_____ **Research Report** _____

National Prevalence of Mental

Disorders among Incoming

Federally-Sentenced Men Offenders

National Prevalence of Mental Disorders among Incoming Federally-Sentenced Men Offenders

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Executive Summary

Key words: *prevalence of mental disorders, offenders, concurrent disorders*

There is now well-established evidence that there are higher rates of major mental disorders in offender populations relative to the general population. Notably, rates of alcohol and substance use disorders and antisocial personality disorder (APD) are elevated, but rates of psychotic disorders are also estimated to be up to 10 times higher among incarcerated people (Fazel & Danesh, 2002). A previous survey of a representative sample of offenders in the Correctional Service of Canada (CSC) conducted in 1988 confirmed that a majority of offenders had suffered from some form of mental disorder in their lifetime (Motiuk & Porporino, 1991). An accurate current estimate of prevalence rates in Canadian federal offenders is needed to permit effective planning of treatment and interventions for this group.

The present study determined the prevalence rates of major mental disorders among men offenders newly admitted to CSC using the Structured Clinical Interview for Diagnostic and Statistical Manual for Axis I Disorders (SCID-I) and the SCID Axis II Personality Disorders. The following disorders were assessed: 1) mood; 2) psychotic; 3) substance use; 4) anxiety; 5) eating; 6) pathological gambling (from the optional modules); 7) APD; and 8) borderline personality disorder (BPD). Rates were obtained for both lifetime and current prevalence (i.e., the past month). All consecutive admissions to the reception centres on new warrants of committal over a six-month period were approached to obtain their consent to participate in the diagnostic interview. This report presents the results nationally and from the individual regions and by Aboriginal ancestry.

Using all the diagnostic categories, the lifetime prevalence of any mental disorder ranged from 78% to 88% across regions and the prevalence of a current disorder ranged from 68% to 82%. The highest prevalence rates for mental disorders across all regions were for alcohol and substance use disorders, with rates of current disorder ranging from 29% to 48% for non-alcohol substance use disorders. The regional prevalence rates were roughly similar for psychotic disorders, posttraumatic stress disorder, pathological gambling, and BPD. Nearly half of offenders met the lifetime criteria for a major mental disorder other than alcohol or substance use disorders and APD. Concurrent disorders were also common with 33% to 44% of offenders meeting the criteria for both a current mental disorder and a substance abuse disorder. Between 27% and 43% of offenders with a current major mental disorder also met the criteria for a diagnosis for APD. National prevalence rate of major mental illness including only psychotic disorders, major depression, and bipolar disorders was 12.4%. Fifty-seven percent of offenders with a current Axis I mental disorder were rated as experiencing minimal to moderate functional impairment based on the Global Assessment of Functioning scale of the DSM.

These results underscore the challenge posed to CSC in providing the necessary correctional interventions and mental health services to assist in the management and rehabilitation of a significant percentage of the population with mental health needs. Findings will be used to inform population management initiatives underway in CSC.

Table of Contents

List of Tables

List of Appendices

Introduction

There is now well-established evidence that the rates of mental disorder among offenders are higher than those in the general population (Gilmour, 2014). Estimates of the prevalence of psychiatric disorders in prison populations have ranged from 15% to 81% (Brinded, Simpson, Laidlaw, Fairley, & Malcolm, 2001; Brink, Doherty, & Boer, 2001; Diamond, Wang, Holzer, Thomas, & Cruser, 2001; Magaletta, Diamond, Faust, Daggett, & Camp, 2009) depending on the definition of mental disorder (MD) adopted. Studies producing the highest estimates include substance abuse disorders and antisocial personality disorders (APD) and use a lifetime timeframe. Studies uniformly find high rates of substance abuse and APD among individuals involved in the criminal justice system (Black, Gunter, Loveless, Allen, & Sieleni, 2010; Butler, Indig, Allnutt, & Mamoon, 2011). Motiuk and Porporino (1991), for example, reported a lifetime prevalence of 75% for APD and 70% for alcohol abuse disorder among Canadian federal offenders. Serious Axis I disorders are also more prevalent among offenders than in the non-offender population. In their meta-analytic review of the research on rates of mental disorder among offenders in several countries, Fazel and Danesh (2002) found that schizophrenia was 10 times more common in prisons than would be expected based on its prevalence in the general population. Likewise, an Australian national study estimated the prevalence of schizophrenia at between 2% and 5% for prisoners (Mullen, Holmquist, & Ogloff, 2003) while rates in the general adult population worldwide are cited as between 0.3% to 1% (Ayuso-Mateos, n.d). Some of the highest estimates of mental disorders in correctional settings have been found among offenders in the Canadian federal correctional system (Brink et al., 2001; Motiuk & Porporino, 1991).

There is consistent evidence across constituencies that the rates of mental disorder among offender populations have been rising, although it is less clear what the reasons for the increase might be (Diamond et al., 2001). Deinstitutionalization has been theoretically implicated in the increase (Ogloff, 2002), but research by Steadman and his colleagues failed to confirm the link between closure of psychiatric inpatient beds and increases in rates of mental disorder in prison in the time period from the 1960s to the1980s (Steadman, Monahan, Duffee, Hartstone, & Robbins, 1984).

While the estimates of rates of mental disorders among offenders are often high, it should

be noted that mental disorders are not rare, even in the general population. For example, worldwide, an international study on the burden of disease noted that depression was the second leading cause of years lived with disability (Ferrari, Charlson, Norman, Patten, Freedman, Murray, Vos, & Whiteford, 2013) and mental disorders contribute more to the global burden of disease than all cancers combined (Mood Disorders Society of Canada, 2009). In Canada, a national community mental health survey published in 2002 found that 1 in 5 Canadians self-reports experiencing a mental illness during their lifetime (Health Canada, 2002). The more recent Canadian Community Health Survey – Mental Health (CCHS-MH), completed on 25,000 respondents, found that while over three-quarters of Canadians have what was described as "flourishing mental health", that is, high positive emotions and high positive functioning, rates of mental illness including at least one diagnosis for depression, bi-polar disorder, generalized anxiety disorder, alcohol abuse and dependence, cannabis abuse and dependence, and other substance abuse and dependence hover around 10% (Statistics Canada 2012). This estimate does not include personality disorders or individuals residing in the territories, reserves, and Canadian armed force bases. Likewise, in the U.S., a survey including over 20,000 adults determined that over 22% had experienced a mental health disorder in the last year and this rate rises to 28% if a substance abuse disorder is included in the calculation (Diamond et al, 2001).

High rates of mental disorder among offender populations pose a challenge for correctional agencies responsible for addressing their mental health needs. In the Correctional Service of Canada (CSC), there is evidence that the prevalence of offenders with mental health problems may be increasing. Between March 1997 and March 2008, the percentage of in-custody men offenders who indicated at intake that they had been diagnosed with a current mental health diagnosis almost doubled from 7% to 13% (CSC, 2008) and the proportion prescribed medication for mental health issues increased from 9% to 21% (CSC, 2008). These data are based on simple questions asked of offenders about their current and past mental health status when they are admitted into the federal correctional system. The results are useful for tracking general trends, but are not adequate for determining diagnoses or for guiding intervention strategies. To address the need to identify offenders who require mental health services, a standardized mental health screening tool for offenders entering the federal correctional system was implemented nationally in 2009. The results of the Computerized Mental Health Intake Screening System (CoMHISS) form the initial component of the continuity

of care established for federally-sentenced offenders with identified mental health needs. Those offenders who are assessed as meeting a specified cut-off score on the mental health screening instruments, embedded in CoMHISS, are referred for a follow-up session with a mental health professional, usually a registered psychologist who may conduct further assessments. Research has found that depending on the cut-off criteria used, about 40% of incoming men offenders self-report psychological symptoms serious enough to warrant a follow-up assessment (Stewart et al., 2009).

The results from the CoMHISS, however, do not provide the rates of diagnoses of mental disorder among incoming offenders. Knowledge of the rate of various serious mental disorders in a population allows for a more detailed planning of the types and intensity of interventions required. Case management can be adapted to address the mental health needs and relative risk status of offenders based in part on their diagnoses. There is evidence that offenders with mental health problems often do not suffer from only one disorder, but meet criteria for multiple psychiatric diagnoses, most often a diagnosis for a major mental illness in combination with a substance abuse disorder or APD (Abram & Teplin, 1991; Motiuk & Porporino, 1991; Swartz, & Lurigio,1999; Wilton & Stewart, 2012). Indeed, Hodgins and Coté (1990) determined that only 7.6% of offenders who met the diagnostic criteria for drug abuse or dependence experienced it in isolation, whereas, the rest had a drug abuse disorder, along with another disorder. This poses an additional challenge to successful reintegration. Hartwell (2004) found that the difference between those in a sample of offenders in correctional custody in Massachusetts who were dually diagnosed compared to those with a mental health diagnoses only was "pronounced". Individuals with dual diagnoses were more likely to have criminal histories related to their substance abuse, to be homeless and violate probation after release, and recidivate. Likewise, a study of offenders in Australia found that the risk of reoffending was significantly higher for prisoners with a co-morbid substance abuse disorder and a non-substance abuse disorder (e.g. anxiety, depression or a personality disorder), even after controlling for covariates (Smith & Trimboli, 2010). In CSC, a study found that offenders with a co-morbid mental health and substance abuse disorder had significantly poorer outcomes that those with a single mental disorder or offenders with neither disorder (Wilton & Stewart, 2012). These results had been previously noted in the MacArthur Risk Assessment Study that examined the relationship between criminality, violence, and mental disorders. The authors found that

substance abuse and personality disorder (particularly the criminal history aspect of psychopathy) were the strongest factors contributing to risk for violence among this population (Monahan et al., 2001). A meta-analytic study by Bonta and colleagues (1998) also found that key contributions to risk of violent reoffending among offenders with mental disorders were factors such as APD, previous criminal history, and substance abuse.

