



**The Correlates  
of Self-Reported  
Delinquency:  
An Analysis of  
the National  
Longitudinal  
Survey of Children  
and Youth**



**DEPARTMENT OF  
JUSTICE CANADA**

**YOUTH JUSTICE RESEARCH**



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Delinquency: An Analysis of the  
National Longitudinal Survey of  
Children and Youth

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*The views expressed herein are solely those  
of the authors and do not necessarily reflect those  
of the Department of Justice Canada.*

## Executive Summary

The present study was designed to examine the correlates of self-reported delinquency among youth between the ages of 12 and 15 using Canadian data from the National Longitudinal Survey of Children and Youth (NLSCY).

For the purposes of this study, a Self-Reported Delinquency Scale (SRDS) was created, which considered both the *frequency* and the *severity* of the delinquent behaviour. Multiple regression was used to determine the significant correlates of the SRDS as well as specific forms of delinquency including violent offending and drug trafficking. Partial regression analyses were also conducted for male and female delinquents.

The prevalence of self-reported delinquency for the 12-month period prior to the survey was approximately 39% – this translates to more than 540,000 youth across Canada who admitted to at least one act of delinquency during the previous year. The majority, however, would be considered minor offenders.

Five core concepts emerged from the analysis which were consistent across different forms of delinquency as well as for male and female youth. The five central concepts correlated with the SRDS are: 1) inconsistent and inadequate parenting; 2) history of victimization; 3) anti-social peer involvement; 4) negative school attachment; and, 5) aggression.

The analysis was based on cross-sectional data from the NLSCY. It would be extremely valuable in the future to use the longitudinal aspect of the data to develop a clearer sense of the temporal relationships between variables.

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## 1.0 Introduction

Since the seminal work of Glueck and Glueck (1950, 1968), considerable research has been conducted in the social sciences to identify factors correlated with delinquency. One of the more important findings that has emerged is the general understanding that such factors do not operate in isolation from one another. Rather, correlates of delinquency often have additive or interactive effects that increase the risk of delinquency for youth who experience multiple factors (Thornberry, Huizinga & Loeber, 1995). Moreover, many factors tend to be involved in reciprocal relationships wherein delinquency leads to further deficits in the very factors most closely associated with it (Thornberry, Lizotte, Krohn, Farnworth & Jang, 1994). Delinquency, therefore, may perpetuate its very existence. Nevertheless, identifying individual correlates is still crucial to the prevention or reduction of criminal behavior in youth by providing direction to the development of appropriate interventions.

Delinquency correlates are often grouped into static factors (i.e., factors that are not amendable to change through direct interventions) and dynamic factors (i.e., those that are amendable to change through direct interventions). This distinction is useful when developing interventions designed to reduce delinquency, as dynamic factors can be targeted for change in an effort to prevent further criminal behavior (Andrews & Bonta, 1998).

The most commonly discussed static factors are gender and age. The risk for criminal involvement is significantly higher for male youth compared to female youth (Bor, Najman, O'Callaghan, Williams, & Anstey, 2001; Lipsey & Derzon, 1998; Moffitt, 1993; Smith, Visher, & Jarjoura, 1991). However, according to Statistics Canada (see Stevenson, Tufts, Hendrick, & Kowalski, 1998) the gender gap is shrinking, as an increasing number of females are engaging in criminal behaviors. Age is considered one of the more robust correlates as the prevalence of delinquency increases in early adolescence and peaks in young adulthood (Gomme, 1985; Loeber, Stouthamer-Loeber, Van Kammen, & Farrington, 1991; McCord, Widom, & Crowell, 2001; Moffitt, 1993).

Two additional factors found in the literature that are often labelled static are child maltreatment and socio-economic status. A history of physical, sexual or emotional abuse, or neglect, has been found to increase the likelihood of delinquent behavior (Malinosky-Rummell & Hansen, 1993; Scudder, Blount, Heide & Silverman, 1993; Stewart, Dennison & Waterson, 2002; Widom, 1989; Zingraff, Leiter, Myers & Johsen, 1993). The relationship between socio-economic status and delinquency, however, is unclear. While some studies do indicate that youth from lower status families are at a higher risk for delinquency than those from higher status families (Farrington, 1989; Lipsey & Derzon, 1998), this finding is not consistent across studies (Tittle & Meier, 1991; Wilkström & Loeber, 2000).

Dynamic factors are typically considered to be of greater importance as they represent precursors of delinquency that have the potential to be changed through individual intervention (Hawkins, Herrenkohl, Farrington, Brewer, Catalano, & Harachi, 1998).

