

EDMONTON POLICE SERVICE

REPORT TO THE EDMONTON POLICE COMMISSION

DATE:

2017 Jan 31

TS: 9350

SUBJECT:

Dr. Sandy Jung Research Presentation - Review of Reported Sexual

Assaults Against Persons 16 Years and Older in Edmonton

RECOMMENDATION:

That this presentation be accepted by the Edmonton Police Commission for information purposes.

BACKGROUND:

On December 10th, 2014 EPS approved a proposal by Dr. Sandy Jung of MacEwan University entitled "Exploring the Profile of Sexual Assault Perpetrators and Their Victims, the Use of Resources in Investigations, and the Potential to Prevent Sexually Assaultive Behaviour"

The research had three broad objectives:

- 1. To identify what sexual assault cases in Edmonton look like. Examine similarities and differences when compared to the larger national context. Examine the profile of the offenders and victims in sexual assault cases.
- 2. To address practical issues related to the reporting of sexual assault crimes and the investigation of newer modus operandi in the execution of sexual assaults and the destruction of evidence. Examine relevance and commonality of factors to proactively target and therefore strive to prevent future incidences.
- 3. To examine the factors that are associated with future sexual assault occurrences in likelihood, severity, and frequency. These characteristics would be initially identified through a review of existing research and measures that are identified known correlates, and the variables of interest would be expanded to include variables that are seen as conceptually related to increased risk for sexual assault crimes.

Dr. Jung's research has been completed and her work has been published in *Sexual Abuse:* A *Journal of Research and Treatment* (http://journals.sagepub.com/doi/full/10.1177/1079063216681563). She will be presenting her findings at Edmonton Police Commission on February 16th, 2017.

CONCLUSION:

For review and consideration.

ADDITIONAL INFORMATION ATTACHED:

- 1. Presentation Review of Police-Reported Sexual Assaults Against Persons 16 Years and Older in Edmonton
- 2. Research Paper Review of Police-Reported Sexual Assaults Against Persons 16 Years and Older in Edmonton

Prepared By: Daniel Spanu, Manager – Strategic Planning, Evaluation, and Research;

Office of Strategy Management

Reviewed By: Staff Sergeant Marc Cochlin, Strategic Business Planning Section;

Office of Strategy Management

Reviewed By: Superintendent Chad Tawfik,

Office of Strategy Management

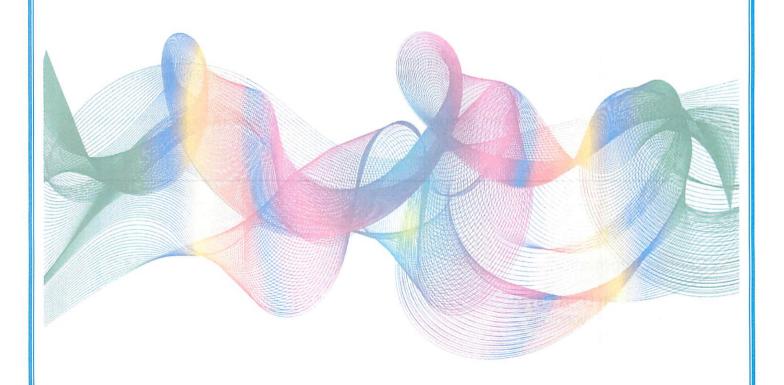
Chief of Police:

Date: FEB 0 2 20



Review of Reported Sexual Assaults Against Persons 16 years and Older in Edmonton

October 2016 (revised)



Prepared by: Sandy Jung, Ph.D., R.Psych. Associate Professor Department of Psychology

Review of Reported Sexual Assaults Against Persons 16 years and Older in	n Edmonton
--	------------

Acknowledgments:

The author expresses tremendous gratitude to the Office of Strategy Management (OSM), the Sexual Assault Section (SAS), the Business Performance Unit, and the Chief's Committee of the Edmonton Police Service, and specifically to Deputy Chief Brian Roberts, Staff Sergeant Devin Laforce, Staff Sergeant Shawna Grimes, and Lindsay Broderick for their direction in this research. Special thanks to Superintendent Chad Tawfik, Inspector Carlos Cardoso, Staff Sergeant Devin Laforce, and Detective Elaine Jensen for their review and valuable feedback on this report. This research would not have been completed without the enormous help provided by Wojciech Kujawa, Maxine Tremblay, and Megan White.

Note:

The empirical examination of sexual violence risk assessment as described in this report has been submitted to a peer-reviewed journal, *Sexual Abuse: A Journal of Research and Treatment*, and is currently under review. Reference citation is as follows:

Jung, S. (in press). Sexual violence risk prediction in a police context. Sexual Abuse: A Journal of Research and Treatment.

Contact Information:

Sandy Jung, Ph.D., R.Psych. Department of Psychology MacEwan University P.O. Box 1796, Edmonton, AB T5J 2P2

780.497.4597 sandy.jung@macewan.ca Psychology Crime Lab @ MacEwan University (PCL@M) website: sites.google.com/a/macewan.ca/psychology-crime-lab-macewan-university/

Executive Summary

- There are an increasing number of reported sexual assault occurrences at Edmonton Police Service (EPS) in Edmonton.
- Sexual assaults against victims ages 16 and older that were reported to EPS from 2010 to 2014 were examined, and 2,569 occurrences were extracted and summarized for demographic information. A stratified random sample of 300 cases was obtained from 2010 to 2013 to examine offence, perpetrator, and victim characteristics.
- Of the 2,569 occurrences in the 5-year span, 34% had identifiable perpetrators and 28% were cleared by charge.
- The investigation of sexual assaults in Edmonton was shown to be challenged by the relative absence of witnesses, digital evidence, and biological evidence, among other issues.
- Most sexual assaults were committed by males who typically had past criminal involvement and were White or Aboriginal. Victims were predominantly female and mostly White or Aboriginal and younger than their perpetrators.
- Two-thirds of the sexual assaults were committed by someone known to the victim with 20% who were dating or cohabitating partners of the victim either in the past or at the time of the offence.
- Two published sexual violence risk measures for convicted sex offenders, Static-99R and Static-2002R, were able to validly predict recidivism for the police-reported sample of nonconvicted perpetrators. This finding has implications for the use of risk assessment at a front line policing level to prioritize and allocate resources.

Introduction

Well known in the criminal justice system is that incidents of sexual offending are not always reported, and therefore statistics on sexual crimes are often underestimates of true crime rates (Taylor & Gassner, 2010). The reasons for under-reporting are varied and are influenced by the familiarity between the victim and their assailants, victim perceptions of the attack, and the severity of the emotional consequences from the assault (e.g., posttraumatic stress disorder symptoms) (Jones et al., 2009; Walsh & Bruce, 2014). In one report from the Canadian Centre for Justice Studies (Brennan & Taylor-Butts, 2008), it is estimated that one in ten sexual assaults are reported to the police, and in a 2014 victimization study, only 5% of sexual assaults experienced by Canadians aged 15 years and older were reported to police (Perreault, 2015). What we do know, despite these limitations, is that police-reported sexual assaults have decreased and increased over the past few years in Alberta (e.g., sexual assaults decreased by 7% from 2012 to 2013, decreased by another 3% from 2013 to 2014, and increased by 1% from 2014 to 2015), with a similar trend seen in Edmonton as well (Statistics Canada, 2014, 2015, 2016). In addition to the caveat of under-reporting, sexual crimes have, in general, one of the lowest clearance rates among all violent crimes. An older report indicated that less than half of sexual assaults (42%) were cleared by charge in 2007 (Brennan & Taylor-Butts, 2008).

Much of the existing research that profiles sexual assault have been sampled from various sources, including, but is not limited to emergency departments (Jones et al., 2009), mental health clinics (Creighton & Jones, 2012), community surveys (Walby & Allen, 2004), victim medical exams at a medical clinic (Grossin et al., 2003; Ingemann-Hansen et al., 2009; Riggs et al., 2000), and victim services (Larsen et al., 2015). Statistics on police-reported sexual assaults are typically examined through large aggregate data, such as those offered by Statistics Canada, but with a limited number of variables. Despite the previously-mentioned limitations of police-reported data (e.g., under-reporting), Jones, Harkins, and Beech (2015) assert that law enforcement is generally the first offender-focused service that will identify a suspect in a sexual assault case, and therefore they are in a unique position to coordinate prevention and early intervention responses. Therefore, surveying police-reported cases of sexual assault is an invaluable resource to identify ways to explore the circumstances in which sexual assaults occur in the hopes of preventing sexual assaults. Larsen et al. (2015) highlight that identifying as well as quantifying the most important contributory factors to sexual assault may be a prerequisite in both the prevention of assaults and the improvement of early interventions.

The purpose of this research endeavour was to describe perpetrator, complainant, and sexual assault characteristics of police-reported sexual assaults between the years 2010 to 2014, and to examine the predictive validity of existing sexual violence risk assessment measures with police-reported sexual assault perpetrators.

Description of Reported Sexual Assaults

At a policing level, risk management may provide further harm reduction and potentially can increase public safety. Evidence-based policing has grown to become the standard in law enforcement services to develop, implement, and evaluate proactive crime-fighting strategies (Sherman, 2013). It is an approach to controlling crime and disorder that promises to be more effective and less expensive than the traditional response-driven models and to develop defensible strategies in policing that are supported by the empirical science. There are many ways in which empirical science can be used to refine police services, including the risk management of offenders. For example, to reduce further recidivism of sexual assault perpetrators, the use of descriptive data can be helpful to identify areas where greater attention and focus could be beneficial. The inferences drawn from descriptive data may be helpful in directing decisions that could not only reduce sexual crimes but increase proactive opportunities to prevent reoffending behaviours of identified perpetrators. According to Maxim, Garis, Plecas, and Davies (2015):

Decision making based on evidence will generally allow you to make better decisions. Evidence-based decision making has the advantage of making the process transparent. Outsiders can become privy to the foundations of the decision. (p. 98)

Moreover, Justice Research and Statistics Association (JRSA, 2005) note that the greater role of police crime intelligence analysts show that police services are using more and more of their data to examine the profile of the cases to improve both their daily functions and for planning future initiatives. In addition to using descriptive data from one's own police service, it is important to frame this data in the wider context (Maxim et al., 2015).

There exist several reports describing the characteristics of sexual assaults. One Canadian report characterized sexual assaults as most likely perpetrated by males (97%) who were older than their victims, mostly in the younger age categories (12 to 17 years, followed by 18 to 34 year olds), and known to the victims (82%), and victims were disproportionately female (81%) (Brennan & Taylor-Butts, 2008). Other reports from the U.S., Denmark, and France were more victim-focused given the source of sampling from victim treatment centers and hospitals where the medical examinations were conducted. Their findings generally showed that a majority of victims were female, assaults primarily involved vaginal penetration, victims had average ages across studies between 15 to 25 years, and the assailant was a stranger in about 25% to 51% of the cases (Grossin et al., 2003; Ingemann-Hansen et al., 2009; Larsen et al., 2015; Riggs et al., 2000). However, it is notable that crime statistics often include the breadth of contact sexual offending perpetrated against both child and adult victims, and sexual assault is defined in various ways. For example, a recent report from the Office of Sex Offender Sentencing, Monitoring, Apprehending, Registering, and Tracking of the U.S. Department of

Justice pointed out that there was no single definition of sexual offending used across research studies and crime statistics reports (U.S. Department of Justice, 2014). At a local level in the Edmonton Police Service (EPS), sexual assaults that involved child victims up to the age of, but not including 16 years, are investigated by child protection section, while occurrences that involved complainants who were 16 years or older at the time of report were more likely to be investigated under the purview of the sexual assault section. Therefore, comparisons between police-reported sexual assaults against persons who are 16 years and older with the existing crime statistics reports are untenable and may not be useful for local police to better understand the demographic characteristics and circumstances of sexual assaults reported to police in Edmonton.