The duration of the mental disorder may also provide information on the relative risk for future antisocial behaviour among offenders and point to the types of interventions required to manage the risk. For example, there is mounting evidence that offenders with schizophrenia can be categorized into two main groups: those who have no history of antisocial behaviour or criminality before the onset of the major mental illness, and the "early starters" who display patterns of antisocial behaviour from early childhood that escalate into delinquency and persistent criminality in adulthood (Hodgins & Jansen, 2002; Mullen, 2006). "Late starters" whose offence histories begin after their diagnosis, can pose a risk under some conditions such as when they are under the influence of organised delusional symptoms with violent content, but when the negative symptoms of the illness predominate (such as social isolation, depression) there is evidence that they are lower risk for criminal and violent offending than those without a disorder (Hodgins & Janson, 2002). The early starters, on the other hand, often have APD in combination with schizophrenia, and begin abusing alcohol and drugs at a young age, and continue to do so through adolescence and adulthood.

A mental health survey of CSC offenders conducted in 1988 and reported by Motiuk and Porporino (1991) used the Diagnostic Interview Schedule (DIS) to estimate rates of major mental disorder among a representative sample of offenders. Using broad criteria, they reported alarmingly high rates of serious disorders including estimates of 56% for anxiety, 30% for depression, and 10% for psychotic disorders; applying more stringent criteria, rates were somewhat lower. More recently, the DIS has been used in research on women offenders in CSC custody and indicated elevated rates of posttraumatic stress disorder, major depressive disorder and APD in this population (Derkzen, Booth, McConnell, & Taylor, 2012). CSC requires an updated survey of the current rate of mental disorders. The current study utilized a measurement tool that is widely regarded as the "gold standard" in clinical research, the Structured Clinical Interview for DSM Disorders (SCID; First, Spitzer, Gibbon, & Williams, 2007). The SCID-I and -II results provide estimates for the rates of both lifetime and current mental disorder and for

personality disorders. The following report presents the results of a national study on the prevalence rates of mental disorders among incoming men offenders in all five regions and includes estimates of the various levels of impairment.

Method

Participants

All men offenders admitted to CSC on new warrants of committal in the Atlantic, Quebec, Ontario, Prairie, and Pacific regions during the study period were eligible and asked for their consent to participate. The Quebec region had the lowest consent rate with nearly 65% of offenders approached agreeing to participate ($n = 197$). In the Pacific region, 75% of offenders ($n = 138$) consented to participate and were interviewed. Similar rates were obtained in the Ontario region with 76% of offenders ($n = 296$) participating. The Atlantic and Prairie regions had the lowest refusal rates with 83% and 90% of offenders ($n = 154$ and $n = 325$, respectively) participating.

National sample. A roll-up of the national sample is presented in Table 1. As a whole, there were some significant differences between offenders who participated as those who did not, in particular, on risk and criminogenic need levels and security level. Participants were more likely to be lower risk, and those who participated in the study were significantly more likely to be convicted of a sexual offence. There was no difference in age between participants and decliners (36 vs. 35, respectively; $t = -0.44$, $p > .05$).

Table 1

Profile of Participants and Offenders who Declined to Participate: National Sample

	Interviewed $N = 1{,}110$ % (n)	Declined $N = 314$ % (n)	χ^2	df
Ethnicity				
Aboriginal	20.7 (230)	18.5 (58)	12.34**	3
Black	8.9 (99)	14.7 (46)		
White	59.7 (663)	53.2 (167)		
Other	10.6 (118)	13.7 (43)		
Marital status				
Single	44.6 (495)	49.0 (154)	2.10	3
Married/common-law	44.1 (489)	41.1 (129)		
Divorced, separated, or widowed	9.4 (104)	8.0 (25)		
Other	2.0 (22)	1.9 (6)		
Criminogenic need level[a]				
Low	9.9 (110)	7.4 (23)	17.49 ***	2
Medium	36.2 (401)	25.6 (80)		
High	53.8 (596)	67.1 (210)		
Criminal history risk level[a]				
Low	15.3 (169)	8.0 (25)	17.78***	2
Medium	41.1 (455)	36.7 (115)		
High	43.6 (483)	55.3 (173)		
Major admitting offence[b]				
Homicide and manslaughter	6.0 (66)	9.0 (28)	3.51	1
Robbery	13.7 (152)	16.0 (50)	1.00	1
Drug offences	26.4 (293)	21.4 (67)	3.32	1
Assault	11.2 (124)	16.3 (51)	5.84	1
Sexual offences	15.7 (174)	9.0 (28)	9.18**	1
Property offences	11.3 (125)	10.9 (34)	0.05	1
Other violent offences	6.1 (67)	8.6 (27)	2.61	1
Other non-violent offences	9.7 (107)	8.6 (28)	0.15	1
Security level[c]				
Minimum	30.8 (335)	17.2 (52)	39.25***	2
Medium	63.9 (694)	69.2 (209)		
Maximum	5.3 (58)	13.6 (41)		
Sentence length				
Less than 5 years	78.2 (868)	77.1 (242)	6.92*	2
5 years or more	19.3 (214)	17.5 (55)		
Indeterminate sentence	2.5 (28)	5.4 (17)		

Note. [a] $n = 4$ missing. [b] $n = 3$ missing. [c] $n = 35$ missing.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Atlantic region. Appendix A presents the demographic information of all offenders who were approached to participate in the study in the Atlantic region. Half of participants were 30 years old or less. Although not a significant difference, the average age of offenders who participated was 34 years of age compared to 35 years of age for those who decline or could not participate in the study ($t = 0.56$, $p > .05$). Significantly more offenders who chose not to participate were convicted of assault compared to participants. No other significant differences in the characteristics of participants and those who did not participate in the study were noted. Yates' chi-square correction is reported in cases where the expected frequency is less than 5.

Quebec region. Offenders in the Quebec region who agreed to participate in the study were on average the oldest participants of any region with a mean age of 39 years. Offenders who declined to take part in the study had a similar mean age, 38 years. There was no significant difference in age between these two groups ($t = -0.38$, $p > .05$). The majority of participants were white and a greater percentage of Aboriginal offenders declined to participate (see Appendix B). There were also significant differences between participants and decliners on their criminogenic need level, static risk level, and security level. Given the nature of the study and the obligation for a representative sample (i.e., not excluding offenders who have more serious mental health conditions), the differences in criminogenic needs between groups was further examined to establish which need domain was rated as a greater concern. Of all seven need domains, the only significant difference was found for the personal-emotional domain ($\chi^2 = 9.55$, $df = 3$, $p < .05$), where 50.5% of offenders who declined were rated as high need versus only 32.7% of participants. This difference was no longer significant after applying the Bonferroni correction (see Appendix C).

Ontario region. Participants ranged in age from 18 years to 74 years old, with half of offenders ($n = 148$) being below the age of 35 years. Offenders in the Ontario region who agreed to participate were significantly older than those who declined (37 years vs. 32 years, $t = -2.95$, $p < .01$). Some differences between groups were noted for the index offense history with significantly more participants being convicted of a sexual offense and significantly more offenders who declined being convicted of homicide or related charges and other non-violent offences (see Appendix D). There was also a significant difference in security level with those who participated in the interview being more likely to be placed in minimum security.

Due to the large number of newly admitted offenders in the Ontario region, several

participants ($n = 126$) who had agreed to participate were not interviewed before the end of the study period. Their demographics were compared to those who completed the interviews and no significant differences were found.

      Prairie region. More than one-third of participants from this region were Aboriginal. The majority of participants were white, had been admitted for a drug offence, classified as medium security, and were serving a sentence of five years or less (see Appendix E). The mean age of participants was 33 years. Offenders who declined to participate had a similar mean age of 32 years ($t = -0.28$; $p > .05$). Of note, in this region, a quarter of participants ($n = 82$) were 24 years or younger.

      Pacific region. Appendix F presents the demographic information of all offenders who were approached to participate at the Regional Reception and Assessment Centre in the Pacific region. No significant difference in age was observed between the two groups (37 vs. 36; $t = -0.60$, $p > .05$). Half of participants were 35 years of age or younger. No statistically significant differences were found between those who participated and those who did not participate on a range of demographic variables.

      Reasons for declining to participate. Overall, approximately one-fifth of offenders approached ($n = 314$) declined to be interviewed. When offenders decided not to participate, they were asked to provide a reason. The majority of offenders stated they simply were not interested in the study and offered no other explanation ($n = 202$). Of note, an issue of language was implicated in the decision to participate for some offenders (5.4%; $n = 22$). Other reasons included the offender not attending the interview (4%; $n = 13$) and no personal benefit or incentive provided for participation (1%; $n = 2$). In 3 cases, the interview was ended due to the offender demonstrating behaviours that were of concern to the interviewer and in 24 instances the offender exercised his right to voluntarily withdraw from the study.

Measures/Material

      Structured Clinical Interview for DSM Axis I Disorders (SCID-I; First, Spitzer, Gibbon, & Williams, Revision: 2007). The SCID-I is a semi-structured interview designed for making major DSM-IV Axis I diagnoses (First et al., 2007). The Research Version of the SCID, used here, is much longer than the Clinician Version as it is designed to include most of the information that is diagnostically useful to researchers. Compared to the Clinician Version, the Research Version contains more disorders, subtypes, severity, longitudinal disorder course

trajectories, and provisions for coding the specific details of past mood episodes, allowing the researcher to modify the interview to fit the specific needs of a particular study (Biometrics Research Department, n.d.). For the present study, the following Axis I disorders were assessed: (1) mood; (2) psychotic; (3) substance use; (4) anxiety; and (5) eating. Pathological gambling was also including from the optional model.

The SCID-I is widely considered to be the "gold standard" for assessing psychiatric diagnoses (e.g., Shear et al., 2000; Steiner, Tebes, Sledge, & Walker, 1995), and has been used with men and women in the community, as well as psychiatric and offender populations (Fennig, Craig, Lavelle, Kovasznay, & Bromet, 1994; Steadman, Robbins, Islam & Osher, 2007; Trestman, Ford, Zhang, & Wiesbrock, 2007; Zanarini & Frankenburg, 2001; Zanarini et al., 2000), including with Canadian federal offenders (Power & Beaudette, 2013; Power & Usher, 2011a, 2011b).