One of the primary dynamic factors correlated with delinquency is inadequate parenting including inconsistent parenting styles (McCord *et al.*, 2001; Hawkins, *et al.*, 1998), lower levels of parental supervision (Loeber & Stouthamer-Loeber, 1986), and poor child-parent attachment (Blaske, Borduin, Henggeler & Mann, 1989; Rankin & Wells, 1990).

A second dynamic factor correlated with delinquency is poor school attachment including repeating a grade and early withdrawal from school (McCord *et al.*, 2001; Thornberry, Lizotte, Krohn, Farnworth, & Jang, 1991). Children who display antisocial attitudes (Andrews & Bonta, 1998) or who live with parents who demonstrate antisocial attitudes (Hawkins *et al.*, 1998; McCord, 1991) are also at an elevated risk of becoming involved in delinquent behavior. Additionally, association with antisocial peers have been identified as contributing to participation in delinquency (Andrews & Bonta, 1998; Bell, 1999; Lawrence, 1991; McCord *et al.*, 2001; Lispey & Derzon, 1998; Matsueda & Anderson, 1998; Warr, 1993).

One of the more salient dynamic correlates of delinquency in childhood is aggression (Bor *et al.*, 2001; Farrington, 1989; Hawkins *et al.*, 1998; McLaren, 2000; Moffitt, 1993). In fact, Laub and Lauritsen (1993) argue that, “the stability of aggressive behavior patterns throughout the life course is one of the most consistently documented patterns found in longitudinal research” (p. 239). There are a number of additional dynamic factors associated with delinquency, including conduct disorders and Attention-Deficit Hyperactivity Disorder (Farrington, 1989; Hawkins *et al.*, 1998; Oddone-Paolucci, Violato & Wilkes, 2000).

The present study was primarily designed to identify the significant correlates of delinquency among youth between the ages of 12 and 15, using Canadian data from the National Longitudinal Survey of Children and Youth (NLSCY). This data source was also useful in providing information on the prevalence of delinquency in Canada within this age group. Previous research in this area has focused on broad definitions of delinquency, including behaviors that are not considered ‘criminal’ by today’s standards, such as truancy, general disobedience, and promiscuity. This study defined delinquency more strictly as a violation of the current *Criminal Code* of Canada and did not include non-criminal misbehavior.



## 2.0 Method

The National Longitudinal Survey of Children and Youth provided a useful data source for the examination of self-reported delinquency in Canadian youth. The NLSCY is a joint project between Statistics Canada and Human Resources Development Canada. The goal of the survey is, “to monitor the development and well being of Canada’s children as they grow from infancy to adulthood” (Statistics Canada, 2002, p.1). Initiated in 1994, the NLSCY was designed to follow a representative sample of Canadian children (newborns to 11 year olds) into adulthood. New interview and questionnaire data are collected every two years.

The data used in this study were drawn from Cycle III, which was collected in 1998. During Cycle III, individuals between 12 and 15 years of age filled out self-administered questionnaires designed to examine a number of different aspects of their lives (e.g., friends, family, school, feelings and behaviors, delinquent behavior, health, and work). Data on each child, including items such as his or her family’s economic, labour force and health status, birth information, behavior, social relationships, school performance, and learning environment were collected from the person most knowledgeable (PMK) about the child, the PMK’s spouse (if applicable), and the child’s principal and teachers through questionnaires and interviews. In total, Cycle III provides data on 31,194 children from across the ten provinces.

### 2.1 Weighting procedures

The principle behind estimation in a probability sample, such as the NLSCY, is that each respondent represents several other individuals in the population. Applying a weight to a respondent allows for the calculation of the number of children that respondent represents. Conceptually, the basic weight of each child in the NLSCY is roughly equal to the inverse of the child’s probability of selection. In general, one child represents approximately 300 children in the population. Given our secondary purpose of reporting on the prevalence of self-reported delinquency among youth 12 to 15 years of age in Canada, this study employs the cross-sectional weighting variable created by Statistics Canada.

### 2.2 Missing data

In order to effectively conduct statistical analysis, it was necessary to recode certain responses within the NLSCY. If a particular individual provided responses such as ‘do not know’ or ‘not applicable’, or if the individual refused to answer the question, the response was coded as missing. A portion of the respondents also failed to answer entire sections of the survey, which, along with our recoding procedures, resulted in a substantial reduction in the sample size used in the regression analysis.

### 2.3 Dependent variable calculation: Self-Reported Delinquency Score

In order to operationalise self-reported delinquency, 14 questions from the NLSCY were selected as dependent variables and matched with comparable *Criminal Code* offences.<sup>1</sup>

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<sup>1</sup> Please see Appendix A for the complete list of questions.