Hence, the first goal of this research is to conduct a descriptive analysis of sexual assault occurrences. Specifically, this report examines police-reported occurrences of sexual assault reported to EPS over a five-year period from 2010 to 2014 and includes variables that are already available to EPS through their police reporting system. In addition to examining all police-reported sexual assaults during this five-year period, detailed characteristics of the offences, perpetrators, and victims were analyzed using a random sample of 300 cases over a four-year period from 2010 to 2013 and are presented in this report.

Validation of Risk Assessment

In the correctional psychology and criminology literature, a great amount of attention has focused on the treatment and management of convicted sex offenders. The overall goal of tertiary prevention is to intervene after sexual violence has occurred and to implement interventions that are designed to minimize the impact of the violence and to restore safety as soon as possible (Chrisler & Ferguson, 2006). The first step in this process is to assess the level of risk that an offender may pose if released into the community. There are two reasons for this particular goal that are practical and preventative.

At a practical level, there is utility in using risk assessment to prioritize cases. In the corrections and forensic psychology fields, the risk, need, and responsivity principles, which were originally introduced to improve the effectiveness of rehabilitation of offenders, have been demonstrated for use with treating and managing sex offenders (Hanson et al., 2009). The risk principle is relevant here and specifies that the intensity of services should be commensurate with the level of risk (Andrews & Bonta, 1994, 2010)—for example, higher risk cases should receive greater attention and intensity of treatment services (and conversely, it would be an inefficient use of resources to allocate more services to low risk offenders). In a police context, it would make sense to allocate more monitoring services of those perpetrators who are assessed to be at a higher risk for reoffending violently.

At a preventative level, risk assessments offer an empirically-supported approach to identifying those offenders who are at the greatest risk to commit further violent offences. When

considering risk assessments at a front line level, using a valid risk measure would be useful to identify sexual assault perpetrators who may be more likely to offend again. Hence, information regarding a perpetrator's risk level would offer a more accurate and defensible information to the court when they are asked to make decisions regarding monitoring and bail.

Sherman (2013) has emphasized that the use of quantitative methods, specifically statistical prediction approaches over clinical strategies, would fall under the purview of evidence-based policing practices. The use of risk assessment in policing is already seen in the field of intimate partner violence (e.g., Hilton et al., 2004; Storey, Gibas, Reeves, & Hart, 2011). In the criminal justice psychology literature that has advanced the field of assessment. treatment, and management of convicted sex offenders, there is a plethora of research (e.g., Beech, Fisher, & Thornton, 2003; Hanson 2009). Hence, the use of evidence-based risk assessments may also help guide policing practice in the prioritization of sexual assault investigation cases and has the potential to prevent further criminal behaviour by identifying high risk perpetrators. However, such validation studies have yet to be published. Jones et al. (2015) reported that a risk assessment model, called the Threat Matrix (based on an existing validated measure, the Risk Matrix, which is used with convicted sex offenders in the United Kingdom). was developed for use by police to identify and assess potential sex offenders from the hundreds of unconvicted suspects and was recently implemented by law enforcement in the United Kingdom. The Threat Matrix has shown promising face validity. For example, the sample of offenders evaluated using the Threat Matrix produced a data spread across risk categories similar to that seen among convicted sex offenders, and the data showed a positive correlation with the professional judgment of police officers (Jones et al., 2015). However, the Threat Matrix is currently being examined for its predictive validity. Until the empirical results on the Threat Matrix is available, it is still unclear whether the Threat Matrix is a valid measure to assess sexual violence risk in a police context.

Hence, the second goal of this research is to examine the validity of existing risk instruments to assess the sexual violence risk of perpetrators under investigation. Two risk measures are examined and include the Static-99R and Static-2002R, which are the two most commonly used instruments in Canada (e.g., 68% of community and 88% of residential programs use Static-99; 42% of community and 25% of residential programs use Static-2002; McGrath et al., 2010). If published risk assessment measures are applicable to a police sample, then the findings would suggest that existing sex offender research can extend to police practice.

The Current Research

The present study examines demographic, offender and complainant, assault, and criminal justice variables of police-reported occurrences of sexual assault that have been reported to the Edmonton Police Service (EPS) over a five-year period from 2010 to 2014, with a comprehensive set of variables coded from a random sample of 300 cases. It is hoped that this descriptive profile of police-reported sexual assaults will offer some insights into the circumstances in which sexual assaults occur with the intention of identifying ways to prevent sexual assaults. This study also examines whether two existing actuarial measures, the Static-99R and Static-2002R, which are already used widely in correctional institutions to assess the risk for sexual violence recidivism, can be reliably coded from police information and whether they can predict risk for further violence and sexual offending with a non-convicted sample of identified perpetrators who offended against victims ages 16 and older. Neither of these measures have been validated with a police-reported sample. It is expected that empirically-supported measures of sexual recidivism risk would apply to pre-adjudicated sexual assault perpetrators.

Methodology

Sample

All occurrences of sexual assault against victims, aged 16 years and over, reported to the Edmonton Police Service (EPS) between and including the years 2010 and 2014 were extracted. To identify these occurrences, a broad extraction was undertaken using the following codes from the uniform crime reports (UCR):

- Aggravated sexual assault (1310)
- Anal intercourse (1375)
- Bestiality commit/compel/incite person (1380)
- Corrupting morals of a child (1365)
- Incest (1360)
- Invitation to sexual touching (1350)
- Luring a child via a computer (1370)

- Sexual assault weapon (1320)
- Sexual assault (1330)
- Sexual exploitation (1355)
- Sexual exploitation of a person with a disability (1356)
- Sexual interference (1345)
- Sexually explicit material to child with intent (1367)
- Voyeurism (1385)

Data reduction. As seen in Table 1, 6,324 occurrences were extracted. However, there were multiple lines extracted for some individual occurrences (i.e., same occurrence number listed on multiple lines), which may reflect multiple charges and/or multiple perpetrators and victims. Occurrences were limited to single lines and therefore repeated lines were excluded. Although this would exclude some important information (e.g., other perpetrators, additional victims, other charges), it was necessary to reduce the data to more statistically meaningful units, particularly when working with a large database.

Table 1. Data reduction.

Year	# of charges	# of occurrences	# sexual assaults against non-child victims	# sexual assaults with identifiable perpetrator
2010	1194	897	458	147
2011	1189	951	542	188
2012	1275	980	523	172
2013	1312	1018	527	174
2014	1354	1040	519	184
	6324	4886	2569	865

Once these repeated entries were removed, 4,886 occurrences remained, but these still included offences against child victims. Victims under the age of 16 years were also removed from the dataset and this left 2,569 occurrences¹. Of these occurrences, there were 865 occurrences with identifiable perpetrators. It is important to note that these reported cases may

¹ The initial discussion regarding this research was to focus on occurrences relevant to the Sexual Assault Section at EPS. Therefore, the eligibility criteria included cases that involved complainants who were 16 years or older at the time of report.

include historical cases (i.e., offences that occurred several years prior to reporting).

Stratified random selection of cases. The second phase examined the validity of existing risk assessment measures in the prediction of future sexual offending charges and convictions with a police sample. Cases were extracted from police occurrences over a 4-year period from 2010 to 2013; specifically, a stratified random sample of 75 cases from each year was collected. Cases from 2014 were omitted to ensure there would be an adequate length of follow-up time to examined recidivism. The total sample for this phase of the research included 300 cases of sexual assault and represented 44.1% of all reported sexual assault cases from 2010 to 2013 with an identifiable perpetrator (n = 681).

Measures

To examine the random selection of 300 cases, a coding form was developed to operationalize offence characteristics, offender features, and victim features (see Appendix). Items were also taken from two validated measures of sexual violence risk, the Static-99R and Static-2002R.

Static-99R. The Static-99R (Hanson & Thornton, 1999; Harris, Phenix, Hanson, & Thornton, 2003) is a static risk assessment tool used to assess risk of sexual recidivism among adult males who have been charged with a sexual offense. The instrument includes 10 items, and total scores range from -3 to 12. Given the police context in which the items were coded, two items were modified. The first item, age at release (item #1 on the Static-99R), refers to the age when the offender is at exposure to risk (Harris et al., 2003). In the police context, the age item was modified and defined as the age of the perpetrator at the time of arrest. The second item, any convictions for non-sexual violence in the index offence (item #3 on the Static-99R) was modified to refer to any charges or arrests for non-sexual violence in the index offence, given that the police officer would be placing a charge(s) on the perpetrators at the time he/she is investigating the perpetrator.

The Static-99/R has demonstrated excellent inter-rater reliability (intra-class correlation, ICC = .98 in Rettenberger, Matthes, Boer, & Eher, 2010; ICC = .90 in Barbaree, Seto, Langton, & Peacock, 2001; ICC = .91, Langton, Barbaree, Hansen, et al., 2007), although one study found markedly lower values in an adversarial field setting (ICC = .64 in Murrie et al., 2009). The Static-99/R also has good predictive validity for sexual, general violent, and general criminal recidivism (AUCs = .68, .70, and .72, respectively; Babchishin, Hanson, & Helmus, 2012).

Static-2002R. The Static-2002R contains 14 items grouped into five content areas (age at release, persistence of sexual offending, deviant sexual interests, relationship to victims, general criminality), and total scores can range from -2 to 13 (Phenix, Doren, Helmus, Hanson, & Thornton, 2008). Similar to the coding of the Static-99R, the age at release item (item #1) of the Static-2002R refers to the age when the offender is at exposure to risk (Phenix et al., 2008),

and this item was modified to the age of the perpetrator at the time of arrest.

Inter-rater reliability has been shown to be high with an ICC of .98 (Helmus & Hanson, 2007); however, the authors noted that this was exceptionally high and should not be considered representative of the typical circumstances in which the Static-2002/R would be used. Modest internal consistency estimates were found for the content area subscales (Cronbach's α's for subscales ranged from .45 to .74 and for total score, .68; Langton, Barbaree, Hansen, et al., 2007). The Static-2002/R has been shown to predict sexual, violent, and general recidivism with area under curve values (AUCs) ranging from .64 to .79, and has been cross validated in several studies, often showing that it can outperform the Static-99 (Bengtson, 2008; Langton, Barbaree, Hansen, et al., 2007; Langton, Barbaree, Seto, et al., 2007; Looman & Abracen, 2010; Stalans, Hacker, & Talbot, 2010).

Procedure

Institutional Research Ethics Approval. This research was reviewed and approved by the MacEwan Research Ethics Board and the Strategic Planning, Evaluation and Research Unit from the EPS. It was deemed unreasonable and impractical to obtain consent directly from parties involved in the cases; therefore, consent was waived for the purpose of conducting this research.

Phase I – all reported occurrences (N = 2569). A file search of cases that were investigated by EPS between the years of 2010 and 2014, using the COGNOS software, was conducted by EPS's Business Performance Unit to identify sexual assault investigations. These cases were converted to an Excel spreadsheet and merged into a single database, subsequently converted to a statistical package called SPSS. The extracted data included a limited number of variables: age, race, height, citizenship, occupation, and gender of the perpetrators and victims, UCR code (most serious offence, e.g., assault, aggravated assault), relationship between the victim and perpetrator, use of weapons (if documented), and date and location of occurrence.

Phase II – stratified random selection (N = 300). An extensive retrospective review of multiple electronic sources was used to conduct the data collection. Three broad groups of variables related to offence, perpetrator, and victim characteristics were coded from these sources. Data were extracted from police file documentation, which almost always included investigator notes (both handwritten and typed), documented evidence, and arrest details. Less consistently available, transcripts of interviews with the offenders, complainants, and witnesses, written victim and witness statements, sexual assault response team kits, correspondence, and other file documents available in the file and relevant to the case were reviewed when they were available. In addition to exhausting these sources, other electronic sources were examined and included information extracted from the Canadian Police Information Centre (CPIC), Justice Online Information Network (JOIN), and Niche Records Management System.

