



**Manitoba Longitudinal Study  
of Young Adults (MLSYA)**  
Summary Report

January 2016



Liquor and Gaming  
Authority of Manitoba

[www.LGManitoba.ca](http://www.LGManitoba.ca)

## EXECUTIVE SUMMARY

The Liquor and Gaming Authority of Manitoba (LGA), formerly the Manitoba Gaming Control Commission (MGCC), holds a research mandate to provide empirical evidence to guide operational, policy, and public interest activities. To accomplish this mandate, the LGA conducts primary research on alcohol and gambling issues, as well as secondary analyses and collaborations with provincial, national and international partners.

In 2006, the former MGCC, the Addictions Foundation of Manitoba and the former Manitoba Lotteries Corporation collaborated to fund the Manitoba Longitudinal Study of Young Adults (MLSYA). The study's objective was to follow a sample of Manitobans between the ages of 18 and 20 over a five-year period from 2007 to 2011 to develop a stronger understanding of the protective characteristics that promote responsible gambling and the risk factors that increase the likelihood of experiencing gambling-related harm. Although monitoring alcohol use was not a component of the MGCC's regulatory framework, the MLSYA survey included measures of alcohol and drug use among participants. The inclusion of indicators measuring alcohol consumption is helpful considering the expanded regulatory mandate of the LGA since April 1, 2014.

The final sample for all waves of data collection included 516 participants who were, on average, 18.9 years of age at recruitment and 22.2 years of age at study completion. Participants were 53% female, with nearly 80% of Caucasian descent. By the final wave of data collection, results indicated high levels of educational attainment (42.3% completed a university or college degree) and workforce participation (81.8%). The results show that young Manitobans represented in this sample have mental and physical health scores comparable to national averages, and these measures remained stable over the four waves of data collection. Self-esteem scores also matched the expected norms for this population.

The majority of participants (approximately 92%) reported gambling on at least one activity at each wave of the study. The most popular gambling activities included scratch tickets, charity raffles and lottery tickets, while the least popular activities included horseracing and online gambling. At the final wave of data collection, 0.6% of participants were classified as problem gamblers, and 12.8% were classified as low- to moderate-risk gamblers. Average monthly spending on all types of gambling activities decreased from approximately \$35 at wave one to \$28 at wave four, and over 70% reported that they set spending or time limits when gambling. The most popular motives to gamble included for fun, to socialize and to win money. When participants were asked if they agreed with a number of common gambling myths about randomness, 39.5% agreed at wave one that it was important to understand how a slot machine or VLT worked in order to play better, while 23.7% agreed that the odds of winning a slot machine changed as you played. Importantly, over the course of the study, the proportion of participants who believed in common gambling myths declined, which indicates that these young adults learned about randomness as they matured.

Patterns of alcohol use remained stable over the four waves of the MLSYA study, with 90% of participants consuming alcohol at each wave. Although most participants consumed alcohol, the frequency of use was relatively low, with nearly 60% of young adults drinking alcohol two to three times a month or less throughout the five years duration. By the final wave of data collection, 58.3% of participants reported having tried marijuana at least once, while 20.5% reporting having tried other substances. Use of marijuana and other substances, however,

remained relatively steady; at each wave of the study, approximately 37% of participants reported marijuana use and approximately 10% reported having used other drugs during the past 12 months.

Since the completion of the MLSYA study, nearly five years ago, numerous researchers have utilized the data access program for projects primarily related to the gambling behaviours of young adults. The wealth of information contained in the MLSYA dataset would support projects related to gambling, alcohol use, drug use, self-esteem, impulsivity and mental or physical health. Appendix B lists the instruments available in the MLSYA dataset, and the LGA welcomes researchers at any level of study to apply to access this unique dataset.

## RESULTS

This report is intended to inform the public and other broad stakeholders about the general findings of the Manitoba Longitudinal Survey of Young Adults (MLSYA) study. Outlining the full results and their implications are beyond the scope of this report due to the complexity of this project. Moreover, this report does not present statistical tests, significance levels and other methodological details. Readers with interest in or questions about these specific research outcomes are welcome to contact the LGA for further information.

Although the purpose of the MLSYA survey focused on the patterns of gambling behaviours and motives among young adults in Manitoba, the study also included broad psychosocial indicators, demographic characteristics and measures of alcohol and drug utilization. Therefore, while it was not intended to measure the patterns of alcohol and drug use of young adults, this information is helpful to inform the LGA's regulatory responsibilities. Results presented in this report include participants who completed all four waves of the study (n=516), and full details about participant attrition are included in methodological Appendix A.

**Table 1** Instruments Included in the MLSYA Study

<u>Demographics:</u> Age, gender, marital status, education, employment status, personal/household income, household composition, religion, citizenship and ethnic identity
Alcohol Dependence Scale
Drug Dependence Scale
Barratt Impulsiveness Scale (BIS-11)
Canadian Problem Gambling Index (CPGI)
Composite International Diagnostic Interview (CIDI-SF)
Drake Belief and Chance
Gambling Attitudes and Fallacies
Gambling Motives Questionnaire (GMQ)
Life Events Questionnaire
Multidimensional Scale of Perceived Support
NEO Five-Factor Inventory
Rosenberg Self-Esteem Scale
SF-8 Health Survey
Spiritual Involvement and Beliefs Scale (SIBS-R)
Ways of Coping Questionnaire

The specific instruments and measures included in the study are listed above in Table 1. Please refer to the codebook in Appendix B for further details regarding these questionnaires. The longitudinal nature of the MLSYA project allows for the examination of changing patterns of behaviours, motives and various health outcomes of the participants in the study, and has been useful for answering detailed research questions asked by gambling scholars (Afifi, Nicholson, Martins & Sareen, 2014; Edgerton, Melnyk & Roberts, 2014; Lambe, Mackinnon & Stewart, 2014). This report provides a brief descriptive summary of demographic characteristics, health, well-being, alcohol use, drug use and gambling behaviours.

## DEMOGRAPHICS

### WHO ARE THE MLSYA PARTICIPANTS?

Unless otherwise noted, these demographic results focused on study respondents at wave four of data collection. The average age of participants at the beginning and end of the study was 18.9 and 22.2 years respectively. 53% were female, 50.2% reported their marital status as single, 11.9% were married or common-law and 38.0% were in relationships. Nearly 80% of participants were of Caucasian descent, and when specifically asked, over 8% self-identified as Aboriginal/Métis/First Nations. Over half of the sample (53.8%) reported religious affiliation, with the greatest proportions being Roman Catholic (15.0%) and Christian (15.4%).

The sample contained many individuals focused on post-education training, with 84% having at least some college/university education and 53% report being full- or part-time post-secondary students. Moreover, 42.3% of respondents had completed their university/college degrees by the end of wave four. Employment rates were high, with 81.8% of participants in the workforce. Nearly 60% of participants resided with their parents and 79% were from the Winnipeg region. Table 2 illustrates the main activities of participants over the four waves of the study.

**Table 2** Main Activity

	Wave 1	Wave 2	Wave 3	Wave 4
	Number (%)	Number (%)	Number (%)	Number (%)
<b>Working</b>	125 (24.2%)	169 (32.8%)	182 (35.3%)	215 (41.7%)
<b>Student</b>	373 (72.3%)	331 (64.1%)	312 (60.5%)	278 (53.9%)
<b>Other<sup>1</sup></b>	18 (3.5%)	16 (3.1%)	22 (4.3%)	23 (4.5%)
<b>TOTAL</b>	<b>516 (100%)</b>	<b>516 (100%)</b>	<b>516 (100%)</b>	<b>516 (100%)</b>

<sup>1</sup> The other category contains activities such as looking for work, caring for children, household work among other activities.

## HEALTH AND WELL-BEING

Overall, participants reported high levels of health and well-being, with 86% stating they had no long-term health conditions and over 70% rated their health as excellent or very good by wave four of the study. The survey measured physical and mental health in greater detail by asking questions related to limitations to physical health, bodily pain, general health perceptions, vitality, social functioning, emotional problems and mental health (Ware, Kosinski, Dewey & Gandek, 2001). Over the four waves of the MLSYA study, participants reported stable mental and physical health scoring well within the normal range of a healthy adult population.

The Rosenberg Self-Esteem Scale (Rosenberg, 1965) measured self-esteem in waves one and three of the study. These questions asked participants a series of questions related to their personal self-worth, and average scores were stable and consistent with normal responses of young adults. In sum, the MLSYA sample reflected what would be expected of the young adult population in terms of general well-being, physical and mental health.

## ALCOHOL AND DRUG USE

Using questions adapted from the Canadian Community Health Survey (Statistics Canada, 2003), the MLSYA dataset contains measures of alcohol and drug consumption, frequency of use and alcohol and drug dependency. Appendix B contains further details about the specific measures utilized in the four waves of data collection.

### Alcohol Use

The proportion of MLSYA participants who consumed alcohol in the previous year remained stable, while excess alcohol use declined over the four waves. 90% of all participants reported some degree of alcohol consumption in the past 12 months at each interval of data collection. The Canadian Tobacco, Alcohol and Drugs Survey (CTADS), which measured alcohol consumption for youth between the ages of 15-19, indicated previous 12 month use of alcohol at a rate of 60.3% (Health Canada, 2013). The proportion of 20-24 year olds who used alcohol within the previous 12 month period was 83.2% (Health Canada, 2013). Although the proportion of alcohol users in the MLSYA was slightly higher than these national averages, differences in measurement and ways of categorizing groups could have accounted for these discrepancies.

Table 3 illustrates the frequency of alcohol use among participants as well as the average across the four waves. Mirroring the results of general alcohol consumption, the frequency of alcohol use was generally stable. Over the duration of the MLSYA, 52% of those who consumed alcohol reported drinking two to three times a month or less.

**Table 3** Frequency of Alcohol Use

	Less than once a month	Once a month	2-3 times a month	Once a week	2-3 times a week	4-6 times a week	Every day
<b>Wave 1</b>	18.6%	10.0%	30.6%	19.9%	16.5%	4.1%	0.4%
<b>Wave 2</b>	19.1%	11.4%	32.7%	16.1%	15.5%	4.3%	0.9%
<b>Wave 3</b>	18.6%	11.1%	32.5%	17.0%	15.9%	3.9%	0.9%
<b>Wave 4</b>	18.1%	11.2%	28.9%	19.8%	17.5%	4.1%	0.4%
<b>AVERAGE</b>	<b>18.6%</b>	<b>10.9%</b>	<b>31.2%</b>	<b>18.2%</b>	<b>16.4%</b>	<b>4.1%</b>	<b>0.7%</b>

In 2011, Canada's Low-Risk Drinking Guidelines were released, and although these recommendations were not available at the time of the MLSYA study, the questionnaires contained closely equivalent measures (Health Canada, 2013). These drinking guidelines (Canadian Centre on Substance Abuse, 2013) suggest both "special occasion" and "weekly" low-risk drinking limits based on gender. Weekly drinking limits suggest 15 drinks a week for men, with no more than three drinks a day, and 10 weekly drinks for women with no more than two a day. For special occasions, men should not exceed four drinks and no more than three drinks for women on any single event. Therefore, a male consuming five or more drinks per occasion or 16 or more drinks a week would exceed the recommended low-risk drinking guidelines.

