EDMONTON POLICE SERVICE

REPORT TO THE EDMONTON POLICE COMMISSION

DATE: **2018 March 14**

SUBJECT: **Socioeconomic Factors of Crime Analysis**

BACKGROUND:

During the Edmonton Police Commission meeting on January 18th, 2018 a request was made for the service to provide an analysis of socioeconomic factors that correlate with crime. The request mirrors an identical request that was completed and presented a year and a half prior. Consequently, in order to provide a response in an efficient manner, the crux of what is presented in this document is taken from the previous research work conducted by the service.

COMMENTS/DISCUSSION:

The attached report analyses several empirically established socioeconomic determinants of crime – age, gender, and race – and compares these levels in Edmonton to other Canadian cities.

ADDITIONAL INFORMATION ATTACHED:

- Attachment 1 – Socioeconomic Factors of Crime

C.S

Written by: Cal Schafer, Strategic Analyst
Strategic Planning, Evaluation & Research Unit (SPERU), OSM Division

Reviewed By: Daniel Spanu, Manager
Strategic Planning, Evaluation & Research Unit, OSM Division

Approved by: Jodie Graham, Executive Director, OSM Division

Chief of Police:

Date: MAR 1 4 2018

Edmonton Police Service

Socioeconomic Factors of Crime

Prepared by: Cal Schafer (Strategic Analyst)
Strategic Planning, Evaluation, and Research Unit
Office of Strategy Management Division
March 14, 2018

Socioeconomic Factors of Crime

Contents

1.0 Introduction 3

2.0 Socioeconomic Factors of Crime 3

2.1 Age 3

2.2 Gender 7

2.3 Race 10

3.0 Conclusion 13

4.0 Additional Resources 14

1.0 Introduction

During the Edmonton Police Commission meeting on January 18th, 2018 a request was made for the service to provide an analysis of socioeconomic factors that correlate with crime. The request mirrors an identical request that was completed and presented a year and a half prior. Consequently, in order to provide a response in an efficient manner, the crux of what is presented in this document is taken from the previous research work conducted by the service.

2.0 Socioeconomic Factors of Crime

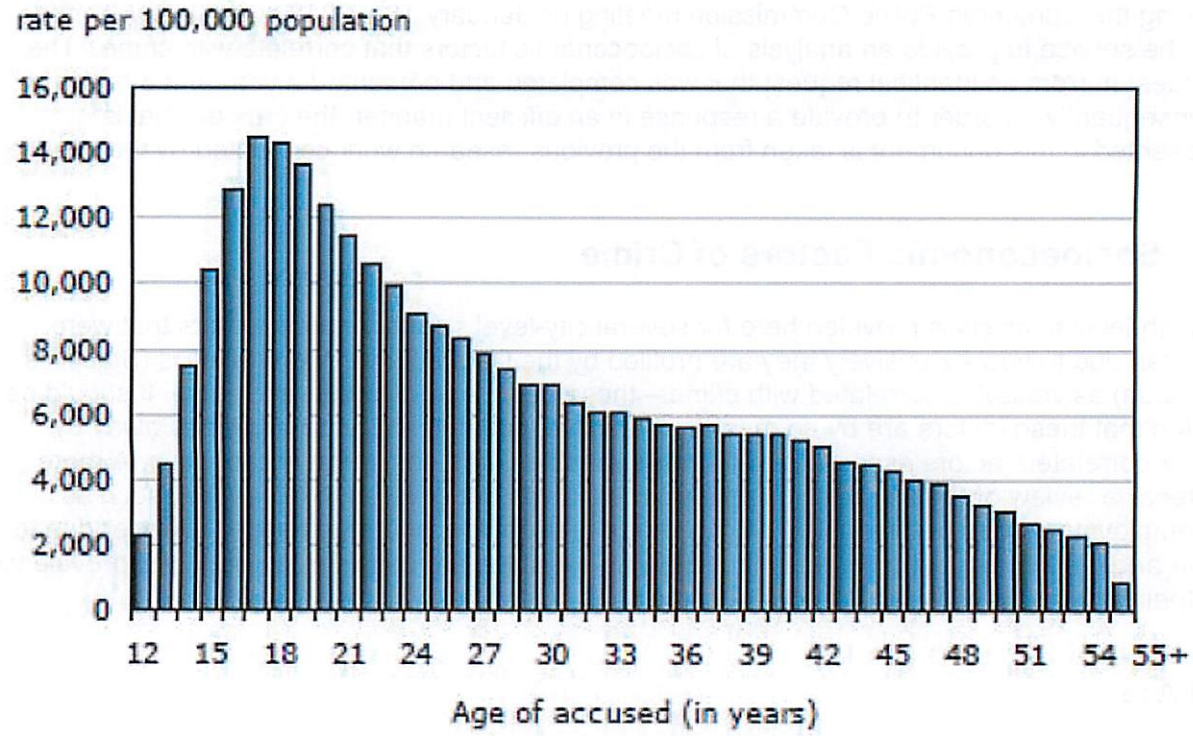
A high-level analysis is provided here for several city-level socioeconomic factors that were chosen due to how extensively they are profiled by the Centre for Justice Statistics (Statistics Canada) as variables correlated with crime – these being Age, Gender, and Race. It should be noted that these factors are by no means exhaustive, can potentially be explained away by other correlated factors associated with these variables, and do not imply causation. A more extensive review of the literature could look at variables not covered in this report, such as unemployment, income inequality, single-parent households, and drug usage, however due to time and resource constraints, only the following variables are considered due to the prevalence of their correlation with occurrences of crime.

