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## EXECUTIVE SUMMARY

This study explores the relationship between teen sexual activity and substance use, emotional health and peer and family influence. It also examines factors related to early sexual initiation. This follow up study to *Rated PG: How parental influence impacts teen sexual activity*, utilizes data analysis by IMFC Research Fellow Dr. Frank Jones. Using data from Statistics Canada's *National Longitudinal Survey of Children and Youth*, Dr. Jones explored behaviour related to sexual choices among 14 to 19-year-olds. The data shows that 39.9 per cent of teens in this age range have had consensual sexual intercourse, which is 41.6 per cent of girls and 38.1 percent of boys.

### *Some interesting findings include:*

- Teen marijuana users are much more likely to be sexually active than non-users. This is strikingly true among adolescent girls
- An increase of episodes of drunkenness correlated with greater likelihood of being sexually active
- Increased time with a boyfriend or girlfriend related to a greater likelihood of sexual activity
- Correlations were found between attempting suicide and being sexual active among girls

Adolescent sexual behaviour places teens at risk of ill health, unintended pregnancy and emotional concerns. The earlier teens initiate sex, the greater the risk. The results suggest that risky behaviours are often related and that many teens may be exposed to multiple hazards. Family members are uniquely placed to help and support teens.

Our top recommendations:

- Parents are the primary educators, helping teens articulate and integrate values in everyday decision making
- Family members should be aware that one risk behaviour may be symptomatic of a larger profile of risk behaviour
- Parents should be encouraged to treat teens, not problems. Parents should strive for a parenting style that is warm, caring and communicative. Sufficient parental supervision, expressed expectations and limits help teens transition towards becoming healthy, autonomous adults

# RATED PG PART II

## *How drugs, alcohol and other factors influence teen sexual activity*

### RESEARCH OVERVIEW

While teen pregnancy and STDs dominate discussion of teen sex, a number of factors like substance use and emotional health are related to the decision to initiate or delay sexual activity and should not be ignored. The IMFC's previous release *Rated PG: How parental influence impacts teen sexual activity* examined the connection between parental behaviour and attitudes during childhood and later teen sexual activity, as well as teens' attitudes and behaviours and the factors influencing early sexual initiation.

### METHODOLOGY

The study is based on data from the *National Longitudinal Survey of Children and Youth*, conducted by Statistics Canada. IMFC Research Fellow Dr. Frank Jones compared sexually active and inactive teens ages 14 to 19-years-old in 2003.<sup>1</sup> The study examined responses to questions about substance use, emotional health and family and peer relationships in light of reported sexual choices. Respondents were grouped by shared variable and their reported sexual behaviour was observed and compared to the national average teen sex rate. An over representation or under representation of ten per cent or more was considered significant.<sup>2</sup> Results for boys and girls were examined separately.

The previous study, *Rated PG: How parental influence impacts teen sexual activity*, examined teen sexual activity and home environments eight years earlier. The study found significant relationships between parental attitudes and behaviours during childhood and later teen sexual activity. Using regression models, the study measured the statistical strength between teen behaviour and specific early home environment variables while holding other variables constant. The current study examines these regression models further, exploring the relationship between teen tobacco, alcohol and drug use, and teen sexual activity while holding childhood variables constant. The study finds significant relationships between substance use and teen sexual activity. The study also explores correlations between sexual activity and time spent with romantic interests, and indicators of emotional health.