All study participants who consumed liquor were asked "How often in the past 12 months have you had five or more drinks on one occasion?" to measure the prevalence of harmful levels of alcohol use. Those who answered "once a month" were asked a separate series of questions to assess how their alcohol use impacted their emotional state, their level of dependency and other harm-related indicators. Table 4 indicates the rates of overconsumption of alcohol by occasion and shows that overconsumption remained relatively stable. Nearly 50% of

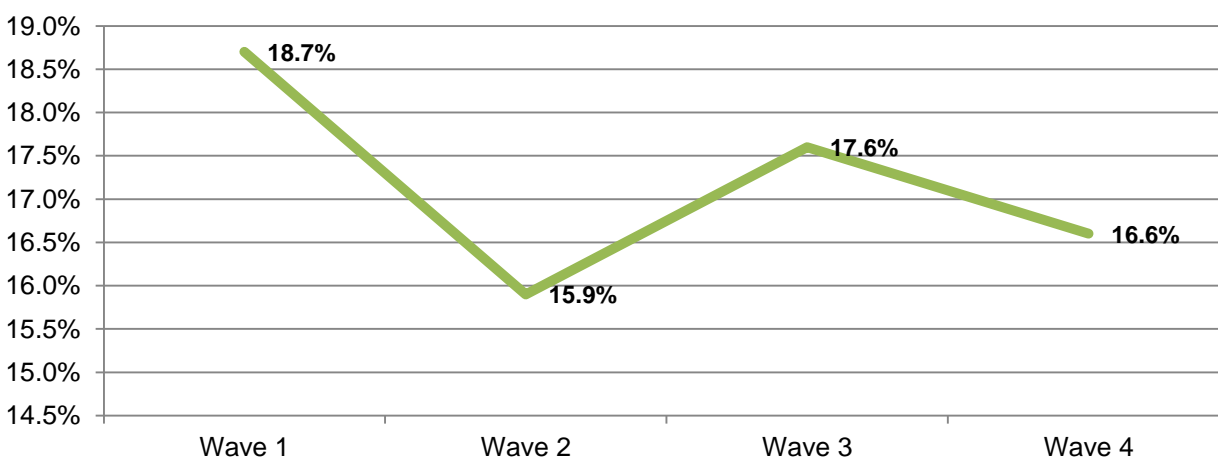
participants reported that their alcohol consumption exceeded five or more drinks on a special occasion “less than once a month” or “never” over the duration of the study.

**Table 4** Frequency of Alcohol Overconsumption (five or more drinks on one occasion)

	Never	Less than once a month	Once a month	2-3 times a month	Once a week	More than once a week
<b>Wave 1</b>	15.0%	30.2%	19.3%	22.5%	9.9%	3.2%
<b>Wave 2</b>	16.0%	32.0%	21.4%	19.7%	7.3%	3.7%
<b>Wave 3</b>	16.4%	36.5%	14.7%	17.1%	11.6%	3.7%
<b>Wave 4</b>	14.3%	38.2%	17.5%	17.7%	8.4%	3.9%
<b>AVERAGE</b>	<b>15.4%</b>	<b>34.2%</b>	<b>18.2%</b>	<b>19.3%</b>	<b>9.3%</b>	<b>3.6%</b>

Participants who drank alcohol were also asked “Have you ever regularly drunk more than 12 drinks a week?” as a measure of weekly excessive alcohol use. Importantly, rates of weekly excessive alcohol consumption declined by the end of the fourth wave of the MLSYA study from 18.7% to 16.6%. Figure 1 illustrates the proportion of participants who reported that they had at some point regularly exceeded weekly drinking limits.

**Figure 1** Rates of Alcohol Overconsumption (ever regularly exceeded 12 drinks per week)



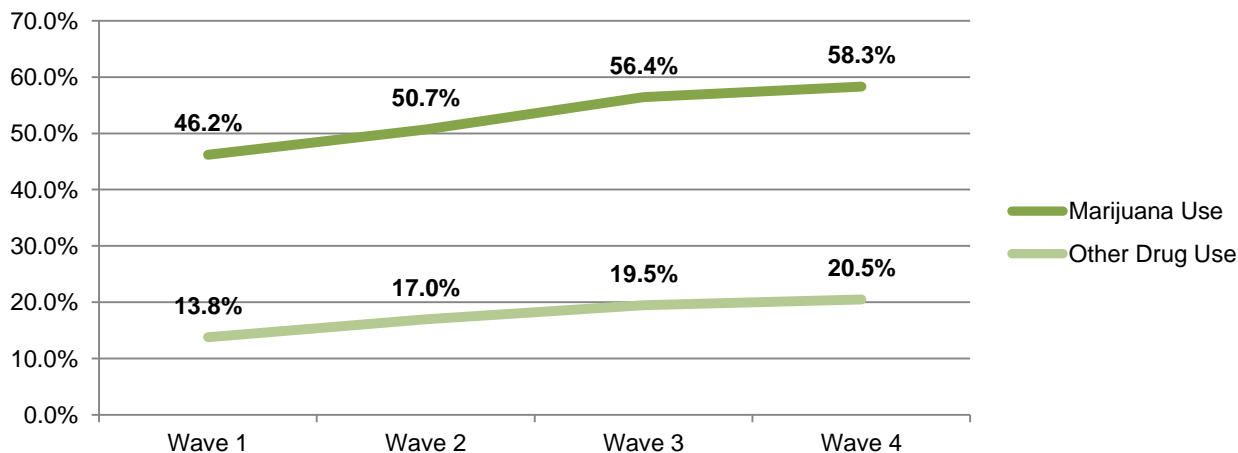
Overall, rates of alcohol overconsumption among MLSYA participants were not significantly different from national surveys measuring alcohol use that exceeded the low-risk guidelines. Among those who drink, national prevalence of regular weekly alcohol overconsumption was 11.9% for 15 to 19 year olds and 24.1% for 20 to 24 year olds when last measured in 2013 (Health Canada, 2013).

### Drug Use

The MLSYA study measured participants’ use of drugs in addition to alcohol. Concerning marijuana use, the questionnaire asked “Have you ever tried marijuana, cannabis or hashish?” and thus the percentages reflect young adults who have tried the substance, and therefore, may not be consistently using. As shown in Figure 2, the overall proportion of participants who had tried marijuana and other drugs gradually increased between the four waves of data collection. By the end of wave four, 58% of participants had tried marijuana, and 20% had tried other drugs. National surveys reported lifetime marijuana use for youth for aged 15 to 19 and 20 to 24 years at 25.8% and 41.7% respectively (Health Canada, 2013). In regards to lifetime use for other drugs, rates were 7.9% for 15 to 19 year olds and 16.8% for 20 to 24 year olds (Health

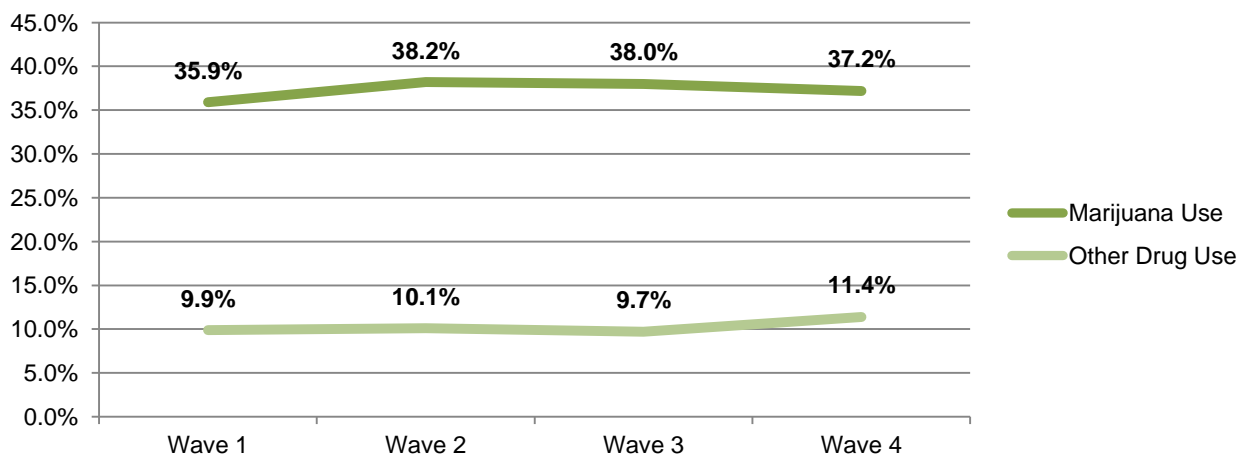
Canada, 2013). In other words, the MLSYA participants had slightly higher lifetime marijuana and other drug use when compared to the national population, but these differences may have occurred by chance or because the CTADS survey includes participants between the ages of 15 and 17, whereas the MLSYA did not.

**Figure 2** Lifetime Rates of Marijuana and Other Drug Initiation (have tried the substance)



Most participants were not frequently utilizing marijuana or other drugs, however, and rates of drug use over the past 12 months remained stable over the MLSYA study as illustrated by Figure 3. These percentages are lower than the proportion of the sample who had tried drugs. For respondents who used marijuana in the previous 12 months, 66% used it one to three times a month or less at wave four of the study. In other words, although a high proportion of participants experimented with marijuana and other drugs, very few participants were using these drugs habitually.