2.1 Age

Age is a commonly cited factor for criminal activity, with strong empirical support over the years and across Canadian police jurisdictions. As noted by Stevens (2011)[1], young persons are overrepresented in those accused of crime, with the percentage of those accused of crime increasing through adolescence, peaking at age 17, and slowly declining thereafter (see the figure below). For instance, in 2009, persons aged 18 were accused of crime at about four times the rate as persons aged 50. Young adults are most overrepresented when it comes to property crime, followed by violent crime – which peaks later in life. Fraud and other white collar crime does not follow the typical age pattern, and tends to be higher much later in life.

[1] Stevens et al (2011): Demographic Trends and Crime in the Province of Alberta. Mount Royal University.

Persons Accused of Crime by Age, per 100,000 population, Canada, 2009 (Source: Stevens (2011))



The role of age on criminality is supported by data in the Criminal Court system, where in 2013/2014, persons under the age of 35 represented 60% of those appearing in Criminal Court (Adult), while only accounting for 29% of the population in 2013[2].

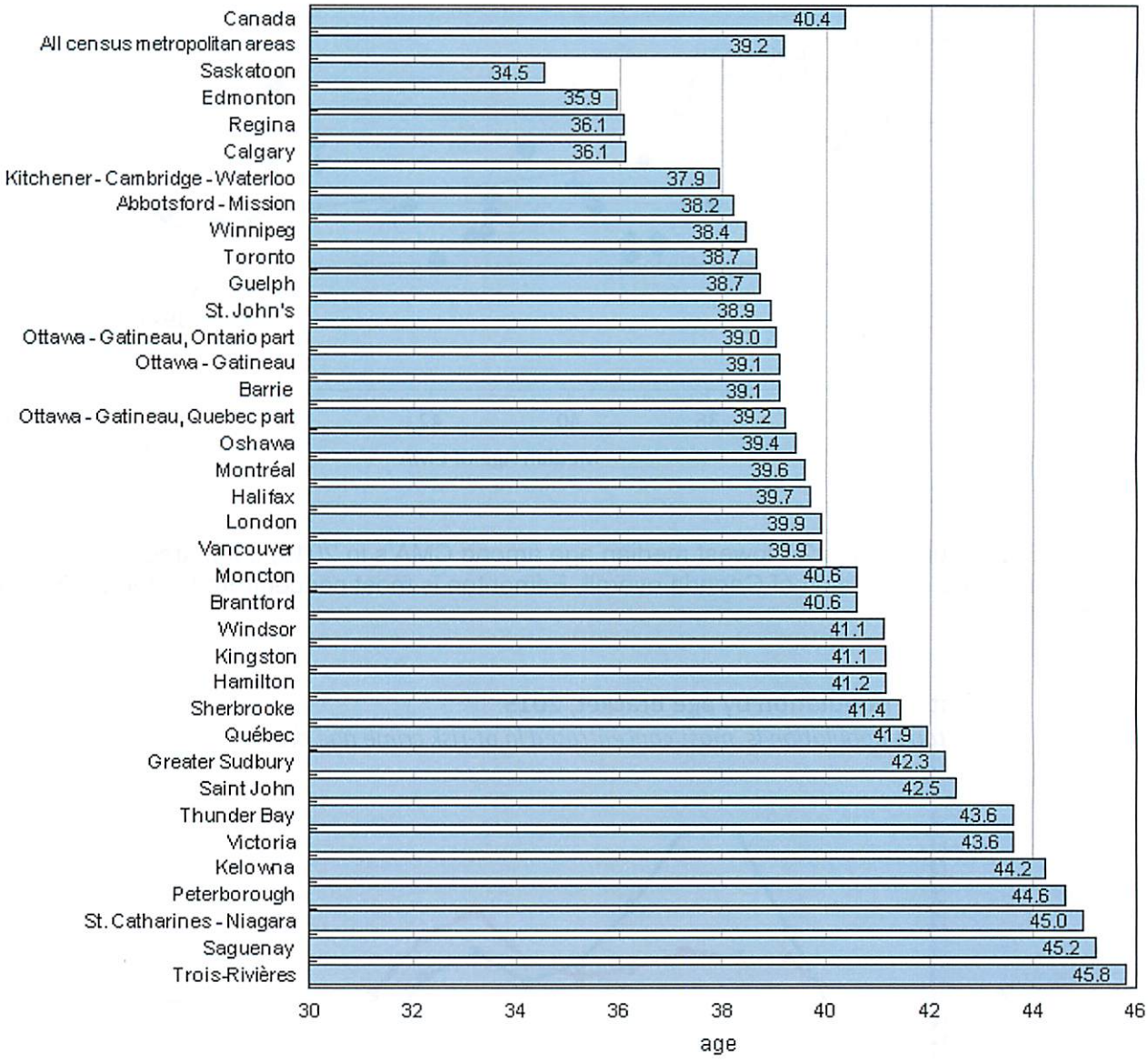
As noted by Stevens (2011), crime rates in Canada have changed over time as Canada's age composition has changed. Violent and property crime rose in the 1960's and 1970's while baby boomers were reaching 15 years of age. In the 1990's when the proportion of persons aged 15-24 was reducing, crime rates began declining as well.