Using the coding form, police file documentation was reviewed by the primary researcher who conducted the coding of the variables for each case. A comprehensive coding form and a single rater of the information sources adhered to this coding form throughout the data collection. In order to assess recidivism accurately, offenders were included in the analysis only if the follow-up period was longer than one year to allow for a minimal amount of time post-release or post-arrest (if not in custody). Data from CPICs, JOINs, and Niche were used to code reoffending information. Only convictions and charges that were subsequent to the index occurrence were analysed to determine if there were (a) any new convictions and/or charges, (b) any violent convictions and/or charges (e.g., assault), and (c) any sexual offence convictions and/or charges. The latter could include incidents that were non-contact, but sexual in nature.

Statistical Note

The results are presented in two sections. The first describes the overall sample obtained. Descriptive statistics include percentages and frequencies for categorical variables, and means and standard deviations for continuous variables. Note that standard deviations refers to the dispersion of the data; for example, if you minus and add the standard deviation (SD) to the mean, this will give you the range of values that accounts for 68.2% of the data, and if you minus/add two SDs, then you would get the range of values that accounts for 95% of the values (e.g., for accused's age, M = 34.5 and SD = 10.5, so 34.5 ± 10.5 would indicate that 68% of the accused's ages fall between 24 to 45 and 95% fall between 13.5 to 55.5).

The second section provides an empirical examination of whether existing risk assessment measures for sexual violence risk are applicable to a police reported sample of sexual assault perpetrators. In order to understand how predictive validity is determined, it is important to explain that predictive accuracy is represented by the Area Under the Receiver Operating Characteristic Curve (AUC from ROC analyses). It is the recommended effect size statistics for recidivism prediction because it is not affected by the base rate of recidivism (Rice & Harris, 2005). Therefore, analyses would be robust when there are low base rates of recidivism (i.e., only a very small number of the offenders in a sample reoffend). The value of the AUC can vary between 0 and 1, where an AUC value of .5 indicates the level of prediction that would be expected by chance (50%). An AUC value less than .5 indicates prediction at *less* than chance levels. AUC values between .5 and 1 indicate prediction exceeding chance, with numbers closer to 1 showing stronger predictive accuracy. Also worth noting is that AUCs of .56 correspond to a small effect, while .64 reflects a moderate effect, and .71 reflects a large effect (Rice & Harris, 2005). Simply put, an AUC of 1 represents a perfect test; an area of .5 represents a worthless test.

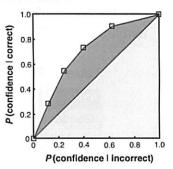
The confidence interval is also important to examine and is the range of values (interval) that act as good estimates for an instrument's ability to predict. Because .5 indicates chance level, then a confidence interval that does not include .5 demonstrates predictive accuracy

significantly greater (or less) than chance. For example, if the confidence interval for the AUC is 0.59 to 0.76, the predictive validity of the instrument is good because it does not include 50% or 0.50. However, if the confidence interval ranged from 0.48 to 0.80, then the instrument does not predict better than chance because it includes 0.50 in the confidence interval.

Graphically, a Receiver Operating Characteristic (ROC) curve plots the true positive rate (sensitivity; e.g., correctly predicts an offender will reoffend) against the false positive rate (specificity; e.g., incorrectly predicts an offender will reoffend).

Therefore, each point on the ROC curve represents a sensitivity/specificity pair corresponding to a particular decision threshold. A test with perfect discrimination (no overlap in the two distributions) has a ROC curve that passes through the upper left corner (100% sensitivity, 100% specificity). The closer the ROC curve is to the upper left corner, the higher the overall accuracy of the test. To illustrate, Figure 1 shows an ROC curve with an AUC of 0.70. If we are testing whether a measure predicts if offenders reoffend, then the measure appears to validly predict recidivism.

Figure 1. Example of an ROC curve.



Demographic Results: Profile of Reported Sexual Assaults in Edmonton

I. OFFENCES

The following describes the sexual assaults reported between 2010 to 2014. Of the 2569 occurrences reported to EPS, 28.1% (n = 722) were cleared by charge. The average number of days between the time the sexual offending ended and the report date to the police was 68.8 days (SD = 601.1), ranging from 0 days to 46 years, although most sexual assaults were reported within 2 weeks (90%). For this large database, there are a limited number of variables available, and Table 2 lists the number and percentages describing these sexual assaults.

Table 2. Profile of reported sexual assaults in Edmonton from 2010 to 2014.

Offence variables	#	%
Gender of perpetrator and victim (n = 872)		
Male perpetrator against female victim	814	93.3
Male perpetrator against male victim	45	5.2
Female perpetrator against female victim	10	1.1
Female perpetrator against male victim	3	0.3
Race $(n = 431)$		
White perpetrator against White victim	114	26.5
White perpetrator against Aboriginal/Métis victim	38	8.8
White perpetrator against non-White victim	12	2.8
Aboriginal/Métis perpetrator against Aboriginal/Métis victim	60	13.9
Aboriginal/Métis perpetrator against White victim	47	10.9
Aboriginal/Métis perpetrator against non-Aboriginal victim	7	1.6
Weapon use (n = 2443)	122 154	
Physical force	2314	94.7
Knife	64	2.6
Firearm	11	0.5
Other	54	2.2
Relationship between the perpetrator and the victim (n = 2333)		
Stranger	865	37.1
Non-family but known	988	42.3
Family	112	4.8
Intimate partner (boyfriend/girlfriend/spouse/past partner)	368	15.8

Phase II sample (N = 300). Based on the randomly selected sample, a larger number of variables were coded regarding the sexual assault investigation, evidence, offence details, and criminal justice outcomes. The following tables summarize descriptive information about the sexual assault occurrences. Table 3 outlines variables related to the investigation.

Table 3. Description of sexual assault investigations from Phase II sample.

Investigation vari	ables	#	%
Eyewitness present	(at time of offence)	55	18.4
Digital evidence	of the offenceof events leading to and after offence	14 27	(4.7) (9.0)
Victim reported even	t milay ekiW-rion teresas to	259	86.3
Investigation procee	nvestigation proceeded to charge(s)		
20 05	 Sexual assault (s.271) Sexual assault CBH or with a weapon (s.272) Aggravated sexual assault (s.273) 	194 23 5	(89.0) (10.6) (2.3)

Note. Parentheses indicate the categories are not mutually exclusive.

The demographic details of the occurrence, including location, co-perpetrators, and the behaviour of perpetrator and victim prior to the assault are summarized on Table 4.

Table 4. Circumstances surrounding the sexual assaults from Phase II sample.

Circumstances	#	%
Occurred in public setting	116	38.7
Occurred in victim's residence	97	32.3
Offence occurred in offender's place of work	28	9.4
Had co-perpetrators	13	4.3
Stalking behaviour preceded index	18	6.0
False pretence used to lure victim	50	16.7
Victim consumed alcohol prior to assault	135	45.0
Victim consumed drugs prior to assault	35	11.7
Perpetrator consumed alcohol prior to assault	166	55.3
Perpetrator consumed drugs prior to assault	48	16.0
Contact resulted from sex trade exchange	5	1.7

The characteristics of the perpetrators and the victims and the details regarding the nature and severity of the sexual assaults are outlined in Table 5.

Table 5. Characteristics of the sexual assaults from Phase II sample.

Offence characteristics	#	%
Gender pairing of perpetrator and victim		
Male perpetrator against female victim	283	94.3
Male perpetrator against male victim	13	4.3
Female perpetrator against female victim	4	1.3
Female perpetrator against male victim	0	0

Offence characteristics (con't)		#	%
Race pairing of perpetrator and victim			
White perpetrator against White victir	n	98	32.7
White perpetrator against Aboriginal/	Métis victim	19	6.3
White perpetrator against non-White	victim	5	1.6
Aboriginal/Métis perpetrator against A	Aboriginal victim	44	14.7
Aboriginal/Métis perpetrator against \	White victim	20	6.7
Aboriginal/Métis perpetrator against r	non-Aboriginal victim	1	0
Victim was unconscious (e.g., asleep, pa	ssed out)	81	27.0
Perpetrator committed break and enter to	commit	17	5.7
Rape kits items were present or used to	commit	3	1.0
Substance used to facilitate assault was (not based on toxicology)	noted in the file	21	7.0
Non-sexual violence used		82	27.3
	- No physical injury noted - Visible or reported injury - Hospital treatment	200 77 23	66.7 25.7 7.6
Victim was penetrated (% of all cases, hence totals do not add t	o 100%)	159	53.0
- Oral - Vaginal - Anal		45 143 34	(15.0) (47.7) (11.3)
- Digital penetrat - Foreign object		43	(14.3) (1.0)
Weapon was used		9	3.0

Note. Parentheses indicate the categories are not mutually exclusive.

As seen on Table 6, over a third of the sexual assaults were committed by a stranger, while the remaining occurrences involved perpetrators known to the victims with varying degrees of familiarity.

Table 6. Relationship between the perpetrator and the victim from Phase II sample.

Relationship variables	#	%
Stranger (known less than 24 hours)	114	38.0
Acquaintance or other known non-family	113	37.7
Family	14	4.7
Dating or cohabitating intimate partner (current or past)	59	19.7

II. VICTIMS

Only a limited number of variables were available from the entire sample to examine the characteristics of the sexual assault victims. The average age of the victims was 28.2 years (SD = 11.6; range 16 to 92 years; N = 2569), and a majority of the victims were female (94.4%; (n = 2422 of 2569). More than half of the victims were White or Caucasian and the second largest ethnic group was Aboriginal or Métis, as Table 7 shows. Fewer than 6% of other ethnic groups were represented.

Victim Race (<i>n</i> = 1483)	#	%
White	795	53.6
Black	61	4.1
Aboriginal, Métis	494	33.3
Asian	40	2.7
South Asian	32	2.2
Hispanic	24	1.6
Middle Eastern	8	0.5

Table 7. Distribution of victim ethnicity.

Phase II sample (N = 300). Based on the randomly selected sample, more variables were coded regarding the sexual assault victims. The average age was 27.9 years (SD = 11.5; range 16.1 to 83.0) and the majority of the victims were female (95.7%; n = 287). The percentage distribution of victim ethnicity was fairly similar to all reported sexual assaults with identifiable perpetrators. As can be seen in Table 8, victims were predominantly White, and the next largest group were Aboriginal or Métis victims. Table 8 also provides an overview of the victims' demographic characteristics, vulnerability features, and criminal histories for this random sample.

Table 8.	Profile of	victims from	Phase I	Il sample.
----------	------------	--------------	---------	------------

Victim variables	#	%
Victim Race (n = 292)		
White	174	59.6
Black	9	3.1
Aboriginal, Métis	85	29.1
Asian	14	4.8
South Asian	7	2.4
Hispanic	3	1.0
Middle Eastern	0	0

Review of Reported Sexual Assaults Against Persons 16 years and Older in Edmonton

Victim variables (con't)	#	%
Marital status at the time of the index offence ($n = 281$)		
Single	216	76.9
Married or common-law	46	16.4
Divorced, separated or widowed	19	6.8
Has children (n = 269)	73	27.1
Is pregnant (<i>n</i> = 283)	11	3.9
Has fixed, permanent address (n = 293)	261	89.1
Employed at the time of the index $(n = 250)$	93	37.2
Evidence of mental illness or a psychiatric history (n = 295)	67	22.7
Has substance abuse problems (n = 283)	72	25.4
Has history of victimization	144	48.2
Has developmental disorder (n = 292)	17	5.8
Criminal history (n = 300)		
Has history of juvenile delinquency	49	(16.4)
Has prior involvement with the criminal justice system	101	(33.7)
Has prior convictions	64	(21.3)
Has violent or sexual violent arrests or convictions	55	(18.3)
Has sex trade offence	11	(3.7)

Note. Parentheses indicate the categories are not mutually exclusive.

III. PERPETRATORS

A limited number of variables were available from the entire sample on the identified perpetrators in the police-reported sexual assaults. The average age of the perpetrators was 35.1 years (SD = 13.2; ranging from 12 to 89 years; n = 865), and most were male (98.5%, n = 859 of 872). The largest ethnic group among perpetrators was White or Caucasian, followed by Aboriginal or Métis, and then Black, as shown on Table 9.