**Figure 3** Rates of Marijuana and Other Drug Use (Have used the substance in the 12 months)





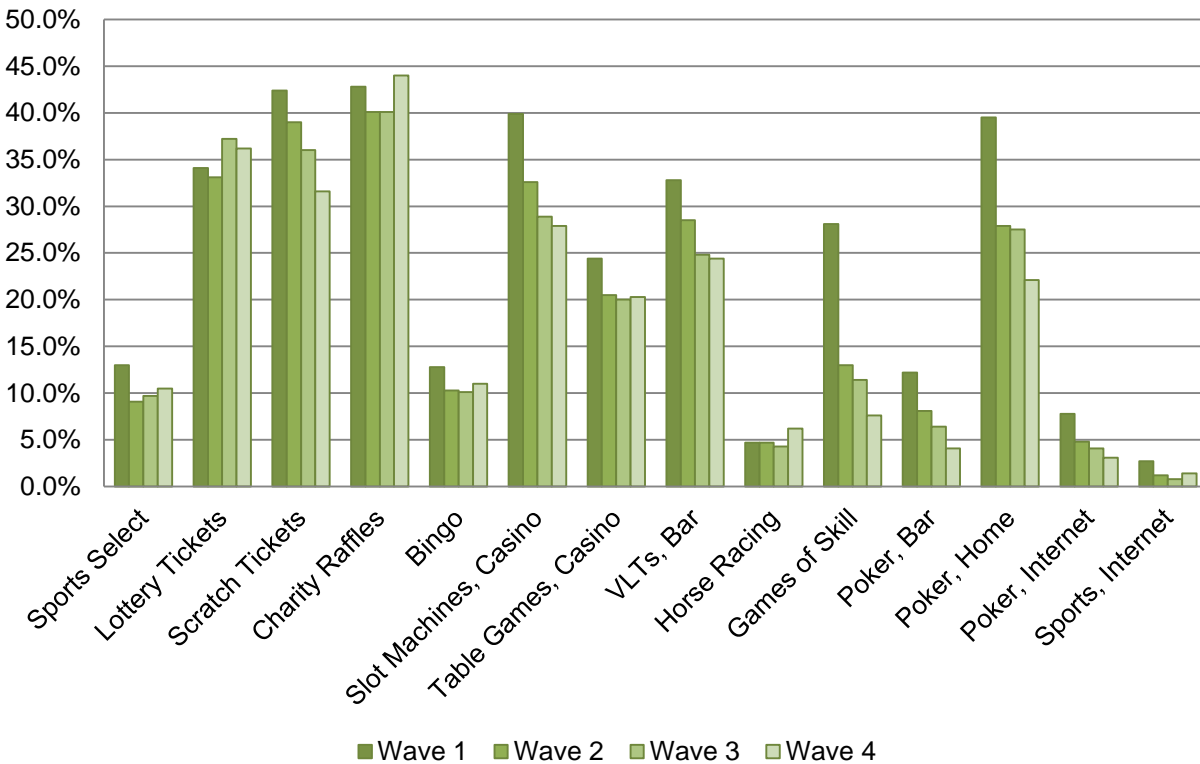
## GAMBLING ACTIVITIES

The MLSYA dataset contained measures of gambling participation, problem gambling, the amount of money spent on gambling activities, beliefs in erroneous myths, motives for gambling and limit setting behaviours. See Appendix B for further details about the specific measures utilized in the four waves of data collection.

### Participation

Involvement in a variety of gambling activities was used to determine gambling participation of young adults. Those who reported never engaging in any of the gambling activities listed in Figure 4 were classified as non-gamblers.

**Figure 4** Gambling Participation by Type of Activity



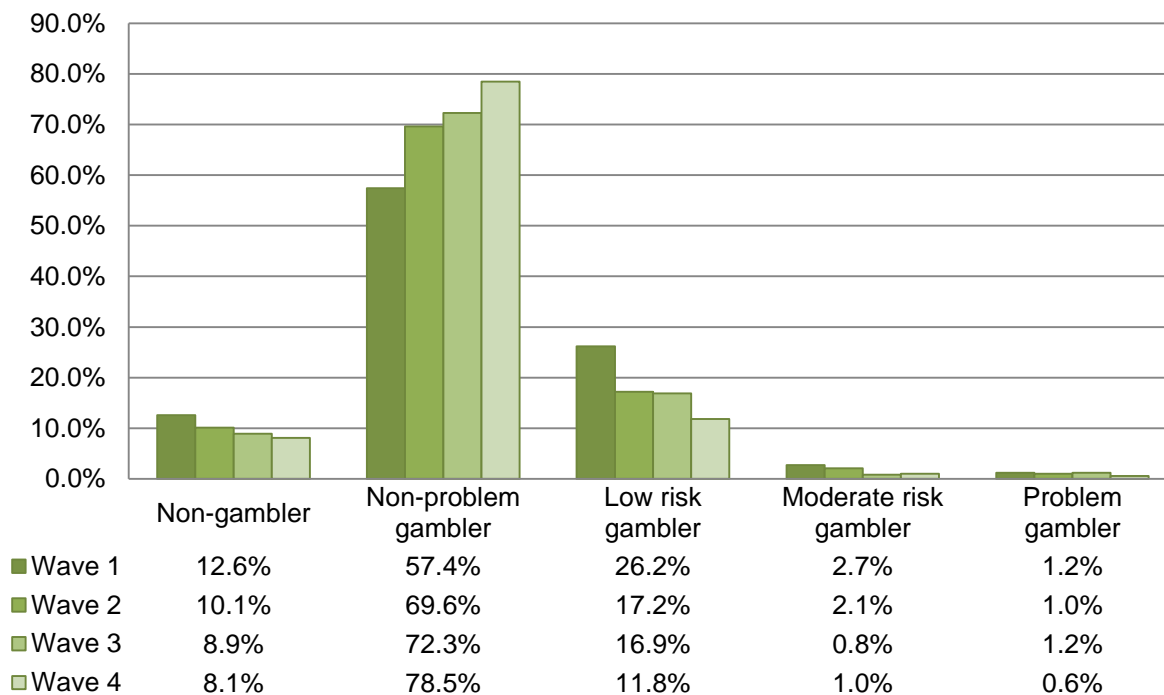
Overall participation in rates in all gambling activities remained fairly stable across waves, with decreases in most activity categories and slight increases in sports select, charity raffles, bingo, horse racing and online sports betting. There was a noticeable decline in the popularity of scratch tickets, slot machines, VLTs, games of skill and poker at home between waves one and four of data collection. Scratch tickets, charity raffles, slot machines, and poker at home were the most popular activities reported at the beginning of the study. Online gambling and horse racing were the least popular forms of gambling among young adults, which was consistent with the rest of the adult Manitoban population (LGA, 2014). Importantly, the MLSYA study concluded prior to the rise in popularity of online daily fantasy sports leagues (e.g. DraftKings and FanDuel) and future research should determine if there has been a significant increase in gambling participation (and spending) for sports and online activities.

### Gambling Classification

The Problem Gambling Severity Index (PGSI) is a nine-item subscale contained within the Canadian Problem Gambling Index (CPGI). PGSI results are categorized as follows: non-

gambler, non-problem gambler, low risk gambler, moderate risk gambler, and problem gambler. Those who did not participate in any gambling activity in the past year are classified as 'non-gamblers'. On this basis, 87.4% of young adults were classified as gamblers at the beginning of the study, a percentage that increased over the course of the MLSYA study to 91.9% by wave four. Importantly, those classified as problem gamblers or those at risk for problem gambling decreased over the course of the MLSYA study, as illustrated in Figure 5.

**Figure 5** Problem Gambling Severity Index Classifications

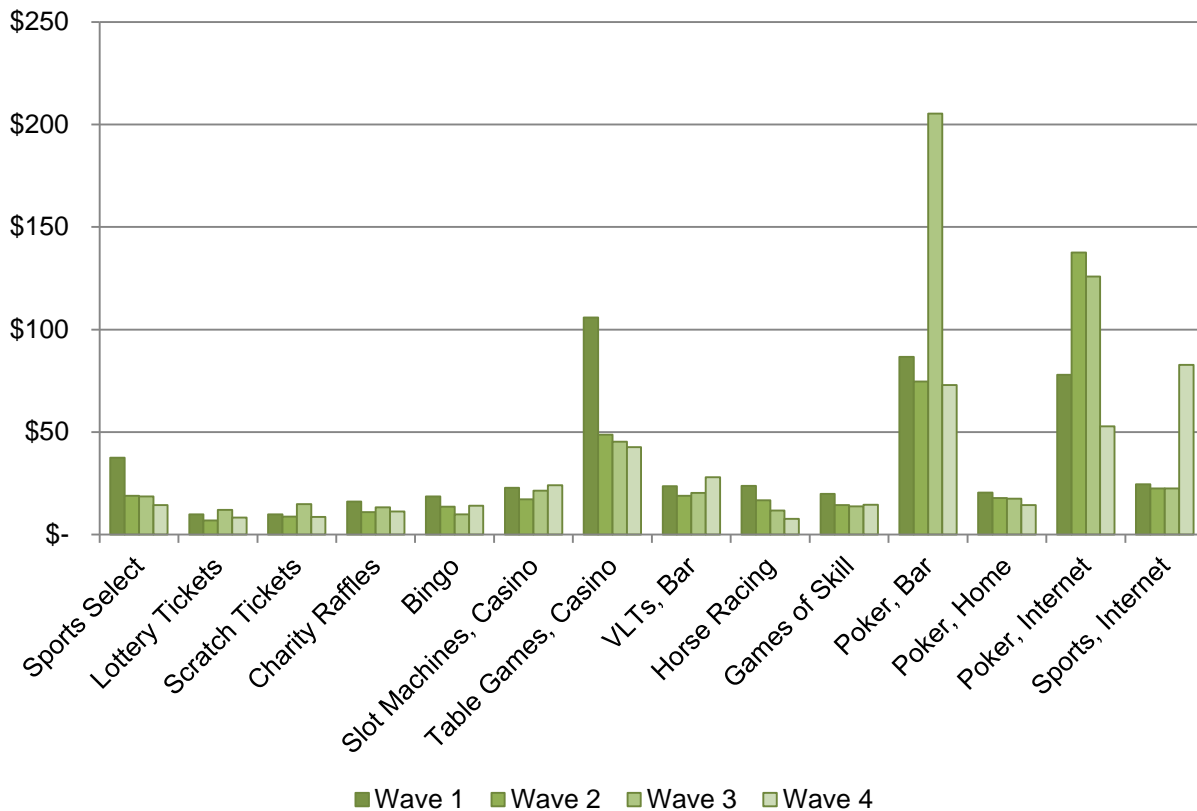


### Spending

Participation rates, however, only portray one aspect of gambling behaviours. The amount of money spent on particular gambling activities provided further insight into the significance of certain gambling types over others. Respondents were asked "In the past 12 months, how much money did you spend, not including winnings, on [gambling activity] in a typical month?" to collect information about typical spending on gambling activities.