With youth at higher-risk for criminality, it follows that cities with younger populations are more likely to observe higher crime levels. Saskatoon, Edmonton, and Regina had the youngest median age at the Census-Metropolitan-Area level (CMA) level as of 2014[3] (see the figure below). These three CMA's were observed to have the highest CSI in Canada in 2015.

[2] Adult criminal court statistics in Canada, 2013/2014 (Statistics Canada): http://www.statcan.gc.ca/pub/85-002-x/2015001/article/14226-eng.htm

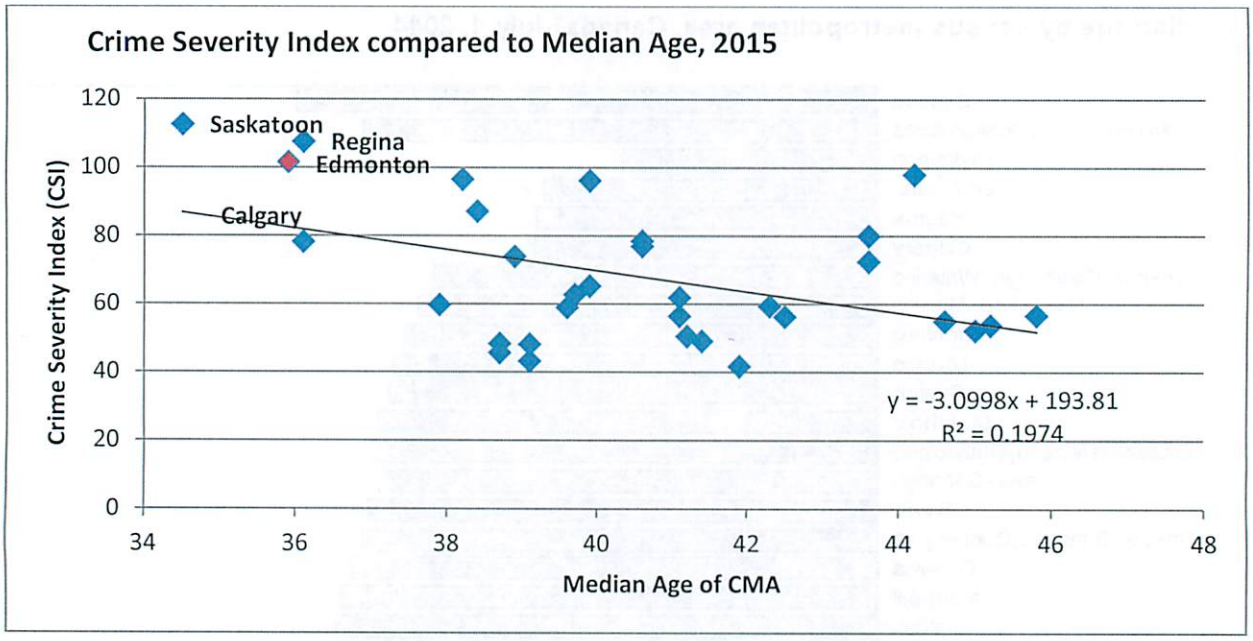
[3] See Statistics Canada: http://www.statcan.gc.ca/pub/91-214-x/2015000/section01-eng.htm