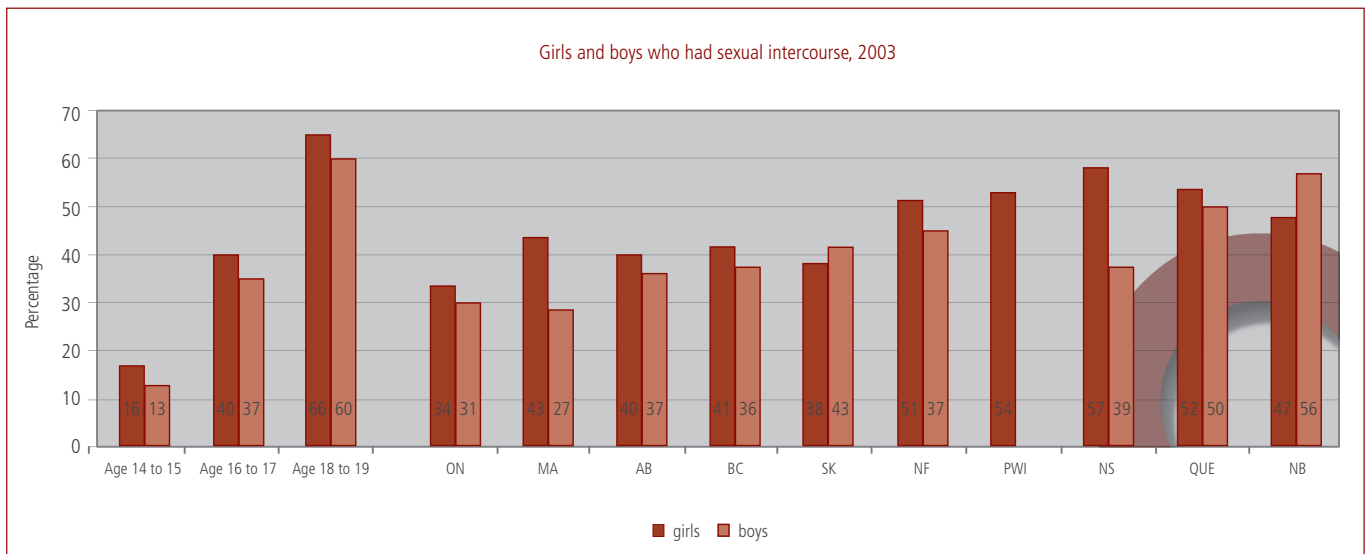
Finally, this study uses regression analysis to examine very early sexual involvement.

#### **DATA SOURCE:**

The study data was extracted from Statistics Canada's *National Longitudinal Survey of Children and Youth* (NLSCY). The survey examines child development from the first year of life to age 19. This study uses data from cycle 1 (1994-95) and cycle 5 (2002-03). Please consult the full text research for more information on the data, model estimates and variables.

## THE TEEN SEX RATE

Amongst 14 to 19-year-olds, 39.9 per cent were sexually active, which is 41.6 per cent of girls and 38.1 per cent of boys.<sup>3</sup> The results show that the likelihood of teen sexual activity increases with age.



## SEXUAL ACTIVITY AND SUBSTANCE USE

### *Sexual choices are often related to substance use*

There might be some truth to the cliché “sex, drugs and rock n’ roll” as a number of associations appear between drug use and sexual activity. Responses to questions about the use of marijuana, LSD and hallucinogens, alcohol consumption and smoking were compared to reported sexual activity.

### **Marijuana and other drug use**

Descriptive analysis revealed that girls who smoked marijuana were 60 per cent more likely to be sexually active than the national average, while boys were 49 per cent more likely to be sexually active. Further analysis which held childhood

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factors constant including household income and parental education, found that marijuana use was the most significant variable tested in our study for girls. This suggests strong associations between adolescent girls who use marijuana and sexual activity. An American study found that teens who used marijuana are four times as likely to get pregnant or get someone pregnant as teens who do not use marijuana.<sup>4</sup> A study of Australian young adults found that marijuana use among women was associated with getting pregnant before age 20.<sup>5</sup> In our descriptive analysis, we found that adolescent girls who had not used marijuana in the previous year were 60 per cent less likely to have sexual intercourse than the national average. Similarly, boys who had not used marijuana in the previous year were 53 per cent less likely to have had sexual intercourse.