Research suggests that the reliability for the SCID-I is good to excellent for most modules. Results were available for most of the disorders included in our study with the range of kappas as follows: major depressive disorder, (0.61 to 0.93); dysthymic disorder (0.40 to 0.91); bipolar disorder (0.79 to 0.84); schizophrenia (0.65 to 0.94); alcohol dependence/abuse (0.65 to 1.00); other substance dependence/abuse (0.76 to 1.00); panic disorder (0.58 to 0.88); social phobia (0.47 to 0.86); obsessive-compulsive disorder (0.40 to 0.70); generalized anxiety disorder (0.44 to 0.95); posttraumatic stress disorder (0.77 to 1.00); and any eating disorder (0.64 to 0.77; Lobbestael, Leurgans, & Arntz, 2010; Segal, Kabacoff, Hersen Van Hasselt, & Ryan, 1995; Skre, Onstad, Torgersen, & Kringlen, 1991; Williams et al.,1992; Zanarini & Frankenburg, 2001; Zanarini et al., 2000). Its validity is also good to excellent, with the SCID-I comparing favourably to diagnoses made by psychiatrists in terms of sensitivity (0.50 - 1.00), specificity (0.94 - 1.00) and agreement (kappa = 0.66 - 0.90) in a sample of psychiatric patients (Fennig et al., 1994).

Structured Clinical Interview for DSM Axis II Disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997). The SCID-II is a semi-structured interview that was developed for the assessment of DSM Axis II (Personality) Disorders (First et al., 1997). It is considered the "gold standard" in assessing personality disorders, and has been used with men and women offenders (see Guy, Poythress, Douglas, Skeem, & Edens, 2008; Komarovaskaya, Loper, & Warren, 2007; Ullrich et al., 2008). Only the portions of the SCID-II that assess

10

borderline personality disorder (BPD) and APD were administered in the present study. These modules have been previously used with Canadian federal offenders (see Power & Beaudette, 2013; Power & Usher, 2011a, 2011b).

In a sample of 45 patients with mental disorders (77% women), reliability was excellent for the BPD assessment, with kappa scores between .87 and 1.0 for measures of baseline inter-rater, test-retest, follow-up inter-rater and follow-up longitudinal reliabilities (Zanarini & Frankenburg, 2001). The inter-rater reliability of the BPD assessment of the SCID-II is good to excellent (0.48-0.91; Dreessen & Arntz, 1998; First et al., 1995; Fogelson, Neuchterlein, Asarnow, Subotnik, & Talovic, 1991; Maffei, et al., 1997). The inter-rater reliability of the APD assessment of the SCID-II is good to excellent (.41-.95; First et al., 1995; Lobbestael et al., 2010; Maffei et al., 1997; Weiss, Najavits, Muenz, & Hufford, 1995).

Validity of the BPD assessment is also excellent. Compared to other measures and psychiatric diagnoses, it has exceptional sensitivity (0.74 – 0.84), specificity (0.82) and convergent validity ($r = 0.80$) in men and women psychiatric patients (Grilo et al., 2001; Ryder, Costa, & Bagby, 2007; Skodol, Rosnick, Kellman, Oldham, & Hyler, 1988). One study that compared the SCID diagnoses to longitudinal diagnoses found strong validity for the APD module for male psychiatric patient, with an agreement at 0.95 diagnostic power (Skodol et al., 1988).

Modified Global Assessment of Functioning – Revised (GAF). The GAF is included in the DSM-IV-TR[1] as the measurement for Axis V and is the most widely used measure of global functioning in psychiatric patients (Bodlund, Kullgren, Ekselius, Lindstrom, & von Knorring, 1994; Piersma & Boes, 1997). The GAF is thought to provide fundamental information for proper treatment planning (Woldoff, 2004). The ratings on the GAF range from 90 (absent or minimal symptoms and no impairment) to 0 (immediate danger from serious neglect or self-injurious behaviour) and the tool contains descriptors for each 10-point bracket, making the distinction between criteria easier for raters. The World Health Organisation (WHO) in its World Mental Health Survey used a score of 50 or less on the GAF as the threshold suggesting overall serious impairment related to a mental health diagnosis (WHO, 2004). Although little research on the reliability and validity of the revised tool has been conducted (Woldoff, 2004), the GAF is regarded as a useful tool that can be easily administered with little training or clinical expertise.

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[1] DSM-IV-TR = Diagnostic and Statistical Manual of Mental Disorders, forth edition, text revision.

Procedure/Analytic Approach

The study employed a continuous intake methodology, meaning that all eligible offenders were approached to participate in the order that they were admitted to the institution. In addition, the study period was chosen to approximate the number of offenders admitted in those regions over a six-month period. Due to logistical difficulties and lower than usual admission rates in some regions, data collection surpassed six months in some regions if a larger sample size was required. All interviews that comprise the data for the study were conducted from March 2012 to September 2014.

Assessor training. Research Assistants (RAs) were hired to work at the Reception Centres in each of the study regions and trained on the administration of the SCID-I and SCID-II. Assessor training was comprised of five days of self-directed learning using the training materials provided by the authors of the SCID (i.e., two user's manuals, two written case examples, eight instructional DVDs). Upon completion of the training, a session with the first author was held to discuss any issues or questions that arose and to practice cases to ensure consistency.

A document was created to record common issues that arose during data collection and to act as a decision log. The first author was the only one who could modify the document; however, it was available to all RAs working on the project. This measure helped to ensure consistency across raters and across regions. In instances where the RA was unsure of a rating, he or she consulted the first author and the SCID manual before coming to a consensus. Decisions made on coding were shared with all RAs.

Participant recruitment. All incoming offenders on new warrants of committal were recruited at the Reception Centres on a continuous basis. To achieve this method of recruitment, lists of all new intakes were provided to the RAs by institutional staff. Any offender being admitted on a new warrant of committal was approached for inclusion in the study. Offenders who were admitted because of revocations, breaches, or suspensions were not included.

Two methods of recruitment were used due to differences in the intake process and access to offenders at each institution. In the Quebec and Ontario regions, the RAs would attend the Admissions and Discharge unit on days when newly admitted offenders arrived. An RA would then approach eligible offenders, in the order that they appeared on the intake list, describe the study, and ask them if they would be willing to participate. Offenders who agreed to

12

participate were scheduled for an interview as soon as possible.

In the Atlantic, Prairie, and Pacific regions, the RAs would attend the intake unit where offenders were housed after completing the admissions process, with the list of all eligible offenders and would approach them in the same order. When an offender accepted, the interview would take place immediately in a room on the unit.

Some offenders on the list were not approached for various reasons (e.g., they were immediately placed in segregation, were receiving treatment in hospital, were assessed as a security risk, or were a high profile offender). These offenders were not considered to have declined because they were never approached for participation. In instances where this occurred, the participant's information was documented and notes were taken indicating the reason the interview was not conducted. If an offender was approached and declined for personal reasons, the RA would inquire as to the reason and would document the conversation. All interviews were conducted in a private room in the institution to ensure confidentiality.

Institutional staff was permitted to disallow an interview if they felt that the safety of the RA was at risk. If an offender had been violent with staff or displayed behaviours that were considered unsafe, the interview could be postponed or cancelled.

Informed consent and data management. No compensation or incentive was provided to participants. A verbal summary of the informed consent form was given to the participant, followed by an opportunity to ask questions about the procedure and about the consent form. A hardcopy of the signed informed consent form was required for the interview to proceed. A debriefing form was given to the participant following the completion of the interview. All interviews were conducted in English in the Atlantic, Ontario, Prairie, and Pacific regions. The majority of interviews in the Quebec region took place in French, however, when requested, an offender could complete the interview in English. As the structured interview was used for research, not diagnostic purposes, no results were shared with participants. In the event an offender stated that he was concerned about his mental health or the RA felt the offender required a follow-up, he was referred to the psychology department at the institution.

After the interview was completed, the data were entered into an electronic spreadsheet in a protected file on a secure network and the hardcopy SCIDs were locked in a cabinet in a secure room at the institution, typically within the psychology department. At the end of the study, all hardcopy materials were transferred back to the primary researcher and stored in a locked cabinet

in a secure room. Offender names and FPS numbers were kept separate from their participant numbers as a measure to further protect their identity.

As a quality control measure, data on the electronic spreadsheet and the results entered onto the hardcopy SCID files were periodically compared.

Statistical techniques. Chi-square analyses were conducted to determine whether any statistically significant differences existed between the men who agreed to participate and those who did not. Student's t-tests were also performed to establish if any mean differences existed among the groups. Prevalence rates percentages were calculated by dividing the number of offenders meeting the diagnostic criteria for a particular disorder (or groups of disorders) by the total number of offenders represented in that group or region. Rates were reported both for the national sample (i.e., all offenders who took part in the study) and for each individual region. In cases where there appeared to be regional disparities for certain disorders, additional chi-square analyses were conducted to determine if those observed differences were statistically significant.

Results

The following section presents the results nationally and for each region. Overall rates for each category of mental diagnosis are presented in the tables in bold, followed by rates of individual diagnosis within each category. It is possible for some offenders to meet the criteria for more than one disorder per category. The psychotic disorders category includes several disorders assessed by the SCID-I. No differential diagnosis is presented as that module was not completed for this group of disorders. Psychotic disorders were given a dichotomous rating (i.e., present or not present). Participants meeting the criteria for any psychotic disorder obtained a positive rating. Possible diagnoses under this category are schizophrenia, schizophreniform, schizoaffective, delusional disorder, brief psychotic disorder, substance abuse or general medical condition causing psychotic symptoms, substance induced psychotic disorder, and psychotic disorder not otherwise specified. The overall rates indicate the percentage of offenders with at least one diagnosis in that category.

National Prevalence

Rates of mental disorders from all five regions were combined to provide an overall national prevalence that includes all diagnostic categories. Table 2 displays the findings from the entire sample ($N = 1,110$). Nationally, the alcohol and substance abuse or dependence are the most common disorders among newly admitted federal offenders (49.6%), closely followed by APD (44.1%) and anxiety disorders (29.5%). Eighty-one percent of offenders ($n = 899$) met the diagnostic criteria for at least one mental disorder in their lifetime, whereas 73% of participants met the criteria for a current disorder (in the last month).