Perpetrator Race (n = 779)	#	%
White	325	43.2
Black	96	12.3
Aboriginal, Métis	186	23.9
Asian	35	4.5
South Asian	48	6.2
Hispanic	21	2.7
Middle Eastern	49	6.3

Table 9. Distribution of perpetrator ethnicity.

Using local police data (i.e., EPROS), both (1) the presence of a criminal history for local arrests and (2) post-index charges were examined. The data is shown in Figure 2. These statistics are likely to be conservative (may not account for all historical and post-index charges in provincial or federal records). The average follow-up period is 4.3 years (*SD* = 1.42; range 1.9 to 6.8 years).

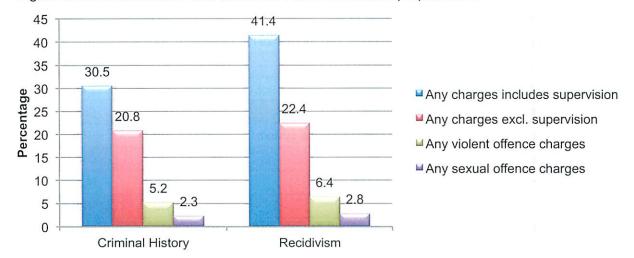


Figure 2. Criminal histories and recidivism rates of identified perpetrators.

Phase II sample (N = 300). For the randomly selected sample, the average age was 35.3 years (SD = 13.0; range 18 to 89.7). Nearly all of the perpetrators were male (98.7%; n = 296) with only four female perpetrators in the sample. Similar to the identifiable perpetrators from all sexual assault from 2010 to 2014, perpetrators were predominantly White, followed by Aboriginal or Métis. Table 10 provides an overview of the characteristics and description of the sexual assault perpetrators in the sample.

Table 10. Profile of perpetrators from Phase II sample.

Perpetrator variables	#	%
Perpetrator Race (n = 296)		
White	125	42.2
Black	29	9.8
Aboriginal, Métis	69	23.3
Asian	15	5.1
South Asian	26	8.8
Hispanic	17	5.7
Middle Eastern	15	5.1
Marital status at the time of the index offence $(n = 284)$) on the state of	
Single	198	69.7
Married or common-law	65	22.9
Divorced, separated or widowed	21	7.4
Has children (n = 250)	66	26.4
Has fixed, permanent address (n = 294)	233	79.3
Employed at the time of the index (n = 279)	161	57.7
Evidence of mental illness or a psychiatric history (n = 291)	41	14.1%
Has substance abuse problems (n = 267)	131	49.1%
Criminal history (n = 300)		
Has history of juvenile delinquency	68	(22.7)
Has prior involvement with the criminal justice system	195	(65)
Has prior convictions	163	(54.3)
Has nonsexual violent arrests or convictions	130	(43.3)
Has sexual offence history	66	(22)

Note. Parentheses indicate the categories are not mutually exclusive.

Empirical Results: Validity of Using Risk Assessment in Policing

Predictive validity of two published sexual violence measures, Static-99R and the Static-2002R, was examined with the Phase II database (smaller randomly selected sample) that had criminal record information. Recidivism information was obtained for 290 male perpetrators in the sample (4 female perpetrators were excluded). Hence, the resulting sample of 290 cases consisted entirely of males who had complete criminal records to code for recidivism outcome. Table 11 lists the overall base rates of recidivism for the sample based on convictions and charges and broken down by gender. The average length of follow-up from the report date of the offence was 3.6 years (SD = 1.09) and ranged from 1.6 to 6.3 years.

Type of recidivism outcome (N = 290) % Any new charges (including breaches) 48.6 141 Any new convictions (including breaches) 100 34.5 72 Any violent offence charges 24.8 42 14.5 Any violent offence convictions Any sexual offence charges 20 6.9 13 4.5 Any sexual offence convictions

Table 11. Rates of recidivism (number and percentage of sample).

Static-99R. The first measure, Static-99R, is an actuarial measure (i.e., provides explicit rules for combining risk factors and are easy to score and interpret) and has been validated with convicted sexual offenders. Table 12 lists the Static-99R items and provides the means, standard deviations, range of scores, for each item and the total score.

Table 12	Total	score	and	items on	the	Static-99R.
Table 12.	1 Olai	00010	uiiu	ILUITIO UIT	LIIU	Oldio ooi t.

Static-99R items	n	M	SD	range
Age at arrest	178	0.32	1.070	-3 – 1
Ever lived with lover for at least 2 years	178	0.67	0.472	0 – 1
Index non-sexual violence charges	178	0.27	0.445	0 – 1
Prior non-sexual violence convictions	178	0.37	0.483	0 – 1
Prior sex offences	178	0.19	0.518	0 – 3
Prior sentencing dates	178	0.27	0.445	0 – 1
Any non-contact sex offence convictions	178	0.07	0.251	0 – 1
Any unrelated victims	178	0.78	0.415	0 – 1
Any stranger victims	178	0.35	0.478	0 – 1
Any male victims	178	0.02	0.149	0 – 1
Total score	178	3.28	2.002	-2 – 8

Static-2002R. The second measure is also actuarial and has been validated with convicted sex offenders. The items and its subscales, along with the descriptive information and total score for the Static-2002R, are listed on Table 13.

Table 13. Total score, items, and domain subscales on the Static-2002R.

Risk measure	n	M	SD	range
1. Age at arrest	269	1.19	1.119	-2 - 2
2. Prior sentencing dates for sex offences	269	0.10	0.368	0-2
Any juvenile arrest for sex offence and convicted as an adult for a separate sex offence	269	0.01	0.086	0 – 1
4. Rate of sexual offending is 1 or more per every 15 years	269	0.06	0.237	0 – 1
Persistence of Sexual Offending (2-4) subscore	269	0.14	0.501	0-2
5. Any sentencing occasion for non-contact sex offences	269	0.04	0.207	0 – 1
6. Any male victim	269	0.03	0.170	0-1
7. Has young, unrelated victims	269	0.00	0.061	0 – 1
Deviant Sexual Interests (5-7) subscore	269	0.08	0.295	0 – 2
8. Any unrelated victim	269	0.83	0.374	0 – 1
9. Any stranger victim	269	0.40	0.491	0 – 1
Relationship to Victims (8-9) subscore	269	1.23	0.718	0-2
10. Any prior involvement with criminal justice system	269	0.62	0.485	0 – 1
11. Prior sentencing dates for anything	269	0.41	0.638	0 – 2
12. Any community supervision violation	269	0.42	0.494	0 – 1
 Years free prior to index sex offence (Less than 36 mos free before index or less than 48 most free before conviction) 	269	0.17	0.377	0 – 1
14. Any prior non-sexual violence sentencing	269	0.36	0.480	0 – 1
General Criminality (10-14) subscore	269	1.16	1.076	0 – 3
Total score	269	3.81	1.898	-1 – 10

Predictive validity of the Static-99R and the Static-2002R. Of the 290 cases with recidivism data, only 61.4% (n = 178) were included in the evaluation of predictive validity of the Static-99R. A larger proportion of the sample, 92.8% (n = 269), was included in the evaluation of the predictive validity of the Static-2002R.

Table 14 lists the AUCs, both average and confidence intervals for each measure and their ability to predict charges and convictions for any, any violent, and any sexual reoffending. As seen in the results, the Static-99R showed large effects for predicting any general, any violent, and any sexual recidivism, whether it was post-index charges or convictions. However, the confidence interval for predicting sexual recidivism was closer to chance.

The Static-2002R predicted all three outcomes exceptionally well for both future charges and convictions, as shown by the large effect sizes (i.e., AUCs of 0.71 or higher).

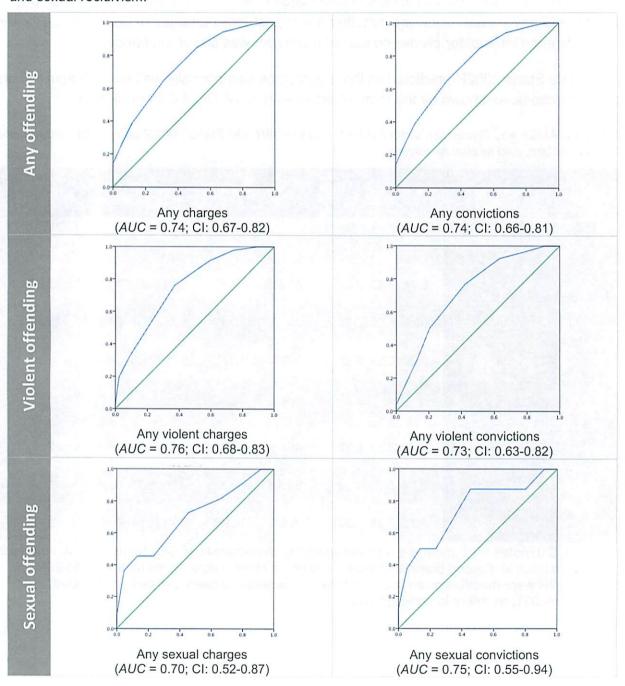
Table 14. AUCs and Spearman's rho (r_s) for the Static-99R and Static-2002R on convictions and charges for any, violent, and sexual recidivism.

Measure	Charges AUC (95%CI)	% recidivism	rs	Convictions AUC (95%CI)	% recidivism	rs
Static-99R total score (N = 178)	ANA L					
Any general recidivism	0.74 (0.67–0.82)	47.8%	.43**	0.74 (0.66–0.81)	32.6%	.39**
Any violent recidivism	0.76 (0.68–0.83)	25.8%	.39**	0.73 (0.63–0.82)	14.6%	.28**
Any sexual recidivism	0.70 (0.52–0.87)	6.2%	.17 ^{ns}	0.75 (0.55–0.94)	4.5%	.18 ^{ns}
Static-2002R total score (N = 269)						
Any general recidivism	0.77 (0.71–0.82)	45.6%	.47**	0.77 (0.71–0.83)	32.0%	.44**
Any violent recidivism	0.78 (0.72–0.85)	23.8%	.43**	0.76 (0.68–0.84)	13.8%	.32**
Any sexual recidivism	0.71 (0.59–0.84)	5.6%	.17*	0.74 (0.57–0.90)	3.7%	.16*

Note. AUC denotes area under the receiver operating characteristic (ROC) curve, 95%Cl denotes 95% confidence interval. Square brackets denote percentage of recidivists. Items on the Static-99R and Static-2002R were modified given accused have not necessarily been charged or convicted. *p<.01, **p<.001, ns refers to non-significant.

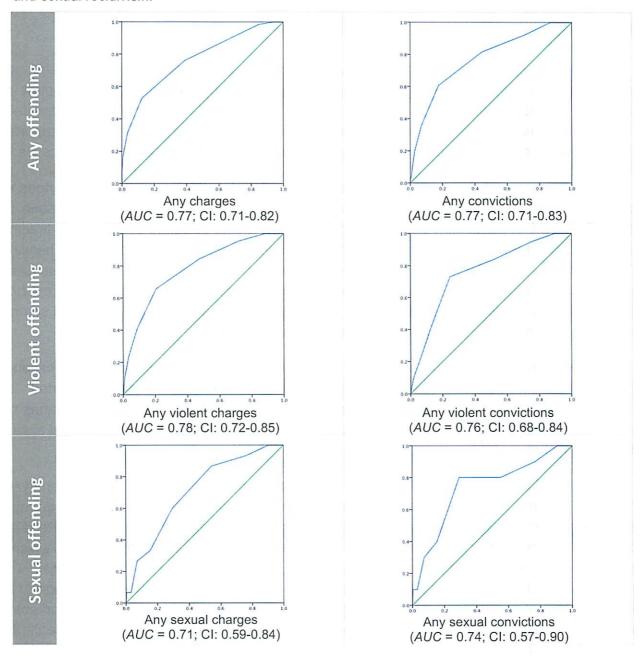
To better illustrate the predictive validity of the Static-99R when used with this police-reported sample (pre-conviction) of sexual assault perpetrators, ROC curves are provided in Figure 3. The ROC curves show that the Static-99R has large AUCs for predicting charges and convictions for any and violent recidivism. However, the Static-99R did not reliably predict sexual recidivism.