Figure 6 illustrates spending trends over the four waves of data collection, with significant declines in table games and sports select monthly spending. Major increases in monthly spending occurred for internet sports gambling, and significant variation in poker spending at the bar and poker spending on the internet. This variation is due to smaller proportions of gambling participation in these categories and should be interpreted with caution as outliers greatly influence these categories. Overall, average monthly spending on all types of gambling activities decreased from \$35.55 in wave one to \$28.34 by wave four.

**Figure 6** Typical Monthly Spending by Type of Activity



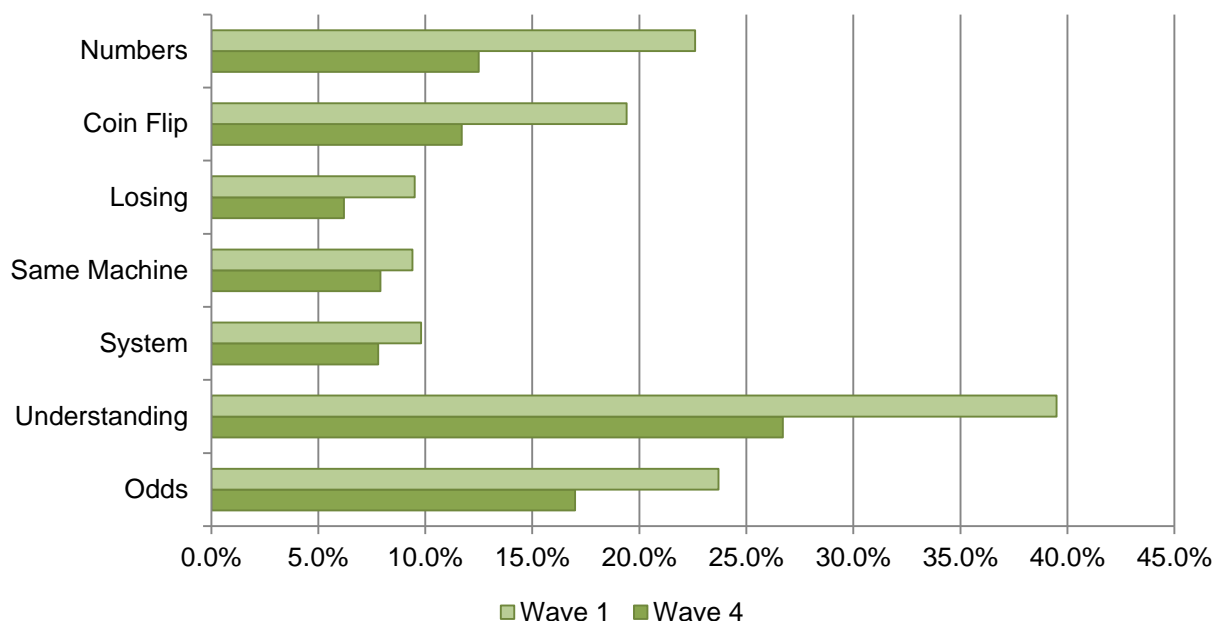
**Belief in Erroneous Gambling Myths**

Young adults in the MLSYA sample were asked questions about their agreement with seven common gambling myths based off questions measuring participants’ beliefs about randomness (MGCC, 2007). These questions include “the odds of winning on a slot machine change as you are playing” (odds); “it is important to understand exactly how a slot machine or VLT works in order to play better” (understanding); “having a system when playing slot machines or VLTs increases the chance of winning” (system); “staying at the same slot machine or VLT will improve your chance of winning” (same machine); “if you have been losing for a while, odds are you are due for a win” (losing); “if you flip a coin and get heads 5 times in a row, your next flip is likely to be tails” (coin flip); and “a series of numbers such as 12-5-23-7 is more likely to win than a series of numbers like 1-2-3-4” (numbers). Figure 7 portrays the percentage of participants who agreed with these myths, and compares the significant decline in myths agreement between waves one and four of data collection.

The most popular myth was the belief that understanding how the machine worked in order to play better, with 39.5% of participants in agreement at wave one. By the fourth wave, only 26.7% of participants agreed with the same statement, but it still remained the most popular erroneous belief about randomness. At wave one, the odds myth (23.7% agreement), numbers myth (22.6% agreement) and the coin flip myth (19.4% agreement) were also common erroneous beliefs. Significantly, over the five years of the study, all myths saw a decline in agreement among participants. This suggests that as the young adults in the MLSYA study matured, their understanding of the randomness of gambling increased. This is critical because responsible gambling is greatly facilitated by ensuring that individuals, and particularly young

adults, have a proper understanding of randomness and probability in relation to most gambling activities (Derevensky & Gilbeau, 2015).

**Figure 7** Percentage of Agreement with Gambling Myths



**Motives**

The Gambling Motives Questionnaire (GMQ) was included in wave four of the MLSYA as an assessment tool of respondents’ motives for participating in gambling activities. The GMQ measures participants’ reasons for gambling based on the three motivational themes of enhancement (to increase positive emotions), coping (to reduce or avoid negative emotions) and social (to increase social affiliation). In 2013, the MGCC developed nine additional financial motive items to supplement the GMQ (Dechant, 2014). Respondents’ answered each item using the same scale as the GMQ and the most reliable measures now are included as the GMQ-F.

The most popular motives for participating in gambling activities in this young adult sample were for fun, to socialize and to win money, respectively. Table 5 illustrates the frequency of certain motivations the MLSYA participants reported for their gambling activities. Coping motives were the least frequently reported, although 21.0% of participants stated that they “sometimes” gambled “to relax”.

**Table 5** Frequency of Gambling Motives

Thinking about all the times you gamble, how often do you gamble...	Never or almost never	Sometimes	Often	Almost always or always
<b>SOCIAL MOTIVES (GMQ)</b>				
Because it’s something you do on special occasions?	49.8	36.9	11.1	2.2
To be sociable?	41.6	38.1	15.7	4.6
Because it makes a social gathering more enjoyable?	64.4	27.4	6.9	1.3
Because it is what most of your friends do when you get together?	67.3	23.5	7.3	2.0

As a way to celebrate?	55.1	36.1	7.5	1.3
<b>ENHANCEMENT MOTIVES (GMQ)</b>				
Because it's fun?	27.9	42.5	21.9	7.7
Because it's exciting?	45.8	34.5	15.3	4.4
Because you like the feeling?	64.4	24.1	10.0	1.5
Because it makes you feel good?	74.6	17.5	6.4	1.5
To get a "high" feeling?	82.3	13.3	3.8	0.7
<b>COPING MOTIVES (GMQ)</b>				
To relax?	71.5	21.0	6.2	1.3
To cheer up when you're in a bad mood?	89.4	8.0	2.0	0.7
Because you feel more self-confident or sure of yourself?	90.3	9.1	0.4	0.2
To forget your worries?	88.1	10.0	1.5	0.4
Because it helps when you feel depressed or nervous?	91.4	6.9	1.3	0.4
<b>FINANCIAL MOTIVES</b>				
To win money?	43.1	36.3	13.1	7.5
Because you enjoy thinking about what you would do if you won a jackpot?	47.8	33.2	10.8	8.2
Because winning would change your lifestyle?	73.2	17.5	5.1	4.2
To earn money?	70.4	20.6	5.5	3.5

### Limit Setting

To investigate the tendency of young adults to use limit setting strategies when gambling, participants were asked to what extent they agree with the following statements, "When I gamble, I set spending or time limits for myself" and "When I set spending or time limits, I stick to these limits". At wave one, Over 50% of young adults report they "always" or "often" set spending or time limits. This percentage continued to increase over time, with over 70% reporting that they set spending and/or time limits on their gambling behaviours at wave four. When questioned about adhering to their spending or time limits, those who answered "often" or "always" were considered to be adhering to their self-imposed gambling limits. The tendency of young adults to stick to a limit continued to improve across waves of data collection, with over 90% adhering to their self-imposed gambling limits at wave four.

## FUTURE DIRECTIONS

Going forward, the LGA will conduct small-scale internal analyses of the MLSYA data while actively seeking collaborative opportunities on large-scale research projects. The findings from these initiatives provide insight that drives the evidence-based policy development within the LGA. The valuable information provided by the MLSYA study informs the LGA's public education and social responsibility campaigns related to our alcohol and gambling regulatory mandate.

### Academic publication

The LGA plans to develop manuscripts based on the MLSYA data for publication in academic journals as well as descriptive reporting expanding upon this current document to share through our website and other venues. Descriptive analyses involve modeling the changes over time in

gambling participation, spending, activities, and differences across gender and other demographic measures.

Additional research initiatives assess the relationships between myth disbelief and responsible gambling behavior in young adults, limit-setting behavior and motives in young adults, the relationship of alcohol use and gambling behaviors. Other analyses emphasize the strength of the longitudinal survey design to examine how gambling participation shifts during the transition to adulthood from late adolescence. Many of these academic publication opportunities will not only provide valuable information to the alcohol and gambling research communities, but also to internal and external LGA stakeholders by providing a firm empirical basis for public education and policy development initiatives.

#### Data Access Program

On behalf of the MLSYA partners, the LGA administers this program to allow external researchers access this valuable dataset. This unique program allows research groups outside of the LGA to access all or part of the MLSYA dataset and conduct their own research. The anticipated results of this program will not only assist in knowledge translation across academia and government, but will also contribute important research results to the field of gambling activities, alcohol use, health measures and motivations of young adults. The LGA encourages all researchers, but especially Manitoba-based students and research professionals, to submit well-developed research proposals to the LGA for the data access program.

Please visit [LGAmanitoba.ca](http://LGAmanitoba.ca) or email [research@LGAmanitoba.ca](mailto:research@LGAmanitoba.ca) for more information about the data access program.

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## ACKNOWLEDGEMENTS

The LGA is grateful to the Manitobans who participated in this research and to the Addictions Foundation of Manitoba and Manitoba Liquor & Lotteries for their collaboration on the MLSYA study. Furthermore, the LGA acknowledges Prairie Research Associates' skilled data collection, particularly due to the complex nature of longitudinal survey design.

## APPENDIX A: METHODOLOGY

In November 2007, the LGA contracted Prairie Research Associates Inc. (PRA) to recruit participants and collect data for the MLSYA. Although the sample is partly a convenience sample, and therefore not truly random, the sample is reasonably representative of the Manitoba population, with the exception of overrepresentation of participants living in Winnipeg (80% of the sample compared to 55% of the population). Table 6 profiles MLSYA participants' demographic characteristics at each study wave.