Table 2

Prevalence Rates of Mental Disorders in Newly Admitted Offenders: National Prevalence

Disorder	Lifetime % (*n*)	Current % (*n*)
Mood disorders	**30.2 (335)**	**16.9 (188)**
Bi-polar I disorder	2.8 (31)	1.7 (19)
Bi-polar II disorder	1.3 (14)	0.8 (9)
Other bi-polar disorders	2.1 (23)	1.4 (15)
Major depressive disorder	18.0 (200)	7.4 (82)
Dysthymic disorder (current only)	--	3.3 (37)
Depressive disorder not otherwise specified	4.1 (46)	2.5 (28)
Mood disorder due to a general medical condition	0.9 (10)	0.5 (5)
Substance-induced mood disorder	2.9 (32)	1.1 (12)
Psychotic disorders[a]	**4.7 (52)**	**3.3 (37)**
Alcohol and substance use disorders	**66.0 (733)**	**49.6 (551)**
Alcohol abuse or dependence	43.7 (485)	26.0 (288)
Non-alcohol substance abuse or dependence	52.0 (577)	38.6 (428)
Anxiety disorders	**34.1 (378)**	**29.5 (328)**
Panic disorder	12.6 (140)	9.1 (101)
Agoraphobia without history of panic	2.6 (29)	2.3 (25)
Social phobia	5.8 (64)	5.1 (57)
Specific phobia	5.1 (56)	4.3 (48)
Obsessive-compulsive disorder	3.3 (37)	3.0 (33)
Posttraumatic stress disorder	13.4 (149)	11.0 (122)
Generalized anxiety disorder	7.6 (84)	7.2 (80)
Anxiety disorder due to a general medical condition	0.1 (1)	0
Substance-induced anxiety disorder	1.8 (20)	0.9 (10)
Anxiety disorder not otherwise specified	4.2 (47)	4.1 (45)
Eating disorders	**1.4 (15)**	**0.8 (9)**
Anorexia Nervosa	0.1 (1)	0
Bulimia Nervosa	0.2 (2)	0.1 (1)
Binge-eating disorder	1.2 (13)	0.8 (9)
Pathological gambling	**9.9 (110)**	**5.9 (65)**
Borderline personality disorder (lifetime only)	**15.9 (176)**	**--**
Antisocial personality disorder (lifetime only)	**44.1 (490)**	**--**

Note. $N = 1,110$. "0" indicates no participant received a rating for that category. Percentages may not add to 100% as participants could meet the diagnostic criteria for more than one disorder. [a] Psychotic disorders included are: schizophrenia, schizophreniform, schizoaffective, delusional disorder, brief psychotic disorder, substance abuse or general medical condition causing psychotic symptoms, substance induced psychotic disorder, and psychotic disorder not otherwise specified.

Atlantic Region

Eighty-three percent of participants in the Atlantic region met the criteria for any mental disorder in their lifetime. Three-quarters of participants met the diagnostic criteria for any disorder at the time of their admission to CSC. Current diagnoses for panic disorder (14%) and pathological gambling (7%) were among the most common current diagnoses among newly admitted offenders when alcohol and substance use disorders and APD were not included (see Table 3). Offenders in the Atlantic region did not meet the diagnostic criteria for posttraumatic stress disorder as often as those in the other regions. The Atlantic region had the highest rate of primary psychotic symptoms of any of the regions (7% lifetime); however, there was no statistically significant difference between this rate and those observed in the other four regions.

Quebec Region

The Quebec region shared the same prevalence rate of lifetime disorders as the national average (81.2%), with a slightly lower percentage for rates of current disorders (70.1%). In addition, the rate of mood disorders was similar to those found in the other regions (18.8%); however, current alcohol and substance use disorders were the lowest in the country (see Table 4). Posttraumatic stress disorder and generalized anxiety disorder were somewhat higher than in the national sample with prevalence rates of 12.7% and 10.7% respectively. Current rates of panic disorder and gambling, however, were slightly lower.

Table 3

Prevalence Rates of Mental Disorders in Newly Admitted Offenders: Atlantic Region

Disorder	Lifetime % (*n*)	Current % (*n*)
Mood disorders	**33.8 (52)**	**18.8 (29)**
Bi-polar I disorder	1.9 (3)	1.9 (3)
Bi-polar II disorder	3.9 (6)	2.6 (4)
Other bi-polar disorders	0.6 (1)	0.6 (1)
Major depressive disorder	18.2 (28)	6.5 (10)
Dysthymic disorder (current only)	--	1.9 (3)
Depressive disorder not otherwise specified	5.8 (9)	4.5 (7)
Mood disorder due to a general medical condition	0	0
Substance-induced mood disorder	3.9 (6)	1.3 (2)
Psychotic disorders[a]	**7.1 (12)**	**6.5 (10)**
Alcohol and substance use disorders	**66.2 (102)**	**50.0 (77)**
Alcohol abuse or dependence	34.4 (53)	22.7 (35)
Non-alcohol substance abuse or dependence	55.2 (85)	42.2 (65)
Anxiety disorders	**30.5 (47)**	**29.9 (46)**
Panic disorder	14.3 (22)	13.6 (21)
Agoraphobia without history of panic	0.6 (1)	0.6 (1)
Social phobia	4.5 (7)	4.5 (7)
Specific phobia	1.9 (3)	1.9 (3)
Obsessive-compulsive disorder	1.3 (3)	1.3 (3)
Posttraumatic stress disorder	5.8 (9)	5.8 (9)
Generalized anxiety disorder	2.6 (4)	2.6 (4)
Anxiety disorder due to a general medical condition	0	0
Substance-induced anxiety disorder	3.2 (5)	2.6 (4)
Anxiety disorder not otherwise specified	6.5 (10)	6.5 (10)
Eating disorders	**0.6 (1)**	**0**
Anorexia Nervosa	0	0
Bulimia Nervosa	0	0
Binge-eating disorder	0.6 (1)	0
Pathological gambling	**9.1 (14)**	**7.1 (11)**
Borderline personality disorder (lifetime only)	**11.0 (17)**	**--**
Antisocial personality disorder (lifetime only)	**54.5 (84)**	**--**

Note. N = 154. "(0)" indicates no participant received a rating for that category. Percentages may not add to 100% as participants could meet the diagnostic criteria for more than one disorder. [a] = Psychotic disorders included are: schizophrenia, schizophreniform, schizoaffective, delusional disorder, brief psychotic disorder, substance abuse or general medical condition causing psychotic symptoms, substance induced psychotic disorder, and psychotic disorder not otherwise specified.

Table 4

Prevalence Rates of Mental Disorders in Newly Admitted Offenders: Quebec Region

Disorder	Lifetime % (*n*)	Current % (*n*)
Mood disorders	**34.5 (68)**	**18.8 (37)**
Bi-polar I disorder	6.1 (12)	4.1 (8)
Bi-polar II disorder	1.0 (2)	1.0 (2)
Other bi-polar disorders	1.5 (3)	1.0 (2)
Major depressive disorder	18.8 (37)	6.1 (12)
Dysthymic disorder (current only)	--	6.1 (12)
Depressive disorder not otherwise specified	1.0 (2)	0
Mood disorder due to a general medical condition	2.5 (5)	2.0 (4)
Substance-induced mood disorder	6.1 (12)	0.5 (1)
Psychotic disorders[a]	**5.6 (11)**	**3.6 (7)**
Alcohol and substance use disorders	**66.5 (131)**	**37.1 (73)**
Alcohol abuse or dependence	39.6 (78)	15.7 (31)
Non-alcohol substance abuse or dependence	51.3 (101)	28.9 (57)
Anxiety disorders	**39.1 (77)**	**32.0 (63)**
Panic disorder	8.6 (17)	6.6 (13)
Agoraphobia without history of panic	3.1 (6)	3.6 (7)
Social phobia	6.1 (12)	5.6 (11)
Specific phobia	10.2 (20)	8.1 (16)
Obsessive-compulsive disorder	1.5 (3)	1.0 (2)
Posttraumatic stress disorder	17.3 (34)	12.7 (25)
Generalized anxiety disorder	11.2 (22)	10.7 (21)
Anxiety disorder due to a general medical condition	0	0
Substance-induced anxiety disorder	4.1 (8)	1.0 (2)
Anxiety disorder not otherwise specified	1.0 (2)	0.5 (1)
Eating disorders	**3.0 (6)**	**2.0 (4)**
Anorexia Nervosa	0	0
Bulimia Nervosa	0.5 (1)	0
Binge-eating disorder	2.5 (5)	2.0 (4)
Pathological gambling	**9.6 (19)**	**3.6 (7)**
Borderline personality disorder (lifetime only)	**17.8 (35)**	**--**
Antisocial personality disorder (lifetime only)	**40.6 (80)**	**--**

Note. N = 197. "0" indicates no participant received a rating for that category. Percentages may not add to 100% as participants could meet the diagnostic criteria for more than one disorder. [a] = Psychotic disorders included are: schizophrenia, schizophreniform, schizoaffective, delusional disorder, brief psychotic disorder, substance abuse or general medical condition causing psychotic symptoms, substance induced psychotic disorder, and psychotic

disorder not otherwise specified.

Ontario Region

In the Ontario region, 78% of offenders met the diagnostic criteria for any disorder in their lifetime, while 68% met the current criteria for a disorder. With the exception of APD and substance abuse disorder, posttraumatic stress disorder (14.2%) and panic disorder (12.8%) were among the most frequent current diagnoses (see Table 5). There were also a significant percentage of offenders meeting the criteria for a current diagnosis of major depressive disorder (10.5%). Rates of APD in the Ontario region were similar to those reported in the Prairie region but are significantly lower than in the Atlantic and Quebec regions and in particular the Pacific region (37% vs. 64%; respectively; $\chi^2 = 38.35$, $df = 4$, $p < .0001$).

Prairie Region

Approximately 80% of participants met the criteria for any mental disorder in their lifetime. Rates for current disorders (i.e., present in the past month) were slightly lower with almost 75% of offenders meeting the diagnostic criteria. Among current prevalence rates, alcohol (41.2%) and substance use (43.1%) disorders, posttraumatic stress disorder (8.0%), pathological gambling (6.2%), and APD (39.7%) were the most common disorders (see Table 6).

Similar rates for these disorders were found in the four other regions, with the exception of a higher rate of APD found in offenders admitted in the Pacific region. Also, the Prairie region had the lowest prevalence rate of anxiety disorders for both lifetime and current rates; however, the difference was marginal.