The IMFC descriptive analysis found an 83 per cent increase in the likelihood of sexual activity among girls who reported selling drugs in the previous year. The use of LSD or hallucinogens among teen girls was associated with a 96 per cent increase in the likelihood of sexual activity. For boys, there was a 71 per cent increase in the likelihood of sexual intercourse among those who sold drugs and a 95 per cent increase among those who used LSD or hallucinogens. Regression analysis found significant relationships between sexual activity and using drugs, selling drugs and having friends who used drugs among both girls and boys. A number of studies have correlated drug use and unplanned sexual activity and high risk sexual behaviour among teens.<sup>6</sup>

#### **Smoking**

Adolescent smoking was associated with an increased likelihood of sexual activity. Girls who reported smoking at least weekly were 78 per cent more likely to be sexually active while descriptive results showed a 98 per cent increase in the likelihood of sexual activity among boys. Significant associations remained after regression analysis included the variable of having a close friend who smokes. Descriptive analysis also revealed that teen girls who reported they had never smoked were 58 per cent less likely than the national average to have had sexual intercourse while boys who reported they never smoked were 56 per cent less likely. The study of Australian young adults noted above also found that smoking was associated with early pregnancy among women.<sup>7</sup> An American study compared over 1400 women who exhibited various smoking patterns between ages 13 to 23, examining a number of outcomes by age 29. The study found that consistently heavy smokers and those who increased their smoking early in their teen years were at greater risk for early sexual initiation and pregnancy compared to other smoking behaviours.<sup>8</sup>

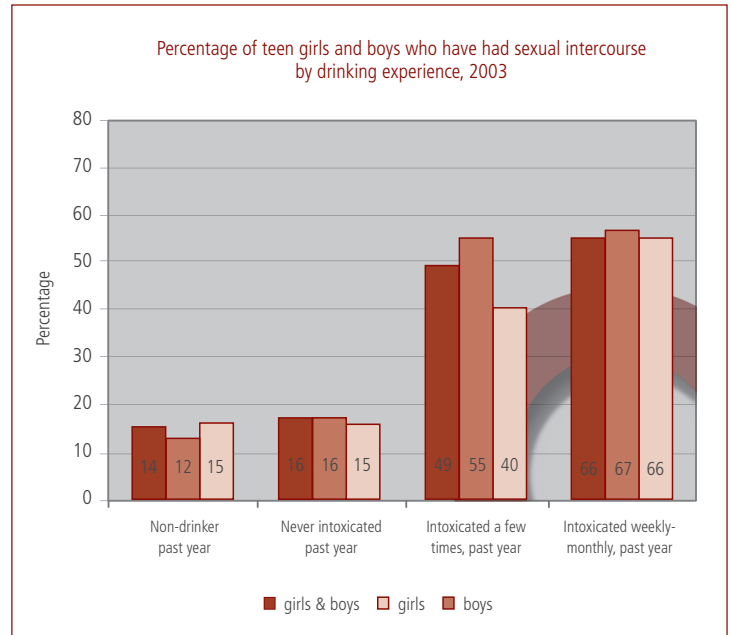
## Alcohol

Numerous studies have examined the relationship between alcohol consumption and teen sexual activity, particularly the association with high risk sexual behaviour such as non-use of birth control and regretted sexual behaviour. Using descriptive analysis, the IMFC study found that the likelihood of having been sexually active increased with greater frequency of episodes of drunkenness. In other words, those teens who reported getting drunk more frequently than their peers were more likely to have had sexual intercourse. In our study non-drinkers were 66 per cent less likely to be sexually active. Regression results confirm correlations between current drinkers and sexual activity.

Alcohol consumption among teens is often associated with other risk behaviours. An American study with an ethnically diverse sample found that lower ages of sexual initiation correlated with lower ages of first time alcohol consumption.<sup>9</sup> Other studies have examined the influence of alcohol consumption on teen sexual decision making. UK researchers explored the relationship between alcohol consumption and high risk sex which they defined as non-use of birth control and regretted sexual behaviour. The researchers found that teens who reported engaging in risky sexual behaviour while drinking cited ‘impaired judgment’ and ‘complete loss of control’ as contributing to their actions.<sup>10</sup> Parents should be aware of these findings considering 61 per cent of the sample reported drinking to intoxication in the previous year.