Median age by census metropolitan area, Canada, July 1, 2014

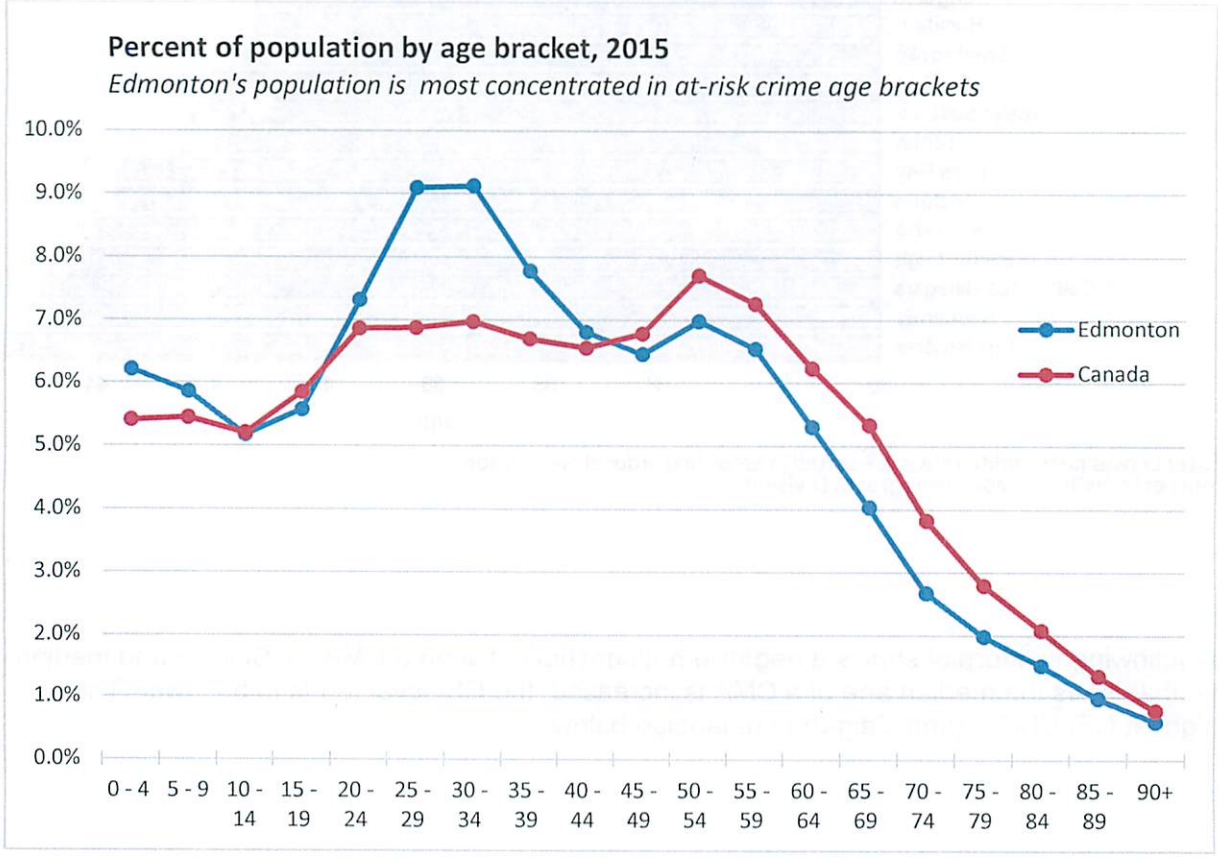


Note: Census metropolitan areas are sorted in ascending order of median age.
Source: Statistics Canada, Demography Division

The following scatterplot shows a negative relationship between a CMA's CSI level and median age, that is, as the median age of a CMA is increased, the CSI level tends to be lower. The top 7 highest CSI CMA's (and Calgary) are labeled below.



While Edmonton has the 2nd lowest median age among CMA's in 2014, compared to the population age distribution of Canada overall, Edmonton is most concentrated in the 20-39 age bracket.



2.2 Gender

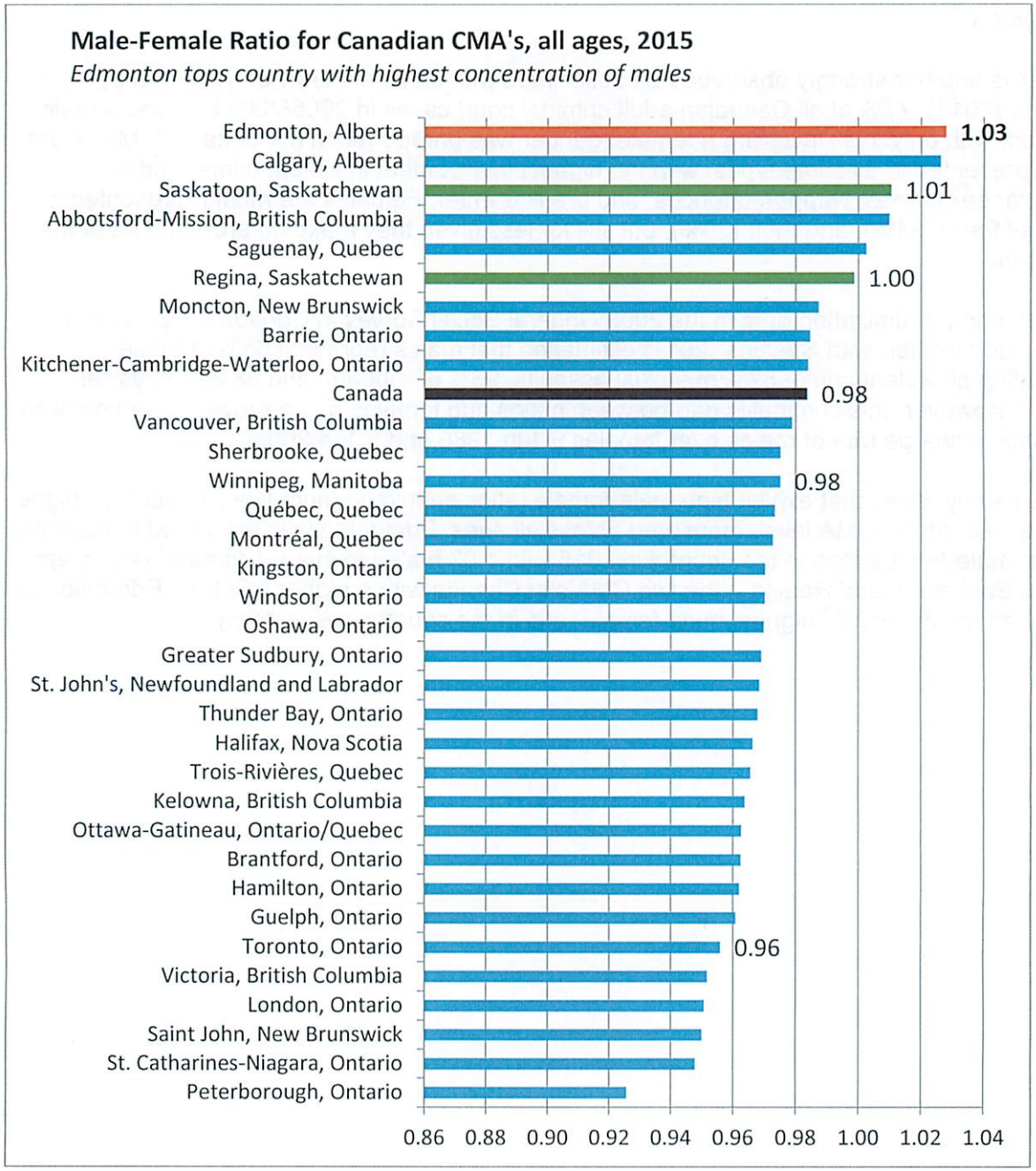
Gender is another strongly observed trait associated with criminal behavior. As noted by Stevens (2011), 77% of all Canadian adult criminal court cases in 2008/2009 involved a male accused, with only 17% involving a female (gender was unreported in 6% of cases). Males are overrepresented in all crime types, with the highest involvement in violent crime, and in particular sex crimes, weapon offences, and break & enter. Females are most represented in cases of fraud (31%), and theft (30%), but still far less given they make up around 50% of the population.

