the research on risk factors was reviewed to determine whether risk factors were similar for both Aboriginal and non-Aboriginal male offenders. Second, various risk assessment instruments were examined to determine how well they predicted risk for the male Aboriginal offenders. Third, different perspectives regarding risk assessment of male Aboriginal offenders were presented, commonalities between the views were identified, and recommendations were outlined.

Risk Factors

Over the last few decades, numerous risk factors have been examined, and for the most, consensus has been reached on which risk factors are most important. Eight central risk factors have been identified, which are as follows: (1) history of antisocial behaviour, (2) antisocial personality, (3) antisocial attitudes, (4) antisocial peers, (5) family/marital problems, (6) school/employment difficulties, (7) absence of positive leisure or recreational activities, and (8) substance abuse. Other weaker risk factors have also been identified (e.g., social class of origin, intellectual functioning, anxiety, self-esteem); however, these risk factors do not predict risk as well as the central eight risk factors.

Risk factors can be described as “static” or “dynamic”. Static risk factors are factors that are unlikely to change over time, and are considered to be stable in nature, such as criminal history. Dynamic risk factors are “dynamic” in nature and can change over time, usually with appropriate treatment. Examples of dynamic risk factors include substance abuse, antisocial attitudes, and antisocial peers, just to name a few. Dynamic risk factors can also be seen as “need” factors, areas in an offender’s life that are in need

¹ This Executive Summary is quite lengthy and was designed to be a stand-alone document. Therefore, it attempts to use more common language and is geared to a variety of audiences.

of attention (i.e., treatment). In fact, using the term “risk/need” factor often emphasizes this parallel. Needs are either “criminogenic” or “non-criminogenic” in nature. Criminogenic needs are needs that are directly related to the criminal behaviour, and if appropriately and successfully targeted, the likelihood of reoffence will be reduced. Non-criminogenic needs are also areas that are deemed problematic and require treatment; however, these needs are not directly related to criminal offending, and are therefore often classified as secondary in the treatment plan. Therefore, while the label “risk factor” may carry a negative connotation in some contexts (e.g. the presence of more risk factors usually indicates a higher risk to reoffend, or results in a higher security classification while incarcerated), it is important to remember that risk factors can also be viewed in a more positive sense (as “need factors”), factors which a treatment plan should incorporate, so that the likelihood of reoffending can be reduced.

The amount of research conducted on the applicability of these central eight risk factors on male Aboriginal offenders varies, depending on the risk factor being examined. A history of antisocial behaviour, usually defined as criminal history, is the most studied of all the risk factors when it comes to Aboriginal offenders. Here, the research is clear – criminal history predicts risk equally well for both Aboriginal and non-Aboriginal offenders. Although there is less research on substance abuse, antisocial attitudes, antisocial personality and antisocial peers, research to date suggests that these factors are also equally applicable to male Aboriginal offenders. In short, research is consistent regarding equal applicability for all risk factors with Aboriginal offenders, with the exception of two.

A landmark study, conducted by James Bonta, Carol LaPrairie and Suzanne Wallace-Capretta in 1997, examined a number of risk factors in the context of a scale validation and found that all risk factors were predictive for male Aboriginal offenders except for the risk factors “family/marital” and “school/employment”. These two risk factors did not predict risk for the Aboriginal offender group in their study. Little research has been conducted since then, so additional research is needed before any firm conclusions are made regarding these two risk factors and their applicability.

Arguments have been presented as to why some of the risk factors may not be applicable to Aboriginal offenders. For example, perhaps Aboriginal communities have different views on the importance of education and full-time employment and maybe these cultural value distinctions become evident through certain risk factors. Perhaps these two risk factors really do not apply to Aboriginal offenders; this has yet to be determined. Arguments have also been made suggesting the possibility that other risk factors may exist that apply to Aboriginal offenders specifically (i.e., that do not apply to non-Aboriginal offenders) but research has yet to identify these factors. For example, research from Australia and New Zealand is exploring cultural-specific risk factors related to Aboriginal identity and the need for group membership within their Indigenous offender population. Additional research is required in this area as well.

Generally speaking, additional research is warranted to examine all risk factors to a greater degree; however, what currently exists certainly supports the position that the *majority* of risk factors are similar across the two cultures.

Risk Assessment Instruments

It is unusual for each risk factor to be assessed one at a time in the correctional context. These days, risk factors are often examined collectively, usually in the form of a structured risk assessment instrument. Many risk assessment instruments exist, though some instruments are more widely accepted and utilized than others, mostly due to their strong psychometric properties. A thorough risk assessment should include a comprehensive review of a number of risk factors, with consideration given to an offender’s

past, present and future, and incorporation of the offender's individual characteristics and his or her surrounding environment.

As with risk factors, there is also research that supports the position that many prominent risk assessment instruments are valid for use with male Aboriginal offenders. With this in mind, the second goal of this review was to examine three of the main risk assessment instruments that are currently used in Canada.² Research on two instruments, the LSI-R and the SIR scale, suggests that these risk assessment scales are valid and predict risk among male Aboriginal offenders. Research on the SIR scale and Aboriginal offenders is conclusive, with scores predicting general recidivism equally well for both Aboriginal and non-Aboriginal offender groups. Less research has been conducted on the LSI-R, but the majority of research to date has found that this risk assessment instrument is also applicable with Canadian male Aboriginal offenders.

Most risk assessment instruments include the central eight risk factors; however, some instruments only include static risk factors. The SIR scale, for example, only contains static risk factors; therefore, not all eight of the central risk factors are represented. The LSI-R on the other hand, includes all eight central risk factors, and many other additional factors. Incorporation of both static and dynamic risk and need factors allows for a more comprehensive assessment, and for a more appropriate treatment plan to be developed. The LSI-R also includes a professional discretion override component, allowing the administrator to incorporate factors or considerations that are not accounted for in the structured portion of the risk assessment.

The incorporation of a variety of risk and need factors is also an important consideration when assessing populations on which the instrument was not originally validated. Furthermore, adherence to the principles of effective correctional treatment is crucial to ensure optimal treatment results. Three of the most important principles are the risk principle, the need principle and the responsivity principle. The responsivity principle is of particular importance in the context of Aboriginal offenders. In essence, in order for treatment to be successful, the treatment should be of a cognitive-behavioural nature, and must be administered in a method that is consistent with the offender's learning style and cultural context. The importance of cultural knowledge, on the part of both the practitioner conducting the assessment and the treatment providers, is discussed.

The need and availability of appropriate treatment for incarcerated Aboriginal offenders has also been raised in the context of risk assessment. One possible explanation for the resistance to risk assessment instruments being used on Aboriginal offenders is the fact that the instrument may indicate that the offender is high-risk. As indicated, a higher number of Aboriginal offenders are classified as high-risk when compared to non-Aboriginal offenders, not because they are Aboriginal, but because they evidence a higher number of risk factors that are measured by the instrument. Unfortunately a higher risk score results in a number of events occurring. On the one hand, comprehensive treatment plans can incorporate all the risk/need factors identified. On the other hand, a higher risk score usually results in a higher security classification, dictating placement in a maximum-security institution, where appropriate programming is less likely to be available. This is a major concern. Although Aboriginal-specific treatment approaches have been developed (e.g., healing lodges), Aboriginal offenders cannot participate or be placed within a lodge if they are classified as high-risk. Therefore, it is always important to recognize the consequences of having a risk assessment completed. Of course, the absence of a risk assessment instrument also poses concerns, as human judgement tends to over-classify offenders.

² Other risk assessment instruments have been developed for specific offender groups (e.g., sex offenders, violent offenders); however, a review of these scales was not conducted in this paper.

Possibilities to address these concerns include mitigating risk scores to allow for differential lower-security placement for treatment purposes, or altering current practices to increase the availability of treatment to address all the needs that are identified through the risk assessment.

Various Perspectives, Common Ground and Recommendations

The final purpose of this review was to present various perspectives on the topic of risk assessment of Aboriginal offenders, identify commonalities, and outline recommendations. While there are many different perspectives, a common theme is the *need* for risk assessment, though opinions differ on the appropriate assessor and the form the assessment should take. There is agreement that “needs” should be identified and that appropriate treatment plans should target these needs. There is also acknowledgement that there are many different methods of doing things, and that no one method is always better than another - they can simply be different. For example, methods of communication between Aboriginal and non-Aboriginal groups are often different in the context of risk assessment. Whereas the empirical method of communication involves emphasis on numbers and structured objectivity, many Aboriginal communities stress non-verbal communication techniques, valuing the importance of story telling and passing down the teachings from one generation to the next. What is valued in a non-Aboriginal society may not be valued to such a degree in an Aboriginal society and vice versa. For example, respecting the land, respecting family and Elders, and living off the land are values found in many Aboriginal communities. An understanding of both cultures is required to address the current issues at hand.

It is important for non-Aboriginal people to recognize the injustices that have been committed against many Aboriginal people. While these injustices have resulted in disadvantage and is apparent in many forms, these disadvantages may not play a role in risk prediction. The goal of risk prediction is to *predict*, not explain. That being said, openness to the explanations is important, when working together. Understanding between the two groups is essential to ensure accurate risk prediction, but also to increase the likelihood of successful treatment and reintegration of Aboriginal offenders back into the community.

From this review, the following recommendations were formed. First, any discussion about risk assessment of Aboriginal offenders should start from what is already known. There is research to suggest that the majority of risk factors are applicable to Aboriginal offenders, so one should start from there rather than reinventing the wheel. Second, researchers should continue to examine the major risk factors, the possibility of potential Aboriginal-specific risk factors, and continue to validate the risk assessment instruments that are currently being used. Third, Aboriginal communities should be utilized for their expertise, in the following ways. Education and cultural understanding is essential, both for conducting risk assessments of Aboriginal offenders and for those validating and developing risk assessment instruments. Aboriginal communities should be involved in the procedure to determine whether additional cultural-related risk factors exist. The expertise of Aboriginal communities should also be incorporated into the development of appropriate treatment strategies for Aboriginal offenders, specifically incorporating the responsivity principle. Lastly, partnerships between Aboriginal communities and the risk assessment experts, with agreement on a common goal, will certainly facilitate movement towards addressing the issue of risk assessment with Aboriginal offenders in Canada.

Risk Assessment of Male Aboriginal Offenders: A 2006 Perspective

The field of risk assessment in corrections has certainly advanced in the last quarter century. Progress has been made on many fronts; however, there exists an ongoing debate on the applicability of current risk assessment instruments with Aboriginal offenders. Although the arguments are complex, the two sides may be summarized as the supportive view, that risk assessment instruments developed on non-Aboriginal people are empirically valid for use with Aboriginal offenders, and the opposing view, that current risk assessment instruments should not be used with Aboriginal offenders, in part because these scales were not developed specifically for them. In addition, numeric science is not a widely accepted Aboriginal tradition, and it has been argued that current instruments do not incorporate many factors that are valued in Aboriginal culture and their communities. Granted, the two extreme positions of the argument are presented, and there are certainly many views that are more towards the middle of the continuum. However, for the purposes of this review, the opposing views will be examined, as it is these two factions that need to be brought together.

The purpose of this review is to examine the literature on the use of risk assessment instruments with Aboriginal offenders and explore the various elements that may cause controversy. Furthermore, this review will explore the current state of this controversy, from the psychological empirical perspective, as well as from the Aboriginal culture and community perspective, in an effort to identify commonalities and directions to further advance this important debate. This literature review included searches of various electronic databases, journal abstracts, government publications, examination of reference lists of acquired journal articles, unpublished academic papers, as well as searches of unpublished government reports from Canada, Australia and New Zealand.

While the area of risk assessment and female offenders, as well as Aboriginal female offenders, is an important topic for review, this paper will specifically focus on male Aboriginal offenders. This decision was made for two reasons. First, the area of risk assessment and Aboriginal offenders draws out a wide variety of perspectives. The area of risk assessment and females also draws out an array of perspectives, some overlapping and some unique to the gender issue. The examination of Aboriginal female offenders would have raised many issues that were more of a concern to the “gender debate” than to the “risk assessment” debate. Second, the majority of Aboriginal offenders, as with non-Aboriginal offenders, are male. While it is certainly important to examine the issue of risk among Aboriginal females, a logical first step was to examine the larger population. Further, since there are fewer Aboriginal female offenders, studies would likely include a smaller sample size, making generalization and conclusions more difficult. Therefore, the decision was made that this review would focus solely on male Aboriginal offenders. Lastly, it must be recognized that Aboriginal offenders are not a homogenous group and differences likely exist among the various Aboriginal subgroups (e.g., Métis, Inuit, Innu etc.). However, for the purposes of this paper, Aboriginal offenders will be described collectively, and compared to non-Aboriginal offenders in most instances.