## Emotional health

Regression analysis revealed that sexual activity correlated with attempting suicide in the previous year among girls, and knowing someone who committed suicide among girls and boys. An American study found that sexually involved teens were more likely to report being depressed or having attempted suicide, despite controlling for gender, race, age and income. The results were more pronounced for teen girls than for boys.<sup>11</sup> A study published in the *American Journal of Preventive Medicine* noted the prevalence of sex and drug use among depressed teens. The authors examined behaviour patterns to determine the sequence of the behaviours



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and depression. The researchers determined that sexual activity and drug use led to greater risk for later depression, particularly among teen girls.<sup>12</sup> A number of studies have suggested correlations between teen depression and suicide ideation and sexual activity and other risk behaviours.<sup>13</sup>

#### **Time with girlfriend or boyfriend**

Another interesting finding suggests that 83 per cent of teens in the study who saw their boyfriend or girlfriend six to seven days a week were sexually active, giving parents reason to be concerned about how much time teens spend with romantic interests.<sup>14</sup> Teen girls who had four or more relationships in the previous year were 26 per cent more likely to be sexually active while boys with four or more relationships in the previous year were 44 per cent more likely to be sexually active than the national average.

## **AGE OF SEXUAL INITIATION**

### *Influences on very early sexual behaviour*

Older teens are far more likely to report having been sexually active than younger teens. In fact, the rate of Canadian teens under the age of 15 who have had sexual intercourse declined from 12 per cent in 1996 to 8 per cent by 2005.<sup>15</sup> Those young teens who are sexually active, however, face greater risks than their peers. Many studies have confirmed that young people who start sexual activity in their early teens are at greater risk for unintended pregnancy and STDs.<sup>16</sup> A Canadian study found greater substance abuse and minor delinquency among teens who initiated sex at an early age. The same study reported that these teens were more likely to have a greater number of sexual partners and less likely to consistently use condoms.<sup>17</sup>

The impact of early sexual initiation extends beyond adolescence. A study using government data from ten thousand American women ages 15 to 44 found multiple disadvantages to beginning sexual intercourse at an early age. Women who began sexual activity at ages 13 or 14 had an average of 13 lifetime sexual partners compared with 2.7 for women who postponed sexual activity until their early twenties. Women who initiated sexual activity at ages 13 or 14 were less than half as likely to be in stable marriages by their thirties compared to women who waited until their early twenties.<sup>18</sup> The same study reported that women who initiated sex early were twice as likely to be infected by an STD as girls who waited until they were twenty-one.<sup>19</sup>



Utilizing regression analysis, our study examined sexually active teens ages 16 to 19 in 2003 and noted the age at which they first had consensual sex. Boys whose parents lived common law in 1995 were more likely to initiate sex when younger, compared to having married parents in 1995. Other correlations with early sexual initiation for both sexes included marijuana use and living in Quebec or the Atlantic provinces when compared to living in Ontario. Having older parents correlated with delayed sexual initiation among boys but not girls. Higher parental education and secure household economic status correlated with delayed sexual initiation among girls.

## **DISCUSSION**

This study uses data from the *National Longitudinal Survey of Children and Youth* to examine correlations between teen sexual behaviour and other attitudes and behaviours.

Using descriptive analysis and regression models, the study found that substance use among adolescents is related to the increased likelihood of having been sexually active. The study found a striking relationship between marijuana use among teen girls and the increased likelihood of having been sexually active compared to the national average. Results also suggest that the likelihood of being sexually active increases with greater frequency of episodes of intoxication. Smoking and the use of illicit drugs was also related to an increase in the likelihood of sexual behaviour. Other studies have explored the influence of substance use on risky sexual behaviour among teens, including unplanned sexual encounters.