**Table 6** Profile of MLSYA Participants by Wave

	Wave 1 (n = 679)	Wave 2 (n = 607)	Wave 3 (n = 561)	Wave 4 (n=518)	2006 Census
<b>Gender</b>					
Male	47.9%	47.1%	47.1%	47.1%	50.7%
Female	52.1%	52.9%	52.9%	52.9%	49.3%
<b>Age (based on Wave 1 survey)</b>					
18 years	35.6%	35.1%	35.1%	35.9%	33.3%
19 years	36.8%	37.6%	37.4%	36.3%	33.6%
20 years	27.5%	27.3%	27.5%	27.8%	33.2%
<b>Region</b>					
Winnipeg	79.7%	79.1%	79.1%	78.8%	55.4%
Manitoba (excluding Winnipeg)	20.3%	20.6%	20.5%	19.7%	44.6%
Outside Manitoba	-	0.3%	0.4%	1.6%	-
<b>Aboriginal</b>					
Yes	11.8%	10.7%	9.8%	8.7%	15.5%
Note: With the exception of gender and age, all 2006 Census information presented is for the entire Manitoba population and not just 18 to 20 year olds.					

At wave one, participants were recruited through various means, including random-digit dialing, onsite casino recruitment, advertisements at post-secondary institutions and VLT lounges, the MLSYA website and toll-free telephone number, and participant referrals. Those who agreed to participate at wave one took part in a telephone survey and then were sent an additional survey by email or mail. At each subsequent wave (waves two to four), participants who had completed the previous wave were contacted by phone and/or email and asked to take part in the next wave of the study. Once again, at each wave, participants completed a survey by telephone and then were sent a second survey by email or mail. Table 6 presents the times of data collection, participation rates, and retention rates between waves. Overall participant retention was excellent, at 76% upon completion of wave four.

**Table 7** Participation Rates

	Wave 1	Wave 2	Wave 3	Wave 4
<b>Start of Data Collection</b>	November 2007	December 2008	May 2010	May 2011
<b>End of Data Collection</b>	October 2008	December 2009	December 2010	December 2011
<b>Participants</b>	679	607	561	518
<b>Retention Rate (%)</b>	---	89.4	92.4	85.3
Note. Participants were those who completed both parts (telephone and mail/email survey) of each wave. Two participants completed all waves except the second wave, meaning that 516 participants completed all four waves of the MLSYA. Percentage of retention from the previous wave is reported.				



To improve retention, PRA contacted participants between each wave at several occasions. In December, participants were sent a postcard that wished them a happy holiday season and thanked them for their continued participation in the MLSYA study. On their birthdays, participants received an email card to wish them a happy birthday. Finally, approximately one week before the start of the next wave, participants received a reminder email that also asked them to update their contact information if there were any changes.

## APPENDIX B: MLSYA CODEBOOK

### Alcohol Dependence Scale

Waves 1, 2, 3, 4

**Variable Names:** ALCDSW1, ALCDSMW1, ALCDSW2, ALCDSMW2, ALCDSW3, ALCDSMW3, ALCDSW4, ALCDSMW4

**Description:** This variable measures alcohol consumption and indicates whether individuals show signs of alcohol dependence.

**Key Source:** Statistics Canada (2003). Canadian Community Health Survey, Cycle 2.1. Available Online at <http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&Id=4995>.

Scale/Item Name	Wave 1 (n=325)		Wave 2 (n=279)		Wave 3 (n=232)		Wave 4 (n=209)	
	Mean	S-D	Mean	S-D	Mean	S-D	Mean	S-D
Alcohol Dependence	1.95	1.56	1.76	1.48	1.49	1.31	1.33	1.29
Alcohol Dependence (Mod.)	2.41	2.00	2.16	1.85	1.84	1.69	1.69	1.66

The Alcohol Dependence Scale was adapted with some modification from the Canadian Community Health Survey, Cycle 2.1 (Statistics Canada), which in turn utilized a shortened version from the Composite International Diagnostic Interview Short-Form. Respondents in all four waves of the MLSYA were first asked the question “*How often in the past 12 months have you had five or more drinks on one occasion?*”. Those who answered at least ‘*once a month*’ were then asked a series of nine questions designed to assess alcohol dependence during the past year. An example question includes: ‘*In the past 12 months, did you ever find that you had to drink more alcohol than usual to get the same effect or that the same amount of alcohol had less effect on you than usual?*’. Possible scores range from 0 to 9, with higher scores indicating a greater chance of alcohol dependence.

<b>Derived Variable</b>	<b>Computation Variables</b>
Alcohol Dependence Scale W1 (ALCDSW1)	ALD1W1, ALD3W1, ALD4W1, ALD5W1, ALD6W1, ALD9W1
Alcohol Dependence Scale Modified W1 (ALCDSMW1)	ALD1W1, ALD3W1, ALD4W1, ALD5W1, ALD6W1, ALD9W1, ALD10W1, ALD11W1, ALD13W1
Alcohol Dependence Scale W2 (ALCDSW2)	ALD1W2, ALD3W2, ALD4W2, ALD5W2, ALD6W2, ALD9W2
Alcohol Dependence Scale Modified W2 (ALCDSMW2)	ALD1W2, ALD3W2, ALD4W2, ALD5W2, ALD6W2, ALD9W2, ALD10W2, ALD11W2, ALD13W2
Alcohol Dependence Scale W3 (ALCDSW3)	ALD1W3, ALD3W3, ALD4W3, ALD5W3, ALD6W3, ALD9W3
Alcohol Dependence Scale Modified W3 (ALCDSMW3)	ALD1W3, ALD3W3, ALD4W3, ALD5W3, ALD6W3, ALD9W3, ALD10W3, ALD11W3, ALD13W3
Alcohol Dependence Scale W4 (ALCDSW4)	ALD1W4, ALD3W4, ALD4W4, ALD5W4, ALD6W4, ALD9W4
Alcohol Dependence Scale Modified W4 (ALCDSMW4)	ALD1W4, ALD3W4, ALD4W4, ALD5W4, ALD6W4, ALD9W4, ALD10W4, ALD11W4, ALD13W4

## Barratt Impulsiveness Scale (BIS-11)

Waves 2, 4

**Variable Names:** BISW2, BISW4

**Description:** This instrument measures the extent that respondents exhibit impulsive traits in their thoughts or behaviors.

**Key Source:** Patton, J. H., Stanford, M. S. & Barratt, E. S. (1995). Factor Structure of the Barratt Impulsiveness Scale. *Journal of Clinical Psychology*, 51(6), 768-774.

Scale/Item Name	Wave 2 (n=604)		Wave 4 (n=517)	
	Mean	S-D	Mean	S-D
Barratt Impulsiveness Scale (BIS-11)	63.59	10.35	61.15	10.42

The Barratt Impulsiveness Scale-11 is a 30-item instrument used in waves 2 and 4 of the MLSYA to measure the six primary dimensions of impulsiveness: (1) *Attention*, (2) *motor impulsiveness*, (3) *self-control*, (4) *cognitive complexity*, (5) *perseverance*, and (6) *cognitive instability*. Though the scale's authors have proposed subscales to measure each of these dimensions, analysis made it clear that this approach was not viable with the MLSYA dataset. Instead, an overall impulsiveness score was calculated by summing responses to all 30 items on the BIS-11, with higher scores indicating a tendency towards more impulsive thoughts/behavior. All questions are designed as 4-point Likert items with valid responses of: 1) *Rarely/Never*, 2) *Occasionally*, 3) *Often*, and 4) *Almost Always/Always* (negatively worded questions were reverse-coded). Possible scores range from a minimum of 30 to a maximum of 120.

Derived Variable	Computation Variables
Barratt Impulsiveness Scale W2 (BISW2)	BIS1W2, BIS2W2, BIS3W2, BIS4W2, BIS5W2, BIS6W2, BIS7W2, BIS8W2, BIS9W2, BIS10W2, BIS11W2, BIS12W2, BIS13W2, BIS13W2, BIS14W2, BIS15W2, BIS16W2, BIS17W2, BIS18W2, BIS19W2, BIS20W2, BIS21W2, BIS22W2, BIS23W2, BIS24W2, BIS25W2, BIS26W2, BIS27W2, BIS28W2, BIS29W2, BIS30W2
Barratt Impulsiveness Scale W4 (BISW4)	BIS1W4, BIS2W4, BIS3W4, BIS4W4, BIS5W4, BIS6W4, BIS7W4, BIS8W4, BIS9W4, BIS10W4, BIS11W4, BIS12W4, BIS13W4, BIS13W4, BIS14W4, BIS15W4, BIS16W4, BIS17W4, BIS18W4, BIS19W4, BIS20W4, BIS21W4, BIS22W4, BIS23W4, BIS24W4, BIS25W4, BIS26W4, BIS27W4, BIS28W4, BIS29W4, BIS30W4

## Beliefs About Randomness

Waves 1, 2, 3, 4

**Variable Names:** BAR1W1, BAR2W1, BAR3W1, BAR4W1, BAR5W1, BAR6W1, BAR7W1, BAR1W2, BAR2W2, BAR3W2, BAR4W2, BAR5W2, BAR6W2, BAR7W2, BAR1W3, BAR2W3, BAR3W3, BAR4W3, BAR5W3, BAR6W3, BAR7W3, BAR1W4, BAR2W4, BAR3W4, BAR4W4, BAR5W4, BAR6W4, BAR7W4,

**Description:** These variables indicate the percentage of respondents who agree with various erroneous statements about randomness.

**Key Source:** Manitoba Gaming Control Commission (2007). *Manitobans and Gambling II*. Retrieved online at [lgamanitoba.ca/documents/manitobans-and-gambling-ii-report.pdf](http://lgamanitoba.ca/documents/manitobans-and-gambling-ii-report.pdf).