Pacific Region

Eighty-eight percent of participants in this region met the criteria for lifetime prevalence of any disorder and 82% met the diagnostic criteria for any current disorder. As noted in Table 7, posttraumatic stress disorder (14.5%), panic disorder (10.1%), and pathological gambling (8.7%) were among the most common current disorders, other than APD and alcohol or substance abuse or dependence. As with all other regions, eating disorders were rarely identified.

Table 5

Prevalence Rates of Mental Disorders in Newly Admitted Offenders: Ontario Region

Disorder	Lifetime % (n)	Current % (n)
Mood disorders	**32.4 (96)**	**16.6 (49)**
Bi-polar I disorder	2.4 (7)	1.7 (5)
Bi-polar II disorder	0.7 (2)	0.3 (1)
Other bi-polar disorders	2.0 (6)	1.4 (4)
Major depressive disorder	23.3 (69)	10.5 (31)
Dysthymic disorder (current only)	--	2.7 (8)
Depressive disorder not otherwise specified	3.0 (9)	1.0 (3)
Mood disorder due to a general medical condition	1.4 (4)	0.3 (1)
Substance-induced mood disorder	2.0 (6)	1.0 (3)
Psychotic disorders[a]	**5.4 (16)**	**3.4 (10)**
Alcohol and substance use disorders	**59.8 (177)**	**42.9 (127)**
Alcohol abuse or dependence	40.2 (119)	18.2 (54)
Non-alcohol substance abuse or dependence	48.3 (143)	33.8 (100)
Anxiety disorders	**40.2 (119)**	**34.5 (102)**
Panic disorder	19.6 (58)	12.8 (38)
Agoraphobia without history of panic	4.1 (12)	3.0 (9)
Social phobia	8.1 (24)	7.1 (21)
Specific phobia	5.4 (16)	4.4 (13)
Obsessive-compulsive disorder	5.7 (17)	5.7 (17)
Posttraumatic stress disorder	18.2 (54)	14.2 (42)
Generalized anxiety disorder	9.5 (28)	9.5 (28)
Anxiety disorder due to a general medical condition	0	0
Substance-induced anxiety disorder	1.4 (4)	1.0 (3)
Anxiety disorder not otherwise specified	2.7 (8)	2.7 (8)
Eating disorders	**0**	**0**
Anorexia Nervosa	0	0
Bulimia Nervosa	0	0
Binge-eating disorder	1.0 (3)	0
Pathological gambling	**8.5 (25)**	**5.1 (15)**
Borderline personality disorder (lifetime only)	**15.2 (45)**	**--**
Antisocial personality disorder (lifetime only)	**36.5 (108)**	**--**

Note. N = 296. "(0)" indicates no participant received a rating for that category. Percentages may not add to 100% as participants could meet the diagnostic criteria for more than one disorder. [a] = Psychotic disorders included are: schizophrenia, schizophreniform, schizoaffective, delusional disorder, brief psychotic disorder, substance abuse or general medical condition causing psychotic symptoms, substance induced psychotic disorder, and psychotic disorder not otherwise specified.

Table 6

Prevalence Rates of Mental Disorders in Newly Admitted Offenders: Prairies Region

Disorder	Lifetime % (*n*)	Current % (*n*)
Mood disorders	**27.1 (88)**	**16.0 (52)**
Bi-polar I disorder	2.5 (8)	0.6 (2)
Bi-polar II disorder	1.2 (4)	0.6 (2)
Other bi-polar disorders	2.8 (9)	1.5 (5)
Major depressive disorder	15.7 (51)	7.1 (23)
Dysthymic disorder (current only)	--	3.4 (11)
Depressive disorder not otherwise specified	4.3 (14)	3.7 (12)
Mood disorder due to a general medical condition	0.3 (1)	0
Substance-induced mood disorder	1.5 (5)	0.9 (3)
Psychotic disorders[a]	**3.1 (10)**	**2.2 (7)**
Alcohol and substance use disorders	**68.3 (222)**	**58.8 (191)**
Alcohol abuse or dependence	52.9 (172)	41.2 (134)
Non-alcohol substance abuse or dependence	50.5 (164)	43.1 (140)
Anxiety disorders	**25.8 (84)**	**23.1 (75)**
Panic disorder	7.4 (24)	4.6 (15)
Agoraphobia without history of panic	1.2 (4)	1.2 (4)
Social phobia	4.0 (13)	3.7 (12)
Specific phobia	1.2 (4)	1.2 (4)
Obsessive-compulsive disorder	1.9 (6)	1.5 (5)
Posttraumatic stress disorder	8.9 (29)	8.0 (26)
Generalized anxiety disorder	4.9 (16)	4.6 (15)
Anxiety disorder due to a general medical condition	0	0
Substance-induced anxiety disorder	0.6 (2)	0.3 (1)
Anxiety disorder not otherwise specified	6.5 (21)	6.5 (21)
Eating disorders	**0.3 (1)**	**0.3 (1)**
Anorexia Nervosa	0.6 (2)	0
Bulimia Nervosa	0.6 (2)	0
Binge-eating disorder	0.3 (1)	0.3 (1)
Pathological gambling	**9.9 (32)**	**6.2 (20)**
Borderline personality disorder (lifetime only)	**13.8 (45)**	**--**
Antisocial personality disorder (lifetime only)	**39.7 (129)**	**--**

Note. N = 325. "0" indicates no participant received a rating for that category. Percentages may not add to 100% as participants could meet the diagnostic criteria for more than one disorder. [a] = Psychotic disorders included are: schizophrenia, schizophreniform, schizoaffective, delusional disorder, brief psychotic disorder, substance abuse or general medical condition causing psychotic symptoms, substance induced psychotic disorder, and psychotic disorder not otherwise specified.

Table 7

Prevalence Rates of Mental Disorders in Newly Admitted Offenders: Pacific Region

Disorder	Lifetime % (*n*)	Current % (*n*)
Mood disorders	**22.5 (31)**	**15.2 (21)**
Bi-polar I disorder	0.7 (1)	0.7 (1)
Bi-polar II disorder	0	0
Other bi-polar disorders	2.9 (4)	2.2 (3)
Major depressive disorder	10.9 (15)	4.4 (6)
Dysthymic disorder (current only)	--	2.2 (3)
Depressive disorder not otherwise specified	8.7 (12)	4.4 (6)
Mood disorder due to a general medical condition	0	0
Substance-induced mood disorder	2.2 (3)	2.2 (3)
Psychotic disorders[a]	**2.2 (3)**	**2.2 (3)**
Alcohol and substance use disorders	**73.2 (101)**	**60.1 (83)**
Alcohol abuse or dependence	45.7 (63)	24.6 (34)
Non-alcohol substance abuse or dependence	60.9 (84)	47.8 (66)
Anxiety disorders	**37.0 (51)**	**30.4 (42)**
Panic disorder	13.8 (19)	10.1 (14)
Agoraphobia without history of panic	4.4 (6)	2.9 (4)
Social phobia	5.8 (8)	4.4 (6)
Specific phobia	9.4 (13)	8.7 (12)
Obsessive-compulsive disorder	6.5 (9)	4.4 (6)
Posttraumatic stress disorder	16.7 (23)	14.5 (20)
Generalized anxiety disorder	10.1 (14)	8.7 (12)
Anxiety disorder due to a general medical condition	0	0
Substance-induced anxiety disorder	0.7 (1)	0
Anxiety disorder not otherwise specified	4.4 (6)	3.6 (5)
Eating disorders	**5.1 (7)**	**2.9 (4)**
Anorexia Nervosa	0.7 (1)	0
Bulimia Nervosa	0.7 (1)	0.7 (1)
Binge-eating disorder	4.4 (6)	2.9 (4)
Pathological gambling	**14.5 (20)**	**8.7 (12)**
Borderline personality disorder (lifetime only)	**23.9 (33)**	**--**
Antisocial personality disorder (lifetime only)	**63.8 (88)**	**--**

Note. $N = 138$. "(0)" indicates no participant received a rating for that category. Percentages may not add to 100% as participants could meet the diagnostic criteria for more than one disorder. [a] = Psychotic disorders included are: schizophrenia, schizophreniform, schizoaffective, delusional disorder, brief psychotic disorder, substance abuse or general medical condition causing psychotic symptoms, substance induced psychotic disorder, and psychotic disorder not otherwise specified.

Aboriginal Offenders

A breakdown of the results by Aboriginal and non-Aboriginal ancestry nationally is provided in Appendix G. These results should be interpreted with caution given the relatively small number of offenders in the Aboriginal group for some diagnostic categories. Rates of any Axis 1 disorder are higher for Aboriginal offenders. In terms of individual diagnoses, the most striking finding for all regions is a considerably higher rate of alcohol and substance use disorders and APD in the Aboriginal group. The majority of Aboriginal offenders were sampled from the Prairie and Pacific regions, consistent with the distribution of Aboriginal offenders in Canada. Of note is an apparently lower rate of psychotic disorders (1.7%) in the Aboriginal population; however, the overall rates were low and therefore should be interpreted with caution.

Prevalence Rates of Major Mental Illness and Co-occurring Disorders

Calculations were conducted to determine the prevalence rate of major mental illness that included any one of the following serious diagnoses: psychotic disorders, bipolar disorders, and major depression. The national rate was 12.4% (Table 8).

Given the high prevalence of alcohol and substance use disorders and APD in offender samples, additional analyses were conducted removing offenders who only had these disorders (see Table 8). Thirty-nine to forty-seven percent of participants across all regions met the diagnostic criteria for a current mental disorder other than APD or alcohol or substance use, highlighting that a significant proportion of inmates are admitted to CSC with mental disorders that may require treatment beyond those identified as criminogenic needs (i.e., procriminal attitudes, substance use).

Previous research has highlighted significantly poorer outcomes for CSC offenders with concurrent substance problems and mental disorders (Wilton & Stewart, 2012). In order to determine whether the offenders sampled were likely to exhibit a dual-diagnosis and, therefore, potentially present with a greater need to address these issues, additional analyses were conducted. A cross-tabulation analysis was used to establish the rates of co-occurring disorders in newly admitted offenders (see Table 9). The percentage of participants with a concurrent diagnosis of a mental disorder (other than APD) who also have a current alcohol or substance use disorder varies between 33% and 44% across the regions. The percentage of offenders with a current mental disorder who also have current diagnosis of APD is between 27% and 43%.