Regression analysis found correlations between having attempted suicide in the previous year among girls, and knowing someone who committed suicide among boys and girls. A number of studies found suggested correlations between depression, suicide ideation and sexual activity. This study does not confirm causation. An American study found that sexual activity and drug use correlated with later depression in teens.

The IMFC study also noted that increased time with a boyfriend or girlfriend led to a greater likelihood of having had sexual intercourse among teens.

Finally, the study used regression models to explore correlations between early sexual initiation and other variables. Boys with common-law parents during childhood, and girls and boys who used marijuana were more likely to have been sexually active at a younger age. Teens from Quebec and the Atlantic provinces were more likely to have been sexually active at a younger age compared to teens from other regions. Factors associated with delayed sexual initiation include boys who reported having older parents and girls with educated parents and from financially secure homes.

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#### RECOMMENDATIONS

The study finds risk behaviours are related, and that some teens may be engaged in multiple risk behaviours. The risks associated with these behaviours and the correlation with depression is concerning. Multiple risk behaviours put teens in a vulnerable position and family members are best positioned to help and support them. Our recommendations recognize the important role family members have in the lives of youth:

- Parents are the primary educators, helping teens articulate and integrate values in everyday decision making
- Family members should be aware that risk behaviour may be symptomatic of a larger profile of risk behaviour
- Girls and boys have unique needs and influences
- Parents should be encouraged to treat teens, not problems. Family members have a unique relational position in a teen's life. Parents should strive for a parenting style that is warm, caring and communicative. Sufficient parental supervision, expressed expectations and limits help teens transition towards becoming healthy, autonomous adults

*The full research is available at [www.ccri.ca](http://www.ccri.ca)*



## Endnotes

- 1 The NLSCY question regarding sexual activity asks, “[h]ave you ever had consensual sexual intercourse?” This may exclude other sexual activities from inclusion in the survey and may underestimate sexual activity broadly considered. Brener, Billy and Grady (2003) report that 93 per cent of the adolescents in their findings considered vaginal penetration to be sexual intercourse compared to 63 per cent who qualified anal sex as intercourse and 22 per cent who viewed oral sex as intercourse.
  - 2 Note that the percentage difference is between the national average and percentage of sexually active respondents who share the variable in question, not the “percentage point” difference between the two. For percentage point difference see the full study, found online at [www.ccri.ca](http://www.ccri.ca).
  - 3 The 2008 study *Trends in teen sexual behavior and condom use* by Michelle Rotermann at Statistics Canada estimates the rate of sexual involvement among teens in 2005 at 43 per cent. That study uses data from the Canadian Community Health Survey, and reports on 15 to 19-year-olds. Our study includes 14-year-olds, who are less likely to be sexually active, which may account for a lower overall sex rate.
  - 4 The National Center on Addiction and Substance Abuse at Columbia University. (1997). Substance abuse and the American adolescent: a report by the Commission on Substance Abuse Among America’s Adolescents.
  - 5 Waldon, M., Heath, A.C., Lynskey, M.T. et al (2009, September). Smoking and illicit drug use associations with early versus delayed reproduction: findings in a young adult cohort of Australian twins. *Journal of Studies on Alcohol and Drugs*, 70 (5), pp. 786-796.
  - 6 Poulin, C. & Graham, L. (2001) The association between substance use, unplanned sexual intercourse and other sexual behaviours among adolescent students. *Addiction*, 96, pp. 607-621; Zapata L.B., Hillis S.D., Marchbanks P.A., et al. (2008, December). Methamphetamine use is independently associated with recent risky sexual behaviors and adolescent pregnancy. *Journal of School Health*, 78 (12), pp. 641-648.
  - 7 *Ibid.*
  - 8 Tucker, J.S., Ellickson, P.L., Orlando, M. & Klein, D.J. (2006, January). Cigarette smoking from adolescence to young adulthood: women’s development trajectories and associates outcomes. *Women’s Health Issues*, 16 (1), pp. 30-37.
  - 9 Rothman, E.F., Wise, L. A., Bernstein, E. & Bernstein, J. (2009). The timing of alcohol use and sexual initiation among a sample of black, Hispanic, and white adolescents. *Journal of Ethnicity in Substance Abuse*, 8 (2), pp. 129-145.
  - 10 Coleman, L.M. & Cater, S.M. (2005, December). A qualitative study of the relationship between alcohol consumption and risky sex in adolescents. *Archives of Sexual Behavior*, 34 (6), pp. 649-661.
  - 11 Rector, R.E., Johnson, K.A., and Noyes, L. R. (2003, June 3). Sexually active teenagers are more likely to be depressed and attempt suicide. Center for Data Analysis Report no. 03-04. Washington DC: The Heritage Foundation. Retrieved December 11, 2009 from <http://www.heritage.org/research/abstinence/cda0304.cfm>
  - 12 Hallfors, D. et al. (2005, October). Which comes first in adolescence – sex and drugs or depression? *American Journal of Preventive Medicine*. 29 (3). pp. 163-170.
  - 13 Afifi, T.O., Cox, B.J., & Katz, L.Y. (2007, October) The associations between health risk behaviours and suicidal ideation and attempts in a nationally representative sample of young adolescents. *Canadian Journal of Psychiatry*, 52 (10), pp. 666-674.
- Hallfors, D.D., Waller, M.W., Ford, C.A. et al (2004, October) Adolescent depression and suicide risk: Association with sex and drug behavior. *American Journal of Preventive Medicine*, 27 (3), pp. 224-231.