Respondents were asked to indicate the frequency of each of the criminal behaviors in the 12 months preceding the survey using the following choices: never; once or twice; three or four times; or, five or more times.

Respondents were also asked about drug use (e.g., “Have you every tried marijuana and cannabis products?”), but the possible responses were dichotomous (i.e., “yes” or “no”) and the timeframe was not specified as with the 14 selected questions. Therefore, drug use was not considered within the dependent delinquency score. As it is a *Criminal Code* offence to possess drugs in Canada, a decision was made to also exclude drug use from the list of independent variables.

In order to develop a meaningful measure of delinquency, which considered both the *severity* and the *frequency* of the behavior, weights were attached to each variable based upon the seriousness of the offence and subsequently multiplied by its frequency. Severity was defined using the mean custodial sentence length (in months) of each *Criminal Code* offence.<sup>2</sup> This information was obtained from the 1998 Adult Criminal Court Survey (ACCS) managed by the Canadian Centre for Justice Statistics (CCJS). Adult court data were selected rather than youth court data in order to create more variability and to accurately rank the seriousness of the crime based upon societal norms as maximum sentences in Canadian youth court are three years for most offences.

For example, the mean sentence length for sexual assault, using ACCS data, was 16 months. If a respondent in the NLSCY indicated that they had, in the past 12 months, forced someone into having sex once or twice, the score would be 16, while three or four infractions would create a score of 32 and five or more infractions would total 48 points. Once each offence was weighted according to severity and frequency, a total overall self-reported delinquency score (SRDS) was calculated by summing each individual’s score across all the offences. The SRDS can range from 0 (indicating no delinquent behavior) to 312.

## 2.4 Independent variables

Previous studies on the correlates of delinquency were used as a guide in selecting the appropriate independent variables. The following scores<sup>3</sup> and individual variables were included:

1. Pro-social Score
2. Parental Nurturance Score
3. Parental Monitoring Score
4. Hyperactivity/Inattention Score
5. Emotional Disorder Score
6. Indirect Aggression Score
7. General Self Score
8. Friends Score
9. School Attachment Score

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<sup>2</sup> Please see Appendix A for the severity weights.

<sup>3</sup> For a detailed description of the scores, please see Statistics Canada (2002).



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10. Extra-curricular Involvement Score
  11. Volunteer Score
  12. Victimization Score
  13. Drug-use Score
  14. Negative Peer Score
  15. Negative School Behavior Score
  16. Inconsistent Parenting Score
  17. Peer Drug-use
  18. Age of child
  19. Gender of child
  20. Household Income
  21. Child witnesses abuse within the home
  22. Social Economic Status
  23. Child takes Ritalin
  24. Child destroys own belongings
  25. Child gives up easily
  26. Parents hit child or threaten to
  27. Parents get angry and yell at child
  28. Child's time spent with friends
  29. Parents encourage child to do well
  30. Child repeated grade
  31. Number of close boyfriends
  32. Number of close girlfriends
  33. Child's school aspirations

## 2.5 Multiple regression

Logistic regression was used to assess the combined and individual influence of each of the independent variables on the SRDS. In addition to the general regression analysis, partial regression analyses were conducted for male youth, female youth, youth engaged in violent offences, youth engaged in property offences, youth engaged in sexual offences, and youth engaged in drug trafficking.

### 3.0 Results

There were 4,293 youth sampled during Cycle III of the NLSCY between the ages of 12 and 15 years. Using weighting procedures, this sample represents 1,659,105 Canadian youth. Table 1 provides basic demographic information on the weighted sample.<sup>4</sup> Most of the youth in the sample resided in Ontario and Quebec, were non-aboriginal, and lived within dual parent families. The median annual household income was \$58,098 with a range of \$6,122 to \$555,000.