Global Assessment of Functioning

Scores from the modified GAF scale were analyzed to determine the level of impairment experienced by offenders for Axis I and Axis II (only BPD) disorders. Table 10 presents these results. Approximately 57% of offenders with a current Axis I mental diagnosis were rated as having no or minimal impairment to moderate impairment on the GAF, indicating a generally reasonably good level of functioning in daily life. Offenders with BPD[2] or a current diagnosis of primary psychotic symptoms fell within the lower levels of functioning on the GAF more frequently than did offenders with other diagnoses (with the exception of those with eating disorders, but these numbers are very low and should be interpreted with caution). It should be noted that the sample represented in Table 10 only accounts for individuals who met the criteria for a current Axis I disorder or BPD, and, therefore does not reflect the full sample ($N = 1,110$).

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[2] BPD is a complex personality disorder marked by emotional dysregulation, instability of interpersonal relationships, self-image, and impulsivity (American Psychiatric Association, 2000; Paris, 2005).

Table 8

Prevalence Rates of Mental Disorder in Newly Admitted Federal Offenders: National and Regional Results

	National N = 1,110 % (n)	Atlantic N = 154 % (n)	Quebec N = 197 % (n)	Ontario N = 296 % (n)	Prairies N = 325 % (n)	Pacific N = 138 % (n)
Criteria met for any disorder – lifetime	81.0 (899)	83.1 (128)	81.2 (160)	77.7 (230)	79.7 (259)	88.4 (122)
Criteria met for any disorder – current	72.8 (808)	74.7 (115)	70.1 (138)	67.6 (200)	74.5 (242)	81.9 (113)
Not including alcohol/substance use disorders						
Criteria met for any disorder – lifetime	68.4 (759)	71.4 (110)	70.1 (138)	67.2 (199)	62.5 (203)	79.0 (109)
Criteria met for any disorder – current	62.8 (697)	68.2 (105)	64.5 (127)	57.4 (170)	58.8 (191)	75.4 (104)
Not including APD						
Criteria met for any disorder – lifetime	76.8 (853)	75.3 (116)	78.7 (155)	75.0 (222)	76.6 (249)	80.4 (111)
Criteria met for any disorder – current	65.6 (728)	64.3 (99)	60.9 (120)	61.1 (181)	70.8 (230)	71.0 (98)
Excluding offenders with alcohol/substance use disorder or APD						
Criteria met for any disorder – lifetime	53.4 (593)	50.0 (76)	60.9 (120)	57.4 (170)	46.5 (151)	54.3 (76)
Criteria met for any disorder – current	43.5 (483)	44.8 (69)	46.7 (92)	43.9 (130)	39.1 (127)	47.1 (65)
Rates of major mental illness[a]	12.4 (138)	15.6 (24)	13.2 (26)	15.2 (45)	10.2 (33)	7.2 (10)

Note. APD = Antisocial personality disorder. [a] = Major mental illness corresponds to a diagnosis of any one of the following: major depressive disorder, bi-polar I disorder, bi-polar II disorder, or any psychotic disorder.

Table 9

Co-occurring Disorders: Alcohol and Substance Use Disorders and APD

	National % (*n*)	Atlantic % (*n*)	Quebec % (*n*)	Ontario % (*n*)	Prairies % (*n*)	Pacific % (*n*)
Lifetime prevalence rates	*n* = 899	*n* = 128	*n* = 160	*n* = 230	*n* = 259	*n* = 122
Mental disorder and alcohol/substance use (not including APD)	52.6 (473)	49.2 (62)	60.0 (96)	54.3 (125)	47.9 (124)	52.5 (66)
Mental disorder and APD (not including alcohol/substance use)	36.0 (324)	39.8 (50)	38.8 (62)	34.8 (80)	29.7 (77)	44.3 (55)
Current prevalence rates	*n* = 808	*n* = 115	*n* = 138	*n* = 200	*n* = 242	*n* = 113
Mental disorder and alcohol/substance use (not including APD)	37.9 (306)	40.9 (47)	32.6 (45)	38.0 (76)	36.4 (88)	44.3 (50)
Mental disorder and APD (not including alcohol/substance use)	34.2 (276)	41.7 (48)	32.6 (45)	34.5 (69)	26.9 (65)	43.4 (49)

Note. APD = Antisocial Personality Disorder.

Table 10

Frequency and Scores from the GAF Scale by Mental Disorder Axis for Current Diagnoses

GAF Score	National		Atlantic		Quebec	
	Axis I[a] Disorders $n = 440$	Axis II[b] Disorders $n = 176$	Axis I[a] Disorders $n = 69$	Axis II[b] Disorders $n = 17$	Axis I[a] Disorders $n = 87$	Axis II[b] Disorders $n = 35$
	% (*n*)	% (*n*)	% (*n*)	% (*n*)	% (*n*)	% (*n*)
81-90 absent	14.1 (62)	10.2 (18)	4.4 (3)	0	11.5 (10)	2.9 (1)
71-80 some mild	13.2 (58)	6.8 (12)	8.7 (6)	5.9 (1)	16.1 (14)	8.6 (3)
61-70 some persistent	11.6 (51)	10.2 (18)	10.1 (7)	5.9 (1)	14.9 (13)	11.4 (4)
51-60 moderate	17.7 (78)	13.1 (23)	13.0 (9)	0	13.8 (12)	8.6 (3)
41-50 some serious	18.6 (82)	20.5 (36)	21.7 (15)	23.5 (4)	21.8 (19)	28.6 (10)
31-40 major	15.2 (67)	22.2 (39)	26.1 (18)	29.4 (5)	10.3 (9)	25.7 (9)
21-30 inability to function	8.2 (36)	14.8 (26)	8.7 (6)	17.6 (3)	10.3 (9)	11.4 (4)
11-20 suffering from neglect	1.1 (5)	1.7 (3)	7.3 (5)	17.6 (3)	0	0
1-10 immediate danger	0.2 (1)	0.6 (1)	0	0	1.1 (1)	2.9 (1)

Note. GAF = Global Assessment of Functioning. [a] = Excluding alcohol and substance use disorders. [b] = Only Borderline Personality Disorder is included.

Table 10 (continued)

GAF Score	Ontario		Prairies		Pacific	
	Axis I[a] Disorders $n = 119$ % (n)	Axis II[b] Disorders $n = 46$ % (n)	Axis I[a] Disorders $n = 109$ % (n)	Axis II[b] Disorders $n = 45$ % (n)	Axis I[a] Disorders $n = 56$ % (n)	Axis II[b] Disorders $n = 33$ % (n)
81-90 absent	23.5 (28)	21.7 (10)	18.3 (20)	15.6 (7)	1.8 (1)	0
71-80 some mild	21.0 (25)	15.2 (7)	11.9 (13)	2.2 (1)	0	0
61-70 some persistent	15.1 (18)	13.0 (6)	10.1 (11)	13.3 (6)	3.6 (2)	3.0 (1)
51-60 moderate	23.5 (28)	23.9 (11)	19.3 (21)	15.6 (7)	14.3 (8)	6.0 (2)
41-50 some serious	10.9 (13)	15.2 (7)	20.0 (22)	20.0 (9)	23.2 (13)	18.2 (6)
31-40 major	5.0 (6)	8.7 (4)	11.0 (12)	13.3 (6)	39.3 (22)	45.5 (15)
21-30 inability to function	0.8 (1)	2.2 (1)	9.2 (10)	20.0 (9)	17.9 (10)	27.3 (9)
11-20 suffering from neglect	0	0	0	0	0	0
1-10 immediate danger	0	0	0	0	0	0

Note. GAF = Global Assessment of Functioning. [a] = Excluding alcohol and substance use disorders. [b] = Only Borderline Personality Disorder is included.

Discussion

Prior to the 1980s, very few studies provided estimates of the rates of mental disorders in prison populations (Brinded et al., 2001). In recent years, however, the need for determining these rates has become well recognized by researchers and correctional administrators. Establishing rates of mental disorders in incoming populations serves an important function in informing decisions regarding the allocation of resources and improving the understanding of the diverse needs of the offender population. This current study used the SCID-I and SCID-II to determine the prevalence rates of mental disorders in a sample of men offenders newly admitted to CSC institutions in all five regions. The results provide prevalence rates for disorders based on both lifetime and current (i.e., the past month) criteria.

When all diagnostic categories were included, the rates of any mental disorder suggest that the great majority of offenders met criteria for a current diagnosis. The results also highlight the number of offenders who cope with more than one mental disorder. Although the high rates of personality disorders and substance abuse and alcohol dependence disorders inflate these numbers, even omitting these conditions, and considering only mental illnesses that include at least one diagnosis of major depression, bipolar disorders, and psychotic disorders the rates are still over 12% nationally. Reported estimates from various sources among community-based populations are considerably lower than those found in our study. A 1991 survey of adults in Ontario estimated that the 1-year prevalence rate of APD in the general male population was 2.9% (Offord et al., 1996). A much cited epidemiological study in the U.S. (Robins & Regier, 1991) found a prevalence rate of APD of 4.5% in the general population (i.e., men and women living in the community). These compare to the national rate of 44% among male offenders in CSC. Seven percent of the sample met the criteria for substance abuse or dependence in their lifetime, compared to our estimate of over 50% of male offenders. The rate of current mood disorder in the national offender sample (17%) was considerably higher than that provided by a Canadian review of 18 international epidemiologic studies that reported rates of 5% to 10% for men in the general public (Waraich, Goldner, Somers, & Hsu, 2004).