Figure 3. ROC curves for the Static-99R in predicting charges and convictions for general, violent, and sexual recidivism.



When we examine the predictive validity of the Static-2002R with this police-reported sample (pre-conviction) of sexual assault perpetrators, ROC curves show that the Static-2002R has large ROC curves for predicting charges and convictions for all three outcomes of any, violent, and sexual recidivism with regards to charges and convictions. These are illustrated in Figure 4.

Figure 4. ROC curves for the Static-2002R in predicting charges and convictions for general, violent, and sexual recidivism.



Conclusions and Recommendations

This research examines sexual assault cases reported to the police, as defined in the function description of the Sexual Assault Section (SAS) of the Edmonton Police Service (EPS). Specifically, all occurrences from 2010 to 2014 (5-year span) were analyzed, and a stratified random sample of 300 cases from 2010 to 2013 (4-year span) were reviewed and coded for offence, perpetrator, and victim characteristics.

Descriptive Profile of Police-Reported Sexual Assaults

The first objective of this research was to provide a descriptive profile of police-reported sexual assaults. Overall, police-reported sexual assault occurrences in Edmonton appear to be increasing by approximately 1% each year from 2010 to 2014. Characteristics regarding the investigation, nature of the offences, perpetrators, and victims were coded from and reported on both the larger dataset that included all occurrences and the random sample of 300 cases.

Variables regarding the investigation suggested that some investigative challenges were present. For example, 81.6% of sampled cases did not have any witnesses to the assault, and more than 90% of the sampled cases did not have any digital evidence of the events leading up to or following the assault or of the assault itself. The clearance rate for occurrences between 2010 and 2014 was 28.1%. However, it was notable that the majority of the sexual assaults were reported to police within two weeks of occurrence (90%) and that most victims reported the offence directly to the police (86%). Of the cases that proceeded to charge (72.7% of sampled cases), a majority of the charges were level 1 sexual assaults (i.e., section 271).

The nature of the sexual assaults was examined and the variables included location, circumstances, intrusiveness, and severity. In terms of *location*, a third of EPS-reported occurrences occurred in the victim's residence (32.3%), which was greater than what has been reported in a national report (vs. 7%; Perreault, 2015). More than a third of the sexual assaults in the current study had occurred in a public setting (38.7%).

Several variables examining the *circumstances* of the sexual assaults were analyzed. Very few assaults involved co-perpetrators, which was similar to findings in a Canadian report indicating the majority of sexual assaults is committed by a single perpetrator (79%; Perreault, 2015). A little over half of the perpetrators consumed alcohol just prior to the assault, which was similar to other reports (e.g., 54%; Perreault, 2015). Similarly, nearly half of the victims consumed alcohol prior to the offence, and this is a little less than what has been reported in other surveys of sexual assault victims (e.g., 61.8%; Larsen et al., 2015). It was remarkable that a quarter of the victims in the sample were unconscious at the time of the sexual assault (27%); that is, they were either asleep or passed out from intoxication. Prior to conducting the research, there were some expectations that certain features would be prominent in the review of the sexual assault cases, but these did not emerge as remarkable. For example, the following

circumstances were rarely either present in the sampled cases or commented upon in police reports: Use of rape kits (e.g., duct tape, rope, and drugs), substances used to facilitate assaults (note that toxicology reports were not examined), sex trade exchange between the perpetrator and victim, and involvement of a break and enter. What was present in 17% of reviewed cases was the use of false pretenses to lure the victim; specifically, varying tactics were used by perpetrators to misrepresent themselves to the victim with the purpose of luring them into a vulnerable situation (e.g., into a vehicle, into their room).

Further to the circumstances of the sexual assaults, the nature of the relationship between the perpetrators and victims was similar between the all-occurrence sample and the random sample. For all occurrences from 2010 to 2014, over a third of police-reported sexual assaults were committed by strangers (37-38%). These values are commensurate with what has been reported in Canadian reported statistics on police-reported sexual assaults, although the proportion of stranger-perpetrated sexual assaults has varied in the literature Edmonton sample (a statistical report by Brennan & Taylor-Butts (2008) reported 18% involved an accused who was a stranger to the victim, and a more recent victimization survey by Perreault (2015) reported 44% of perpetrators were strangers). Perpetrators who were known to their victims committed the remainder of the police-reported sexual assaults (62-63%). Specifically, non-familial acquaintances (38-42%) committed a large proportion of the sexual assaults, followed by current or past dating or cohabitating intimate partners (16-20%). A small proportion was committed by family members (less than 5%).

Variables that examined the *intrusiveness* of the sexual assaults were included and showed some notable differences from other reports. For example, a little over half of EPS-reported occurrences involved victim penetration; however, a Canadian report of police-reported sexual assaults indicated a smaller percentage (19%; Brennan & Taylor-Butts, 2008) and surveys of victims who attend trauma centers provide larger numbers (e.g., 70%, Larsen et al., 2015; 83%, Riggs et al., 2000). Of the sexual assaults that involved penetration, a majority involved vaginal rape, with a small percentage that involved anal penetration and/or digital penetration.

The **severity** of the sexual assaults was also analyzed and showed that over a quarter of the cases (27%) involved nonsexual violence. Similar to a Canadian report (Perreault, 2015), weapons were rarely used. Based on investigation notes and narratives, physical injuries were noted in a third of the cases, which was slightly greater than other police-reported sexual assault statistics (23%; Brennan & Taylor-Butts, 2008).

Regarding the perpetrators and victims from sexual cases where there was an identifiable perpetrator, a majority of cases involved male perpetrators who assaulted female victims. When ethnicity was examined, the largest group was represented by White perpetrators who assaulted White victims (26.5%), followed by Aboriginal perpetrators who assaulted Aboriginal victims (13.9%). A small proportion of cases was represented by White perpetrators

against Aboriginal victims and Aboriginal perpetrators against White victims (8.8% and 10.9%, respectively). There is no national data regarding the ethnic profile of sexual assault perpetrators and victims; therefore, direct comparisons cannot be made.

Specific *characteristics of the sexual assault perpetrators* were examined. In the current research, nearly all identifiable perpetrators were male (98.5%). Perpetrators were usually older than their victims, and perpetrators had an average age of 35 years with most being under the age of 40 (70%). When examining the distribution of perpetrators by ethnic group, the largest group was White (e.g., 43.2% of the all-occurrence sample), followed by Aboriginal or Métis (23.9%) and Black (12.3%). The remaining ethnic representations were small (6% or less). Other notable characteristics represented by a majority of the randomly sampled perpetrators showed that most were single (69.7%) and without any children (73.6%), had a permanent address (79.3%), and did not have a noted psychiatric illness (85.9%). Files indicated that about half of the perpetrators were employed and had substance abuse problems.

Criminal histories and reoffending behaviour of the perpetrators were also examined. In terms of criminal records, 20.8% of identified perpetrators from the all-occurrence sample had prior local police contact for criminal behaviour, and there was a very small proportion of perpetrators who had local records for violent (5.2%) or sexual (2.3%) crime. For the random sample, a more extensive review of local, provincial, and federal data was conducted, and showed that 65% of perpetrators had prior involvement with the criminal justice system, 54.3% had convictions, 43.3% had violent crimes, and 22% had sexual crimes. Sexual assault perpetrators are unlike other violent offenders who often have higher rates of past criminal offending (e.g., 84% of homicide offenders at EPS).

This study also investigated the recidivism rates of police-reported sexual assault perpetrators. For the overall sample of identified perpetrators, 22.4% had post-index criminal activity according to local police documentation, and 6.4% had violent and 2.8% had sexual post-index activity. For the random sample using more comprehensive criminal record information, 24.8% of perpetrators had violent charges and 6.9% had sexual charges post-index offence after an average follow-up of 3.6 years. Not surprising, the rates in the current study with a non-convicted sample are relatively low compared to other Canadian studies that have examined violent recidivism rates of convicted rapists (e.g., 53% with an average follow-up of 5.1 years; Harris et al., 2003) and meta-analytic studies that have shown the rates for general, violent, and sexual recidivism of sex offenders, in general (e.g., 33.2%, 19.5%, and 11.5%, respectively, with an average follow-up time of 5.8 years; Hanson & Morton-Bourgon, 2009). At the current time, no data is available regarding the recidivism rates of pre-convicted sexual assault or child molestation perpetrators.

When we examine the *characteristics of sexual assault victims*, nearly all of the victims were female (94%) and most were 30 years or younger (70%) with an average age of 28 years. Of the all-occurrence data sample and the smaller random sample, victims were mostly

White (52.4% and 59.6%, respectively) with the next largest representation being Aboriginal or Métis (30.7% and 29.1%, respectively). Less than 6% of the sexual assault victims were represented by each of the remaining ethnic groups.

Victim vulnerability factors that were identified in Perreault's study (2015) were examined in the current research. These factors reflected varying proportions of victims in these police-reported cases: Most victims were single (76.9%), almost half had some history of property or personal victimization in their documented history (48.2%), over a quarter had children (27.1%), a quarter had substance abuse problems (25.4%), and a fifth had criminal convictions (21%). Only a small proportion of victims in the sample were homeless (11%) or were developmentally delayed (6%). It is important to note the limitation in coding the victims' descriptive data, as this information was gleaned from the police narratives, written notes, and any victims records that were available, and therefore the sources of information was more fragmented than what was obtained for the perpetrators.

Application of Risk Assessment to Sexual Assault Perpetrators

The second objective of this research was to examine the application of current sexual offender risk assessments (originally developed for use to assess convicted sexual offenders) in a police context with cases of sexual assault where a perpetrator has been identified. In the psychological literature, much is known about risk factors predictive of reoffending behaviour of known and convicted sex offenders (see Hanson, 1998; Hanson & Bussière, 1998). However, little research has examined pre-conviction suspects of sexual assault and the determination of risk that a suspect poses if he remains in the community. For the current research at EPS, two existing actuarial measures were adopted, which have been well-established in criminal justice psychology to predict sexual recidivism among convicted sexual offenders: The Static-99R (Harris et al., 2003) and Static-2002R (Phenix et al., 2008). The present study's findings support the use of actuarial measures in a police context. The Static-99R performed well in predicting any recidivism and any violent recidivism but performed less well in its predictive accuracy for any sexual recidivism. The Static-2002R, on the other hand, performed very well in predicting all recidivism outcomes. In general, these findings support the use of actuarial risk assessments in policing practices to predict further violent and sexual offending, specifically future criminal charges and convictions.

Limitations of the Research

As with most empirical work, it is important to acknowledge certain methodological issues. One of the major limitations of this study is the archival nature of this study, and therefore information was not purposefully collected to complete the actuarial measures. Some of the variables were less reliably coded as information was based on what was available through police resources. It is also important to note that the data was coded by a researcher who has been trained to conduct risk evaluations, rather than by police personnel, although

Hilton, Harris, Rice, Eke, and Lowe-Wetmore (2007) have previously demonstrated that police officers can be effectively trained to score actuarial risk measures. Furthermore, a challenge of all recidivism studies is the underreporting of criminal behaviour and the conservative recording of convictions and charges on official records. Another limitation of the study is that although occurrences in Phase II were randomly selected from each of the 4 years, many were not included because there was not enough information on the case to carry out the coding, and therefore it is not a 'true' random sample. The sampling of cases also excluded cold cases and cases where there was no identifiable perpetrator. Other methodological issues are related to the coding of some variables. For example, although other victim surveys suggest that the use of date rape drugs is reported by over one tenth of victims (11%; Larsen et al., 2015), substances used to facilitate assaults were only noted in 7% of reviewed cases in this study; however, this statistic may be problematic because coding of this variable was based on whether it was noted in the police report or if toxicology tests were done. Often these cases are reported some time after the actual assault, so toxicology is rendered ineffectual after a certain point in time.