<b>TABLE 1 DEMOGRAPHIC INFORMATION</b>					
	N	%		N	%
<b>Gender</b>			<b>Province</b>		
Male	854,611	51.5%	Newfoundland	32,999	2.0%
Female	804,494	48.5%	Prince Edward Island	8,719	0.5%
<b>Total</b>	<b>1,659,105</b>	<b>100%</b>	Nova Scotia	51,394	3.1%
			New Brunswick	42,235	2.6%
<b>Age</b>			Quebec	369,192	22.3%
12 Years	459,705	27.7%	Ontario	634,027	38.2%
13 Years	322,971	19.5%	Manitoba	65,408	3.9%
14 Years	478,662	28.9%	Saskatchewan	62,369	3.8%
15 Years	397,767	24.0%	Alberta	177,707	10.7%
<b>Total</b>	<b>1,658,696</b>	<b>100%</b>	British Columbia	215,056	13.0%
			<b>Total</b>	<b>1,659,105</b>	<b>100.1%</b>
<b>Marital Status</b>			<b>Aboriginal Status</b>		
Married	1,253,230	75.5%	Aboriginal	25,484	1.6%
Common-law	103,895	6.3%	Non-aboriginal	1,548,909	98.4%
Single	58,454	3.5%	<b>Total</b>	<b>1,574,393</b>	<b>100%</b>
Widowed	21,456	1.3%			
Separated	103,855	6.3%			
Divorced	118,215	7.1%			
<b>Total</b>	<b>1,659,105</b>	<b>100%</b>			

Note: Percentages do not always total 100% due to rounding.

<sup>4</sup> Unless otherwise indicated, the results will be based upon the weighted sample, which provides more accurate estimates.



### 3.1 Prevalence of self-reported delinquency

The prevalence of self-reported delinquency for the 12-month period prior to the survey was approximately 39% – this translates to more than 540,000 youth across Canada who admitted to at least one act of delinquency during the previous year (see Table 2). The SRDS scores, which take into consideration the severity and frequency of offending, ranged from zero to 306 with a mean score of 5.3 (SD=16.6). In order to present a clearer understanding of the SRDS, we grouped the youth into five categories from non-delinquents to very serious delinquents.<sup>5</sup> As Table 2 indicates, the vast majority of youth engaging in delinquent behavior (68%) would be considered ‘minor’ offenders.

	<b>N</b>	<b>%</b>
<b>Delinquency Group</b>		
Non-Delinquent	839,942	60.8%
Minor	366,351	26.5%
Moderate	117,315	8.5%
Serious	44,995	3.3%
Very Serious	12,681	0.9%
<b>Total</b>	<b>1,381,284</b>	<b>100%</b>

The offence reported most frequently was ‘stealing from parents’ followed by ‘stealing from a store/school’ and ‘damaging property’ (see Table 3). ‘Forcing someone into sex’ was the least likely offence committed followed by ‘carrying a gun to defend’ and ‘threatening for money/possessions’.

<sup>5</sup> Using the calculated scores from the SRDS, we recoded respondents using the following groupings: Minor = 1 to 10 ; Moderate = 11 to 30 ; Serious = 31 to 100 ; Very Serious = more than 100.

<b>TABLE 3 SELF-REPORTED DELINQUENCY BY SPECIFIC OFFENCES</b>		
	<b>N</b>	<b>%</b>
<b>Specific Offence</b>		
Stolen money from parents	284,268	22.8%
Stolen from store/school	227,530	18.2%
Damage to property	162,902	13.1%
In fight causing injury	123,013	9.9%
Fencing stolen property	83,950	6.7%
In fight with a weapon	87,771	6.4%
Sold drugs	64,426	4.8%
Break and Enter	38,727	3.1%
Stolen a vehicle	40,023	3.0%
Set fire to something on purpose	37,008	2.7%
Touched someone who was unwilling	31,027	2.3%
Threatened to get money/possessions	29,672	2.2%
Carried a gun to defend oneself	22,909	1.7%
Forced someone into having sex	12,211	0.9%

Delinquent youth were significantly more likely to use drugs than non-delinquent youth ( $\Phi=.29$ ,  $p<.0001$ ). Approximately two-thirds of those who reported engaging in at least one delinquent act also reported illegal drug use, while only one-third of non-delinquents admitted to using illegal drugs.

### 3.2 Delinquency and gender

A somewhat higher percentage of males than females (43% vs. 35%) reported engaging in delinquency. Given that the overwhelming majority of young offenders processed in youth court are male, this finding is somewhat surprising. However, a more detailed examination of offence patterns revealed significant differences in the severity of offences by gender. Using the SRDS, the mean score for males was 6.7; while for females it was 3.9 ( $t=5.27$ ,  $p<.0001$ ). Females were equally likely to be ‘minor’ offenders, but were less likely to be considered ‘moderate’, ‘serious’, or ‘very serious’ offenders. The major difference can be found in the violent and sexual offence categories with males being three times more likely to report engaging in these behaviors. Females were equally as likely, however, to engage in drug trafficking and almost as likely to report committing property offences.

### 3.3 Delinquency and age

There was a pattern of escalating criminal behavior by age. According to the SRDS, the frequency and severity of self-reported delinquency increased with age ( $r=0.11$ ,



$p < .0001$ ). In fact, the mean SRDS for 12 year-olds was 3.2, while the mean scores for 13 year-olds, 14 year-olds, and 15 year-olds were 4.4, 5.6, and 8.0, respectively.