Scale/Item Name	Wave 1 (n=679)	Wave 2 (n=624)	Wave 3 (n=578)	Wave 4 (n=530)
	% Agree	% Agree	% Agree	% Agree
The odds of winning on a slot machine change as you are playing.	24.7	16.7	13.3	9.6
It is important to understand exactly how a slot machine or VLT works in order to play better.	39.0	27.1	23.2	17.0
Having a system when playing slot machines or VLTs increases the chances of winning.	10.5	7.7	6.4	4.2
Staying at the same slot machine or VLT will improve your chances of winning.	9.1	7.9	6.2	3.6
If you have been losing for a while, odds are you are due for a win.	10.8	7.1	5.0	3.8
If you flip a coin and get heads 5 times in a row, your next flip is likely to be tails.	20.8	13.0	10.4	8.1
A series of numbers such as 12-5-23-7 is more likely to win than a series of numbers like 1-2-3-4.	21.9	12.8	11.2	6.6

Derived Variable	Computation Variables
Beliefs About Randomness W1 (BARW1)	BAR1W1, BAR2W1, BAR3W1, BAR4W1, BAR5W1, BAR6W1, BAR7W1
Beliefs About Randomness W2 (BARW2)	BAR1W2, BAR2W2, BAR3W2, BAR4W2, BAR5W2, BAR6W2, BAR7W2
Beliefs About Randomness W3 (BARW3)	BAR1W3, BAR2W3, BAR3W3, BAR4W3, BAR5W3, BAR6W3, BAR7W3
Beliefs About Randomness W4 (BARW4)	BAR1W4, BAR2W4, BAR3W4, BAR4W4, BAR5W4, BAR6W4, BAR7W4

# Canadian Problem Gambling Index (CPGI)

Waves 1, 2, 3, 4

**Variable Names:** See below.

**Description:** The Canadian Problem Gambling Index measures prevalence of gambling behavior and problem gambling with an emphasis on related social and environmental factors.

**Key Source:** Ferris, J. & Wynne, H. (2001). *The Canadian Problem Gambling Index: Final Report*. Ottawa, ON: Canadian Centre on Substance Abuse.

Scale/Item Name	Wave 1 (n=679)			Wave 2 (n=624)			Wave 3 (n=578)			Wave 4 (n=530)		
	% Yes	Mean \$ <sup>*</sup> /month	Mode	% Yes	Mean \$ <sup>*</sup> /month	Mode	% Yes	Mean \$ <sup>*</sup> /month	Mode	% Yes	Mean \$ <sup>*</sup> /month	Mode
Sport Select?	13.1	\$36.91	\$10.00	10.1	\$24.90	\$5.00	9.9	\$20.32	\$10.00	10.2	14.43	\$10.00
Lottery tickets?	35.2	\$11.40	\$10.00	34.3	\$7.76	\$5.00	38.4	\$12.40	\$5.00	36	8.52	\$2.00
Instant-win?	43.4	\$11.54	\$5.00	39.6	\$9.64	\$5.00	36.2	\$15.49	\$5.00	32.3	8.97	\$5.00
Charity raffles?	41.7	\$16.95	\$10.00	40.9	\$13.78	\$10.00	41.5	\$14.28	\$10.00	44	11.37	\$5.00
Bingo?	12.4	\$28.21	\$10.00	10.7	\$13.85	\$10.00	10.2	\$11.89	\$2.00	11.1	13.86	\$2.00
Slot machines?	42.6	\$28.59	\$20.00	36.4	\$21.91	\$20.00	30.1	\$25.01	\$20.00	27.9	24.01	\$20.00
Table games at casino?	24.9	\$105.87	\$20.00	22	\$48.43	\$20.00	20.6	\$47.54	\$20.00	20.9	44.25	\$10.00
VLTs?	35.5	\$31.55	\$20.00	32.5	\$24.44	\$20.00	26.8	\$29.53	\$20.00	25.1	30.11	\$10.00
Horse races?	5.9	\$28.75	\$20.00	4.5	\$24.50	\$20.00	4.2	\$11.48	\$2.00	6.2	7.45	5 and 1
Games of skill?	28.9	\$21.86	10 and 20	15.7	\$16.60	\$10.00	12.6	\$14.54	\$20.00	7.5	20.71	\$5.00
Poker at bar or lounge?	13.7	\$73.55	\$10.00	9.6	\$70.96	\$20.00	6.9	\$191.69	\$20.00	4.2	115.05	\$20.00
Poker at home?	40.4	\$23.45	\$10.00	28.2	\$20.54	\$20.00	27.7	\$17.78	\$20.00	22.3	15.75	\$5.00
Internet casino?	8.1	\$71.36	\$20.00	5.1	\$141.88	\$20.00	4	\$121.68	\$100.00	3	52.81	\$50.00
Internet sports?	2.8	\$42.81	10 and 30	1.1	\$19.57	2 and 5	0.9	\$22.50	\$20.00	1.3	82.86	\$20.00

\* Mean includes only respondents who bet or spent money on that particular type of gambling.

Variable Description	Variable Names
Sport Select... Bet or spent money? (CPG1A) How often bet? (CPG2A) Time spent? (CPG3A) Money spent? (CPG4A) Largest amount spent? (CPG5A) Who do you play with? (CPG6A)	CPG1AW1, CPG2AW1, CPG3AW1, CPG4AW1, CPG5AW1, CPG6AW1, CPG1AW2, CPG2AW2, CPG3AW2, CPG4AW2, CPG5AW2, CPG6AW2, CPG1AW3, CPG2AW3, CPG3AW3, CPG4AW3, CPG5AW3, CPG6AW3, CPG1AW4, CPG2AW4, CPG3AW4, CPG4AW4, CPG5AW4, CPG6AW4
Lottery Tickets... Bet or spent money? (CPG1B) How often bet? (CPG2B) Time spent? (CPG3B) Money spent? (CPG4B) Largest amount spent? (CPG5B) Who do you play with? (CPG6B)	CPG1BW1, CPG2BW1, CPG3BW1, CPG4BW1, CPG5BW1, CPG6BW1, CPG1BW2, CPG2BW2, CPG3BW2, CPG4BW2, CPG5BW2, CPG6BW2, CPG1BW3, CPG2BW3, CPG3BW3, CPG4BW3, CPG5BW3, CPG6BW3, CPG1BW4, CPG2BW4, CPG3BW4, CPG4BW4, CPG5BW4, CPG6BW4
Instant-win... Bet or spent money? (CPG1C) How often bet? (CPG2C) Time spent? (CPG3C) Money spent? (CPG4C) Largest amount spent? (CPG5C) Who do you play with? (CPG6C)	CPG1CW1, CPG2CW1, CPG3CW1, CPG4CW1, CPG5CW1, CPG6CW1, CPG1CW2, CPG2CW2, CPG3CW2, CPG4CW2, CPG5CW2, CPG6CW2, CPG1CW3, CPG2CW3, CPG3CW3, CPG4CW3, CPG5CW3, CPG6CW3, CPG1CW4, CPG2CW4, CPG3CW4, CPG4CW4, CPG5CW4, CPG6CW4

<p>Charity raffles...  Bet or spent money?  (CPG1D)  How often bet? (CPG2D)  Time spent? (CPG3D)  Money spent? (CPG4D)  Largest amount spent?  (CPG5D)  Who do you play with?  (CPG6D)</p>	<p>CPG1DW1, CPG2DW1, CPG3DW1, CPG4DW1, CPG5DW1, CPG6DW1,  CPG1DW2, CPG2DW2, CPG3DW2, CPG4DW2, CPG5DW2, CPG6DW2,  CPG1DW3, CPG2DW3, CPG3DW3, CPG4DW3, CPG5DW3, CPG6DW3,  CPG1DW4, CPG2DW4, CPG3DW4, CPG4DW4, CPG5DW4, CPG6DW4</p>
<p>Bingo...  Bet or spent money?  (CPG1E)  How often bet? (CPG2E)  Time spent? (CPG3E)  Money spent? (CPG4E)  Largest amount spent?  (CPG5E)  Who do you play with?  (CPG6E)</p>	<p>CPG1EW1, CPG2EW1, CPG3EW1, CPG4EW1, CPG5EW1, CPG6EW1,  CPG1EW2, CPG2EW2, CPG3EW2, CPG4EW2, CPG5EW2, CPG6EW2,  CPG1EW3, CPG2EW3, CPG3EW3, CPG4EW3, CPG5EW3, CPG6EW3,  CPG1EW4, CPG2EW4, CPG3EW4, CPG4EW4, CPG5EW4, CPG6EW4</p>
<p>Slot machines...  Bet or spent money?  (CPG1F)  How often bet? (CPG2F)  Time spent? (CPG3F)  Money spent? (CPG4F)  Largest amount spent?  (CPG5F)  Who do you play with?  (CPG6F)</p>	<p>CPG1FW1, CPG2FW1, CPG3FW1, CPG4FW1, CPG5FW1, CPG6FW1,  CPG1FW2, CPG2FW2, CPG3FW2, CPG4FW2, CPG5FW2, CPG6FW2,  CPG1FW3, CPG2FW3, CPG3FW3, CPG4FW3, CPG5FW3, CPG6FW3,  CPG1FW4, CPG2FW4, CPG3FW4, CPG4FW4, CPG5FW4, CPG6FW4</p>
<p>Table games at casino...  Bet or spent money?  (CPG1G)  How often bet? (CPG2G)  Time spent? (CPG3G)  Money spent? (CPG4G)  Largest amount spent?  (CPG5G)  Who do you play with?  (CPG6G)</p>	<p>CPG1GW1, CPG2GW1, CPG3GW1, CPG4GW1, CPG5GW1, CPG6GW1,  CPG1GW2, CPG2GW2, CPG3GW2, CPG4GW2, CPG5GW2, CPG6GW2,  CPG1GW3, CPG2GW3, CPG3GW3, CPG4GW3, CPG5GW3, CPG6GW3,  CPG1GW4, CPG2GW4, CPG3GW4, CPG4GW4, CPG5GW4, CPG6GW4</p>
<p>VLTs...  Bet or spent money?  (CPG1H)  How often bet? (CPG2H)  Time spent? (CPG3H)  Money spent? (CPG4H)  Largest amount spent?  (CPG5H)  Who do you play with?  (CPG6H)</p>	<p>CPG1HW1, CPG2HW1, CPG3HW1, CPG4HW1, CPG5HW1, CPG6HW1,  CPG1HW2, CPG2HW2, CPG3HW2, CPG4HW2, CPG5HW2, CPG6HW2,  CPG1HW3, CPG2HW3, CPG3HW3, CPG4HW3, CPG5HW3, CPG6HW3,  CPG1HW4, CPG2HW4, CPG3HW4, CPG4HW4, CPG5HW4, CPG6HW4</p>
<p>Horse races...  Bet or spent money? (CPG1I)  How often bet? (CPG2I)  Time spent? (CPG3I)  Money spent? (CPG4I)  Largest amount spent?  (CPG5I)  Who do you play with?  (CPG6I)</p>	<p>CPG1IW1, CPG2IW1, CPG3IW1, CPG4IW1, CPG5IW1, CPG6IW1,  CPG1IW2, CPG2IW2, CPG3IW2, CPG4IW2, CPG5IW2, CPG6IW2,  CPG1IW3, CPG2IW3, CPG3IW3, CPG4IW3, CPG5IW3, CPG6IW3,  CPG1IW4, CPG2IW4, CPG3IW4, CPG4IW4, CPG5IW4, CPG6IW4</p>