Self-reporting victimization data in the 2009 General Social Survey in Canada supports this observation further, with Stevens (2011) estimating that males represent 88% of those committing all violent crime, 87% of sexual assaults, 95% of robbery, and 88% of physical assault. However, this criminality gap between males and females has narrowed over time with the criminal charge rate of males over females 9:1 in 1986 and 5:1 in 2005[4].

Consequently, cities that exhibit high male-female ratios should be more likely to observe higher crime levels. At the CMA level, measured across all ages, Edmonton was estimated to have the highest male-female ratio in the country in 2015 with 1.03 males to every 1 female[5] (see graph below). Saskatoon and Regina – the two CMA's in Canada with a higher CSI than Edmonton in 2015, had the 3rd and 6th highest male-female ratio in the country, respectively.

[4] See Stevens (2011) and Females Offenders in Canada (archived), Statistics Canada: http://www.statcan.gc.ca/pub/85-002-x/2008001/article/10509-eng.htm

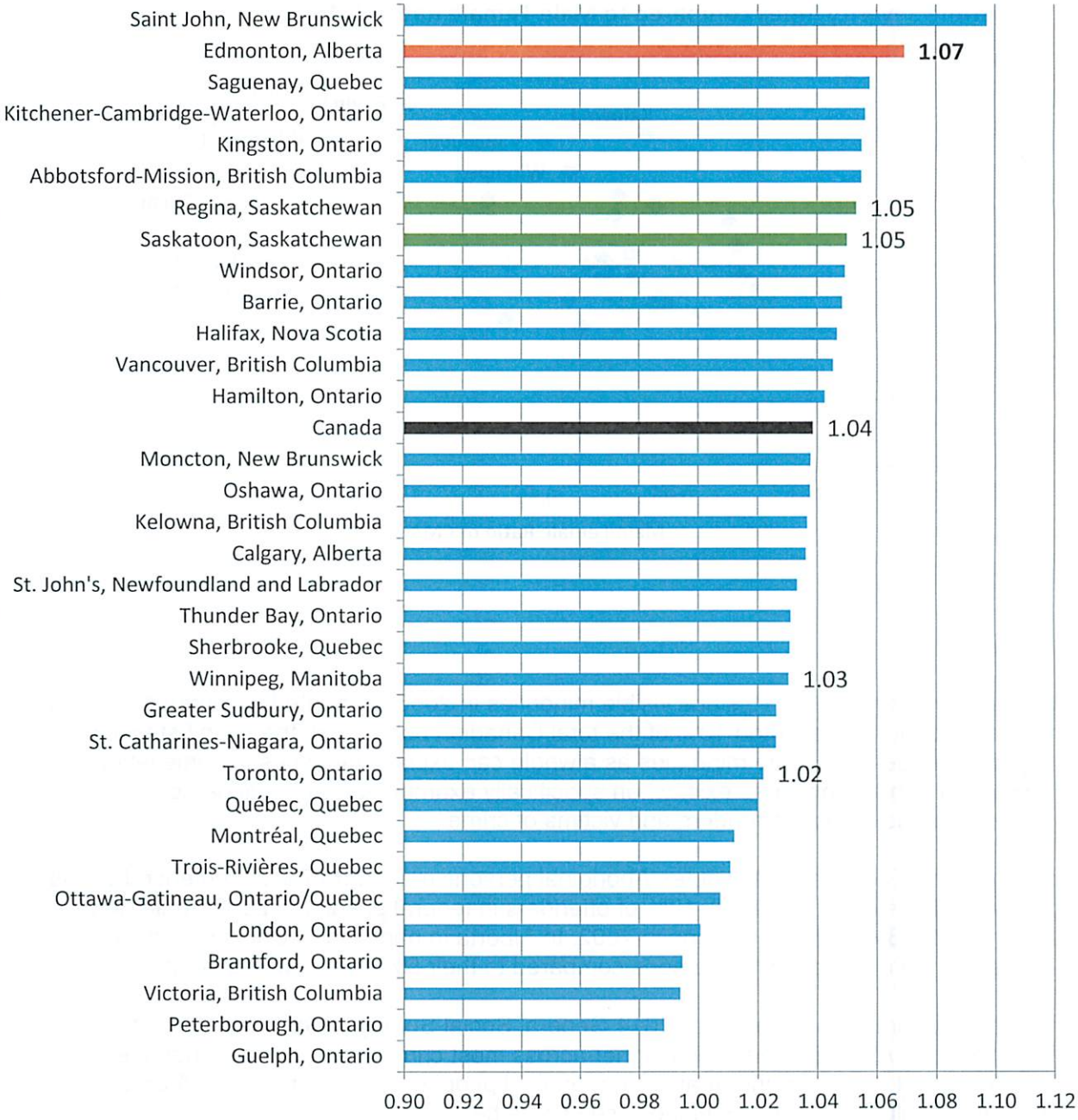
[5] Source: Statistics Canada, table 051-0056 and 051-0001