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- 14 Time spent with a boyfriend or girlfriend is also correlated with other risk factors. Columbia University's *National Survey of American Attitudes on Substance Abuse IX: dating practices and sexual activity*, reports that teens who spend 25 hours or more a week with a boyfriend or girlfriend are more likely to smoke, drink, get drunk and smoke marijuana.
- 15 Rotermann, M. (2008, September). Trends in teen sexual behavior and condom use. *Health Reports*, 19 (3). Retrieved August 10, 2009 from <http://www.statcan.gc.ca/pub/82-003-x/2008003/article/10664-eng.pdf>
- 16 Garriguet, D. (2005, May). Early sexual intercourse. *Health Reports*, Ottawa: Statistics Canada, vol. 6, no. 3, p. 13. Retrieved August 10, 2009 from <http://www.statcan.gc.ca/studies-etudes/82-003/archive/2005/7837-eng.pdf>
- 17 Boyce, W.F., Gallupe, O., and Fergus, S. (2008, Fall). Characteristics of Canadian youth reporting a very early age of first sexual intercourse. *Canadian Journal of Human Sexuality* 7(3). Toronto: Sex Information and Education Council of Canada
- 18 Rector, R.E., Johnson, K.A., Noyes, L.R. and Martin, S. (2003, June 23). The harmful effects of early sexual activity and multiple sexual partners among women: a book of charts. Washington DC: The Heritage Foundation. pp. 1-2. Retrieved December 11, 2009 from [http://www.heritage.org/research/abstinence/abstinence\\_charts.cfm](http://www.heritage.org/research/abstinence/abstinence_charts.cfm)
- 19 *Ibid.*

**APPENDIX: ABOUT THE RESEARCHER**

Frank Jones Ph.D., is a Research Fellow with the Institute of Marriage and Family Canada and the Director of Research at the Christian Commitment Research Institute (CCRI). Dr. Jones has formerly been a Lay Chaplain at the University of Ottawa, a Senior Analyst with Statistics Canada and an Adjunct Professor of Economic Science at the University of Ottawa.

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*HOW DRUGS, ALCOHOL AND OTHER FACTORS INFLUENCE TEEN SEXUAL ACTIVITY*



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