Aboriginal Offenders in Canada

Prior to reviewing the risk assessment information on Aboriginal offenders, it is important to place Aboriginal offenders in their current context. A quick presentation of some recent statistics will provide grounding for the Aboriginal circumstance in Canada. A recent Statistics Canada report (2006) describes Aboriginal people in the following way:

Aboriginal people are younger on average, their unemployment rates are higher and incomes are lower; they are more likely to live in crowded conditions; they have higher residential mobility; and their children are more likely to be members of a lone-parent family. They also have a lower level of education ... (p. 6)

In terms of criminal justice, Aboriginal offenders account for a disproportionate share of Canada's offender population. Although efforts have been made to address this problem, there has been little progress. In 2004-05, Aboriginal offenders represented 16.2% of the total federal offender population while Aboriginal adults represent 2.7% of the Canadian adult population (Public Safety and Emergency Preparedness Canada; PSEPC, 2005).

Based on research collected by Statistics Canada in the 2004 General Social Survey, rates of violent crime committed on reserves were eight times higher for assaults, seven times higher for sexual assaults and six times higher for homicides than rates in the rest of Canada (Statistics Canada, 2006). In Saskatchewan, Aboriginal people made up 80% of those offenders who were admitted to provincial custody, compared to their 10% representation of the province's adult population. Aboriginal offenders tend to be younger than non-Aboriginal offenders³, have a lower level of education and are less likely to be employed at the time of admission to a correctional facility. This demographic profile has not changed over time, and the current situation of Aboriginal offenders in Canada continues to be a concern.

There are several factors that may play a role in the overrepresentation of Aboriginal people within Canada's justice system. The Royal Commission on Aboriginal Peoples (1996) suggested that factors associated with poverty and unemployment influenced the overrepresentation. LaPrairie (1996) agreed, suggesting that for numerous reasons, Aboriginal persons may commit more crimes than non-Aboriginal people, leading to higher rates of offending in the Aboriginal population. While this is certainly an area that requires attention, this paper focuses on a more specific area: the risk assessment of Aboriginal offenders.

³ According to Statistics Canada (2006), Aboriginal offenders were on average three years younger than non-Aboriginal adults. Correctional Service Canada (PSEPC, 2005) states that of those offenders admitted to federal jurisdiction in 2004-05, 50.4% of Aboriginal offenders were under the age of 30, compared to 38.5% of non-Aboriginal offenders. The median age of Aboriginal offenders at admission was 29, compared to a median age of 33 for non-Aboriginal offenders.

Risk Assessment

Effective offender assessment is imperative in the field of corrections. Risk assessment is the process of determining the level of risk that an individual poses to commit a future criminal act (i.e., assessing an individual's likelihood to reoffend; Andrews & Bonta, 2003). Offenders are judged on their risk at various stages of the criminal justice system (e.g., sentencing, security placement while incarcerated, parole decision-making, release, etc.). In addition to predicting an offender's likelihood of reoffending, risk assessment instruments are typically used for two other main purposes - to determine a security placement for offenders who are incarcerated and, perhaps most importantly, to identify the offender's risk and need factors. When offenders' risk and need factors are accurately identified, appropriate treatment strategies can be developed. This is a key step towards effective rehabilitation and community reintegration (Bonta & Cormier, 1999).

A thorough risk assessment should include a comprehensive review of a number of factors, with consideration given to an offender's past, present and future, incorporating both the individual's characteristics and his or her surrounding environment (Andrews & Bonta, 2003; Gendreau, Goggin, & Little, 1996a). Typically, the offender's risk is labelled as "low-risk", "medium-risk", and "high-risk" to reoffend, although occasionally the categories are further expanded (e.g., low-medium risk), depending in part on the risk assessment instrument that is used.

Research on risk assessment has flourished in the past few decades (Bonta & Cormier, 1999) and continues to advance. Bonta (1996) described three generations of risk assessment. The first generation, usually referred to as the generation of clinical judgment, describes the period where the majority of risk assessments were based solely on a professional's clinical judgment, sometimes incorporating what some refer to as "gut instinct". First generation assessments are informal and unstructured, and decisions are not always based on standardized decision-making criteria.

The second generation of risk assessment recognized the importance of standardized decision-making criteria and is represented by actuarial risk assessment derived from empirical evidence. Second generation actuarial risk assessment instruments incorporate mostly static risk factors, factors from an individual's past history that are unlikely to change (e.g., criminal history, severity of index offence).

The third generation of risk assessment recognizes the importance of both static and dynamic risk factors. Hence, these risk assessment instruments focus not only on the past (i.e., static factors), but also on factors related to offending that can change with the appropriate treatment or intervention (i.e., dynamic factors). These dynamic risk factors speak to the issue of offender needs. Needs were identified as either criminogenic (i.e., related to criminal behaviour) or non-criminogenic (i.e., needs identified as problematic but unrelated to criminal offending). This distinction between the two types of needs contributed to a more accurate identification of risk factors.

Third generation risk assessment research also advanced in the area of effective correctional treatment. Specifically, Andrews and Bonta (2003) posited a number of principles that underlie effective correctional treatment with offenders. The three most important principles are the risk principle, the need principle, and the responsivity principle.

The risk principle requires that the level of intervention be matched to an offender's risk level. For example, a low-risk offender should receive a low level of treatment intervention whereas a high-risk offender should receive intensive treatment intervention (Andrews & Bonta, 2003).

The need principle dictates that the treatment provided be targeted to address an offender's criminogenic needs rather than his or her non-criminogenic needs. In other words, treatment should target those needs that are directly related to criminal offending. If intervention is successful, the likelihood of recidivism should therefore be reduced.

The responsivity principle states that the treatment provided to the offender should be delivered in a means that acknowledges the offender's abilities and learning style. The responsivity principle is broken down into two types of responsivity: general responsivity and specific responsivity. The general responsivity principle states that cognitive-behavioural forms of intervention are the most effective when it comes to changing an offender's behaviour (Andrews & Bonta, 2003). The specific responsivity principle pertains to the individual offender, stating that the offender's characteristics must be taken into account when determining the appropriate type of treatment for that specific offender (Andrews & Bonta, 2003). For example, if an offender has a learning disability, the treatment strategy should address this and incorporate a learning technique that the offender is able to understand. Cultural sensitivity or awareness may also arise under this principle. For example, it may be necessary to adapt correctional programs to incorporate cultural beliefs, such as Aboriginal traditions and spirituality, in order to obtain maximum learning from the offender. This particular principle and its applicability to Aboriginal offenders will be examined further within this paper.

Current risk assessment instruments examine a number of potential risk/need areas. Examples of risk/needs that are typically examined within risk assessment instruments include antisocial behaviour, antisocial attitudes, antisocial peers, family and relationship difficulties, and violence (Gendreau et al., 1996a; Gendreau, Little, & Goggin, 1996b), to name a few. The number and severity of needs present in an offender is related to the likelihood of an offender reoffending (Andrews & Bonta, 2003). Offenders that are considered high-risk to reoffend will possess multiple criminogenic needs, whereas offenders who are classified low-risk to reoffend have fewer needs or the needs are less severe. As the number of criminogenic needs increases, so does the risk to reoffend.

The progressive development of risk assessment instruments through the various generations is supported by much research (Andrews & Bonta, 2003; Andrews, Bonta, & Wormith, 2006; Bonta & Cormier, 1999; Gendreau et al., 1996b; Gendreau, Goggin, & Smith, 2002; Grove, Zald, Lebow, Snitz, & Nelson, 2000). There is strong evidence to support that actuarial methods of risk prediction outperform clinical methods (Grove & Meehl, 1996; Grove et al., 2000; Douglas, Cox & Webster, 1999), and that the incorporation of both static and dynamic risk and need factors is important⁴ (Andrews & Bonta, 2003; Andrews et al., 2006; Bonta & Cormier, 1999; Gendreau et al., 1996b; Gendreau et al., 2002).

Building on the three generations that were originally described by Bonta (1996), Andrews and Bonta (2003) describe a fourth generation of offender risk assessment. In the fourth generation, the importance of case management is recognized by directly linking risk assessment results to case management strategies. Risk assessment instruments (such as the Level of Service Inventory – Revised; LSI-R) are being or have recently been adapted to incorporate this new advance (e.g., Level of Service/Case Management Inventory; Andrews, Bonta, & Wormith, 2004).

⁴ The incorporation of dynamic risk and need factors is particularly important when it comes to the treatment of offenders; it is less important in terms of risk prediction, as some second-generation risk assessment instruments have been shown to have strong predictive abilities.

Risk/Need Factors

Over the years, important risk factors have been identified and a number of empirically-based risk assessment instruments have been developed. The risk factor literature incorporates both psychological (e.g., antisocial personality, antisocial attitudes) and social (e.g., delinquent peers, poor school performance, high-crime neighbourhoods; Wilson & Howell, 1993) risk factors (Farrington, 1998). Numerous risk factors have been examined over the past few decades and, for the most part, consensus over the major risk factors has been reached.

In 1996, Gendreau, Goggin and Little (Gendreau et al., 1996a; 1996b) used meta-analytic techniques to examine a large number of potential risk factors and predictor domains, as well as various actuarial risk assessment instruments, to determine which were the best predictors of adult offender recidivism. One hundred and thirty one studies were included in their meta-analysis and 1141 correlations with recidivism were produced. The results suggested that certain risk factors played a much larger role in risk prediction than others. Specifically, their results showed that dynamic predictors predicted recidivism as well as static predictors and that the strongest predictors of recidivism included criminogenic need(s), criminal history/history of antisocial behaviour, social achievement, age/gender/race and family factors. Although all predictor domains were significant predictors of recidivism⁵, the best predictor domains (the ones with the largest *r* values) were adult criminal history, antisocial personality, companions and criminogenic needs. Predictors such as intellectual functioning, anxiety, self-esteem, and social class of origin were found to be weak predictors of recidivism.

Generally speaking, the four *major* risk factors are commonly referred to as the “big four”. These four risk factors demonstrate the highest predictive validity when assessing an offender’s risk to reoffend (Andrews & Bonta, 2003; Gendreau et al., 1996a). The big four are: (1) a history of antisocial personality, (2) the presence of an antisocial personality, (3) antisocial cognitions or attitudes, and (4) antisocial peers and associates. Gendreau’s (Gendreau et al., 1996a) work also makes reference to the “central eight” risk factors, which encompass the big four, but also four additional moderate level risk factors: family/marital, school/employment, leisure/recreation, and substance abuse. Table 1 highlights these eight risk factors, as well as other potential risk factors that have been examined in the literature, but when tested empirically have only been found to be minor risk factors.

Although numerous risk factors have been posited throughout the literature, this paper will primarily examine the central eight risk factors and the applicability of these risk factors to Aboriginal offenders. Some of the minor risk factors listed in Table 1 will also be examined, but to a lesser extent. There is little doubt that the central eight risk factors are important when assessing risk, but for the most part, these risk factors were validated on a non-Aboriginal sample of offenders.

Although one may expect that this section examining individual risk factors and their applicability to Aboriginal offenders would be lengthy, this is not the case as, surprisingly, very little research exists in this area. The meta-analysis conducted by Gendreau, Goggin and Little (1996a) was, as the authors described, “regrettably ... virtually silent” (Gendreau et al., 1996a; p. 19) on the prediction of

⁵ Gendreau, Goggin and Little (1996a; 1996b) examined eighteen predictor domains. They included: age, adult criminal history, pre-adult antisocial history, family criminality, family rearing practices, family structure, gender, intellectual functioning, race, socio-economic status, antisocial personality, companions, criminogenic needs, interpersonal conflict, personal distress, social achievement, substance abuse and risk scales. These were then collapsed into eight all-encompassing predictor domains: (1) age/gender/race, (2) criminal history, (3) criminogenic needs, (4) family factors, (5) intellectual functioning, (6) personal distress, (7) socio-economic status, and (8) social achievement.

Table 1. Risk Factors.

Type	Factor	Risk	Risk Assessment Instrument*	
The "Central Eight" Risk Factors	The "Big Four" Risk Factors	History of antisocial behaviour	Early and continuing involvement in a number and variety of antisocial acts in a variety of settings	LSI-R, MRNS, SIR, CRNA, CRS
		Antisocial personality pattern	Adventurous pleasure seeking, weak self-control, restlessly aggressive	LSI-R
		Antisocial cognition	Attitudes, values, beliefs, and rationalizations supportive of crime; cognitive emotional states of anger, resentment, and defiance; criminal versus reformed identity; criminal versus anticriminal identity	LSI-R, MRNS, CRNA
		Antisocial associates	Close association with criminal others and relative isolation from anticriminal others; immediate social support for crime	LSI-R, MRNS, CRNA
	Examples of Minor Risk Factors	Family and/or marital	Two key elements are nurturance and/or caring and monitoring and/or supervision.	LSI-R, MRNS, SIR, CRNA
		School and/or work	Low levels of performance and satisfactions in school and/or work	LSI-R, MRNS, SIR, CRNA
		Leisure and/or recreation	Low levels of involvement and satisfaction in anticriminal leisure pursuits	LSI-R
		Substance abuse	Abuse of alcohol and/or other drugs	LSI-R, MRNS, CRNA, CRS
	Examples of Minor Risk Factors	Personal and/or emotional distress		
		Major mental disorder		
Physical health issues				
Fear of official punishment				
Physical conditioning				
Low IQ				
Social class of origin				
Seriousness of current offence				
Other factors unrelated to offending				

* LSI-R = Level of Service Inventory – Revised (Andrews & Bonta, 1995); MRNS = Manitoba Risk/Needs Scale (Bonta, LaPrairie, & Wallace Capretta, 1997); SIR = Statistical Information on Recidivism (Nuffield, 1982); CRS = Custody Rating Scale (Correctional Service Canada, 1991); CRNA = Community Risk Needs Assessment (British Columbia Public Safety and Solicitor General, 2004), which was based on the Correctional Service of Canada's Community Risk/Needs Management Scale (Motiuk & Porporino, 1989) and adapted for use in probation by the British Columbia's Department of Public Safety and Solicitor General.