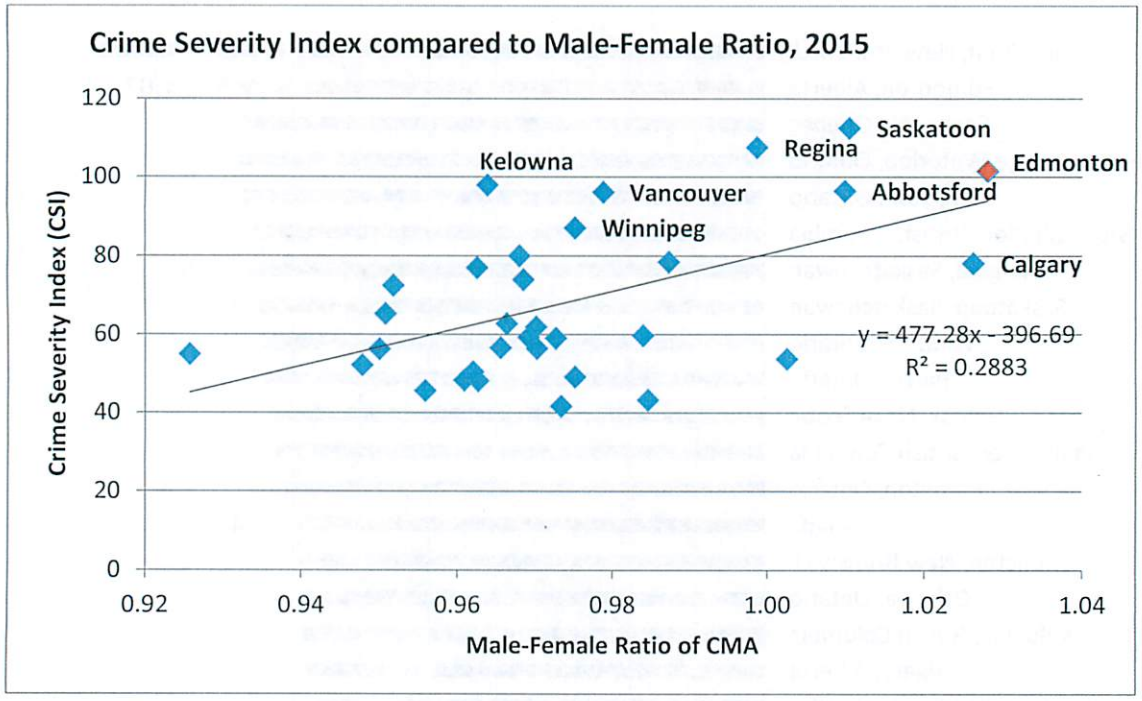
Further, in the 15-29 age bracket – the age brackets with the highest propensity for criminality, Edmonton had the 2nd highest male-female ratio in the country in 2015 at 1.07 males for every female (see graph below). This plays a compounding effect where Edmonton has both a high proportion of young adults, and with a high proportion of these young adults as male.

Male-Female Ratio for Canadian CMA's, ages 15-29 ages, 2015

Edmonton has one of the highest male concentrations of 15-29 year olds



The following scatterplot shows a positive relationship between a CMA's CSI level and Male-Female ratio, that is, as a CMA has a higher proportion of males, the CSI tends to be higher.



2.3 Race

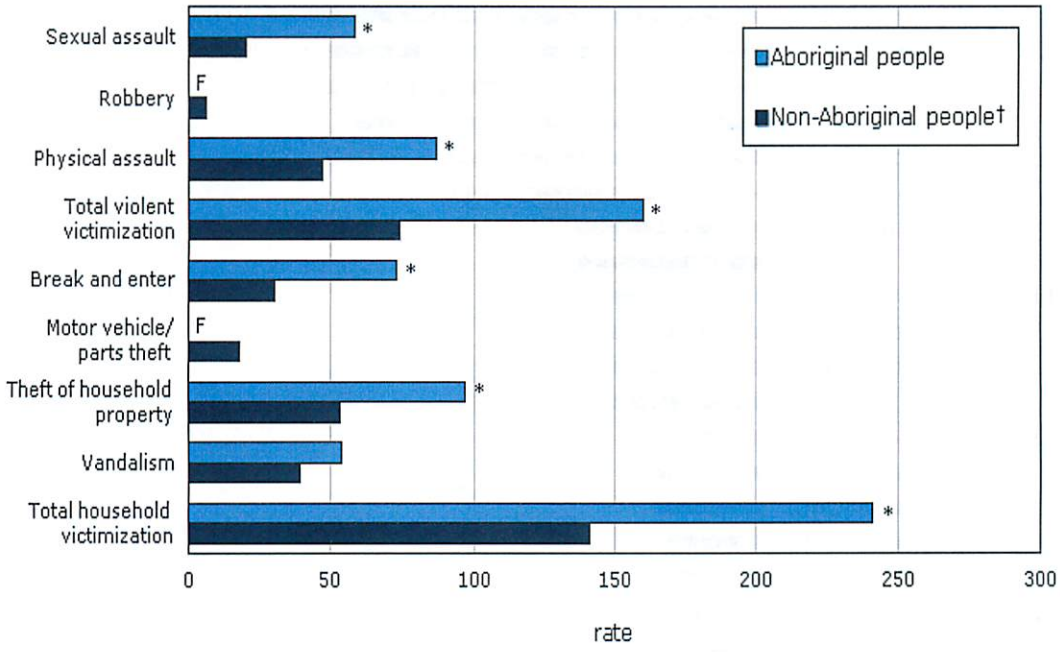
As noted by Stevens (2011), since visible minorities in 2006 accounted for about 11% of those incarcerated, but represented 13% of the total Canadian population, there isn't statistical support to argue that visible minorities as a whole can explain variances in crime levels. However, a relationship does exist when specifically examining Aboriginal persons, who are overrepresented as both offenders and victims of crime.