Despite these limitations, this research endeavour has led to a rich source of data and variables. Many additional analyses will later be conducted on these data. For example, relevant to EPS, is the examination of variables that are already available through EPROS to potentially assist with risk assessment and possibly the prediction of recidivism. Another area of research may include the use of selected variables from the Static-99R and Static-2002R that may produce better measures in their prediction of reoffending outcomes for this police sample.

Concluding Remarks

This study provides a description of sexual assaults in Edmonton. Very limited information is available on police-reported sexual assaults, especially compared to the research on convicted sexual offenders, but compared to what is currently available, the profile of sexual assault offences, perpetrators, and victims do not appear to be remarkable from the national reports of police-reported sexual assaults in Canada. Only a few characteristics of sexual assaults reported to EPS seem to deviate from the existing literature, such as the location occurring equally in public spaces and the victims' homes. More notable was the circumstances of the assaults, which included victims who were unconscious at the time of the offence, false pretences to lure the victims, and victim with vulnerability factors whom perpetrators may have targeted. The current study also suggests that existing measures of risk, which are commonly used to assess convicted sex offenders, may be adapted for use by front line law enforcement to assess for sexual violence risk of identified sexual assault perpetrators. The use of risk assessment may be helpful by allocating more resources to higher risk perpetrators and therefore reduce further perpetration of sexual violence, as currently practiced in institutional and community corrections.

References

- Andrews, D. A., & Bonta, J. (1994). *The psychology of criminal conduct.* Cincinnati, OH: Anderson.
- Andrews, D. A., & Bonta, J. (2010). *The psychology of criminal conduct (5th edition)*. New Providence, NJ: Andrews Publishing.
- Babchishin, K. M., Hanson, R. K., & Helmus, L. (2012). Even highly correlated mea- sures can add incrementally to actuarial risk prediction. *Assessment, 19,* 442-461. doi:10.1177/1073191112458312
- Barbaree, H. E., Seto, M. C., Langton, C. M., & Peacock, E. J. (2001). Evaluating the predictive accuracy of six risk assessment instruments for adult sex offenders. *Criminal Justice and Behavior*, 28, 490-521. doi:10.1177/009385480102800406
- Beech, A. R., Fisher, D. D., & Thornton, D. (2003). Risk assessment of sex offenders. *Professional Psychology: Research and Practice, 34,* 339-352. doi:10.1037/0735-7028.34.4.339
- Bengtson, S. (2008). Is newer better? A cross-validation of the Static-2002 and the Risk Matrix 2000 in a Danish sample of sexual offenders. *Psychology, Crime & Law, 14*, 85-106. doi:10.1080/10683160701483104
- Brennan, S., & Taylor-Butts, A. (2008). *Sexual assault in Canada, 2004 and 2007.* Ottawa, ON: Canadian Centre for Justice Statistics. Statistics Canada Catalogue no. 85F0033M.
- Chrisler, J. C., & Ferguson, S. (2006). Violence against women as a public health issue. *Annals of the New York Academy of Sciences*, 1087, 235-249.
- Creighton, C. D., & Jones, A. C. (2012). Psychological profiles of adult sexual assault victims. Journal of Forensic and Legal Medicine, 19, 35-39.
- Grossin, C., Sibille, I., de la Grandmaison, G. L., Banasr, A., Brion, F., & Durigon, M. (2003).

 Analysis of 418 cases of sexual assault. *Forensic Science International*, 131, 125-130.
- Hanson, R. K. (1998). What do we know about sex offender risk assessment? *Psychology, Public Policy, and Law, 4,* 50-72. doi:10.1037/1076-8971.4.1-2.50
- Hanson, R. K. (2009). The psychological assessment of risk for crime and violence. *Canadian Psychology*, *50*, 172-182. doi:10.1037/a0015726
- Hanson, R. K., & Bussière, M. T. (1998). Predicting relapse: A meta-analysis of sexual offender recidivism studies. *Journal of Consulting and Clinical Psychology*, 66, 348-362.
- Hanson, R. K., Bourgon, G., Helmus, L., & Hodgson, S. (2009). The principles of effective correctional treatment also apply to sexual offenders: A meta-analysis. *Criminal Justice and Behavior*, *36*, 865-891.
- Hanson, R. K., & Morton-Bourgon, K. (2009). The accuracy of recidivism risk assessment for sexual offenders: A meta-analysis of 118 prediction studies. *Psychological Assessment,* 21, 1-21. doi:10.1037/a0014421
- Hanson, R. K., & Thornton, D. (1999). Static-99: Improving actuarial risk assessments for sex offenders (User Report No. 1999-02). Ottawa, Canada: Solicitor General of Canada.

- Harris, A., Phenix, A., Hanson, R. K., & Thornton, D. (2003). *Static-99 coding rules revised—2003*. Ottawa, Canada: Solicitor General of Canada.
- Helmus, L., & Hanson, K. (2007). Predictive validity of the Static-99 and Static-2002 for sex offenders on community supervision. *Sexual Offender Treatment*, 2, 1-14.
- Hilton, N. Z., Harris, G. T., Rice, M. E., Lang, C., Cormier, C. A., & Lines, K. J. (2004). A brief actuarial assessment for the prediction of wife assault recidivism: The Ontario Domestic Assault Risk Assessment. *Psychological Assessment*, *16*, 267–275. doi:10.1037/1040-3590.16.3.267
- Hilton, Harris, Rice, Eke, & Lowe-Wetmore (2007). Training front-line users in the Ontario Domestic Assault Risk Assessment (ODARA), a tool for police domestic investigations. *Canadian Journal of Police and Security Services*, *5*, 92-96.
- Ingemann-Hansen, O., Brink, O., Sabroe, S., Sorensen, V., & Charles, A. V. (2009). Legal aspects of sexual violence—Does forensic evidence make a difference? *Forensic Science International*, 180, 98-104.
- Jones, E., Harkins, L., & Beech, A. R. (2015). The development of a new risk model: The Threat Matrix. *Legal and Criminological Psychology*, *20*, 165-175. doi:10.1111/lcrp.12019
- Justice Research and Statistics Association. (2005). Use of data in police departments: A survey of police chiefs and data analysts. Washington, DC: Author.
- Langton, C. M., Barbaree, H. E., Hansen, K. T., Harkins, L., & Peacock, E. J. (2007). Reliability and validity of the Static-2002 among adult sexual offenders with reference to treatment status. *Criminal Justice and Behavior*, *34*, 616-640. doi:10.1177/0093854806296851
- Langton, C. M., Barbaree, H. E., Seto, M. C., Peacock, E. J., Harkins, L., & Hansen, K. T. (2007). Actuarial assessment of risk for reoffense among adult sex offenders: Evaluating the predictive accuracy of the Static-2002 and five other instruments. *Criminal Justice and Behavior, 34*, 37-59. doi:10.1177/0093854806291157
- Larsen, M-L., Hilden, M., & Lidegaard, O. (2015). Sexual assault: a descriptive study of 2500 female victims over a 10-year period. *BJOG*, *122*, 577-584.
- Looman, J., & Abracen, J. (2010). Comparison of measures of risk for recidivism in sexual offenders. *Journal of Interpersonal Violence*, 25, 791-807. doi:10.1177/0886260509336961
- Maxim, P. S., Garis, L., Plecas, D., & Davies, M. (2015). *The risk decision: Evidence-based decision making for police service professionals*. Ottawa, Canada: Canadian Association of Chiefs of Police Research Foundation
- McGrath, R., Cumming, G., Burchard, B., Zeoli, S., & Ellerby, L. (2010). Current practices and emerging trends in sexual abuser management: The Safer Society 2009 North American Survey. Brandon, VT: Safer Society Press.
- Murrie, D. C., Boccaccini, M. T., Turner, D. B., Meeks, M., Woods, C., & Tussey, C. (2009). Rater (dis)agreement on risk assessment measures in sexually violent predator proceedings: Evidence of adversarial allegiance in forensic evaluation? *Psychology, Public Policy, and Law, 15*, 19-53. doi:10.1037/a0014897
- Perreault, S. (2015). Criminal victimization in Canada, 2014. Juristat. Ottawa, Canada: Statistics

- Canada Catalogue no. 85-002-X.
- Phenix, A., Doren, D., Helmus, L., Hanson, R. K., & Thornton, D. (2008). *Coding rules for Static-2002*. Ottawa, Canada: Public Safety Canada.
- Rettenberger, M., Matthes, A., Boer, D. P., & Eher, R. (2010). Prospective actuarial risk assessment: A comparison of five risk assessment instruments in different sexual offender subtypes. *International Journal of Offender Therapy and Comparative Criminology*, *54*, 169-186. doi:10.1177/0306624X08328755
- Rice, M. E., & Harris, G. T. (2005). Comparing effect sizes in follow-up studies: ROC area, Cohen's d, and r. *Law and Human Behavior*, *29*, 615–620. doi:10.1007/s10979-005-6832-7
- Riggs, N., Houry, D., & Long, G., Markovchick, V., & Feldhaus, K. M. (2000). Analysis of 1,076 cases of sexual assault. *Annals of Emergency Medicine*, *35*, 358-362.
- Sherman, L. W. (2013). The rise of evidence-based policing: Targeting, testing, and tracking. *Crime and Justice*. 42, 377-451. doi:10.1086/670819
- Stalans, L. J., Hacker, R., & Talbot, M. E. (2010). Comparing nonviolent, other-violent, and domestic batterer sex offenders: Predictive accuracy of risk assessments on sexual recidivism. *Criminal Justice and Behavior*, 37, 613-628. doi:10.1037/t04165-000
- Statistics Canada. (2014). *Police-reported crime statistics in Canada, 2013.* Ottawa, Canada: Author. Statistics Canada Catalogue no. 85-002-X
- Statistics Canada. (2015). *Police-reported crime statistics in Canada, 2014.* Ottawa, Canada: Author. Statistics Canada Catalogue no. 85-002-X
- Statistics Canada. (2016). *Police-reported crime statistics in Canada, 2015.* Ottawa, Canada: Author. Statistics Canada Catalogue no. 85-002-X
- Storey, J. E., Gibas, A. L., Reeves, K. A., & Hart, S. D. (2011). Evaluation of a violence risk (threat) assessment training program for police and other criminal justice professionals. *Criminal Justice and Behavior, 38,* 554-564. doi:10.1177/0093854811403123
- Taylor, S. C., & Gassner, L. (2010). Stemming the flow: challenges for policing adult sexual assault with regard to attrition rates and under-reporting of sexual offences. *Police Practice and Research*, *11*, 240–255.
- U.S. Department of Justice (2014). Sex offender management assessment and planning intiative. Washington, DC: Author.
- Walby S., & Allen, J. (2004). *Domestic violence, sexual assault and stalking: Findings from the British Crime Survey.* London, UK: Home Office Research, Development and Statistics Directorate
- Walsh, R. M., & Bruce, S. E. (2014). Reporting decisions after sexual assault: The impact of mental health variables. *Psychological Trauma: Theory, Research, Practice, and Policy,* 6. 691-699.