Adapted from Andrews, D. A., Bonta, J., & Wormith, J. S. (2006). The recent past and near future of risk and/or need assessment. *Crime and Delinquency*, 52, p. 11.

recidivism among minority groups. Furthermore, more recent reviews, such as the one conducted by Andrews, Dowden and Rettinger (2001) on special populations in corrections, have also concluded that there is a lack of research in this area. Other special populations, such as female offenders, have received increased attention in the past decade; however Aboriginal offenders, as a special population, have not received nearly as much attention as is needed. Reviews of the major risk factors and their applicability to Aboriginal offenders have been conducted in a non-empirical sense (Jones, Masters, Griffiths, & Moulday, 2002; Pridemore, 2004), usually citing that risk factors, both dynamic and static, are more likely to be evident in the Aboriginal population, when compared to the non-Aboriginal, given the cultural circumstances of many Aboriginal people. Hence, there are arguments as to why risk factors are disproportionately evident in Aboriginal offenders, but there are fewer arguments questioning whether they are valid.

The little empirical research that does exist in this area has examined the applicability of risk assessment scales on Aboriginal offenders and the individual risk score items within the context of the overall risk assessment instrument. One study of this nature has been cited widely as the leading (and in some cases most conclusive) study in this area; this study was conducted by Bonta, LaPrairie and Wallace-Capretta in 1996 (Bonta, LaPrairie, & Wallace-Capretta, 1997). As a result, reference to this study will be made repeatedly in this section which examines each of the major risk factors in detail.

1. History of antisocial behaviour. Perhaps the most frequently cited phrase in risk prediction is that past behaviour is the best predictor of future behaviour (Andrews & Bonta, 2003). A history of antisocial behaviour (e.g., criminal history) is one of the four major risk predictors for future criminality (Andrews & Bonta, 2003; Gendreau et al., 1996b). In order to determine whether an offender has a history of antisocial behaviour, clinicians review an individual's history, beginning from childhood, to determine the age of onset of antisocial or criminal behaviour and the frequency of antisocial acts. Early and persistent involvement in antisocial or criminal behaviour usually indicates higher risk, as does the versatility of the acts and settings (Andrews & Bonta, 2003; Gendreau et al., 1996a).

History of antisocial behaviour is usually defined as "criminal history" in various risk assessment instruments. Specific items that are commonly included in the criminal history domain include the following: number of prior convictions, age at first offence, escape history, probation breaches, etc. Research has shown that Aboriginal offenders, in general, have lengthier and more serious criminal histories when compared to non-Aboriginal offenders (Charette & Lariviere, 2005; Holsinger, Lowenkamp, & Latessa, 2003). Furthermore, Aboriginal offenders have more criminal experiences and probation failures than non-Aboriginal offenders (Bonta et al., 1997) and they come into contact with the criminal justice system earlier than non-Aboriginal offenders (LaPrairie, 1992). Consistent with the findings of Holsinger and colleagues, Charette and Lariviere (2005) found significant differences between Aboriginal and non-Aboriginal offenders regarding criminal history; however, their findings that Aboriginal offenders scored higher on criminal history variables suggests that criminal history is a valid risk factors for Aboriginal offenders.

Bonta (1989) compared the predictive abilities of the risk factor criminal history in male Aboriginal ($n = 48$) and non-Aboriginal ($n = 71$) offenders when validating a risk assessment instrument (the LSI-R). He found that the criminal history subcomponent of the instrument predicted reincarceration for both groups (.41, $p < .01$ and .53, $p < .001$, respectively).

Bonta, LaPrairie and Wallace-Capretta (1997) examined the individual items of the Manitoba Risk/Needs Scale (MRNS; which was modeled on the Wisconsin assessment instrument) for 513 non-

Aboriginal and 390 Aboriginal probationers. While there was not a specific item labeled “history of antisocial behaviour”, there were three items related to criminal history (prior convictions, probation breaches, and convictions for a violent crime).

Examination of the predictive validity of the MRNS revealed that most individual items (including the criminal history items) predicted recidivism equally well for the Aboriginal and non-Aboriginal group. The predictive validity estimates for the Aboriginal offender group and non-Aboriginal offender group were .18 and .25 ($p < .001$) respectively for the “prior conviction” item and .17 and .19 ($p < .001$) respectively for “type of prior conviction” item. Based on the results of this study, it appears that items related to a history of antisocial behaviour predict equally well for Aboriginal offenders.

Bonta, Lipinski and Martin (1992) examined characteristics of male Aboriginal recidivistic offenders ($N = 282$) and found that, among several possible predictors examined, the strongest predictors of recidivism were previous incarcerations, an offence of break and enter, and age at first conviction, though they concluded that these variables did not demonstrate sufficient predictive ability to be used in release-making decisions. This study was useful as it found that criminal history was predictive of recidivism among both non-Aboriginal and Aboriginal offenders. The authors concluded by emphasizing the importance of looking beyond static variables, such as criminal history, and exploring dynamic variables and their applicability to the Aboriginal offender population.

In an effort to further examine the history of the antisocial behaviour risk factor, validation studies on other risk prediction tools, such as the Statistical Information on Recidivism (SIR) scale, were examined to identify instruments with criminal history related variables. However, none of the studies identified specifically compared such items across male non-Aboriginal and Aboriginal groups. That being said, a report on the Community Risk Needs Assessment (CRNA) instrument offers additional insight into the applicability of risk and needs factors with male Aboriginal offenders (British Columbia Public Safety and Solicitor General, 2004). The impetus for this research report was said to be the lack of research on the applicability of risk assessment on Aboriginal offenders. The CRNA is based on the Correctional Service of Canada’s Community Risk/Needs Management Scale (Motiuk & Porporino, 1989) and adapted for use in probation by the British Columbia Department of Public Safety and Solicitor General.

The study sample included 750 Aboriginal offenders (376 females and 374 males) who were assessed using the CRNA in 1998, and incorporated a four-year follow-up period. Although this study did not address the concerns of using an assessment instrument that was developed on non-Aboriginal male offenders, its goal to examine the applicability of that risk/need assessment instrument was a worthy one. Unfortunately, this study did not examine the individual CRNA items as to whether each individual risk factor possessed predictive ability. The study incorporated the use of principle components analysis (PCA) and logistic regression. The PCA is a statistical technique that groups individual items into common groupings or “factors”. The analysis clearly indicated that the CRNA was made up of two factors, which the authors labeled the “risk factor” and the “need factor” (not be confused with individual risk and need factors). The “risk factor” of the PCA encompassed items related to criminal history (e.g., number of current convictions, number of prior convictions, age at first conviction). The PCA “need factor” was made up of items related more to dynamic criminogenic needs (family relations, living arrangements, companions and significant others). A logistic regression found that each of the two PCA factors was predictive of recidivism (defined as new offence) for the entire Aboriginal offender sample (males and females; $\beta = .687, p < .001$ and $\beta = .450, p < .001$, for each factor respectively) as well as for the male Aboriginal group (“risk factor”: $\beta = .634, p < .001$; “need factor”: $\beta = .369, p < .01$). Since the PCA factors were found to have predictive ability, one could

argue that the individual items that make up the factors (seven of which are consistent with the “central eight” risk factors established in the risk assessment literature: criminal history, family/marital, companions, academic/vocational, employment/school, substance abuse and attitudes) also have predictive ability (although they were not each specifically examined).

In sum, the extant research provides consistent support to history of antisocial behaviour as a valid risk factor for male Aboriginal offenders.

2. Antisocial personality. The presence of an antisocial personality is also one of the “big four” risk factors for future criminal behaviour. Antisocial personality traits include impulsivity, adventurousness or thrill-seeking, weak self control, restlessness and aggressiveness, just to name a few (Andrews et al., 2006). While there is relatively little research examining antisocial behavioural history across Aboriginal and non-Aboriginal groups, there is even less research examining the antisocial personality risk factor. Again, this risk variable is incorporated into various scales across several individual items (usually more as a “domain” rather than a specific item).

Based on the findings of Bonta and his colleagues (Bonta et al., 1997), one might assume that the MRNS would incorporate antisocial personality as a risk factor or domain. Unfortunately, this is not the case; there were no individual MRNS items linked to this domain. Interestingly, the “emotional” item, a non-criminogenic item, was not found to be predictive of recidivism for either group (Aboriginal and non-Aboriginal). Another non-criminogenic item, “mental ability”, was found to be only slightly predictive (.08, $p < .05$) for the non-Aboriginal group.

When discussing antisocial behaviour, the concept of psychopathy is often raised. There exists a large body of research to suggest that psychopathy is an important contributor to criminal behaviour and it has been cited as one of the best predictors of criminal behaviour (Porter, Fairweather, Drugge, Hervé, Birt, & Boer, 2000).

Little research was found in the area of psychopathy amongst Aboriginal offenders. Research on psychopathy is conflicting and inconclusive, though there is certainly some indication that the concept may be valid across some cultures. Lynn (2002) conducted a comprehensive review of racial and ethnic differences in psychopathic personality, stating “Blacks and Native Americans almost invariably show higher levels of psychopathic personality than Whites” (p. 305). However, these results were challenged by Zuckerman (2003), who, using a structured measure of psychopathy within a community sample, found no consistent racial differences in psychopathy-related traits in his examination of African-American, Native-American, Hispanic and European-American groups. He concluded that differences between African-American, Native-American, Hispanic and European-American groups in antisocial behaviour appeared to be more a function of social class, historical circumstance or their status in the context of Western society rather than race (Zuckerman, 2003). Furthermore, Boer and his colleagues (Boer, Couture, Geddes, & Ritchie, 2004), in their research on risk management of Aboriginal offenders, stated that research exists indicating that the Psychopathy Checklist – Revised (PCL-R; Hare, 2003) is equally valid for Aboriginal offenders; however, this author was not able to locate any of this research.⁶

While the original concept of psychopathy had no cultural or gender bounds, the majority of the research on the predictive validity of PCL-R has been conducted on incarcerated Caucasian male offenders (Vitale, Smith, Brinkley, & Newman, 2002). In their review of the PCL-R and recidivism,

⁶ The PCL-R is the most widely used instrument to measure psychopathy.

Hemphill, Hare and Wong (1998) suggested that race might be an important moderator variable to consider (however, they did not specifically examine race in their review). No studies were found that specifically examined the PCL-R's applicability to male Aboriginal offenders.

This review found that antisocial personality is certainly one area where additional research is necessary to determine whether or not it is a risk factor for Aboriginal offenders.

3. Antisocial attitudes. Antisocial attitudes or cognitions is the third of the top four factors found to predict risk. Attitudes and values supportive of crime, as opposed to supportive of a prosocial lifestyle, place an offender at a higher risk to reoffend. Although this area of research is extensive regarding the general offender population, little research exists when it comes to specifically examining antisocial attitudes within the Aboriginal offender population. Returning to the validation study of the MRNS, Bonta and colleagues examined the specific risk item "attitudes" and found that this item predicted equally well for the Aboriginal and non-Aboriginal group (.22 and .26 respectively, $p < .001$; Bonta et al., 1997). The report reviewing the CRNA (British Columbia Public Safety and Solicitor General, 2004) also provides suggestive evidence to support the position that antisocial attitudes as a risk factor is applicable to male Aboriginal offenders.

4. Antisocial associates. The last of the four major risk factors is antisocial peers or associates in an offender's life. A close association with individuals who also engage in and are supportive of a criminal lifestyle increases the likelihood an offender will engage in additional criminal acts. Although the factor antisocial peers has been found to be a major risk predictor, research in this area, generally, is still ongoing and there is little research examining the antisocial associates of Aboriginal offenders.

Bonta (1989) examined a number of antisocial peer related items in the LSI validation study and found that the subcomponent "companions" was not predictive for Aboriginal offenders. However, the 1997 study (Bonta et al., 1997) examining risk prediction of the MRNS, found the antisocial associates risk factor predicts equally well for Aboriginal and non-Aboriginal offenders (.27 and .25 respectively, $p < .001$). In addition, the CRNA analysis (British Columbia Public Safety and Solicitor General, 2004) also provides some evidence that antisocial companions may be a valid risk predictor item in the male Aboriginal offender population (though as indicated, this one item was one of many in the factor that predicted recidivism).

5. Family/marital. Although the "big four" risk factors discussed above have been found to be the most important of risk predictors, several other factors have been found to also predict risk, albeit to a lesser degree. Problems within the family or marital relationship have been correlated with reoffending (Andrews & Bonta, 2003; Gendreau et al., 1996a; 1996b). Specifically, two aspects of parenting that have been linked to delinquency include the lack of nurturance and poor supervision (Gendreau et al., 1996a; 1996b).