In corrections, Stevens (2011) notes Aboriginal persons made up 27% of sentenced admissions to provincial custody in 2008/09, 18% of offenders in federal prisons in 2002, while only accounting for 3% of the population in 2002. In Alberta in particular, 40% of provincial facility admissions were of Aboriginal persons compared to their 5% portion of the adult population.

In terms of victimization, Canada's 2014 General Social Survey (GSS) finds that rates of victimization of Aboriginal people is higher across most crime types, most pronounced in sexual assaults (about 3 times higher than non-aboriginal people), followed by break & enter and physical assault (about 2 times higher) (see figure below)[6].

[6] See Statistics Canada, Criminal Victimization in Canada (2014): http://www.statcan.gc.ca/pub/85-002-x/2015001/article/14241-eng.htm

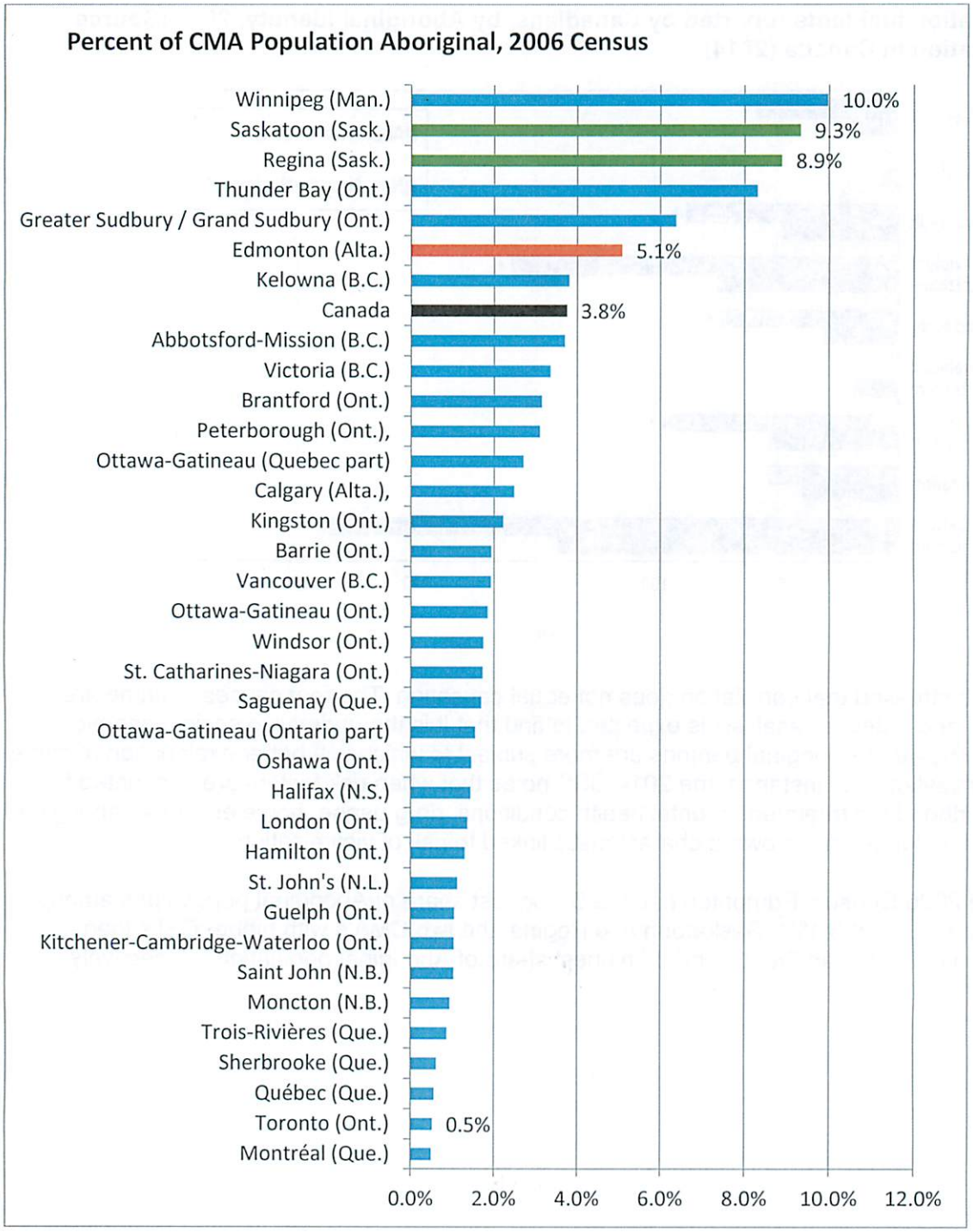
Victimization incidents reported by Canadians, by Aboriginal identity, 2014 (Source: Victimization in Canada (2014)