In this study, despite some regional variations, overall rates of mental disorders across the regions are in line with previous studies involving offender populations (for example, see Brinded, Mulder, Stevens, Fairley, & Malcolm, 1999; Brinded et al., 2001; Herrman, McGorry,

Mills, & Singh, 1991; Motiuk & Porporino, 1991). The greatest discrepancy between regions was found in the prevalence rates for APD in the Ontario and the Pacific regions, with 37% and 64% of participants meeting the criteria, respectively. This may be related to several factors. The Ontario region has a larger percentage of offenders over the age of 50. Some researchers have noted that behaviours associated with APD generally decrease with age (Black, Baumgard, & Bell, 1995; Robins & Regier, 1991; Tasman & Mohr, 2011), with one study suggesting that antisocial behaviours decrease markedly after the age of 34 (Swanson, Bland, & Newman, 1994). In addition, the Pacific region had the second highest percentage of Aboriginal offenders, after the Prairie region. In this study, Aboriginal offenders had a higher prevalence of diagnoses of APD. Despite these discrepancies in estimates of rates of APD between regions, Brinded and colleagues (1999) argue that verifying the exact number of APD cases in a prison population would have little impact on the management of offenders. Consistent with this argument, in CSC, risk ratings are heavily weighted by the volume, diversity, and age of onset of the criminal history, irrespective of diagnosis of APD. Correctional plans and program assignment are created based on risk ratings and criminogenic factors, the presence of antisocial personality traits would not be the defining aspect for population management.

Also of note is the apparently higher rate of psychotic symptoms among offenders in the Atlantic region. This difference, however, was not statistically significant; a larger sample may serve to establish whether there is an actual higher prevalence of these disorders in this region. It should also be noted that the recruitment rate was highest in the Atlantic region which could have resulted in a larger percentage of the most impaired offenders being included in the study relative to other regions.

The lifetime prevalence rates obtained for depressive disorders were comparable across regions and are similar to a previous study conducted with Canadian federal offenders (Motiuk & Porporino, 1991) using the DIS. Motiuk and Porporino reported lifetime prevalence rates for depressive disorders of 21.5% applying stringent lifetime criteria; they did not include offenders residing in treatment centres. Combining the rate for various depression diagnoses (bi-polar disorders, major depressive disorder and depressive disorder not otherwise specified), we obtained a very similar rate across all regions in the present study. Likewise, current rates of psychotic disorders among offenders in this study are comparable to those estimated by Motiuk and Porporino.

Methodological Considerations

This study examined rates of mental disorder among men offenders recently admitted to CSC under new warrants of committal. Several choices regarding the methodology have implications for the interpretation of the results. First, the prevalence rates reported here may differ from those found in the general incarcerated CSC population (i.e., those who have received their institutional placement and no longer reside at reception centres). For some offenders, adjustment to the stress of a new sentence could increase the likelihood of a current disorder during the reception period. On the other hand, offenders who have more mental health needs typically have longer sentences and may face additional challenges in completing their correctional plans and earning discretionary release. Offenders who return to custody on a current sentence tend to have higher risk and need profiles and may also have higher rates of mental disorder (Stewart, Wilton, & Cousineau, 2011). These offenders were not included in among our sample. Secondly, of the offenders who refused and the small percentage who were not available to interview because they were transferred on reception may have been more likely to suffer from a mental disorder. We expect that our results therefore likely represent the lower end of estimates for mental health disorders within the federally incarcerated male population.

While the SCID provides reliable estimates of major mental disorder, the current report is particularly helpful in that it also provides results from the GAF which allows for considerations regarding the extent to which individuals are impaired due to their diagnosis. Many individuals with mental disorders lead productive lives and may not require extensive psychiatric services, or may not require them on an on-going basis. Our analysis indicates that among offenders who meet the criteria for a current Axis I mental diagnosis, approximately 57% of offenders were rated as experiencing no or minimal impairment to moderate impairment. Greater impairment was found for offenders who met the criteria for BPD (Axis II). Consistent with these findings, a previous study found that individuals with BPD are more likely to obtain lower scores on the GAF than those with major depressive disorder or other personality disorders (Gunderson et al., 2011). Given the nature of BPD and the instability of interpersonal relationships among those with the diagnosis, the disorder can be difficult to treat and manage, often requiring resource intensive interventions.

This current study confirms previous findings indicating that the presence of major mental disorders is higher among CSC offenders than among Canadians in the general public.

The recent CCHS-MH report found that rates of mental disorder in community members aged 15 and older that include at least one diagnosis for depression, bi-polar disorder, generalized anxiety disorder, alcohol abuse and dependence, cannabis abuse and dependence, and other substance abuse and dependence hover around 10% (Gilmour, 2014). The prevalence rate for male offenders in CSC for the same disorders is 71.6%. It should be noted, however, that these estimates include substance abuse disorders which are typically very high in correctional samples.

Conclusions

These results illustrate the challenge posed to CSC in providing the necessary correctional interventions and mental health services to assist in the management and rehabilitation of a significant percentage of the population with mental health needs. Previous research has examined the correctional outcomes of offenders with concurrent mental disorders and substance abuse and found that those offenders are more likely to return to custody (Wilton & Stewart, 2012) and to have issues with successful reintegration than those without any disorder (Baillargeon et al., 2009a; Baillargeon et al., 2009b; Collins et al., 2011; Edens, Peters, & Hills, 1997). Findings from the present study demonstrate that these challenges may be faced by a large number of offenders.

CSC has several programs currently in place to address the criminogenic and mental health needs of offenders highlighted in this research report, including correctional programs and a comprehensive mental health strategy. Findings from the present study will help to inform population management strategies for the delivery of mental health services within CSC. This includes future planning for the allocation of hospital beds in treatment centres, resource allocation among regions, and service delivery for intermediate level care. Yet to be determined is how correctional planning can maximise positive correctional outcomes of offenders, many of whom suffer the "triple stigma" (Hartwell, 2004) of criminal histories, along with substance abuse and mental disorders.

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Appendix A

Profile of Participants and Offenders who Declined to Participate: Atlantic Region

	Interviewed (N = 154) % (n)	Declined (N = 30) % (n)	χ^2	df
Ethnicity				
Aboriginal	11.0 (17)	16.7 (5)	1.92	3
Black	7.8 (12)	16.7 (5)		
White	75.3 (116)	63.3 (19)		
Other	5.8 (9)	3.3 (1)		
Marital status				
Single	47.4 (73)	50.0 (15)	0.87	3
Married/common-law	42.2 (65)	43.3 (13)		
Divorced, separated, or widowed	9.7 (15)	6.7 (2)		
Other	0.7 (1)	0		
Criminogenic need level				
Low	10.4 (16)	6.7 (2)	1.98	2
Medium	24.7 (38)	36.7 (11)		
High	64.9 (100)	56.7 (17)		
Criminal history risk level				
Low	23.4 (36)	20.0 (6)	0.62	2
Medium	39.0 (60)	46.7 (14)		
High	37.7 (58)	13.3 (10)		
Major admitting offence				
Homicide and manslaughter	3.9 (6)	0	0.29	1
Robbery	15.6 (24)	10.0 (3)	0.26	1
Drug offences	32.5 (50)	40.0 (12)	0.64	1
Assault	8.4 (13)	30.0 (9)	9.13**	1
Sexual offences	13.6 (21)	6.7 (2)	0.57	1
Property offences	11.0 (17)	10.0 (3)	0.02	1
Other violent offences	4.6 (7)	0	0.45	1
Other non-violent offences	10.4 (16)	3.3 (1)	0.77	1
Security level				
Minimum	39.0 (60)	30.0 (9)	2.49	2
Medium	57.1 (88)	60.0 (18)		
Maximum	3.9 (6)	10.0 (3)		
Sentence length				
Less than 5 years	83.8 (129)	80.0 (24)	0.27	2
5 years or more	14.9 (23)	20.0 (6)		
Indeterminate sentence	1.3 (2)	0		

Note. "0" indicates no participant received a rating for that category.

* $p < .05$. ** $p < .01$.

Appendix B

Profile of Participants and Offenders who Declined to Participate: Quebec Region

	Interviewed (N = 197) % (n)	Declined (N = 111) % (n)	χ^2	df
Ethnicity				
Aboriginal	5.1 (10)	17.1 (19)	14.67**	3
Black	7.1 (14)	10.8 (12)		
White	82.2 (162)	65.8 (73)		
Other	5.6 (11)	6.3 (7)		
Marital status				
Single	36.6 (72)	46.0 (51)	2.67	3
Married/common-law	53.3 (105)	44.1 (49)		
Divorced, separated, or widowed	9.6 (19)	8.1 (9)		
Other	0.5 (1)	1.8 (2)		
Criminogenic need level[a]				
Low	3.1 (6)	3.6 (4)	8.95*	2
Medium	36.4 (71)	20.0 (22)		
High	60.5 (118)	76.4 (84)		
Criminal history risk level[a]				
Low	4.6 (9)	2.7 (3)	8.96*	2
Medium	47.7 (93)	31.8 (35)		
High	47.7 (93)	65.5 (72)		
Major admitting offence				
Homicide and manslaughter	3.1 (6)	6.3 (7)	1.15	1
Robbery	11.7 (23)	15.3 (17)	0.83	1
Drug offences	29.4 (58)	18.9 (21)	4.12*	1
Assault	14.2 (28)	18.0 (20)	0.78	1
Sexual offences	12.7 (25)	9.0 (10)	0.96	1
Property offences	9.6 (19)	10.8 (12)	0.11	1
Other violent offences	9.1 (18)	11.7 (13)	0.52	1
Other non-violent offences	10.2 (20)	9.9 (11)	0.01	1
Security level[b]				
Minimum	28.2 (51)	15.5 (16)	17.78***	2
Medium	66.3 (120)	64.1 (66)		
Maximum	5.5 (10)	20.4 (21)		
Sentence length				
Less than 5 years	84.3 (166)	73.9 (82)	6.09*	2
5 years or more	15.2 (30)	21.6 (24)		
Indeterminate sentence	0.5 (1)	4.5 (5)		

Note. [a] $n = 3$ missing. [b] $n = 24$ missing.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Appendix C

Differences on Need Domains between Participants and Offenders who Declined

	Participants[a] (N = 197) % (n)	Declined (N = 111) % (n)	df	χ^2
Associates				
Low need	30.1 (59)	32.4 (36)	2	2.33
Moderate need	45.4 (89)	36.9 (41)		
High need	24.5 (48)	30.6 (34)		
Attitudes				
Low need	20.9 (41)	19.8 (22)	2	6.50*
Moderate need	40.8 (80)	27.9 (31)		
High need	38.3 (75)	52.3 (58)		
Community functioning				
Low need	89.8 (176)	85.6 (95)	2	4.04
Moderate need	9.7 (19)	9.9 (11)		
High need	0.5 (1)	4.5 (5)		
Employment				
Low need	40.8 (80)	36.0 (40)	2	2.41
Moderate need	53.1 (104)	53.2 (59)		
High need	6.1 (12)	10.8 (12)		
Marital				
Low need	75.0 (147)	68.5 (76)	2	3.80
Moderate need	16.8 (33)	16.2 (18)		
High need	8.2 (16)	15.3 (17)		
Personal-emotional				
Low need	37.2 (73)	28.8 (32)	2	9.55**
Moderate need	30.1 (59)	20.7 (23)		
High need	32.7 (64)	50.5 (56)		
Substance				
Low need	41.3 (81)	39.6 (44)	2	1.68
Moderate need	23.0 (45)	18.0 (20)		
High need	35.7 (70)	42.3 (47)		

[a] $n = 1$ missing.