Bonta, LaPrairie and Wallace-Capretta (1997) examined the risk factor of family and marital relations in their validation of the MRNS and interestingly, found that the "family/marital" item did *not* predict recidivism for the Aboriginal group, whereas it was found to be a significant predictor in the non-Aboriginal group (.18, $p < .001$). Furthermore, Bonta (1989) found that the family/marital subcomponent was comparable for Aboriginal and non-Aboriginal offenders groups, not predicting recidivism for either group. "Family relations" is an item included in factor two (the "need factor") of the CRNA instrument validation study. Therefore, one could assume that this item *may* predict recidivism within the male Aboriginal population (British Columbia Public Safety and Solicitor

General, 2004). Unfortunately examination of the individual PCA item as a risk factor was not conducted. This is an area that requires additional investigation. There is some evidence to suggest that there is Aboriginal overrepresentation in the area of domestic violence (Howells, Day, Bryne, & Bryne, 1999). Consequently, this is another area that should be explored under this risk factor.

6. School/employment. During a risk assessment, offenders are often assessed on either their school or work performance, depending on which of the two is their main activity. Lack of interest, poor achievement, reduced performance and low satisfaction levels are all indicators of potential problems under this risk factor. Bonta (1989) found that the education/employment subcomponent predicted recidivism for both Aboriginal and non-Aboriginal offenders (.28, $p < .05$ and .39, $p < .001$, respectively). However, consistent with the findings of Bonta and colleagues (1997) with the “family/marital” MRNS item, the “academic/vocational” item of the MRNS was also found to *not* be predictive for Aboriginal offenders, though it was for non-Aboriginal offenders (.08, $p < .05$). In the CRNA study (British Columbia Public Safety and Solicitor General, 2004), it would have been interesting to look further into this risk factor by examining the “academic/vocational” item as well as the “employment” item, as the PCA factor that encompasses these two items was predictive of recidivism for male Aboriginal offenders. In review of research from Australia, Dawson (1999) concluded that employment factors were comparable risk factors across Aboriginal and non-Aboriginal groups, though she notes the small sample sizes in this research.

The area of school and employment has been used as an example by critics who argue against assumptions that Aboriginal and non-Aboriginal offenders are similar. For example, critics argue that Aboriginal youth may have different reasons for dropping out of high school, or for not being employed. The situations on reserves are very different when compared to the situations of non-Aboriginal youth, or even off-reserve Aboriginal youth. Also, it has been argued that the expectation that an individual *should* complete high school and *should* work full-time as an adult are expectations of the Western culture. Many Aboriginal communities, especially ones in northern Canada, may “live off the land”, where hunting, fishing and trapping are the way of life. An expectation to “work hard” has been described as the North American standard, though what constitutes “working hard” may be defined differently across cultures. It is possible that other values are held to a higher regard in other cultures (e.g., family). This is an interesting argument; however, in terms of risk prediction, examination of these two risk factors should be conducted before the decision is made to exclude them.

7. Leisure/recreation. It has been said that idle hands wander, and this holds true in the rehabilitation sense as well - too much free time increases an offender’s risk level. An offender’s risk level increases if he or she does not participate in structured activities or hobbies, and if there are no pursuits that bring the offender personal satisfaction outside criminal activity (Andrews & Bonta, 2003). Unfortunately this item was not included in the MRNS (Bonta et al., 1997) or the CRNA (British Columbia Public Safety and Solicitor General, 2004), and therefore there is no evidence on whether this risk factor applies equally well to Aboriginal offenders. Future research endeavours will need to consider the Aboriginal context (i.e., different “leisure” activities may exist on reserve).

8. Substance abuse. The last risk factor of the central eight is substance abuse. An offender’s addiction to alcohol or drugs increases his or her likelihood to reoffend. In the MRNS study, Bonta et al. (1997) found that the “alcohol/drug” item was actually a *better* predictor item for Aboriginal offenders than it was for non-Aboriginal offenders (.23 and .12 respectively, $p < .001$). This finding is consistent with the LSI validation study (Bonta, 1989; Aboriginal offenders: .38, $p < .01$ and non-Aboriginal offenders:

.24, $p < .05$). This finding is interesting in the context that some research indicates that substance abuse problems are more prevalent in Aboriginal populations when compared to the non-Aboriginal population (Trevethan, Tremblay, & Carter, 2000). The CRNA (British Columbia Public Safety and Solicitor General, 2004) also included an item on substance abuse, and the PCA factor in which it was loaded was found to be predictive of recidivism in male Aboriginal offenders.

9. Minor risk factors. Research has found that the following risk factors are weak predictors of recidivism: personal/emotional distress (Andrews et al., 2006; Gendreau et al., 1996b), major mental disorder (Andrews et al., 2006; Bonta, Law, & Hanson, 1998), physical health issues (Andrews et al., 2006), fear of official punishment (Andrews et al., 2006), physical conditioning (Andrews et al., 2006), low IQ (Andrews et al., 2006; Gendreau et al., 1996b), social class of origin or socio-economic status (Andrews et al., 2006; Gendreau et al., 1996b), and seriousness of current offence (Andrews et al., 2006; Webster, Harris, Rice, Cormier, & Quinsey, 1994). This list is not exhaustive, as other risk factors have been suggested. Originally, the intention was to examine each of these weaker risk factors individually to determine their applicability to Aboriginal offenders, under the premise that perhaps these risk factors may not be “weak” factors in an Aboriginal population. This investigation found little research examining the “major” risk factors so it is not surprising that research into the “minor” risk factors is virtually non-existent.

Summary. Overall, the seminal study that informs the applicability of major risk factors for the Aboriginal offender population is the study conducted by Bonta and colleagues (Bonta et al., 1997). They found that the MRNS, a classification instrument that incorporated most major risk factors and was originally developed on non-Aboriginal offenders, demonstrated predictive validity equally well for Aboriginal offenders. These findings imply that the risk factors assessed in this scale are the same for Aboriginal offenders as they are for non-Aboriginal offenders, with the exception perhaps of the family/marital risk factor and the school/employment risk factor. The MRNS items related to these two risk factors (family/marital and academic/vocational) did not predict equally well for the two groups, but had better predictive ability with the non-Aboriginal group. Bonta and colleagues (1997) argue that the findings support the theoretical perspective of Andrews and Bonta (1994) that the major risk factors are largely independent of race and culture. They further argue that their findings challenge the premise held in 1997 (and still held today by many people) that what is known about non-Aboriginal offenders cannot be generalized and applied to Aboriginal offenders (Bonta et al., 1997).

Interestingly, the study by Bonta and colleagues (1997) commented on the lack of research specifically examining risk prediction factors within the Aboriginal offender population, and although it is almost ten years later, little additional research has been conducted on this topic. This study (Bonta et al., 1997) was particularly useful as it examined the *individual* risk prediction items as well as the overall predictive ability of the risk assessment *instrument*. Additional research should model itself after this study.

Table 2 summarizes the research on the eight central risk factors to date. Thus far, although research on individual risk prediction items has not provided absolute clarity on which risk items apply to Aboriginal offenders and which do not, there is strong indication that the majority of the central eight risk factors predict risk equally well for male Aboriginal offenders. However, despite the fact that research findings suggest there are more similarities than differences between Aboriginal and non-Aboriginal offender groups, additional replication of these results is still needed. To further examine the area of risk assessment of Aboriginal offenders, this paper will now review the research on various risk assessment instruments and their applicability to male Aboriginal offenders.

Table 2. Summary of Research Reviewed on Central Eight Risk Factors

Factor	Research Summary	References
1. History of antisocial behaviour (criminal history)	<ul style="list-style-type: none"> ▪ Consistent findings ▪ Criminal history variables predict equally well for Aboriginal offenders 	<ul style="list-style-type: none"> ▪ Bonta, 1989 ▪ Bonta, LaPrairie, & Wallace-Capretta, 1997 ▪ Bonta, Lipinski, & Martin, 1997 ▪ B.C. Public Safety & Solicitor General, 2004
2. Antisocial personality pattern	<ul style="list-style-type: none"> ▪ Little research specifically on male Aboriginal offenders ▪ Research on psychopathic traits and ethnicity is inconsistent, but the majority indicates no racial differences 	<ul style="list-style-type: none"> ▪ Lynn, 2002 ▪ Zuckerman, 2003
3. Antisocial attitudes	<ul style="list-style-type: none"> ▪ Predict equally well for Aboriginal offenders ▪ Research should be conducted using attitudinal scales (e.g., PID and CSS) 	<ul style="list-style-type: none"> ▪ Bonta, LaPrairie, & Wallace-Capretta, 1997 ▪ B.C. Public Safety & Solicitor General, 2004
4. Antisocial peers	<ul style="list-style-type: none"> ▪ Fairly consistent findings ▪ Predicts equally well for Aboriginal offenders (the original LSI validation study found that it predicted slightly better for non-Aboriginal offenders) 	<ul style="list-style-type: none"> ▪ Bonta, 1989 ▪ Bonta, LaPrairie, & Wallace-Capretta, 1997 ▪ B.C. Public Safety & Solicitor General, 2004
5. Family and/or marital	<ul style="list-style-type: none"> ▪ May not predict recidivism for Aboriginal males 	<ul style="list-style-type: none"> ▪ Bonta, 1989 ▪ Bonta, LaPrairie, & Wallace-Capretta, 1997 ▪ B.C. Public Safety & Solicitor General, 2004
6. School and/or work	<ul style="list-style-type: none"> ▪ Research is inconclusive ▪ Some studies: does not predict recidivism, others suggesting that employment factors are comparable across Aboriginal and non-Aboriginal groups 	<ul style="list-style-type: none"> ▪ Bonta, 1989 ▪ Bonta, LaPrairie, & Wallace-Capretta, 1997 ▪ Dawson, 1999 ▪ B.C. Public Safety & Solicitor General, 2004
7. Leisure and/or recreation	<ul style="list-style-type: none"> ▪ No research 	
8. Substance abuse	<ul style="list-style-type: none"> ▪ Consistent findings ▪ Predict equally well, if not better 	<ul style="list-style-type: none"> ▪ Bonta, 1989 ▪ Bonta, LaPrairie, & Wallace-Capretta, 1997 ▪ B.C. Public Safety & Solicitor General, 2004

Risk Assessment Instruments

Although there is no single risk assessment instrument that is used by all practitioners, there are certainly some instruments that are more well-known and utilized than others, due to their strong psychometric properties. According to Gendreau, Goggin and Little's (1996a; 1996b) meta-analysis, the ideal risk assessment instrument should include an examination of both static and dynamic predictors. More specifically, static variables of age, criminal history, and family factors, as well as the dynamic variables antisocial personality, antisocial peers, criminogenic needs, interpersonal conflict, social achievement and substance abuse should be examined during the assessment process.

As indicated, while there are many current risk assessment instruments, only the most prominent empirically-based instruments will be examined in this review. Three instruments have been chosen: the Level of Service Inventory – Revised (LSI-R; Andrews & Bonta, 1995), the Statistical Information on Recidivism (SIR) scale (Nuffield, 1982) and the Custody Rating Scale (CRS) used by the Correctional Service of Canada (CSC). Although there are other instruments that could have been included, each of these instruments was chosen for a specific reason, as outlined below. Generally speaking, these three instruments are used frequently in the assessment of Canadian offenders, including Aboriginal offenders; hence, they should be examined as to their applicability to those Aboriginal offenders. Other instruments, such as the Violence Risk Appraisal Guide (VRAG; Quinsey, Harris, Rice, Cormier, 1998) and the STATIC-99 (Hanson & Thornton, 1999) were not chosen because they were designed to measure risk in a specific type of offender population (e.g., risk for violent reoffending [VRAG] and risk for sexual reoffending [STATIC-99]). Each of the three chosen risk assessment instruments will be examined as to its reliability and validity on the male Aboriginal offender population.

Given the number of Aboriginal adult males currently incarcerated in Canada (almost 3,500 incarcerated federally as of April 10, 2005; comprising 16.2% of the total federal offender population; PSEPC, 2005), one would think that examining, or ensuring, the applicability of currently utilized risk assessment instruments would be a given, or at least a priority. However, this is not the case. Surprisingly, and unfortunately, there is a lack of research examining the applicability of various risk assessment instruments on the male Aboriginal offender population. The research on the various risk scales that does exist will be examined next.

Level of Service Inventory – Revised. The Level of Service Inventory – Revised (LSI-R) is a quantitative 54-item structured risk-need assessment instrument designed for use with offenders who are sixteen years and older (Andrews & Bonta, 1995). This well-recognized risk assessment instrument (Gendreau et al., 2002) includes ten dimensions related to risk and need factors: criminal history, education/employment, financial situation, family/marital relationships, accommodation, leisure and recreation activities, companions, alcohol and drug use, emotional/mental health, and attitudes/orientations. An offender's risk level is categorized into five levels: low, low-medium, medium, medium-high and high. The LSI-R also incorporates a professional discretion override section, allowing administrators to include special circumstances that may inform a level of service decision rather than simply using the total score. This component may be particularly useful when assessing Aboriginal offenders as it allows for other factors to be considered.