<p>Games of skill...  Bet or spent money? (CPG1J)  How often bet? (CPG2J)  Time spent? (CPG3J)  Money spent? (CPG4J)  Largest amount spent? (CPG5J)  Who do you play with? (CPG6J)</p>	<p>CPG1JW1, CPG2JW1, CPG3JW1, CPG4JW1, CPG5JW1, CPG6JW1,  CPG1JW2, CPG2JW2, CPG3JW2, CPG4JW2, CPG5JW2, CPG6JW2,  CPG1JW3, CPG2JW3, CPG3JW3, CPG4JW3, CPG5JW3, CPG6JW3,  CPG1JW4, CPG2JW4, CPG3JW4, CPG4JW4, CPG5JW4, CPG6JW4</p>
<p>Poker at bar or lounge...  Bet or spent money? (CPG1K)  How often bet? (CPG2K)  Time spent? (CPG3K)  Money spent? (CPG4K)  Largest amount spent? (CPG5K)  Who do you play with? (CPG6K)</p>	<p>CPG1KW1, CPG2KW1, CPG3KW1, CPG4KW1, CPG5KW1, CPG6KW1,  CPG1KW2, CPG2KW2, CPG3KW2, CPG4KW2, CPG5KW2, CPG6KW2,  CPG1KW3, CPG2KW3, CPG3KW3, CPG4KW3, CPG5KW3, CPG6KW3,  CPG1KW4, CPG2KW4, CPG3KW4, CPG4KW4, CPG5KW4, CPG6KW4</p>
<p>Poker at home...  Bet or spent money? (CPG1L)  How often bet? (CPG2L)  Time spent? (CPG3L)  Money spent? (CPG4L)  Largest amount spent? (CPG5L)  Who do you play with? (CPG6L)</p>	<p>CPG1LW1, CPG2LW1, CPG3LW1, CPG4LW1, CPG5LW1, CPG6LW1,  CPG1LW2, CPG2LW2, CPG3LW2, CPG4LW2, CPG5LW2, CPG6LW2,  CPG1LW3, CPG2LW3, CPG3LW3, CPG4LW3, CPG5LW3, CPG6LW3,  CPG1LW4, CPG2LW4, CPG3LW4, CPG4LW4, CPG5LW4, CPG6LW4</p>
<p>Internet casino...  Bet or spent money? (CPG1M)  How often bet? (CPG2M)  Time spent? (CPG3M)  Money spent? (CPG4M)  Largest amount spent? (CPG5M)  Who do you play with? (CPG6M)</p>	<p>CPG1MW1, CPG2MW1, CPG3MW1, CPG4MW1, CPG5MW1, CPG6MW1,  CPG1MW2, CPG2MW2, CPG3MW2, CPG4MW2, CPG5MW2, CPG6MW2,  CPG1MW3, CPG2MW3, CPG3MW3, CPG4MW3, CPG5MW3, CPG6MW3,  CPG1MW4, CPG2MW4, CPG3MW4, CPG4MW4, CPG5MW4, CPG6MW4</p>
<p>Internet sports...  Bet or spent money? (CPG1N)  How often bet? (CPG2N)  Time spent? (CPG3N)  Money spent? (CPG4N)  Largest amount spent? (CPG5N)  Who do you play with? (CPG6N)</p>	<p>CPG1NW1, CPG2NW1, CPG3NW1, CPG4NW1, CPG5NW1, CPG6NW1,  CPG1NW2, CPG2NW2, CPG3NW2, CPG4NW2, CPG5NW2, CPG6NW2,  CPG1NW3, CPG2NW3, CPG3NW3, CPG4NW3, CPG5NW3, CPG6NW3,  CPG1NW4, CPG2NW4, CPG3NW4, CPG4NW4, CPG5NW4, CPG6NW4</p>
<p>Used alcohol/drugs while gambling? (CPG24)  Urge to gamble when something painful happened? (CPG27)  Remember big win? (CPG29)  Remember big loss? (CPG30)  Thought about suicide? (CPG32)  Attempted suicide? (CPG33)</p>	<p>CPG24W1, CPG27W1, CPG29W1, CPG30W1, CPG32W1, CPG33W1,  CPG24W2, CPG27W2, CPG29W2, CPG30W2, CPG32W2, CPG33W2,  CPG24W3, CPG27W3, CPG29W3, CPG30W3, CPG32W3, CPG33W3,  CPG24W4, CPG27W4, CPG29W4, CPG30W4, CPG32W4, CPG33W4</p>



Notes:

'Bet or spent money': In the past 12 months, have you bet or spent money on X?

'How often bet': In the past year, how often did you bet or spend money on X?

'Time spent': In the past year, how much time did you normally spend each time you bet or spent money on X?

'Money spent': In the past 12 months, how much money did you spend, not including winnings, on X in a typical month?

'Largest amount spent': In the past 12 months, what is the largest amount of money you spent on X in any one day?

'Who do you play with': When you spend money on X, who do you participate, play, or go with?

'Used alcohol/drugs while gambling': Thinking about the past 12 months, how often have you used alcohol or drugs while gambling?

'Urge to gamble when something painful happened': Thinking about the past 12 months, how often did you have the urge to gamble when something painful happened?

'Remember big win': Do you remember a big win when you first started gambling?

'Remember big loss': Do you remember a big loss when you first started gambling?

'Thought about suicide': Have you ever seriously thought about committing suicide as a result of your gambling?

'Attempted suicide': Have you ever attempted suicide as a result of your gambling?

## Problem Gambling Severity Index (PGSI)

Waves 1, 2, 3, 4

**Variable Names:** PGSIW1, PGSIRW1, PGSIW2, PGSIRW2, PGSIW3, PGSIRW3, PGSIW4, PGSIRW4

**Description:** The Problem Gambling Severity Index is a subsection of the Canadian Problem Gambling Index (CPGI) that measures severity of gambling related harm.

**Key Source:** Ferris, J. & Wynne, H. (2001). *The Canadian Problem Gambling Index: Final Report*. Ottawa, ON: Canadian Centre on Substance Abuse.

Scale/Item Name	Wave 1 (n=679)	Wave 2 (n=624)	Wave 3 (n=578)	Wave 4 (n=530)
	%	%	%	%
PGSI - Non-Gambler	11.5	9.3	8.5	8.1
PGSI - Non-Problem Gambler (0)	57.0	69.1	71.8	78.1
PGSI - Low Risk (1-4)	26.8	18.3	17.5	11.7
PGSI - Moderate Risk (5-7)	3.2	1.9	0.7	1.1
PGSI - Problem Gambler (8+)	1.5	1.4	1.6	0.9

The Problem Gambling Severity Index (PGSI) is a 9-item subscale contained within the Canadian Problem Gambling Index (CPGI). This instrument was administered to every survey participant, in all four waves of the MLSYA study. Possible scores on the PGSI range from 0 to 27, with higher scores indicating greater severity of gambling related harm. The raw score is derived from Likert scale items with possible answers of 'never', 'sometimes', 'most of the time', or 'almost always'. Example questions include<sup>1</sup>: 'How often have you gone back another day to try to win back the money you lost?' and 'How often have you bet more than you could really afford to lose?'. Cut-points for interpreting the PGSI have been recently established as: 0 – non-problem gambler, 1-4 – low risk gambler, 5-7 – moderate risk gambler, 8+ – problem gambler. In addition, those who did participate in any gambling activity in the past year are marked as 'non-gamblers'.

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<sup>1</sup> Respondents are instructed to base their responses on the past 12 months.

<b>Derived Variable</b>	<b>Computation Variables</b>
Problem Gambling Severity Index W1 (PGSIW1) Problem Gambling Severity Index – Raw Scores W1 (PGSIRW1)	CPGI7W1, CPGI8W1, CPGI10W1, CPGI11W1, CPGI13W1, CPGI15W1, CPGI16W1, CPGI17W1, CPGI18W1
Problem Gambling Severity Index W2 (PGSIW2) Problem Gambling Severity Index – Raw Scores W2 (PGSIRW2)	CPGI7W2, CPGI8W2, CPGI10W2, CPGI11W2, CPGI13W2, CPGI15W2, CPGI16W2, CPGI17W2, CPGI18W2
Problem Gambling Severity Index W3 (PGSIW3) Problem Gambling Severity Index – Raw Scores W3 (PGSIRW3)	CPGI7W3, CPGI8W3, CPGI10W3, CPGI11W3, CPGI13W3, CPGI15W3, CPGI16W3, CPGI17W3, CPGI18W3
Problem Gambling Severity Index W4 (PGSIW4) Problem Gambling Severity Index – Raw Scores W4 (PGSIRW4)	CPGI7W4, CPGI8W4, CPGI10W4, CPGI11W4, CPGI13W4, CPGI15W4, CPGI16W4, CPGI17W4, CPGI18W4

## Composite International Diagnostic Interview (CIDI-SF)

Waves 1, 2, 3, 4

**Variable Names:** CIDIGAW1, CIDIMDPW1, CIDIMDCW1, CIDIOCW1, CIDIPGW1, CIDIGAW2, CIDIMDPW2, CIDIMDCW2, CIDIOCW2, CIDIPGW2, CIDIGAW3, CIDIMDPW3, CIDIMDCW3, CIDIOCW3, CIDIPGW3, CIDIGAW4, CIDIMDPW4, CIDIMDCW4, CIDIOCW4, CIDIPGW4

**Description:** These four instruments, taken from the Composite International Diagnostic Interview (CIDI), diagnose cases of Generalized Anxiety Disorder, Major Depression, Obsessive Compulsive Disorder, and Pathological Gambling.

**Key Source:** Walters, E. E., Kessler, R. C., Nelson, C. B., & Mroczek, D. (2002). *Scoring the World Health Organization's Composite International Diagnostic Interview Short Form (CIDI-SF)*.