### 3.4 Aboriginal status and delinquency

Approximately 41% of Aboriginal youth reported engaging in delinquent behavior compared to 39% of non-Aboriginal youth. In terms of specific offence types, aboriginals were more likely than non-Aboriginals to report violent offending (24% vs. 14%) and drug trafficking (10% vs. 5%) but equally likely to report property offending (36% versus 34%).<sup>6</sup> Using the SRDS, Aboriginal youth had a mean score of 7.9 while non-Aboriginals had a mean score of 5.3 ( $t=1.21$ ,  $p=.226$ ). One of the other important differences found between Aboriginal and non-Aboriginal youth was drug use. Approximately 28% of Aboriginal youth reported using illegal drugs, while only 19% of non-Aboriginal youth reported illegal drug use.

### 3.5 Correlates of general delinquency

The results of the overall regression analysis indicate that negative school behavior (i.e., truancy and suspensions) accounted for the largest variation in the SRDS, followed by association with negative peers, and the Victimization Score, which measures the frequency of being threatened or physically attacked/assaulted both outside and inside the home (see Table 4). Overall, the model explained one-quarter of the variance in the SRDS.

**TABLE 4**  
**SUMMARY OF REGRESSION ANALYSIS FOR GENERAL DELINQUENCY**  
**(N=1378)**

Variable	B	$\beta$	t	P
<i>Intercept</i>	2.04498	0	0.24	0.8084
Negative School Behavior	4.32222	0.23718	8.56	<.0001
Negative Peers	1.73999	0.11172	4.18	<.0001
Victimization Score	0.90046	0.09856	3.67	0.0003
Indirect Aggression Score	0.55969	0.08239	3.07	0.0022
Peer Drug Use	1.13914	0.08046	2.88	0.0040
Positive School Aspirations	-0.86618	-0.07266	-2.73	0.0065
Parents Threaten/Hit Youth	1.31902	0.07261	2.61	0.0091
Extra-Curricular Involvement Score	0.29848	0.06895	2.56	0.0107

*Note.*  $R^2 = .235$  ( $p < .0001$ ).

<sup>6</sup> The cell counts in the sexual offending by Aboriginal status table were too small to be released by Statistics Canada.

### 3.6 Correlates of delinquency by gender

In terms of gender differences, male delinquency was positively correlated with peer drug use and a self-reported lack of motivation or effort (i.e., gives up easily). In addition, male delinquency was negatively correlated with the Parental Nurturance Score, which indicates a more positive and nurturing parental style (see Table 5).

<b>TABLE 5 SUMMARY OF REGRESSION ANALYSIS FOR DELINQUENCY IN MALES (N=632)</b>				
<b>Variable</b>	<b>B</b>	<b><math>\beta</math></b>	<b>t</b>	<b>P</b>
<i>Intercept</i>	-3.78659	0	-0.31	0.7589
Negative School Behavior	4.83151	0.24274	5.80	<.0001
Peer Drug Use	2.44717	0.15434	3.63	0.0003
Indirect Aggression Score	0.83587	0.11288	2.83	0.0048
Parental Nurturance Score	-0.26472	-0.10868	-2.17	0.0302
Gives up Easily	2.32113	0.09473	2.30	0.0220
Negative Peers	1.38699	0.08817	2.20	0.0281
<i>Note. R<sup>2</sup> = .258 (p &lt; .0001).</i>				

The unique correlates of female delinquency were failing a grade at school, the Victimization Score, and parents threatening or actually hitting their children. In addition, female delinquency was positively correlated with destroying one's own belongings, inconsistent parenting (e.g., not following through with threats of

<b>TABLE 6 SUMMARY OF REGRESSION ANALYSIS FOR DELINQUENCY IN FEMALES (N=746)</b>				
<b>Variable</b>	<b>B</b>	<b><math>\beta</math></b>	<b>t</b>	<b>P</b>
<i>Intercept</i>	11.09232	0	0.83	0.4079
Negative School Behavior	4.38207	0.26351	6.89	<.0001
Repeated Grade at School	14.0217	0.16323	4.96	<.0001
Negative Peers	2.46133	0.15923	4.48	<.0001
Destroys Own Belongings	3.34275	0.14663	4.09	<.0001
Victimization Score	1.35968	0.13150	3.76	0.0002
Positive School Aspirations	-1.45972	-0.12740	-3.53	0.0004
Parents Threaten/Hit Youth	1.84259	0.11302	3.03	0.0025
Socio-Economic Status	1.45517	0.10320	2.35	0.0193
Indirect Aggression Score	0.53220	0.08554	2.29	0.0220
Inconsistent Parenting Score	0.34104	0.07869	2.15	0.0322
<i>Note. R<sup>2</sup> = .2951 (p &lt; .0001).</i>				



punishment), and socio-economic status. A negative correlation was also found with positive academic aspirations (see Table 6).