The psychometric properties of the LSI-R are well-established, with high reliability estimates (interrater, test-retest and internal consistency) as well as solid validity results (face validity and utility, construct validity, relative validity, discriminant validity, predictive validity and generalizability; Andrews &

Bonta, 1995). Overall, research has clearly demonstrated that the LSI-R is an empirically sound risk assessment instrument. In fact, Gendreau and colleagues (Gendreau et al., 1996a; 1996b) concluded that the LSI-R was the closest to the “ideal” assessment instrument as it generated higher correlations with recidivism when compared to other risk measures, such as the Wisconsin model and the PCL (Gendreau et al., 2002).⁷

In 2002, Gendreau and colleagues (Gendreau et al., 2002) re-examined the predictive validities of the LSI-R, compared to the PCL-R and, once again, they concluded that the LSI-R was a better predictor of general recidivism. The LSI-R consistently produced greater *r* values (78% of the time in the 2002 examination) and the confidence intervals of the LSI-R and PCL-R did not overlap. In short, few other risk assessment instruments compare well to the LSI-R. Hence, the LSI-R was chosen for examination within this review.

The LSI-R is considered a third generation risk assessment instrument; however, a fourth generation version has been recently released, the LS/CMI (Andrews et al., 2004), which incorporates a new case management strategy component. Although the LSI-R is one of the most popular risk assessment instruments in use today, correspondence with one of the LSI-R scale authors confirms that few studies to date compare the LSI-R’s predictive ability within the male Aboriginal offender population (J. Bonta, personal communication, May 23, 2006).

Research on the LSI-R’s applicability with Aboriginal offenders is more advanced than it is on other risk assessment instruments, though it is by no means definitive. In Canada, as well as a northwestern American state, preliminary research has found that the LSI-R was valid on Aboriginal offenders, whereas research conducted on Australian Aboriginal offenders was less conclusive.

The first study attempting to validate the LSI with Aboriginal offenders was in 1989 (Bonta, 1989). Results, based on a sample of 52 male Aboriginal offenders (with a comparison group of 74 non-Aboriginal offenders), indicated that the LSI was predictive of recidivism (i.e., reincarceration) for both Aboriginal ($r = .35, p < .01$) and non-Aboriginal offenders ($r = .50, p < .001$). The various LSI subcomponents were also examined as to their predictive validity across the two groups. Five of the ten subcomponents predicted reincarceration for both Aboriginal and non-Aboriginal offenders (criminal history, education/employment, family/marital, leisure, alcohol/drug). Differences predicting reincarceration were found for four of the ten subcomponents, with each of these subcomponents being predictive for the non-Aboriginal offender group but not for the Aboriginal offender group. The four subcomponents were the “companions” domain ($r = .25, p < .05$ and $r = .09, ns$, respectively), the “attitudes” domain ($r = .24, p < .05$ and $r = .14, ns$, respectively), the “financial” domain ($r = .26, p < .01$ and $r = .17, ns$, respectively) and the “accommodation” domain ($r = .21, p < .05$ and $r = .12, ns$, respectively). The “emotional/personal” domain did not predict for either group. The results of this study suggest that, overall, the LSI possesses predictive ability for Aboriginal offenders; however, further research is warranted regarding the applicability of some of the subcomponents.

More recently, Holsinger and Lowenkamp (in press) examined the predictive validity of the LSI-R in a sample of 140 American Aboriginal offenders (100 males and 40 females). For the Aboriginal male offender subgroup, results indicated a weak non-significant relationship ($r = .19$) between the LSI-R total score and recidivism (defined as any new arrest over a 17-month follow-up). In addition, the 95% confidence intervals, which ranged from $-.01$ to $.37$ included the value of zero, indicating no

⁷ This assertion was challenged by Hemphill and Hare (2004), where they argued the merits of the PCL-R, in comparison to the LSI-R. The debate on which instrument is “the best” will no doubt continue; however, the point being made here is that the LSI-R is one of best risk prediction tools currently in use.

relationship and that the predictive ability was not much better than chance alone. These results question the use of the LSI-R with male American Aboriginal offenders. However, analyses examining the risk level categories (low, medium and high-risk) were more promising. Results indicated some support for the three gradations of risk (low, medium and high) for all offenders (non-Aboriginal males, Aboriginal males, non-Aboriginal females, and non-Aboriginal females). Unfortunately, the authors conclude by stating that the available data did not allow for an in-depth exploration into why the LSI-R did not predict recidivism for American Aboriginal male offenders, especially in the light of strong correctional literature (Gendreau et al., 1996b) which suggests the factors measured by the LSI-R should be universal across various offender racial groups.

Holsinger and Lowenkamp (in press) argue that there may be a possibility that the risk factors are not universal, since Aboriginal Americans were not included in the original data that identified the most common risk factors. However, they acknowledge that many researchers would argue that there is probably overlap between groups and that additional research should be conducted to determine if an unknown subset of criminogenic risk/need factors exists for Aboriginal offenders. Furthermore, when comparing their results to the results of Bonta (1989), they posit that there is also the potential that American Aboriginal offenders may differ from Canadian Aboriginal offenders. Australian research on the validity of the LSI-R has also raised this point (Mihailides, Jude, & Van den Bossche, 2005).

To further complicate matters, even within Canadian Aboriginal offenders, differences have been found between the various Aboriginal groups (e.g., Métis, on-reserve, off-reserve; Bonta et al., 1997). Although differences may lie within the Aboriginal offender population, it is important to start from somewhere, and at this point, additional research is still needed to examine differences between Aboriginal and non-Aboriginal offenders, prior to determining whether differences exist within Aboriginal male offender groups.

Holsinger and Lowenkamp (in press) also discuss the particular importance of the responsivity principle when it comes to working with Aboriginal offenders, an important consideration which will be further explored in this paper. They argue that since the LSI-R relies heavily on a one-on-one interview with the offender, extra care is required when assessing Aboriginal offenders, regarding the use of language and jargon, relational expectations, communication styles, and cultural heritage and customs. They further question whether the professionals who administer the LSI-R, who have undergone specific training to use the risk assessment instrument, have also undergone any potentially necessary training regarding the Aboriginal population – another area for possible exploration.

Although this paper focused on adult Aboriginal offenders, there is one study that involves youth, which is relative to the topic at hand. The Youth Level of Service/Case Management Inventory⁸ (Hoge & Andrews, 2002) is a risk assessment instrument that is based on the LSI-R, but designed for youths. Since it incorporates the same domains as the LSI-R, the results of a study assessing its predictive validity on Aboriginal youth will be briefly reviewed. Jung and Rawana (1999) examined 263 young offenders (134 were Aboriginal) and found that ethnicity was “inconsequential” with regards to the instrument’s prediction. They found that Aboriginal young offenders scored higher than non-Aboriginal

⁸ Consistent with the LSI-R, the YLS/CMI consists of risk and need items, responsivity items, and a professional override feature (Hoge & Andrews, 2002). The YLS/CMI consists of 42 items, based on eight categories: Prior and Current Offences/Dispositions, Family Circumstances/Parenting, Education/Employment, Peer Relations, Substance Abuse, Leisure/Recreation, Personality/Behaviour, and Attitudes/Orientation. The psychometric properties of the YLS/CMI are acceptable, as outlined in the instrument manual (Hoge & Andrews, 2002) and reported by Jung and Rawana (1999) and Schmidt, Hoge and Gomes (2005).

young offenders on the YLS/CMI⁹ (Hoge & Andrews, 2002). Jung and Rawana (1999) also found that Aboriginal young offenders had greater negative peer relations, more substance usage, and a greater lack of involvement in prosocial recreational activities than non-Aboriginal young offenders, but these differences were not statistically significant, though they did explain the higher scores for the Aboriginal group. Overall, Jung and Rawana (1999) concluded that the YLS/CMI predicted recidivism equally well for Aboriginal and non-Aboriginal young offenders. While they caution that their results do not confirm that there is no bias in predicting reoffending behaviour among Aboriginal youth, their findings certainly provide some indication that “little, if any, bias” exists in the YLS/CMI’s utility with Aboriginal young offenders (Jung & Rawana, 1999).

Overall, there have been few studies examining the applicability of the LSI-R on male Aboriginal offenders. Studies to date have had relatively small sample sizes, and there is still the question of whether Aboriginal offenders from various countries are different from one another or if there are differences within Aboriginal groups within the same country. Generally speaking, there is promising evidence to support the LSI-R’s use; however, additional research should be undertaken.

Statistical Information on Recidivism scale. The 15-item Statistical Information on Recidivism¹⁰ (SIR) scale (Nuffield, 1982) was developed in 1982 to assist in the process of parole-decision making for federally sentenced offenders (i.e., offenders serving a sentence of two years or more). The majority of the items are static in nature (e.g., age, escape history, previous criminal convictions). Research has shown that the various forms of the SIR scale demonstrate sound psychometric properties and that SIR total scores are predictive of both general and violent recidivism (Bonta, Harman, Hann, & Cormier, 1996; Hann & Harman, 1989; Nuffield, 1982). In 1988, administration of the SIR scale became policy and standard practice in the intake process of non-Aboriginal offenders into the custody of the Correctional Service of Canada (CSC; Cormier, 1997). Almost twenty years later, the SIR scale is still not applied to Aboriginal offenders (the CSC website states that the SIR scale “does not work” for Aboriginal offenders; CSC website, accessed August 8, 2005).

The validity of the SIR scale on Aboriginal offenders is a hotly debated topic. Despite CSC’s official position, most research suggests that the SIR scale is indeed valid for use with Aboriginal offenders (Bonta & Rugge, 2004). Seven years after its original development, Hann and Harman (1989) tested the SIR scale’s (known then as the Nuffield Scoring System and later the GSIR) applicability to female offenders and Aboriginal offenders and found that the SIR scale was of “some assistance” for predicting release risk for Aboriginal offenders, but results did not yield sufficiently accurate prediction values to warrant widespread application to the Aboriginal offender population. Hann and Harman (1989) argued that since the scale was not designed for use specifically on Aboriginal groups, the results were not surprising.

Five years after the 1988 CSC policy was implemented, as a follow-up investigation to their 1989 study, the first study *specifically* examining the applicability of the SIR scale with male Aboriginal offenders was released (Hann & Harman, 1993). Results indicated that the SIR scale had predictive value for the general release risk of Aboriginal offenders, and that the predictive accuracy was comparable to the

⁹ In this study, the YLS/CMI was referred to as the Ministry Risk/Need Assessment Form (MRNAF; Jung & Rawana, 1999).

¹⁰ The SIR scale was first introduced as the Nuffield Scoring System in 1982, and has since been referred to as the General Statistical Information on Recidivism (GSIR) scale, the Statistical Information on Recidivism (SIR) scale, the Statistical Information on Recidivism – Revised (SIR-R) scale, and the Statistical Information on Recidivism – Revised One (SIR-R1) scale. The revisions that have occurred over time pertain mostly to scoring, but the risk factor items themselves have remained the same. The dates and official names differ across publications and various sources, but for the purposes of this paper, the scale will hereinafter be referred to as the SIR scale.

predictive accuracy of the scale for non-Aboriginal offenders (Hann & Harman, 1993). However, it was argued that the sample size was small ($N = 271$) and therefore, there was still insufficient evidence to warrant application in the Aboriginal offender population.

In 2002, Nafekh and Motiuk also examined the SIR (referred to as the SIR-R1 in their study), specifically re-examining the SIR-R1 for its reliability, predictive validity and practical utility with CSC offenders. This study also examined the creation of a proximal measure (referred to as the SIR-Proxy) and its applicability to Aboriginal offenders (Nafekh & Motiuk, 2002). The SIR-Proxy is scored by primarily using data from the CSC's Offender Intake Assessment (OIA), assessing the same domains as the SIR-R1.

Although Nafekh and Motiuk (2002) stated, "for Aboriginal male offenders, the SIR-Proxy was not predictive of [recidivism]" (p. ii), where recidivism was defined as return to federal custody with a new offence within three years of release, the statistical results seem to contradict this statement. Testing the SIR-Proxy on 1,211 male Aboriginal offenders, results indicated that SIR-Proxy scores were correlated with general recidivism ($r = .32$, $p < .0001$). This study (Nafekh & Motiuk, 2002) also examined the "recalibrated" SIR, and found that the predictive ability was slightly better than the SIR-Proxy ($AUC^{11} = .72$), indicating its ability to predict general recidivism for the male Aboriginal population.

More recently, and within the confines of a large recidivism study (Bonta, Rugge & Dauvergne, 2003), Bonta and Rugge (2004) examined the SIR scale scores of 940 male Aboriginal offenders. In practice, the SIR scale is sometimes administered to Aboriginal offenders during the intake process even though CSC policy indicates that the total scores should not be used in CSC decision-making. In testing the predictive validity of the SIR scale with male Aboriginal offenders, Bonta and Rugge's (2004) results indicated that the SIR scale scores predicted "any reconstructions" and "violent reconstructions" equally well for both Aboriginal and non-Aboriginal male offenders, with overlapping confidence intervals. While the SIR scale predicted "non-violent reconstructions" for both Aboriginal and non-Aboriginal males, results indicated that the prediction was better for non-Aboriginal males. Table 3 shows those results in further detail.