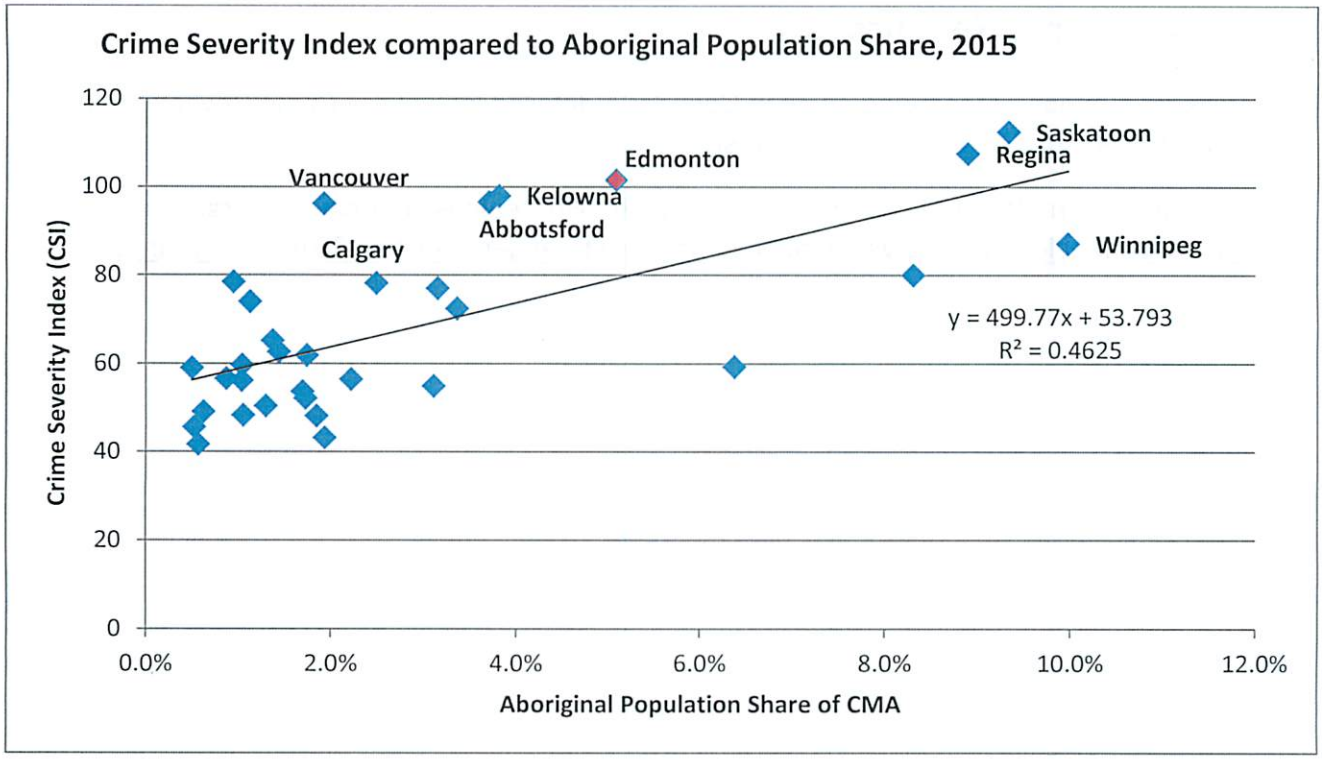
It must be stressed that correlation does not equal causation. The root causes of crime are complex, and a deeper analysis is expected to find that it is the underlying socioeconomic vulnerabilities that Aboriginal persons are more subject to which is a better explanation of crime and victimization. For instance, the 2014 GSS notes that when risk factors are accounted for (e.g., childhood maltreatment, mental health conditions, drug usage, homelessness), aboriginal identity is no longer on its own a characteristic linked to risk of victimization.

As of the 2006 Census, Edmonton had the 6th highest share of Aboriginal populations among Canadian CMA's at 5.1%[7]. Saskatoon and Regina, the two CMA's with higher CSI's than Edmonton in 2015, had the 2nd and 3rd highest share of Aboriginal population, respectively.

[7] Data source: http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/demo64a-eng.htm



The following scatterplot shows a positive relationship between a CMA's CSI level and Aboriginal population share.



3.0 Conclusion

The Crime Severity Index is the most comprehensive-developed indicator by Statistics Canada for the state of crime and public safety that cities, provinces, and Canada face. The consistency of data collection across police services via the Uniform-Crime-Reporting standard insures sound comparability across police jurisdictions, and over time. This usefulness of this metric is apparent when one considers how complex crime is: in 2015, there were 83,383 criminal incidents reported to EPS spanning 115 unique criminal offence codes. But for a topic as broad as crime and public safety, the limitation of the CSI should be acknowledged, it is only one metric for a topic that can be measured many different ways.

The CSI varies considerably across Canadian cities, and factors such as age, gender, and Aboriginal Status go a long way in explaining this variance. However, there are many other socio-economic variables that can also explain variance in crime levels. These socioeconomic variables bring attention that while police certainly influence crime levels, they do not control it.

4.0 Additional Resources

Statistics Canada - Measuring crime in Canada: A detailed look at the Crime Severity Index: http://www.statcan.gc.ca/eng/sc/video/csi

Macleans - Canada's most dangerious cities 2016: How safe is your city? (Interactive): http://www.macleans.ca/news/canada/canada-most-dangerous-cities-2016-safe-your-city/