Appendix A: Coding Form (for EPS use only)

Sexual Assault Cases:	Research No.:
Coding Form	Date coded:
C AOccurrence Fil Reliability of data sources: 0 = sketchy or very limited inform 1 = some missing and/or inconsi 2 = mostly complete information	CPIC+JOIN coded? Entered SPSS? enation available istent information
Index Offence Variables:	
4:Time of occurrence (24 hour clo 5//	currence (mm/dd/year) — Multiple dates/times lck) – if not specified, indicate time of day: PS (mm/dd/year) – Historical assault (> 1 yr ago) g (e.g., parking lot, street, bar) (0=No, private resident; 1=Yes)
Specify location (type of place AND address or cross-streets):	ence (circle) D W NW NE SE SW
7 First contact different than assault locatio	n (0=No/same; 1=Yes/different; leave blank if established relationship)
Origin of first encounter (if known for less than 24 hrs):	
 10 Eyewitness(es) present? (must be directly 11 Digital evidence, leading up to and/or after □ recording, 	er offence(s) (0=No, 1=Yes) personal □ recording, public □ text/other: 1=Yes) - □ recording, personal □ recording, public □ text/other ital evidence (e.g., snapchat) (0=No, 1=Yes)
	(0=No, 1=Yes) – ☐ belligerent ☐ uncooperative ☐ physically aggressiv
Specify reason for victim reporting:	recommendation of the comment of the
17 Discrepancy in victim statement noted du 18 Victim declines to proceed (0=No, 1=Yes	
Details about what was declined and reasons for it:	SART:medical.only.done ☐ To be contacted ☐ To complete interview
19 Follow-up services noted (0=No, 1=Yes)	- □ SACE □ VSU [□ Unable to contact □ no VIS □ no court pre
0 = No; 1 = Yes / Leave blank if unknown or not applicable	EPS (SAS) Research Study (Dr. S.Jung/MacEwan) v

NATURE AND SEVERITY

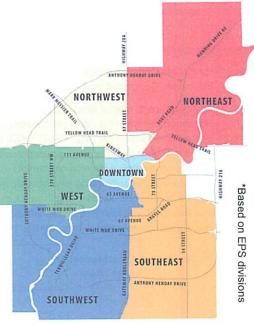
- 20. __ Evidence victim was unconscious (e.g., asleep, passed out/substances) at time of sexual assault (0=No, 1=Yes)
- 21. __ Involved break and enter (0=No, 1=Yes)
- 22. __ Evidence of offender engaging in stalking behaviour, e.g., beyond moments just prior to assault (0=No, 1=Yes)
- 23. __ Use of a disguise (0=No, 1=Yes)
- 24. __ False pretence to <u>lure</u> victim (0=No, 1=Yes) | Specify: _
- 25. Rape kit items (e.g., rope, roofies, duct tape) (0=No/not present, 1=Present or threatened to use, 2=Yes/used)

Specify type of items:

- 26. __ Evidence substance(s) used to facilitate/enable/was a factor in sexual assault (0=No, 1=Yes) ☐ EtOH ☐ Drug
- 27. __ Evidence victim used substance involuntarily or not to his/her knowledge (0=No, 1=Yes)
- 28. __ Victim consumed alcohol prior to assault (0=No, 1=Yes) □ beer □ wine □ cocktails □ liquor
- 29. Victim used/consumed drugs prior to assault (0=No, 1=Yes) Specify:
- 30. __ Degree of victim injury. Choose most severe injury to victim:
 - 0 = no information available
 - 1 = no injury (no visible or reported injuries noted)
 - 2 = visible or reported injuries, but treatment refused or not needed
 - 3 = treated at scene (e.g., EMS)
 - 4 = treated and released at hospital (< 24 hour stay)
 - 5 = hospitalized
 - 6 = unconscious
- 31. __ Non-sexual violence used (0=No, 1=Yes)

Description of injury and treatment:





0 = No; 1 = Yes / Leave blank if unknown or not applicable Code '0' if not enough info evidence that indicates it is present

EPS (SAS) Research Study (Dr. S.Jung/MacEwan) v.6 Page 2 of 8

Offender Variables:					
GENERAL CHARACTERISTICS		Name:			
		ECIB:			
32/_ / DOB (year/mm/dd)		FPS identifier:			
33 Age at release – <u>Static-99R.#1</u> (1 = 18-34.9; 0 = 35-39.9; -1 = 40-59.9; -	3 = 60+)	DL: (□ AB)			
34 Age at release – <u>Static-2002R.#1</u>	3 - 00+)	DL. (LI AB)			
(2 = 18-34.9; 1 = 35-39.9; 0 = 40-59.9; -2	2 = 60+)	ADDITIONAL INFO	RMATION – time in Canada, citizenship:		
	- 00 ,	ADDITIONAL INFO	RMATION – time in Canada, chizenship:		
35 Gender (0=male; 1=female)					
36 Height (cm / clinches) 37 Weight (kg / clib)					
38 Ethnicity 1=Caucasian/White/European					
2=African/Caribbean Black			☐ Much of history unknown		
3=Native/Native American/Abo	riginal/Metis				
4=Asian/Asian American (Chine		ese, etc)			
5=Indian/S.Asian/Brown	•	, ,			
6=Hispanic/Latino (& Cuban, M	lexican, S.Am	erican, etc)			
7=Middle Eastern (Afghani, Pal	kistani, Irania	n, etc)			
8=Uncodeable/Other race not li	isted, specify:)		
39 Marital status (1=single/dating only; 2=m: 40 © Ever lived with lover for at least two yea 41 Any children (biological, step) (0=No, 1=)	ars? – <u>Static</u> .	99R.#2 (O NOTE	<u>::</u> 0=YES, 1=No)		
42 Has permanent address (0=No, 1=Yes) 43 Employed legally (0=No, 1=Yes)					
Specify type (e.g., labourer, student,					
retired, at-home mom, illegal occupation,					
social assistance supported):			☐ Steady work		
Less likely codeable items (only code if sure of the	ne information	<u>):</u>			
44 Education: Completed high school (0=No	o, 1=Yes)				
45 Education: Completed post-secondary sci	hooling (0=N	o, 1=Yes)			
46 Any evidence of mental illness or psychia	tric history (0	=No 1=Yes) Do	not code helow if this is 'No'		
47 Has mood disorder (e.g., depression, bipo					
48 Has an anxiety disorder (e.g., PTSD, OCI					
49 Has a psychotic disorder (e.g., schizophrenia, delusional disorder, schizophreniform, BriefPD) (0=No, 1=Yes)					
50 Has previous suicidal ideation or attempts (0=No, 1=Yes)					
51 Has taken or currently taking psychotropic medications for mental illness/stability (0=No, 1=Yes)					
52 Has developmental disorder (e.g., low IQ, mental retardation, FASD) (0=No, 1=Yes)					
53 Has medical conditions (e.g., physical disability, Hepatitis B or C, HIV, etc) (0=No, 1=Yes)					
54 Has substance abuse problems (0=No, 1	=Yes)				
Specify type(s) of substance					
abuse problem					
		☐ Sought or co	ompleted treatment in past or current		

0 = No; 1 = Yes / Leave blank if unknown or not applicable Code '0' if not enough info evidence that indicates it is present EPS (SAS) Research Study (Dr. S.Jung/MacEwan) v.6 Page 3 of 8

INDEX OFFENCE 55. __ Proceed to charge (0=No, 1=Yes) - If no, check if applies: ☐ CO decline to charge ☐ Crown decline ☐ Other: ___ Specify ☐ s.271 Sexual assault (# ☐ s.272 Sexual assault weapon, threats to a 3rd party, or CBH (#____) charge(s) and # of counts ☐ s.273 Aggravated sexual assault (#____) ☐ s.279(2) Confinement (#_☐ s.264.1(1) Utter threat (#_ for each: ☐ Attempted murder ☐ Murder (1st, 2nd, or manslaughter) ☐ Add'I violent offence charge(s): □ Supervision – □ Recognizance □ Probation □ EPO | □ No victim contact (EPO/crim) ☐ Other: 56. Sentenced? (0=No, 1=Yes) - Plead Guilty Date ___/___ Disposition: _ 57. __ Did the index involve non-sexual violence, convictions only - modified Static-99R.#3 (0=No, 1=Yes) (e.g., assault of CO/other, robbery, kidnap, threat, violation of restraining order; MODIFIED to any charges) 58. __ Alcohol used/consumed by offender (0=No, 1=Yes) 59. __ Illicit/illegal drugs ingested by offender (0=No, 1=Yes) Sexually Intrusive Behaviours - (0=No, 1=Yes) Nature of offence (extra details): 60. __ Exhibiting genitalia to victim 61. __ Contact without sexual body parts, e.g., leg, lips, butt 62. __ Sexual contact, e.g., touch crotch/breast, penis on victim 63. __ Oral sex contact - □ fellatio □ cunnilingus 64. _ Penetration - □ digital □ vaginal □ anal ☐ foreign object: _ Other Details 65. Weapon was used (0=No, 1=Yes) | Specify weapon(s): Weapon was threatened (but not used) (0=No, 1=Yes) | Specify weapon(s): 67. __ Use of threat(s) 0 = none noted or no threats used 1 = threat to harm property, animals (pets), or others 2 = threat of direct violence to victim (either now or in the future) Denial and Minimization - □ No info 68. Acknowledge some responsibility or something happened? (0=No, 1=Yes) 69. Absolute denial (0=No, 1=Yes) 70. __ Claims consensual (0=No, 1=Yes) 71. __ Made excuses (0=No, 1=Yes) - Blames: ☐ Victim ☐ Substance use ☐ Other people ☐ Minimize severity Excuse/explanation:

0 = No; 1 = Yes / Leave blank if unknown or not applicable Code '0' if not enough info evidence that indicates it is present EPS (SAS) Research Study (Dr. S.Jung/MacEwan) v.6

Page 4 of 8

Relationship with Index Offence Victim

72 Length of relationship: 0 = < 24 hrs; 1 = > 1 day, but < 1	mo, 2 = > 1 mo, but < 1 year; 3 = 1+ years
 73 Stranger (known for less than 24 hours) (0=No, 1=Yes) 74 Contact was a result of sex trade exchange (0=No, 75 Offender working at time met victim (0=No, 1=Yes) Specify job: 	1=Yes) Details of relationship not coded:
If not strangers:	
76 Acquaintance (e.g., classmate, friend of a friend, etc) (0	=No 1=Yes)
77 Friend (e.g., hung out together purposely) (0=No, 1=Yes	
78. Family/relative (0=No, 1=distant relative, 2=immediate fi	
79 Dating (i.e., not apparent if sexually intimate) (0=No, 1=	· · · · · · · · · · · · · · · · · · ·
80 Current intimate partner (0=No, 1=Yes)	163)
81 Married or common-law (0=No, 1=Yes)	
82 Ex-intimate partner (0=No, 1=Yes)	
	that if < 1ma state '1'\
 Total length of dating/intimate relationship (in mon 84 Any children shared between offender and victim? (0=N 	=
85 Any no contact with victim provision (EPO/criminal; past	· · · · · · · · · · · · · · · · · · ·
	o. canoni, (c. 110, 1. 100)
86 Previous consensual sexual intimacy (0=No, 1=Yes)	
87 Previous recording of sex act between offender and victi	
88 Previous sexting (explicit messages/images) between of	
89 How offender and victim met was noted in file? (0=No, 1	•
☐ At bar / drinking establishment ☐ At s	, -
☐ Dating service / website ☐ Oth	er, specify:
CRIMINAL HISTORY 90 Any prior involvement with criminal justice system (arrest 91 Any recorded juvenile delinquency (i.e., arrests or convigue) Any juvenile arrest for a sexual offence and convicted a Static-2002R.#3 0 = no arrest for sexual offence before 93 Any recorded criminal history of convictions (0=No, 1=) 94 Prior sentencing dates (excluding index) - Static-99R.# (Do not include failure to appear) 95 Prior sentencing occasions for anything - Static-2002R	ictions when a juvenile) (0=No, 1=Yes) s an adult for a separate sexual offence ore 18; 1 = arrest prior to age 18 and conviction after 18 Yes) $0 = 3 \text{ or less}$ $1 = 4 \text{ or more}$
(Do not include failure to appear)	1 = 3-13 prior sentencing occasions
	2 = 14 or more prior sentencing occasions
96 Prior non-sexual violent offences (arrest/conviction) (0=97 Prior non-sexual violence – Any convictions/sentencing 98 Prior utter threats offences (arrest/conviction) (0=No, 1=99 Any community supervision violation (arrest/conviction) 100 Prior substance-related (arrest/conviction) (0=No, 1=Ye 101 Prior weapon-related offence (arrest/conviction) (0=No, 1=Ye)	- <u>Static-99R.#4/Static-2002R.#14</u> (0=No, 1=Yes) =Yes) - <u>Static-2002R.#12</u> (0=No, 1=Yes) - ☐ More than 2 es)
102. Prior sex offences (arrest/conviction) (0=No, 1=Yes) 103. Prior sex offences (arrest/conviction) – Static-99R.#5	0 = no charges or convictions
	1 = 1,2 charges or 1 conviction
	2 = 3-5 charges or 2,3 convictions
	3 = 6+ charges or 4+ convictions