Bonta and Rugge (2004) argue that their results support the use of the SIR scale with Aboriginal offenders. Furthermore, they argue that since SIR scale scores predicted recidivism equally well for both Aboriginal and non-Aboriginal offenders, these results reinforce the argument and are consistent with the research that concludes that risk factors for non-Aboriginal males are very similar to the risk factors for other racial/cultural groups, such as Aboriginal offenders (Andrews et al., 2001; Bonta et al., 1997; Girard & Wormith, 2004). Unfortunately since this study (Bonta & Rugge, 2004) was conducted within the confines of a larger study, examination of the individual SIR scale items to determine the applicability of the individual risk scale items on male Aboriginal offenders was not possible.

¹¹ AUC = Area Under the Curve. The AUC is a measure of the predictive accuracy of a scale controlling for base rates and selection ratios. An AUC of 1 indicates perfect prediction, or perfect discrimination between recidivists and non-recidivists, while an AUC of 0.5 or less indicates that the scale has no power to discriminate. An AUC can also be interpreted as the chances of a randomly selected recidivist having a higher score than a nonrecidivist. For example, an AUC of .72 indicates that there is a 72% chance that a recidivist will have a higher risk score on the SIR-Proxy than a nonrecidivist.

Table 3. Predictive Validity of the SIR Scale by Race for Male Offenders (CI)

Criterion/Measure	Non-Aboriginal	Aboriginal
Any Reconviction:		
Pearson correlation	-.46	-.42
Area Under the Curve	.77 (.76-.78)	.74 (.71-.77)
Non-Violent Reconviction:		
Pearson correlation	-.38	-.27
Area Under the Curve	.73 (.72-.74)	.66 (.62-.70)
Violent Reconviction:		
Pearson correlation	-.19	-.21
Area Under the Curve	.65 (.63-.66)	.65 (.61-.70)

Adapted from Bonta J., & Rugge, T. (2004). *The Prediction of Recidivism with Aboriginal Offenders*. Unpublished manuscript, p. 11.

Custody Rating Scale. Although other risk assessment instruments may play a role in security classification and placement, CSC also uses a specific scale for this purpose, the Custody Rating Scale (CRS). CSC adopted the CRS in the early 1990s in order to implement an objective, evidence-based standardized decision-making process for the security placement of offenders (Bonta, Hanson, & Yessine, 2004; Luciani, 2001). The 12-item CRS consists of two subscales, the Institutional Adjustment subscale (including items such as escape history and age) and the Security Risk subscale (including items such as number of prior convictions and sentence length). The subscales consist of five items and seven items, respectively, where each item is assigned a weight, and the higher subscale score determines the offender's security classification as minimum, medium or maximum. Recently, debate has occurred as to whether the CRS is applicable for Aboriginal offenders, as well as for women (Auditor General, 2003; the Canadian Human Rights Commission, 2003; Webster & Doob, 2004). It has been suggested that any custody assignment instrument should incorporate the unique and culturally relevant indicators for Aboriginal people in order to obtain a more predictive and accurate assessment of security placement (Native Counselling Services of Alberta, 2003).

In 2004, Bonta, Hanson and Yessine (Bonta et al., 2004) conducted a comprehensive and exhaustive review of the evidence regarding the CRS and its reliability (the consistency of how the scale is applied) and validity (the degree of evidence to support the interpretation and use of the scale), overall, and specifically on these two subgroups (Aboriginal offenders and female offenders). This review concluded that additional research was necessary as the CRS did not demonstrate high standards of reliability or validity for even the population it was developed for (the male offender population), let alone for either the female or Aboriginal offender subgroups (Bonta et al., 2004). The report reviewed evidence that found that when comparing male Aboriginal offenders to male non-Aboriginal offenders, the correlations between the measures were much lower and often not statistically significant for the Aboriginal group. The authors indicated that further clarification of these results was necessary to

determine the applicability of the CRS to male Aboriginal offenders.¹² Bonta, Hanson, and Yessine (2004) concluded that the custodial placement decisions being made through the use of the CRS were based on weak empirical evidence and that research was required to develop an empirically-based, valid and reliable security placement tool.

It should be recognized that in an attempt to better understand the Aboriginal culture and incorporate Aboriginal views, where appropriate into correctional issues, the CSC has been working in conjunction with Aboriginal people and experts in the field. Hence, this review is not attempting to critique the CSC, only to identify potential areas where improvements can be made. The CSC (Nafekh & Motiuk, 2002) recommends that the predictive accuracy of risk assessment instruments, such as the SIR, can be maximized by considering all factors and trends that are specific to the male Aboriginal population. They also recommended engaging in consultation with Elders and other experts to facilitate this process.

The principle of professional discretion. As was reviewed earlier, the principle of professional discretion usually takes the form of an override feature within risk assessment instruments, allowing assessment administrators the ability to incorporate other factors they deem pertinent (i.e., factors that were not included in the assessment tool but are believed to be important). Therefore, although the benefits of using a standardized instrument remains, allowances have been made to ensure that special factors, such as the Aboriginal circumstance, can be taken into account, and ultimately, included in the final recommendation. Not all standardized risk assessment instruments include an override feature; however, when choosing the appropriate instrument to assess Aboriginal offenders, this should be taken into account. Furthermore, in order to optimize the use of this feature, assessment administrators should be completely knowledgeable about the offender, and any factors that should be considered in the context of risk assessment.

Summary. Three risk assessment instruments were reviewed in detail as to their applicability with male Aboriginal offenders (see Table 4). The review found that the SIR scale appears valid when used to assess risk in male Aboriginal offenders. Furthermore, the LSI-R also appears to be predict risk equally well for male Aboriginal offenders. However, since one study's finding with American Aboriginal males was less conclusive, additional research is warranted. Research on the CRS indicated that this scale should not be used with Aboriginal offenders. Overall, this review found that there are risk assessment instruments, that are currently available, that predict risk equally well for male Aboriginal offenders.

¹² Additional research evidence was available regarding female Aboriginal offenders; however, results indicated that the predictive validity of the CRS was weak or non-existent for the female Aboriginal offender population.

Table 4. Summary of Research Reviewed on Three Risk Assessment Instruments

Instrument	Research Summary	Research Studies
LSI-R	<ul style="list-style-type: none"> ▪ Majority of findings indicate scale predicts recidivism equally well for Aboriginal offenders ▪ Further research is required on the applicability of some of the subcomponents (e.g., financial, companions) 	<ul style="list-style-type: none"> ▪ Bonta, 1989 ▪ Holsinger & Lowenkamp, 2003 ▪ Holsinger & Lowenkamp, in press ▪ YLS/CMI: Jung & Rawana, 1999
SIR	<ul style="list-style-type: none"> ▪ Consistent research ▪ Scale predicts recidivism equally well for male Aboriginal offenders 	<ul style="list-style-type: none"> ▪ Hann & Harman, 1989 ▪ Hann & Harman, 1993 ▪ Nafekh & Motiuk, 2002 ▪ Bonta & Rugge, 2004
CRS	<ul style="list-style-type: none"> ▪ Fairly consistent findings ▪ Most recent comprehensive review indicated that the scale should not be used with Aboriginal offenders 	<ul style="list-style-type: none"> ▪ Bonta, Hanson, & Yessine, 2004

Risk Assessment and Aboriginal Offenders

When it comes to risk assessment of Aboriginal offenders, there are several questions that should be investigated. At a minimum, there are the following: Are the major risk factors identified for non-Aboriginal offenders applicable to Aboriginal offenders? Are there different or additional risk factors for Aboriginal offenders? Are current risk assessments valid for Aboriginal offenders? Seeking answers to these questions was the purpose of this review. The research to date has found that the majority of risk factors may well be applicable to Aboriginal offenders. However, research needs to be conducted to examine whether there are additional risk factors for Aboriginal offenders. Lastly, although not all risk assessment instruments may work as well with Aboriginal offenders (e.g., CRS), there are certainly some risk assessment instruments that do predict equally well with Aboriginal offenders (e.g., SIR).

In terms of the appropriate use of current risk assessment instruments, as Freedman (in press) points out “any instrument that is used for risk assessment should have demonstrated reliability and validity across the spectrum of those to whom it might be administered” (Freedman, in press, p. 8). Thus, the risk assessment instrument being used should perform with sufficient validity and reliability to predict future criminality within the Aboriginal offender population. Although efforts have been made to validate current risk assessment instruments on Aboriginal offenders, research to date is sparse, and any differences that have been found (albeit from studies with a small sample size) require further investigation.

Potential threats to risk assessment instruments. Schwalbe and his colleagues (Schwalbe, Fraser, Day, & Cooley, 2006) outline the various threats to risk assessment instruments when attempts are made to apply them to different populations. Specifically, they state that when dealing with brief risk assessment instruments, the following should be considered to determine whether the instruments is correctly and equivalently classifying risk of recidivism for offenders (in their case, juveniles) from diverse groups: (1) omitted variable bias, (2) dimensional identity, and (3) sampling bias (Schwalbe et al., 2006).

First, omitted variable bias can occur “when excluded risk factors are disproportionately distributed across populations” (Schwalbe et al., 2006, p. 308). Schwalbe and colleagues (2006) state that when these risk factors are omitted from risk assessment instruments, these factors may retain their influence and show up in race/ethnicity parameter estimates. Statistically significant parameter estimates for demographic variables are problematic because they indicate that the risk assessment instrument has not accounted for all of the risk-related variance that affects the group being examined and therefore, shows that the risk assessment classifications are variably accurate across race (Schwalbe et al., 2006). They illustrate their point using the example of neighbourhood factors, where minority youth are affected in greater proportion when compared to White youth, arguing that risk factors such as these are often omitted from risk assessment instruments (Schwalbe et al., 2006).

The second pitfall that risk assessment instruments may succumb to is the issue of dimensional identity (Schwalbe et al., 2006). The authors (Schwalbe et al., 2006) explain this concept as follows:

... the property of dimensional identity is said to exist when a measure, such as a risk assessment instrument, has the same relationship to recidivism for all subpopulations within a sample. When the empirical relationship between a risk assessment instrument and recidivism is the same for males, females, White offenders, and minority offenders, then dimensional identity is established and the generalizability of the risk assessment

instrument can be asserted. When the empirical relationships between a risk assessment instrument and recidivism differs according to subgroups, dimensional identity does not exist and the generalizability of risk assessment across demographic groups cannot be asserted. ... If a risk assessment instrument fails to possess dimensional identity, then the predictive validity of risk assessment will be greater for some groups and less for others. (p.309).

The third possible threat to risk assessment predictive validity is the issue of sampling bias, which they cite specifically as being juvenile justice decision-making practices in the context of their study (Schwalbe et al., 2006). This issue certainly could apply to the Canadian Aboriginal population. While they use the example of increased police surveillance for minority groups, it is possible that Aboriginal offenders also experience circumstances which increase the likelihood of being officially detected.

Schwalbe and colleagues (2006) argue that any of these three threats could limit the predictive validity of a risk assessment instrument for a diverse sample and that this is problematic because if the predictive validity varies across ethnic subgroups, then the contribution of the structured risk assessment instrument to the “laudable goal of decision-making equity will be attenuated” (Schwalbe et al., 2006, p. 309). These are important points to keep in mind as the validation of risk assessment instruments to determine applicability for Aboriginal offenders continues.

In sum, and as has been previously noted, additional research on the applicability of risk assessment instruments is warranted. Despite the strong advances in risk assessment over the years, risk assessment instruments attempt to predict future behaviour and as such, are still subject to error, despite best efforts. This fact is important to remember when discussing risk assessment and its applicability to various cultures. In addition to the examination of specific risk factors, research ventures should also examine the importance of Aboriginal culture and its impact on the administration and interpretation of risk assessment instruments within the Aboriginal offender population. Furthermore, the principles of effective correctional treatment, specifically the principle of responsivity, should be further explored within the Aboriginal population.

One of the purposes of this paper is to explore the controversy of using risk assessment instruments with Aboriginal offenders. First and foremost, it was important to examine the empirical research that supports their use. Next, it is important to examine the Aboriginal perspectives, and to consider their viewpoints regarding this matter.

Aboriginal Perspectives

To begin, it must be recognized that there is no one single Aboriginal culture. There are many different Aboriginal groups, tribes and communities, all distinct in nature. Around the world, Aboriginal people are referred to as Aboriginal, Native, Indian, Indigenous, and within these communities, there are many different sub-groups or tribes that exist. Ultimately, research should explore the differences between these sub-groups; however, for the purposes of this paper, these distinct Aboriginal groups have been combined, and referred to as “Aboriginal” but where differences are important, they will be highlighted. In considering risk assessments, the commonalities of the various sub-groups (described here collectively as Aboriginal offenders), and how they compare to non-Aboriginal offenders, are important.

Assessment of Aboriginal offenders has been a topic of debate, criticism and investigation from various sectors, such as academia, government, and Aboriginal communities. It is fair to say that the Aboriginal way of doing things is sometimes different from the non-Aboriginal way of doing things. In many

cases, a similar result will be achieved, and in other cases a different result may be achieved. It is important to remember that the view through a different lens will provide a different outlook.