Appendix D

Profile of Participants and Offenders who Declined to Participate: Ontario Region

	Interviewed (N = 296) % (n)	Declined (N = 90) % (n)	χ^2	df
Ethnicity				
Aboriginal	10.8 (32)	8.9 (8)	7.77	3
Black	21.0 (62)	28.9 (26)		
White	57.1 (169)	43.3 (39)		
Other	11.2 (33)	18.9 (17)		
Marital status				
Single	42.2 (125)	44.4 (40)	1.34	2
Married/common-law	47.0 (139)	48.9 (44)		
Divorced, separated, or widowed	10.8 (32)	6.7 (6)		
Criminogenic need level				
Low	9.5 (28)	10.0 (9)	3.89	2
Medium	35.5 (105)	24.4 (22)		
High	55.1 (163)	65.6 (59)		
Criminal history risk level				
Low	14.5 (43)	10.0 (9)	1.83	2
Medium	30.7 (91)	36.7 (33)		
High	54.7 (162)	53.3 (48)		
Major admitting offence				
Homicide and manslaughter	8.8 (26)	16.7 (15)	4.52*	1
Robbery	16.6 (49)	16.7 (15)	0.01	1
Drug offences	21.6 (64)	21.1 (19)	0.01	1
Assault	12.2 (36)	10.0 (9)	0.31	1
Sexual offences	19.6 (58)	6.7 (6)	8.34**	1
Property offences	8.8 (26)	5.6 (5)	0.97	1
Other violent offences	5.7 (17)	10.0 (9)	1.99	1
Other non-violent offences	6.8 (20)	13.3 (12)	3.93*	1
Security level[a]				
Minimum	28.1 (83)	14.9 (13)	6.91*	2
Medium	63.7 (188)	72.4 (63)		
Maximum	8.1 (24)	12.6 (11)		
Sentence length				
Less than 5 years	72.0 (213)	76.7 (69)	4.30	2
5 years or more	22.0 (65)	13.3 (12)		
Indeterminate sentence	6.1 (18)	10.0 (9)		

Note. [a] $n = 4$ missing.
* $p < .05$. ** $p < .01$.

Appendix E

Profile of Participants and Offenders who Declined to Participate: Prairies Region

	Interviewed (N = 325) % (n)	Declined (N = 38) % (n)	χ^2	df
Ethnicity				
Aboriginal	38.8 (126)	31.6 (12)	7.50	3
Black	3.1 (10)	5.3 (2)		
White	44.9 (146)	34.2 (13)		
Other	13.2 (43)	29.0 (11)		
Marital status				
Single	49.9 (162)	60.5 (23)	2.20	3
Married/common-law	35.7 (116)	23.7 (9)		
Divorced, separated, or widowed	8.3 (27)	5.3 (2)		
Other	6.2 (20)	10.5 (4)		
Criminogenic need level[a]				
Low	17.9 (58)	13.2 (5)	2.82	2
Medium	46.0 (149)	36.8 (14)		
High	36.1 (117)	50.0 (19)		
Criminal history risk level[a]				
Low	22.5 (73)	13.2 (5)	2.61	2
Medium	50.6 (154)	36.8 (14)		
High	26.9 (87)	50.0 (19)		
Major admitting offence[b]				
Homicide and manslaughter	5.9 (19)	2.6 (1)	0.20	1
Robbery	10.2 (33)	10.5 (4)	0.05	1
Drug offences	31.3 (101)	26.3 (10)	0.36	1
Assault	11.2 (36)	18.4 (7)	1.12	1
Sexual offences	13.9 (45)	18.4 (7)	0.58	1
Property offences	10.5 (34)	18.4 (7)	1.43	1
Other violent offences	5.6 (18)	2.6 (1)	0.14	1
Other non-violent offences	11.5 (37)	2.6 (1)	1.93	1
Security level[c]				
Minimum	36.5 (117)	18.9 (7)	3.56	2
Medium	62.3 (200)	78.4 (29)		
Maximum	1.3 (4)	2.7 (1)		
Sentence length				
Less than 5 years	81.9 (266)	86.8 (33)	0.67	2
5 years or more	17.5 (57)	13.2 (5)		
Indeterminate sentence	0.6 (2)	0		

Note. "0" indicates no participant received a rating for that category. [a] n = 1 missing. [b] n = 2 missing. [c] n = 5 missing.

45

Appendix F

Profile of Participants and Offenders who Declined to Participate: Pacific Region

	Interviewed (N = 138) % (n)	Declined (N = 45) % (n)	χ^2	df
Ethnicity				
Aboriginal	32.6 (45)	31.1 (14)	0.03	3
Black	0.7 (1)	2.2 (1)		
White	50.7 (70)	51.1 (23)		
Other	15.9 (22)	15.6 (7)		
Marital status				
Single	45.7 (63)	55.6 (25)	3.60	2
Married/common-law	46.4 (64)	31.1 (14)		
Divorced, separated, or widowed	8.0 (11)	13.3 (6)		
Criminogenic need level				
Low	1.5 (2)	6.7 (3)	1.78	2
Medium	27.5 (38)	24.4 (11)		
High	71.0 (98)	68.9 (31)		
Criminal history risk level				
Low	5.8 (8)	4.4 (2)	0.30	2
Medium	34.1 (47)	31.1 (14)		
High	60.1 (83)	64.4 (29)		
Major admitting offence[a]				
Homicide and manslaughter	6.5 (9)	11.4 (5)	0.47	1
Robbery	16.7 (23)	25.0 (11)	1.36	1
Drug offences	14.5 (20)	11.4 (5)	0.33	1
Assault	8.0 (11)	13.6 (6)	0.61	1
Sexual offences	18.1 (25)	6.8 (3)	3.43	1
Property offences	21.0 (29)	15.9 (7)	0.64	1
Other violent offences	5.1 (7)	9.1 (4)	0.33	1
Other non-violent offences	10.1 (14)	6.8 (3)	0.16	1
Security level[b]				
Minimum	17.7 (24)	15.6 (7)	0.12	2
Medium	72.1 (98)	73.3 (33)		
Maximum	10.3 (14)	11.1 (5)		
Sentence length				
Less than 5 years	68.1 (94)	75.6 (34)	2.44	2
5 years or more	28.3 (39)	17.8 (8)		
Indeterminate sentence	3.6 (5)	6.7 (3)		

Note. [a] n = 1 missing. [b] n = 2 missing.

Appendix G

Prevalence of Mental Disorders for Aboriginal and Non-Aboriginal Offenders

Prevalence Rates of Mental Disorders by First Nations, Métis, All Aboriginal and Non-Aboriginal Offenders Groups (N = 1110)

Disorder	Aboriginal						Non-Aboriginal	
	First Nations Lifetime (N = 172)	First Nations Current (N = 172)	Métis Lifetime (N = 56)	Métis Current (N = 56)	All Aboriginal[b] Lifetime (*N* = 230)	All Aboriginal[b] Current (*N* = 230)	Lifetime (N = 880)	Current (N = 880)
Any disorder	93.0 (160)	82.6 (142)	94.6 (53)	85.7 (48)	93.5 (215)	83.0 (191)	77.7 (684)	59.7 (525)
Any axis I disorder	89.5 (154)	82.6 (142)	89.3 (50)	85.7 (48)	89.6 (206)	83.0 (191)	73.2 (644)	59.7 (525)
Axis I disorders								
Mood disorders	31.4 (54)	19.8 (34)	25.0 (14)	12.5 (7)	30.0 (69)	17.8 (41)	30.2 (266)	16.7 (147)
Psychotic disorders[a]	†	†	†	0	2.6 (6)	†	5.2 (46)	3.8 (33)
Alcohol or substance use disorders	87.2 (150)	76.7 (132)	80.4 (45)	76.8 (43)	85.2 (196)	76.5 (176)	61.0 (537)	42.6 (375)
Anxiety disorders	37.8 (65)	35.5 (61)	26.8 (15)	23.2 (13)	34.8 (80)	32.2 (74)	33.9 (298)	28.9 (254)
Eating disorders	†	†	†	†	2.6 (6)	†	1.0 (9)	†
Pathological gambling	12.8 (22)	10.5 (18)	25.0 (14)	12.5 (7)	15.7 (36)	10.9 (25)	8.4 (74)	4.5 (40)
Any axis II disorder	62.2 (107)	--	66.1 (37)	--	63.0 (145)	--	44.1 (388)	--
Axis II disorders								
BPD	20.9 (36)	--	25.0 (14)	--	21.7 (50)	--	14.3 (126)	--
APD	59.3 (102)	--	64.3 (36)	--	60.4 (139)	--	39.9 (351)	--

Note. " -- " indicates a value was not possible. Percentages may not add to 100% as participants could meet the diagnostic criteria for more than one disorder.
† = *n* fewer than 6. [a] = Psychotic disorders included are: schizophrenia, schizophreniform, schizoaffective, delusional disorder, brief psychotic disorder, substance abuse or general medical condition causing psychotic symptoms, substance induced psychotic disorder, and psychotic disorder not otherwise specified. [b] = The "All Aboriginal" groups includes First Nations, Métis, and Inuit participants.