0 = No; 1 = Yes / Leave blank if unknown or not applicable Code '0' if not enough info evidence that indicates it is present

EPS (SAS) Research Study (Dr. S.Jung/MacEwan) v.6 Page 5 of 8

104 Prior sentencing occasions	for sexual offences	- Static-2002R.#2	2		
0 =	1 =		2 =	3 =	
no sentencing dates	1 sentencing	dates 2, 3 ser	ntencing dates	4+ sentencing dates	S
105 Rate of sexual offending –	Static-2002R.#4			asion every 15 years sion every 15 years	
106 Years free prior to index se	x offence - Static-2	002R.#13		in the contract of the Contrac	
AND more	than 48 months free	prior to index con	viction	esulted in the index co	
	San com			sulted in the index cor	nviction
	an 48 months free p				
107 Any convictions for non-cor					. 7
108 Any unrelated sexual abuse) nc
109 Any stranger sexual abuse					Includes self-report info
110 Any male sexual abuse vict			6/(recoded)SSPI	<u>.#1</u> (0=No, 1=Yes)	es s
111 Any young, unrelated sexua	the second secon				ef-
0 = Not have 2 or more vict	ims under 12 <u>or</u> has	2+ victims under	12 but one is unr	elated	řeg
1 = Has 2 or more victims u	inder 12 and one is	unrelated			ort
112 Has sexual abuse victim ag	ed 11 or younger –	SSPI.#3 (0=No, v	ictims were 12 or	older; 1=Yes)	D,
113 Has more than one sexual	abuse victim – <u>SSPI</u>	.#2 (0=No, 1=Yes	5)		0
114 Cormier-Lang criminal his	COLUMN TERRETARIO MENO DI MANAGRAMIA	Charles and the Control of the Contr		and the second s	
Use the following coding of		0 =	+6		
	Score 0	Score 1	or 2 Score 3 of	or above	
From Rice & Harris (2006), Table offender's history of criminal offen two counts of rape (2 x 6 = 12), the	ses (with charges and co	nvictions). For example	e, if there are three o	ounts of spousal assault (3	
Offense		Score	EPROS	CPIC/ IOIN	

Offense	Score	EPROS	CPIC/JOIN
Homicide (murder, manslaughter, criminal negligence causing death)	28		
Attempted murder, causing bodily harm with intent to wound	7		
Kidnapping, abduction, and forcible confinement	6		
Aggravated assault, choking, administering a noxious substance	6		
Assault causing bodily harm	5		
Assault with a weapon	3		
Assault, assaulting a peace officer	2		
Aggravated sexual assault, sexual assault causing bodily harm	15		
Sexual assault with weapon	12		
Sexual assault, gross indecency (vaginal or anal penetration,	10		
victim forced to fellate offender)			
Sexual assault (attempted rape, indecent assault)	6		
Gross indecency (offender fellates or performs cunnilingus on victim)	6		
Sexual assault (sexual interference, invitation to sexual touching)	2		
Armed robbery (bank, store)	8		
Robbery with violence	5		
Armed robbery (not a bank or store)	4		

0 = No; 1 = Yes / Leave blank if unknown or not applicable Code '0' if not enough info evidence that indicates it is present

EPS (SAS) Research Study (Dr. S.Jung/MacEwan) v.6 Page 6 of 8

STRUCTURED PROFES	SIONAL JUDGMENT ON CR	IMINAL HISTORY (R	SVP) *Leave blank if unable to code				
STRUCTURED PROFESSIONAL JUDGMENT ON CRIMINAL HISTORY (RSVP) *Leave blank if unable to code 115 Chronicity of Sexual Violence - RSVP#1 (0=present, 1=partial, 2=present) 116 Diversity of Sexual Violence - RSVP#2 (0=present, 1=partial, 2=present) 117 Escalation of Sexual Violence - RSVP#3 (0=present, 1=partial, 2=present) 118 Physical Coercion in Sexual Violence - RSVP#4 (0=present, 1=partial, 2=present) 119 Psychological Coercion in Sexual Violence - RSVP#5 (0=present, 1=partial, 2=present) 120 Extreme Minimization or Denial of Sexual Violence - RSVP#6 (0=present, 1=partial, 2=present) 121 Attitudes that Support or Condone Sexual Violence - RSVP#7 (0=present, 1=partial, 2=present) 122 Problems with Self-awareness - RSVP#8 (0=present, 1=partial, 2=present) 123 Problems with Stress or Coping - RSVP#9 (0=present, 1=partial, 2=present) 124 Problems Resulting from Child Abuse - RSVP#10 (0=present, 1=partial, 2=present) 125 Sexual Deviance - RSVP#11 (0=present, 1=partial, 2=present) 126 Psychopathic Personality Disorder - RSVP#12 (0=present, 1=partial, 2=present) 127 Major Mental Illness - RSVP#13 (0=present, 1=partial, 2=present) 128 Problems with Substance Use - RSVP#14 (0=present, 1=partial, 2=present) 129 Violent or Suicidal Ideation - RSVP#15 (0=present, 1=partial, 2=present) 130 Problems with Intimate Relationships - RSVP#16 (0=present, 1=partial, 2=present) 131 Problems with Employment - RSVP#18 (0=present, 1=partial, 2=present) 132 Problems with Employment - RSVP#19 (0=present, 1=partial, 2=present) 133 Nonsexual Criminality - RSVP#19 (0=present, 1=partial, 2=present) 134 Problems with Planning - RSVP#19 (0=present, 1=partial, 2=present) 135 Hostility (fly off handle, volatile, anger towards women, aggressive/rude/threatening) - Acute#2 (0=No, 1=Yes) 136 Collapse of social supports - Acute#4 (0=No, 1=Yes)							
If relevant (intimate partner violence/D	OCS completed), co	oding from FVIR:				
1.	6.	11.	16.				
2.	7.	12.	17.				
3.	8.	13.	18.				
4.	9.	14.	19.				
5.	10.	15.	20.				
•	-up) data on offender						
137//	Date of CPIC/JOIN (mo/o	late/year)					
138 Any new offences							
	Next offence (mo/date/ye						
140//	Sentencing for next offen	ce (any new offences;	mo/date/year)				
141 Any new violent of							
	142//Next violence offence (mo/date/year)						
143//	Sentencing for next viole	nt offence (incl. sexua	l; mo/date/year)				
144 Any new sexual o	ffence? (0=No, 1=Yes)						
145/	Next sexual violence offe	nce (mo/date/year)					
146//	Sentencing for next sexual	al violence offence (m	o/date/year)				
0 = No; 1 = Yes / Leave blank			EPS (SAS) Research Study (Dr. S.Jung/MacEwan) v.6				
Code '0' if not enough info evide	moe mai indicates it is present		Page 7 of 8				

Victim Variables:			
147/ DOB (year/mm/dd)	Name:		
148 Gender (0=male; 1=female)	ECIB:		
149 Height ([] cm / [] inches)			
150 Weight ([] kg / [] lb)	FPS identifier:		
151 Ethnicity			
1=Caucasian/White/European	ADDITIONAL INFO	ORMATION – time in Canada, citizenship:	
2=African/Caribbean Black			
3=Native/Native American/Aboriginal/Metis			
4=Asian/Asian American (Chinese, Vietnamese, etc)	☐ Much of history unknown		
5=Indian/S.Asian/Brown			
6=Hispanic/Latino (& Cuban, Mexican, S.American, etc	c)		
7=Middle Eastern (Afghani, Pakistani, Iranian, etc)			
8=Uncodeable/Other race not listed, specify:)	
152 Marital status (1=single/dating only; 2=married/living v	vith partner; 3=div	vorced/separated/widowed)	
153 Any children (biological, step) (0=No, 1=Yes) - Number	•	•	
154 Pregnant (0=No, 1=Yes)	_		
155 Has permanent address (0=No, 1=Yes)	Education:	☐ Completed high school	
156 Employed legally (0=No, 1=Yes)	Education.	☐ Completed post-secondary schooling	
Specify type of employment (e.g.,			
labourer, student, retired, at-home			
mom, illegal occupation, social			
assistance supported):		☐ Steady work	
ODIMINAL LUCTORY (EDDOC and ODIC anti-)			
CRIMINAL HISTORY (EPROS and CPIC only)	(0=No. 1=Vos)		
157 Has been criminally active (arrests, illegal activities)?	•	worile)? (0-No. 1-Voc)	
158 Has recorded juvenile delinquency (i.e., arrests or con 159 Has recorded criminal history of convictions? (0=No, 1	-	(0-140, 1-1es)	
160. Has prior violent and/or sexual violence arrest(s) or co		In 1=Yes)	
161. Has prior supervision violation arrest(s) or conviction(s			
162. Has prior substance-related arrest(s) or conviction(s)?	• •	,	
163 Has prior weapon-related offence arrest(s) or conviction		Yes)	
164 Has prior sex trade/prostitution offence arrest(s) or cor			
VICTIMIZATION AND VULNERABILITY HISTORY			
165 Any victimization history noted? (0=No, 1=Yes)			
166 Against person? (0=No, 1=Yes) ☐ Sexual violence	e □ Non-sexual	violence	
167 Any evidence of mental illness or psychiatric history (0	0=No. 1=Yes) 1	Do not code below, if this is 'No'	
168 Has mood disorder (e.g., depression, bipolar, dysthym			
169 Has an anxiety disorder (e.g., PTSD, OCD, phobia, pa			
170 Has a psychotic disorder (e.g., schizophrenia, delusion	nal disorder, schiz	cophreniform, BriefPD) (0=No, 1=Yes)	
171 Has previous suicidal ideation or attempts (0=No, 1=Y			
172 Has taken or currently taking psychotropic medications		s/stability (0=No, 1=Yes)	
173 Has developmental disorder (e.g., low IQ, mental retar			
174 Has substance abuse problems (0=No, 1=Yes) Spe			

0 = No; 1 = Yes / Leave blank if unknown or not applicable Code '0' if not enough info evidence that indicates it is present

EPS (SAS) Research Study (Dr. S.Jung/MacEwan) v.6 Page 8 of 8

Appendix B: Additional Demographic Results (for EPS use only)

Table B.1. Demographic variables of sexual assaults reported to EPS between 2010 and 2014.

Demographic variables	#	%
EPS Division ($n = 2238$)		
Downtown	541	24.2
Southeast	336	15.0
Southwest	357	16.0
West	346	15.5
Northwest	305	13.6
Northeast	353	15.8

Table B.2. Coded variables describing sexual assaults reported to EPS from 2010 to 2013 taken from Phase II sample.

Offence, investigation variables		#	%
	perpetrators (n = 114) perpetrators (n = 186)	13 84	11.4 45.2
Occurred in public non-residence setting	Of stranger perpetrators (n = 114)Of known perpetrators (n = 186)	71 45	62.3 24.2
Sexual assault response team (SART) kit co	mpleted	a menetit	
Of all cases (n = 300)		119	39.9
Of cases where there is a potential of biological evidence ($n = 167$)		113	67.7
Victim decline of SART kit, of cases where there is a potential of biological evidence		9	5.4
Victim declines to proceed		96	32.3
Perpetrator resistance during investigation (n = 300)		57	19.0
At the time of data retrieval, what was the leg - Peace bond - For lesser non-violent char - For lesser violent charge - For most severe charge	one was a statement of the read was stated the read	8 4 30 50	2.7 1.3 10.0 16.7
At the time of data retrieval, perpetrator was sentenced		93	31.0