One clear difference between the Aboriginal perspective and the non-Aboriginal perspective is the means by which information is presented. The non-Aboriginal method of communication includes the use of numbers and places importance on the impersonal (objective), formalized (structured), and the validity of factors. In contrast, the Aboriginal method of communication relies heavily on story-telling, a form that places importance on talking (informality, unstructuredness) and listening, on taking a journey, at an individual's own pace. Story telling is deeply rooted in Aboriginal culture, and Elders have guided the discussions that may identify the root causes of an individual's problems (i.e., risk/need factors). Communication is generally open and relaxed, honest and sincere. Indirect communication and body language is very important and attention to this is more the norm in Aboriginal communities (Department of Aboriginal and Torres Strait Islander Policy and Development, 1999). Aboriginal people tend to discuss a topic generally while gauging other people's views before stating their own. The establishment of a relationship is also important, an occurrence that must take place prior to business starting. Practitioners who conduct risk assessments should also be aware of the culture in order to ensure accurate interpretation of the communication that takes place with the Aboriginal offender.

Risk Assessment and Risk Factors in the Aboriginal Context

Gottfredson and Synder (2005) examined race in the prediction of recidivism among American young offenders. They reminded critics that the role of risk assessment was to predict, not explain. Some risk assessments are developed subjectively whereas others are developed empirically (Gottfredson & Synder, 2005), but ultimately, risk assessments should include factors that improve the predictive accuracy of the instrument. That being said, Gottfredson and Synder (2005) cite the problems that can occur when "empirical power is the sole criterion used to select risk scale predictors" (p.iii). They recognize that certain predictive items may also carry ethical connotations or value judgements with them – such as racial bias. Gendreau and colleagues (Gendreau et al., 1996a) have also raised this point. As a result, face validity of an instrument could be jeopardized when the predictor items reflect the assessor's motivations and personal biases.

Gottfredson and Synder (2005) used the example of race as a predictor variable for recidivism for American young offenders. They state that it is a fact "that most juvenile justice research has found a correlation between race and negative outcomes" (p. iii), and if nothing else is known about a youth, it would be statistically correct to predict that minority youth are more likely to recidivate than white youth. This does not mean that race *causes* recidivism; recidivism differences may be correlated with race, but the recidivism differences are not caused by race. Gottfredson and Synder (2005) state that the differences are caused by factors that are correlated with race, such as poverty, school failure, and amount of police presence in the community, to name a few. They stress their point by explaining that if all these other factors were included in the statistical analysis, the "race" factor would *not* be found to be a significant predictor of recidivism. In a sense, race is a variable that "contains" many significant predictors within it, causing a potential dilemma for risk assessment instrument developers. Gottfredson and Synder (2005) suggest that race be used as a risk predictor during initial scale development, but then replaced with items that are found to be correlated with race, but have their own predictive ability.

Consistent with Gottfredson and Synder (2005), Doone (2000) argues that there exists a wide range of inter-related socioeconomic factors (e.g., unemployment, poor health, low socioeconomic status, low educational achievement, dysfunctional family relations and negative peers) that are risk factors for

criminality. Aboriginal communities have been described as communities that suffer from poverty, low levels of education, and low employment, features that lend the community itself to be described as criminogenic in nature (Crutchfield, 1995). Doone (2000) states that although the majority of these risk factors can be found in Aboriginal communities, that does not mean that being Aboriginal causes criminal behaviour. It means that Aboriginal people are overrepresented in some of the risk factors that contribute to criminal behaviour (Doone, 2000). This, in part, explains why Aboriginal people are overrepresented in the offender population¹³ and why Aboriginal offenders tend to have higher risk scores than non-Aboriginal offenders¹⁴.

Gottfredson and Snyder (2005) discuss the specifics of scale development. However, the question that must first be asked is whether *new* risk assessment instruments should be developed to assess Canadian Aboriginal offenders? At first glance, it makes practical sense to use current risk assessment knowledge as the basis from which to expand, as research to date has suggested that much of the correctional knowledge that currently exists may apply to Aboriginal offenders. However, there have also been arguments put forth as to why this may not be the preferred route (Allan & Dawson, 2004). These arguments will be reviewed shortly.

In addition to the empirical evidence that exists suggesting that many risk factors are cross-cultural, Clairmont and Linden (1998) contend that current views on what constitutes effective offender rehabilitation¹⁵ is consistent with treatment programs that are being run in some Aboriginal communities (such as Hollow Water First Nation and Winnipeg's Native Clan Organization; Clairmont & Linden, 1998). It is very possible that the Aboriginal communities have been doing similar work and identifying similar successes to those who work in a more empirical arena.

Unfortunately, not everyone agrees on the utility of current practices and established frameworks. Webb (2003) cites the research of Maynard and colleagues, as well as the Department of Corrections of New Zealand (2001), to support his argument that the psychological approach is limited when used with Aboriginal offenders. Webb argues that cultural elements are simply being "grafted" onto current psychological theory, a theory that has already explained offending as a product of negative emotions and antisocial thoughts. Webb (2003) revisits the concept of criminality and argues that it is limited when using the established risk/needs framework, as its parameters only allow for the incorporation of individual pathologies or an individual's surroundings. He argues that the framework does not allow for anything beyond the "individual", such as the effect of wider social inequities. Webb (2003) posits that this limited conception of criminality that is used in the risk/needs framework ignores the wider social and structural inequalities in society that exist between Aboriginal and non-Aboriginal individuals¹⁶. He further argues that these inequalities affect not only crime but all social processes that define what is "criminal" and the responses to criminal behaviour.

Many other scholars support this view (LaPrairie, 1996; Pfohl, 1994; Ross, 1996), arguing that the inequalities that Aboriginal people have faced should be considered. It has been suggested that negative

¹³ As indicated earlier, in 2004-05, Aboriginal offenders represented 16.2% of the total federal offender population while Aboriginal adults represent 2.7% of the Canadian adult population (PSEPC, 2005).

¹⁴ When compared to incarcerated non-Aboriginal offenders, a lower percentage of incarcerated Aboriginal offenders are classified as minimum security risk (14.4% versus 20.9%) and a higher percentage are classified as maximum security risk (16.3% versus 14.9%; PSEPC, 2005).

¹⁵ Effective correctional treatment usually incorporates a cognitive-behavioural approach that targets criminogenic needs, and addresses needs that are considered to be both individual and societal (Clairmont & Linden, 1998).

¹⁶ Webb (2003) specifically speaks to the differences between Maori and the non-Maori people of New Zealand and applies his arguments to this specific Indigenous/Native culture; however, for the purposes of this paper, Webb's arguments are being applied as also being valid to the Canadian Aboriginal population.

social factors such as unemployment, poor education and cultural marginalization stem from colonization (Jackson, 1987; LaPrairie, 1996). In addition to the academic field, case law such as *R. v. Gladue* (1999) clearly states that the context of Aboriginal people should be taken into account when considering criminal sanctions, and interventions (the implications of Gladue will be discussed shortly).

It is argued that psychological approaches to risk assessment tend to “universalize” risk and need factors and assume the “universality” of social norms to all groups of offenders (Webb, 2003). Risk factor analysis therefore assumes a consensus of values in society from which definitions of crime develop (Webb, 2003). For example, Webb argues that when it comes to criminogenic needs, psychological approaches do not incorporate the differences that may exist between groups, as they are seen to have little relevance. To support this argument, Webb cites the work of Bonta, LaPrairie and Wallace-Capretta (1997) and challenges their premise that cultural differences did not vary in the psychological approach to explaining crime. As previously discussed, Bonta and colleagues (1997) found that cultural differences between Aboriginal and non-Aboriginal offenders were present for programming responses but that the major correlates and predictors of criminal behaviour were similar across the two groups. They concluded that race and cultural factors were relevant in regards to the responsivity principle only.

The importance of the responsivity principle, especially in terms of Aboriginal offenders, has been highlighted in the literature. Broader social and cultural factors play a role in the assessment of responsivity (Bonta, 2002). Bonta (2002) emphasizes that risk assessment instruments need not assess race and ethnicity, but that these factors must be considered in program delivery. It appears that the risk factors are very similar for Aboriginal and non-Aboriginal offenders, but the response to the risk factor needs to be different for the two groups in order for the risk to be decreased. For example, in a situation where the needs of offenders are the same (e.g., substance abuse may be a criminogenic need for both a non-Aboriginal and an Aboriginal offender), the intervention chosen to address the need of each offender may be different, as outlined by the responsivity principle. In the case of Aboriginal offenders, the cultural context may be incorporated into treatment in order for it to be successful.¹⁷ The requirement for culturally-specific programming responses has been recognized and implemented in Canada (Correctional Service Canada) as well as in some other countries where there are significant Aboriginal offender populations (Australia and New Zealand).

In addition to emphasizing the importance of the responsivity principle, there has been one other question threaded throughout the Aboriginal offender literature regarding risk assessment – are there *additional* risk factors that exist for Aboriginal offenders? At first glance, this is not usually a question that is welcomed by Aboriginal advocates (E. Buller, personal communication, March 24, 2006). Aboriginal offenders already typically score as higher risk than non-Aboriginal offenders; do we want to assess even more factors that could further increase their risk? The answer to this question depends partly on what will be done with the information. Discussion with Aboriginal advocates (personal communication, Ed Buller, March 24, 2006) confirms that Aboriginal people are wary of risk assessment, partly because the outcome usually results in a higher security classification or denied release. Furthermore, concern may exist because Aboriginal people are not usually involved in the development of the assessments. If examination of additional factors could further exacerbate these outcomes, then there is reluctance to explore other potential risk factors. On the other hand, if additional risk factors are identified, but “labelled” as needs (i.e., areas where treatment could be provided to assist the offender) then exploration would be acceptable. Much of the work regarding additional risk factors is coming from Australia and New Zealand. However, it is still important to note

¹⁷ Howells and colleagues (Howells et al., 1999) examine the responsivity principle and Aboriginal programs in detail.

that the research is preliminary and there does exist the possibility that the Aboriginal populations in each country are different.

Interestingly, work in New Zealand has found results different from those of Bonta, LaPrairie and Wallace-Capretta (1997). The Department of Corrections in New Zealand (2001) examined both Aboriginal (the Maori) and non-Aboriginal offenders with a specific interest to measure a number of Maori culturally-related needs. Based on their results, the researchers suggested that for Maori offenders, there may exist additional culture-related risk factors that had to do with the status of the Maori in a predominantly non-Maori culture (Department of Corrections, 2001). Although their methodology was not presented, the report stated that many of the central eight risk factors applied to Maori offenders and that risk factors specific to the Maori included lack of cultural identity, sense of group membership, and negative self-image.¹⁸ At first glance, it is possible that these three factors, in particular, may also be present within the Canadian Aboriginal population.

Maynard and colleagues (Maynard, Coebergh, Anstiss, Bakker, & Huriwai, 1999) found that a secure cultural identity was related to positive behavioural outcomes for the Maori. They concluded that without a secure identity, cognitive difficulties, negative emotions and antisocial behaviour could result. The authors provide several examples to support how a lack of cultural identity, or confusion surrounding it, could lead to negative outcomes. One example regarding the need for a sense of group membership highlighted the fact that Maori offenders may seek belonging through gang involvement within institutions, a risk factor that is recognized by Canadian corrections as being apparent in the current male Aboriginal inmate population. The fact that all of these additional Maori-specific risk factors could result in negative outcomes provides the basis for their argument that there exist criminogenic needs that are specific to the Maori. In terms of risk prediction then, Maynard and colleagues would argue that the inclusion of a cultural identity risk factor variable would add predictive power to risk assessment instruments; however, this has yet to be tested.

Although there may be similarities across various Aboriginal groups, it is possible that there may exist unique Maori traits. Here again, it is important to remember that although there are commonalities across Aboriginal groups, there may also be differences. For example, there is Australian literature that suggests that risk factors for violence with Australian Aboriginal offenders may differ from other cultural groups (Allan & Dawson, 2004; Mals, Howells, Day, & Hall, 2000). Additional research must be conducted to determine whether culture-related factors such as lack of cultural identity are indeed additional risk factors, are risk factors for only certain Aboriginal groups, or whether they are simply factors that should be taken into consideration at the treatment stage, under the principle of responsivity.

There have been other attempts to develop risk assessment instruments specifically for Aboriginal offenders. Although the attempts described below did not result in an empirically valid risk assessment instrument for Aboriginal male offenders, the process encountered many challenges. In response to both the overrepresentation of Aboriginal offenders in Australia as well as the absence of risk assessment instruments that have had proven valid for this population, Allan and Dawson (2004) attempted to identify factors that predicted recidivism within a population of Australian violent or sexual male Aboriginal offenders. They chose to develop an original risk assessment instrument from scratch for a number of reasons.

¹⁸ The other additional risk factors appeared to be linked to the Maori specifically (and may not apply within the Canadian Aboriginal context) and therefore were not listed. The factors were: relationship with Whanau, and presence or absence of whakawhanaungatanga.