Common correlates to both male and female delinquency included negative school behavior, negative peers, and indirect aggression. Both models explained approximately one-quarter of the variance in the SRDS.

### 3.7 Correlates of sexual offending

In order to examine the correlates of sexual offending, we identified those youth who reported forcing someone into sex and/or touching someone’s private parts without permission and compared them to all other youth. The model that emerged for sexual offending was relatively weak in that the independent variables only explained a very small proportion (5%) of the variance in sexual offending. The positive correlates in the model were the General Self Score, which measures positive self-image using statements such as “I like the way I am” or “I have a lot to be proud of”, and the Hyperactivity/Inattention Score, which measures behaviors such as inability to concentrate, sit still and/or wait, and parental threats/use of violence. The Parental Monitoring Score, which asks questions concerning parental knowledge of the youths’ activities, whereabouts, and companions, was negatively correlated with sexual offending.

**TABLE 7**  
**SUMMARY OF REGRESSION ANALYSIS FOR SEXUAL OFFENDING**  
**(N=1375)**

<b>Variable</b>	<b>B</b>	<b><math>\beta</math></b>	<b>T</b>	<b>P</b>
<i>Intercept</i>	0.08753	0	1.00	0.3188
General Self Score	0.00406	0.09797	2.65	0.0081
Hyperactivity/Inattention Score	0.00305	0.08178	2.42	0.0157
Parents Threaten/Hit Youth	0.01365	0.08068	2.60	0.0095
Parental Monitoring Score	-0.00250	-0.06978	-2.19	0.0290
<i>Note.</i> $R^2 = .0474$ ( $p = .0006$ ).				

### 3.8 Correlates of violent offending

A violent offence score, incorporating assault-based offences, robbery, and carrying a firearm, was developed to examine whether or not there were any unique or particularly strong correlates to violent offending. The resulting model explained approximately 18% of the variance in violent offending (see Table 8). A comparison between the general and violent offence regression models revealed some differences. Violent offending was positively correlated with the Hyperactivity/Inattention Score, witnessing violence in the home, and the General Self Score. Both the Parental Monitoring Score and the Parental Nurturance Score were negatively correlated with violent offending. These results indicate that youth with more nurturing parents who monitor their children’s leisure time more closely were less likely to report engaging in violent behavior. Finally, males and

older youth were more likely to report violent behavior than females and younger youth. Otherwise, the remaining correlates – negative school behavior, parents threaten/hit youth, negative peers, positive school aspirations, Indirect Aggression Score, Victimization Score, and extra-curricular involvement – were also found to correlate significantly with general delinquency.

<b>TABLE 8 SUMMARY OF REGRESSION ANALYSIS FOR VIOLENT OFFENDING (N=1368)</b>				
<b>Variable</b>	<b>B</b>	<b><math>\beta</math></b>	<b>t</b>	<b>P</b>
<i>Intercept</i>	4.08598	0	1.39	0.1636
Negative School Behavior	1.18371	0.11247	6.75	<.0001
Age	-0.22625	-0.11214	-2.22	0.0267
Negative Peers	0.36296	0.09719	2.51	0.0121
Indirect Aggression Score	0.26079	0.07452	4.12	<.0001
Victimization Score	0.17638	0.07263	2.07	0.0390
Positive School Aspirations	-0.26659	-0.06972	-2.41	0.0159
Extra-Curricular Involvement Score	0.14507	0.06054	3.58	0.0004
General Self Score	0.11675	0.07529	2.28	0.0227
Parental Nurturance Score	-0.05427	-0.04208	-2.03	0.0427
Hyperactivity/Inattention Score	0.13184	0.04046	3.13	0.0018
Parents Threaten/Hit Youth	0.50390	0.03677	2.87	0.0042
Witnesses Adults/Teens Hurting Others at Home	0.56250	0.03100	2.51	0.0122
Parental Monitoring Score	-0.08276	-0.01146	-2.17	0.0304
Gender	-0.59947		-2.14	0.0327
<i>Note.</i> $R^2 = .1752$ ( $p < .0001$ ).				