First, Allan and Dawson (2004) felt it was inappropriate to simply use current risk assessment tools that were validated on a non-Aboriginal population without investigation to test their applicability. Second, previous Australian literature (Mals et al., 2000) as well as the results from various focus groups with Aboriginal people and people working in the correctional field, had suggested that risk factors for Aboriginal violence may differ across various cultural groups. Third, they felt that currently available risk assessment instruments, those with a clear theoretical base, were based on constructs that were clearly embedded in Western, non-Aboriginal culture. Although these constructs may prove valid in an Aboriginal culture, no research has yet examined that possibility. Fourth, they argued that since current risk assessment instruments were based on regression models, which use predictors obtained from specific populations, the accuracy of these instruments was dependent on risk markers that best characterized the population on which the instrument was based (Allan & Dawson, 2004). Furthermore, although the risk factors within these instruments may prove valid, these instruments did not allow for the possibility that additional risk factors may exist with the Aboriginal population. As such, they felt that these limitations would not allow for appropriate treatment strategies to be developed. Reference was also made to ethical and practicality questions regarding the current use of the more common risk assessment instruments. Lastly, Allan and Dawson acknowledged the criticism and scepticism that current risk assessment instruments face in the Aboriginal community.

Using a retrospective analysis, with 1,838 adult male Aboriginal offenders (of which 380 were used to build the instrument), results found that violent Aboriginal offenders and sexual Aboriginal offenders were distinct and that there was no merit to establishing one scale to serve both populations. Allan and Dawson proceeded and found that with the violent offenders, offenders who committed “family-violence” formed another distinct group and that non-violent sexual offenders were different from violent sexual offenders. Hence, they concluded that four separate instruments needed to be developed but their reduced sample size for the four groups prevented this. In terms of violent offenders (including both family-violence and non-family violence), Allan and Dawson described the results as “disappointing”, even though their instrument correctly identified 95.4 percent of violent offenders who reoffended, it produced a false positive rate of 55 percent. Unfortunately, they did not list the factors that were used in their proposed risk prediction instrument (other than a 3-predictor model for sexual offenders which included unrealistic long-term goals, unfeasible release plans and poor coping skills prior to release). Allan and Dawson noted that, even if the proposed instrument had proved empirically valid, it could only be accepted as reliable if the Aboriginal community was involved in the planning stages, the development, and were well-informed and involved throughout the project. They recognized that given the complexity of the situation, especially around cases of violence or sexual offending, the community might perceive the research endeavour as “prejudicial and discriminating” (Allan & Dawson, 2004, p. 3).

Although there is some merit to starting from a clean slate in terms of risk assessment instrument development, the experience of Allan and Dawson highlights potential problems. Working with Aboriginal communities can certainly be useful; however, there must be an acknowledgement of various areas of expertise. As Ross (1996) points out, Aboriginal communities may be doing similar things to what psychologists are doing, but both parties need to acknowledge the expertise of the others. Empirical evidence speaks to many non-Aboriginal practitioners, whereas evidence through observation and involvement speaks to many Aboriginal communities. There is some overlap here, but generally speaking, these communication styles should be acknowledged.

There is little doubt that different sectors are working, albeit perhaps by different means, towards improving the current situation. Overrepresentation of Aboriginal people in the criminal justice system

has been, and is still, a concern in Canada, as well as in other countries. In fact, the majority of the research cites two common themes: the overrepresentation and disadvantages of Aboriginal people, and the lack of research regarding risk assessment on Aboriginal offenders. It is likely that many of these injustices have placed Aboriginal offenders in a position to heighten both their risk level and their negative experience with the criminal justice system (e.g., placement in higher security facilities, serving longer proportions of their sentences, etc.). The effect of these injustices should not be minimized; however, these injustices are sociological factors, and should not negate the main purpose of risk assessments. In Canada, academics, psychologists, various advocates and the government have been working towards decreasing the Aboriginal offender population and providing appropriate correctional services. In 1999, the Supreme Court of Canada waded into the discussion.

Legal Considerations: R. v. Gladue

No analysis of Aboriginal offenders in Canada is complete without reference to the Supreme Court of Canada's direction in the case of *R. v. Gladue* (1999; hereinafter referred to as Gladue). Although the Gladue decision deals specifically with the interpretation of section 718.2(e)¹⁹ of the *Criminal Code of Canada* in the context of sentencing of Aboriginal offenders, this decision has ramifications beyond the courtroom. The Gladue case is considered to be the watershed of cases as it was the first one where the courts interpreted section 718.2(e) in terms of the sentencing of Aboriginal offenders. First, the courts interpreted the section to be "remedial in nature" and its purpose to "ameliorate the serious problem of overrepresentation of [A]boriginal people in prison, and encourage sentencing judges to have recourse to a restorative approach to sentencing" (*R. v. Gladue*, 1999, para. 64). The decision stated that when determining an appropriate disposition the following two points must be taken into consideration:

- (a) the *unique systemic or background factors*²⁰ which may have played a part in bringing the particular [A]boriginal offender before the courts; and
- (b) the types of sentencing procedures and sanctions which may be appropriate in the circumstances for the offender because of his or her particular [A]boriginal heritage or connection (*R. v. Gladue*, 1999, para. 93).

It is important to note that these factors are not exclusive to Aboriginal offenders; however, the basis for their existence differs when compared to non-Aboriginal offenders (Ashton, 2001). The court stated that "many [A]boriginal people are victims of systemic and direct discrimination, many suffer the legacy of dislocation, and many are substantially affected by poor social and economic conditions (*R. v. Gladue*, 1999, para. 67). The overall premise of the court's decision was that in order to treat Aboriginal offenders fairly, their differences (when compared to non-Aboriginal offenders) had to be considered and accounted for in terms of sentencing needs and outcomes.

There is no doubt that risk factors are more prevalent in the majority of Aboriginal offenders when compared to non-Aboriginal offenders. Does the Gladue decision then mean that risk assessment instruments should be scored differently or adjusted to compensate for the fact that Aboriginal people are more likely than non-Aboriginal people to experience many of the factors that ultimately increase their risk? Aboriginal groups argue that the Gladue decision should be interpreted to mean that all

¹⁹ Section 718.2(e) is a sentencing provision in the *Criminal Code of Canada* which states that "all available sanctions other than imprisonment that are reasonable in the circumstances should be considered for all offenders, with particular attention to the circumstances of [A]boriginal offenders".

²⁰ The "unique systemic or background factors" were interpreted by the court to include "low incomes, high unemployment, lack of opportunities and options, lack or irrelevance of education, substance abuse, loneliness and community fragmentation" (*R. v. Gladue*, 1999, para. 67)

levels of the criminal justice system should take into consideration the unique background and cultural factors of Aboriginal offenders (Native Counselling Services of Alberta, 2003). They argue further that it is logical to carry this responsibility into any setting where offender assessment, of any kind, is involved. For example, the Native Counselling Services of Alberta claims that the Gladue interpretation means that the CSC has the responsibility to ensure that all assessment instruments for Aboriginal offenders be culturally appropriate and incorporate considerations of Aboriginal history and culturally mitigating factors (2003).

To date, the Gladue decision has not affected risk assessment practices. However, the decision should cause some pause. The courts have been clear, but does that mean that risk assessment practices should be affected? Although there are many issues under debate, there is some common ground from where we can start to move forward.

The Current State of Affairs

Many issues have arisen throughout this review. A summary follows. First, current psychological approaches to risk assessment utilize a framework that is based on criminogenic risk and needs. This approach is not an Aboriginal approach to criminality. However, it is important to recognize that elements of Aboriginal culture appear to be present in current risk assessment instruments. As Ross (1996) points out, there are many commonalities and agreement on “what works”, it is only in the method of communication that agreement may not be apparent. Second, there is empirical evidence to suggest that many risk factors, first identified on non-Aboriginal samples, are in fact valid within the Aboriginal offender population. However, that being said, existing research on some of the individual risk factors is not conclusive and there are some inconsistencies in the results that warrant more research. Third, there are three main areas that should be the focus of future research. The first deals with confirming the validity of the central eight major risk factors with Aboriginal offenders. The second is the search for additional risk factors that may be valid for Aboriginal offenders. Finally, if this search is fruitful then there is the question of how should they be incorporated into risk assessment instruments. There are certainly other areas that deserve additional exploration, but it is argued that future research should build on what is already known. It is important to remember, as Gottfredson and Synder (2005) emphasize, the main goal of risk assessment instruments is to predict, not explain. Examining root causes is certainly important, but it is not the goal of risk assessment.

The last major conclusion of this review is that the principles of effective correctional treatment provide a foundation on which to build additional common ground. Through the responsivity principle, it has been shown that the response to criminogenic needs may need to be different across groups, thereby incorporating a cultural sensitivity component in the individualized intervention plan. Aboriginal communities should be utilized as a resource in this regard, as they have the best knowledge of their culture and what has been successful with their peoples in the past. In addition, Aboriginal communities can assist in providing knowledge training to practitioners to ensure that there is an understanding of Aboriginal culture and how the assessment procedure itself may need to be sensitive and appropriate. Research on factors related to successful reintegration of Aboriginal offenders has been undertaken (Heckbert & Turkington, 2001) in partnership with the Aboriginal communities. Such efforts should continue.

Future Directions

The final goal of this review is to offer recommendations on future directions. Recommendations are based on two positions. First, it is suggested that research should start from what is already known. Rather than reinventing the wheel, the developmental process of risk assessment specifically for Aboriginal offenders should begin with evaluations of current risk assessment instruments. Although Allan and Dawson (2004) may challenge this recommendation, testing current risk assessments is an area that should be explored. Perhaps there is no need to adapt them at all or perhaps predictive ability can be improved by including culturally sensitive factors. Furthermore, guidelines for the selection and use of offender risk assessment instruments have been developed (Bonta, 2002), and it is recommended that these be followed, regardless of whether current risk assessment instruments are being utilized, or whether new ones are created.

Given the arguments of Webb (2003), along with other critics, and the Supreme Court of Canada, it is important to remember the disadvantaged situation of many Aboriginal offenders. The situation on reserves may dictate that risk factors may be different, may need to be interpreted differently, or may only come into play in the development of an appropriate treatment plan. For example, Aboriginal youth may drop out of high school, or may not have employment, for different reasons than non-Aboriginal youth, even though the risk factor may be comparable in terms of risk prediction.

There is no question that additional research is needed. From an empirical standpoint, more research is required to examine risk factors, as well as risk assessment instruments. At a broader level, discussion is required with Aboriginal practitioners and Aboriginal communities. Information should be shared. Differences in language, perceptions and understandings should be clarified. Research questions should be identified. A common purpose should be articulated. The Aboriginal community should be accessed as a resource when implementing the responsivity principle and when developing treatment and intervention strategies. Although there is much work to be done, work should be focused – one step at a time.

General recommendations can be useful, but a list of specific steps can fuel an action plan. In an effort to direct further research, as well as the consultation process (or “working together”) goal for academia, governments and Aboriginal communities, the following steps are presented.

1. *Validation of current risk assessments.* Researchers need to attempt to (further) validate current risk assessment instruments among Aboriginal offender samples.
2. *Validation and examination of risk factors.* Linked closely with the task above, researchers need to examine specific risk factors to determine their applicability to the Aboriginal offender population. It seems logical to begin with the major central eight risk factors, but ultimately, every risk factor within a risk assessment measure should be validated. Furthermore, consideration should be given to the possibility that additional risk factors may exist for Aboriginal offenders.
3. *Examination and implementation of the responsivity principle.* Research is required on the role of the responsivity principle among Aboriginal peoples. Involvement of Aboriginal communities will be very important here for two reasons. First, Aboriginal communities have specialized knowledge of their culture, traditions and spirituality, and knowledge on how those factors can be successfully incorporated into treatment strategies that then adhere to the

responsivity principle. Second, in order to address the possible scepticism and mistrust, which some Aboriginal communities may feel, full involvement in the process is critical.

In addition to the three main research steps required, the following recommendations are necessary to facilitate the debate, and to ensure that great strides can be made.

4. *Working together (government, academics, Aboriginal communities etc.)*. All parties need to be involved. Inclusion and ownership are important from all perspectives. A team effort on the part of researchers may be effective and efficient. Involvement of Aboriginal communities will provide researchers, as well as other key players in the correctional process, with information to be considered. As indicated, Aboriginal communities have specialized knowledge on their culture, traditions and spirituality, all of which may be very useful. Working together may decrease possible scepticism and mistrust on the part of all parties involved. Full involvement and buy-in is essential.
5. *Sharing information and education*. As previously noted, communication styles of Aboriginal and non-Aboriginal people can be very different. Skill sets are different and the knowledge and areas of expertise are different. Linked closely to item four above, sharing of information and education between the two groups is of extreme importance, and essential to facilitate this process.
6. *Development of common goals*. There is a lot of work to be done, and therefore it is critical to set realistic goals and timelines, goals which all players agree upon. For example, development of specific risk assessment instruments for Aboriginal offenders may be necessary but only after thoroughly testing the ones currently in use. There is research to suggest that there may be differences within Aboriginal subgroups, and while this certainly requires comprehensive investigation, accomplishing this goal may take some time.

This paper attempted to do many things, but ultimately, its goal was to provide up-to-date information reviewing the state of risk assessment relating to male Aboriginal offenders that would be useful to both the academic/correctional audience, as well as the informed Aboriginal community.

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