### 3.9 Correlates of property offending

As with violent and sexual offending, we identified those youth who reported engaging in property offences. The model explained approximately 25% of the variance in property offending (see Table 9). Unlike the other models, negative school behavior was the weakest correlate in the model, while indirect aggression and victimization were stronger. Property offending was also positively correlated with gender (males), peer drug use, socio-economic status, failing a grade in school, and destroying one's own belongings. Time spent with friends and the Hyperactivity/Inattention Score were also positively correlated. Property offending was negatively correlated with the School Attachment Score, which measures concepts such as school spirit and positive attitudes towards academic performance, and the number of close girl friends. Thus, positive school attachment and a high number of close girlfriends decreased the likelihood of engaging in property offences such as theft, vandalism, and break and enter.



**TABLE 9**  
**SUMMARY OF REGRESSION ANALYSIS FOR PROPERTY OFFENDING**  
**(N=1378)**

Variable	B	$\beta$	B	P
<i>Intercept</i>	0.48927	0	1.44	0.1508
Indirect Aggression Score	0.05328	0.19258	7.25	<.0001
Victimization Score	0.05620	0.15104	5.67	<.0001
Gender	0.09954	0.10440	3.06	0.0023
Peer Drug Use	0.05703	0.09889	3.57	0.0004
Socio-economic Status	0.05645	0.09311	2.85	0.0045
Repeated Grade at School	0.25942	0.08283	3.33	0.0009
Destroys Own Belongings	0.08474	0.07953	3.04	0.0024
School Attachment Score	-0.01292	-0.07744	-2.39	0.0169
Time Spent with Friends	0.03333	0.07407	2.87	0.0042
Hyperactivity/Inattention Score	0.01159	0.07102	2.37	0.0180
Number of Close Girl Friends	-0.00595	-0.06157	-1.97	0.0485
Negative School Behavior	0.04330	0.05834	2.13	0.0337

*Note.*  $R^2 = .2485$  ( $p < .0001$ ).

### 3.10 Correlates of drug trafficking

The model that emerged from the regression analysis explained approximately 18% of the variance in drug trafficking. As table 10 illustrates, there was a positive correlation between drug trafficking and negative school behavior, destroying one's own belongings, peer drug use, negative peers, and parental monitoring. Parental monitoring, however, was unique in that a higher level of parental monitoring was correlated with trafficking, rather than a lower level of parental monitoring.

**TABLE 10**  
**SUMMARY OF REGRESSION ANALYSIS FOR DRUG TRAFFICKING**  
**(N=1376)**

Variable	B	$\beta$	t	P
<i>Intercept</i>	-0.17944	0	-1.43	0.1541
Negative School Behavior	0.06423	0.24527	8.53	<.0001
Peer Drug Use	0.02857	0.14042	4.85	<.0001
Negative Peers	0.02023	0.09029	3.26	0.0012
Destroys Own Belongings	0.02768	0.07362	2.69	0.0073
Parental Monitoring Score	0.00361	0.06526	2.20	0.0280

*Note.*  $R^2 = .1763$  ( $p < .0001$ ).

## 4.0 Discussion

The annual self-reported delinquency rate in our sample (39%) was substantially higher than the official rate of 5% found in the Uniform Crime Reports (UCR).<sup>7</sup> Our rates of property offending (39%) and violent offending (15%) were also substantially higher than official rates. UCR data indicated that the prevalence rate for property crime was approximately 3%, while the violent offence rate was less than 1% of all youth. Discrepancies between official rates and self-reported rates are to be expected. In fact, according to Moffitt (1993), although only a portion of youth come to the attention of police, deviant behavior is so prevalent during adolescence that youth who never engage in offending are considered statistical anomalies.

In terms of gender, our results indicate that the official data sources also vastly underestimate the extent of female delinquency. We found that females constituted approximately 44% of all youth who reported engaging in delinquent behavior while the official data from the UCR indicate that females constituted 22% of all youth charged. Female youth were less likely, however, to report serious and frequent offending, which may partially explain this discrepancy. Police may not be as likely to charge youth for the minor offending that is common among female youth.

While the Aboriginal self-reported delinquency rate (41%) was similar to non-Aboriginal youth (39%), Aboriginal youth were more likely to report engaging in more serious offences. Unfortunately, we were unable to compare our sample to official data sources, as Aboriginal status is not adequately reported to the UCR.

In general, the correlates identified in this study provide further support to the findings within the literature. The primary correlates of general delinquency are negative school attachment, anti-social peers, victimization, aggression, and negative parenting. The findings are encouraging in that these are primarily dynamic factors amenable to change through targeted interventions with youth and their families.

While unique correlates were identified for female and male delinquency, the broad categories of negative school attachment, anti-social peers, aggression, and negative parenting were still present. The central difference was that victimization was strongly correlated with female delinquency and poor motivation was uniquely correlated with male delinquency. Appropriate gender-based interventions designed to reduce recidivism, therefore, should provide an increased focus on reducing the consequences of victimization for females and increasing self-motivation for males.

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<sup>7</sup> The UCR data in this report represents all youth aged 12 to 17 charged with a common offence (*Criminal Code* and other federal statute offences) across all 13 provinces/territories from the same year as the NLSCY data (1998).



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Sexual offending was not strongly related to any of the factors we tested. Clearly, the pathways into sexual offending are rather unique and may be related to a different set of independent variables.

For violent offending, the same five core concepts (school, peers, aggression, victimization, and parenting) emerged with the addition of age, self-esteem, hyperactivity/inattention, and gender. That is, violent youth displayed attributes similar to other delinquents, but tended to be older, hyperactive males who presented a positive self-image.

For property offending, four of the five core concepts entered the model with negative parenting being the notable exclusion. Gender, hyperactivity/inattention, and socio-economic status were also correlated with property-related offending. In other words, property offenders, as a unique group of delinquents, tended to be hyperactive males with higher socio-economic status.

Drug trafficking was also correlated with four out of the five core concepts. Victimization, however, did not enter the model.

## 5.0 Conclusion

The results of the regression analyses provide clear direction for the prevention and treatment of delinquent behavior. Addressing the five core concepts identified in this study within criminal justice interventions may prove to be effective in reducing recidivism. Future research testing such a hypothesis would be warranted. Four of these five core concepts are also consistent with the comprehensive research of Andrews and Bonta (1998) who have developed an empirically-based set of treatment targets that has been linked with rehabilitation. These include: a) reducing anti-social peer involvement; b) promoting familial affection, communication and monitoring; c) preventing abuse/neglect; and, d) replacing aggression with pro-social alternatives. In addition to these, we would suggest targeting negative school attachment in order to improve behavior, attendance, performance, and attitudes towards educational achievement.

### 5.1 Additional future research

This analysis was based on cross-sectional data from the National Longitudinal Survey of Children and Youth. It would be extremely valuable to use the longitudinal aspect of the data to develop a clearer sense of the temporal relationships between variables. As discussed, many factors demonstrate reciprocal relationships with delinquency. For example, it would be useful to determine if negative school behavior is exacerbated by delinquency and thus, further increases the likelihood of delinquency. Moreover, such an analysis would provide a glimpse into both the initiation process into criminal behavior and the abatement process out of criminal behavior. While it is understood that many youth simply age out of offending behavior (Moffitt, 1993), there may be identifiable differences between desisters and chronic offenders.



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## Appendix A: Dependent Variable Calculation (SRDS)

NLSCY QUESTION	ACCS OFFENCE CLASSIFICATION	SEVERITY WEIGHT
In the past 12 months, about how many times have you tried to force someone into having sex with you?	Sexual Assault I	16
In the past 12 months, about how many times have you threatened someone in order to get their money or things?	Robbery with Assault	16
In the past 12 months, about how many times have you sold any drugs?	Trafficking	13
In the past 12 months, about how many times have you set fire on purpose to a building, a car, or something else not belonging to you?	Arson	13
In the past 12 months, about how many times have you attempted to touch the private parts of another person's body (while knowing that they would probably object to this)?	Other Sexual Offences	11
In the past 12 months, about how many times have you broken into, or snuck into, a house or building with the idea of stealing something?	Break and Enter	9
In the past 12 months, about how many times have you fought with someone to the point where they needed care for their injuries (for example, because they were bleeding, or had broken bones)?	Major Assault	5
In the past 12 months, about how many times have you been in a fight where you hit someone with something other than your hands (for example, a stick, club, knife, or rock)?	Major Assault	5
In the past 12 months, about how many times have you carried a gun other than for hunting or target shooting?	Weapons Offences - All others	5
In the past 12 months, about how many times have you used or bought or tried to sell something you knew was stolen?	Possession of Stolen Property	3
In the past 12 months, about how many times have you stolen something from a store or school?	Theft Under \$5,000	2
In the past 12 months, about how many times have you taken a car, motorbike, or motorboat without permission?	Motor Vehicle Theft	2
In the past 12 months, about how many times have you damaged or destroyed anything that didn't belong to you (for example, damaged a bicycle, car, school furniture, broken windows or written graffiti)?	Mischief (Vandalism) Under \$5,000	2
In the past 12 months, about how many times have you taken money from your parents without their permission?	Theft Under \$5,000	2