Scale/Item Name	Wave 1 (n=679)	Wave 2 (n=624)	Wave 3 (n=578)	Wave 4 (n=530)
	%	%	%	%
Generalized Anxiety Disorder	3.1	3.0	2.9	4.5
Major Depression (probable case)	16.1	12.5	13.2	10.6
OCD	5.6	3.5	2.2	0.9
Pathological Gambler	3.7	2.6	2.2	2.5
Subclinical Pathological Gambler	9.0	5.1	5.0	4.9
Non-Pathological Gambler	75.8	83.2	84.3	84.5
Non-Gambler	11.5	9.1	8.5	8.1

The Composite International Diagnostic Interview Short Form (CIDI-SF) is comprised of numerous instruments designed to detect cases of various mental and behavioral disorders. For the MLSYA, the CIDI instruments to detect Generalized Anxiety Disorder, Major Depression, Obsessive Compulsive Disorder, and Pathological Gambling were included. All respondents were asked to complete each of the instruments on all four waves of the MLSYA. Below are brief descriptions of each survey component.

*Generalized Anxiety Disorder* – This section of the CIDI allows for a full diagnostic assessment of GAD. A positive diagnosis for GAD results only if the following four conditions are met: (1) Respondent endorses an anxious period lasting at least 6 months; (2) Anxious period was excessive, manifested more days than not, and involved more than one item of worry; (3) Anxious feelings were beyond the control of the individual; and (4) Anxiety coincided with three or more physical symptoms (e.g. restless, tired, irritable, etc.). These diagnosis instructions correspond with the criteria listed in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).

*Major Depression* – This section of the CIDI determines the likelihood of diagnosis for Major Depression. The instrument included in the MLSYA is a short-form version which does not constitute a comprehensive diagnosis of Major Depression. Instead, the short-form instrument indicates the probability that Major Depression would be diagnosed by a clinician using the full CIDI instrument.

Survey participants were first asked two series of questions to determine whether they meet the diagnostic requirement for either dysphoria (unpleasant mood), or anhedonia (inability to experience pleasure). Provided this initial condition is met, probability of diagnosis for major depression is calculated based on the sum of positive responses to each of seven symptom questions (e.g. feeling tired, trouble concentrating, loss of interest, etc.). Scores of three or more indicate probable cases of major depression. Higher scores coincide with a greater probability of diagnosis<sup>2</sup>. Two different variables were created to show probable vs. non-probable cases of Major Depression (CIDIMDC), and to show the probabilities of diagnosis associated with respondents' scores for this scale (CIDIMDP).

*Obsessive Compulsive Disorder* – This section of the CIDI is designed to classify respondents as either probable or non-probable cases for diagnosis of Obsessive-Compulsive Disorder according to the DSM-IV. The instrument begins by assessing the presence of obsessive thoughts (e.g. 'My hands are constantly dirty' or 'I might harm someone') or compulsive behaviors/thoughts (e.g. constantly checking whether a door is locked). Obsessions and compulsions are then evaluated whether they are recognized as unreasonable, causing marked distress, or as causing significant interference. One point is scored for each category endorsed, with possible scores ranging from 0-3. A score of 3 corresponds with a probable case of obsessive-compulsive disorder (probability of 84%), and scores less than 3 indicate non-probable cases (< 6%).

*Pathological Gambling* – The CIDI section to assess Pathological Gambling is taken directly from the DSM-IV criteria. A series of questions are first asked to determine whether the respondent: a) Ever bet or spent money on gambling activities; b) Had a time in their lives when gambling interfered with close relationships or important responsibilities such as work or school; c) Lied to others about the extent of their gambling; and/or d) Ever spent \$250 or more on gambling in a single year. Endorsement of any item b through d prompts a series of questions covering the ten diagnostic criteria for pathological gambling listed in the DSM-IV. A classification of 'pathological gambler' is attributed to those respondents who meet five or more DSM-IV criteria. Scores of 1 through 4 are classified as 'subclinical pathological gambler', scores of 0 are classified as 'non-pathological gambler', and those who had never gambled are coded as 'non-gambler'.

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<sup>2</sup> Scores and probabilities of diagnosis for Major Depression are as follows: 3 – 55.4%, 4 – 81.3%, 5&6 – 89.0%, 7 – 90.8%.

<b>Derived Variable</b>	<b>Computation Variables</b>
GAD W1 (CIDIGAW1)	GAD1W1, GAD1AW1, GAD2W1, GAD2AW1, GAD2AUW1, GAD2BW1, GAD2BUW1, GAD4W1, GAD5W1, GAD6W1, GAD7W1, GAD8W1, GAD9W1, GAD10W1, GAD11W1 TO GAD116W1, GAD12AW1, GAD12BW1, GAD12CW1, GAD12DW1, GAD12EW1, GAD12FW1, GAD12GW1
Major Depression Prob W1 (CIDIMDPW1) Major Depression Case W1 (CIDIMDCW1)	MD1W1, MD1AW1, MD1BW1, MD1CW1, MD1DW1, MD2W1, MD2AW1, MD2BW1, MD3W1, MD3AW1, MD4W1, MD5W1, MD6W1, MD9W1, MD9AW1, MD9BW1, MD9CW1, MD10W1, MD10AW1, MD10BW1, MD11W1, MD11AW1, MD12W1, MD13W1, MD14W1
OCD W1 (CIDIOCW1)	OCD1W1, OCD2W1, OCD4W1, OCD5W1, OCD6W1, OCD7W1, OCD8W1, OCD9W1, OCD10W1, OCD11W1, OCD13W1, OCD14W1, OCD15W1
Pathological Gambling W1 (CIDIPGW1)	PG1W1, PG6W1, PG8AW1, PG8BW1, PG8CW1, PG8DW1, PG10AW1, PG10BW1, PG10CW1, PG10DW1, PG10EW1, PG10FW1, PG10GW1, PG10HW1, PG10IW1, PG10JW1, PG10KW1, PG13W1
GAD W2 (CIDIGAW2)	GAD1W2, GAD1AW2, GAD2W2, GAD2AW2, GAD2AUW2, GAD2BW2, GAD2BUW2, GAD4W2, GAD5W2, GAD6W2, GAD7W2, GAD8W2, GAD9W2, GAD10W2, GAD11W2 TO GAD116W2, GAD12AW2, GAD12BW2, GAD12CW2, GAD12DW2, GAD12EW2, GAD12FW2, GAD12GW2
Major Depression Prob W2 (CIDIMDPW2) Major Depression Case W2 (CIDIMDCW2)	MD1W2, MD1AW2, MD1BW2, MD1CW2, MD1DW2, MD2W2, MD2AW2, MD2BW2, MD3W2, MD3AW2, MD4W2, MD5W2, MD6W2, MD9W2, MD9AW2, MD9BW2, MD9CW2, MD10W2, MD10AW2, MD10BW2, MD11W2, MD11AW2, MD12W2, MD13W2, MD14W2
OCD W2 (CIDIOCW2)	OCD1W2, OCD2W2, OCD4W2, OCD5W2, OCD6W2, OCD7W2, OCD8W2, OCD9W2, OCD10W2, OCD11W2, OCD13W2, OCD14W2, OCD15W2
Pathological Gambling W2 (CIDIPGW2)	PG1W2, PG6W2, PG8AW2, PG8BW2, PG8CW2, PG8DW2, PG10AW2, PG10BW2, PG10CW2, PG10DW2, PG10EW2, PG10FW2, PG10GW2, PG10HW2, PG10IW2, PG10JW2, PG10KW2, PG13W2
GAD W3 (CIDIGAW3)	GAD1W3, GAD1AW3, GAD2W3, GAD2AW3, GAD2AUW3, GAD2BW3, GAD2BUW3, GAD4W3, GAD5W3, GAD6W3, GAD7W3, GAD8W3, GAD9W3, GAD10W3, GAD11W3 TO GAD116W3, GAD12AW3, GAD12BW3, GAD12CW3, GAD12DW3, GAD12EW3, GAD12FW3, GAD12GW3
Major Depression Prob W3 (CIDIMDPW3) Major Depression Case W3 (CIDIMDCW3)	MD1W3, MD1AW3, MD1BW3, MD1CW3, MD1DW3, MD2W3, MD2AW3, MD2BW3, MD3W3, MD3AW3, MD4W3, MD5W3, MD6W3, MD9W3, MD9AW3, MD9BW3, MD9CW3, MD10W3, MD10AW3, MD10BW3, MD11W3, MD11AW3, MD12W3, MD13W3, MD14W3
OCD W3 (CIDIOCW3)	OCD1W3, OCD2W3, OCD4W3, OCD5W3, OCD6W3, OCD7W3, OCD8W3, OCD9W3, OCD10W3, OCD11W3, OCD13W3, OCD14W3, OCD15W3
Pathological Gambling W3 (CIDIPGW3)	PG1W3, PG6W3, PG8AW3, PG8BW3, PG8CW3, PG8DW3, PG10AW3, PG10BW3, PG10CW3, PG10DW3, PG10EW3, PG10FW3, PG10GW3, PG10HW3, PG10IW3, PG10JW3, PG10KW3, PG13W3
GAD W4 (CIDIGAW4)	GAD1W4, GAD1AW4, GAD2W4, GAD2AW4, GAD2AUW4, GAD2BW4, GAD2BUW4, GAD4W4, GAD5W4, GAD6W4, GAD7W4, GAD8W4, GAD9W4, GAD10W4, GAD11W4 TO GAD116W4, GAD12AW4, GAD12BW4, GAD12CW4, GAD12DW4, GAD12EW4, GAD12FW4, GAD12GW4
Major Depression Prob W4 (CIDIMDPW4) Major Depression Case W4 (CIDIMDCW4)	MD1W4, MD1AW4, MD1BW4, MD1CW4, MD1DW4, MD2W4, MD2AW4, MD2BW4, MD3W4, MD3AW4, MD4W4, MD5W4, MD6W4, MD9W4, MD9AW4, MD9BW4, MD9CW4, MD10W4, MD10AW4, MD10BW4, MD11W4, MD11AW4, MD12W4, MD13W4, MD14W4
OCD W4 (CIDIOCW4)	OCD1W4, OCD2W4, OCD4W4, OCD5W4, OCD6W4, OCD7W4, OCD8W4, OCD9W4, OCD10W4, OCD11W4, OCD13W4, OCD14W4, OCD15W4
Pathological Gambling W4 (CIDIPGW4)	PG1W4, PG6W4, PG8AW4, PG8BW4, PG8CW4, PG8DW4, PG10AW4, PG10BW4, PG10CW4, PG10DW4, PG10EW4, PG10FW4, PG10GW4, PG10HW4, PG10IW4, PG10JW4, PG10KW4, PG13W4

## Drake Beliefs About Chance Inventory

Waves 1, 3

**Variable Names:** DRAKTOTW1, DRAKSUPW1, DRAKIOCW1, DRAKTOTW3, DRAKSUPW3, DRAKIOCW3

**Description:** These variables indicate the degree to which individuals demonstrate two major cognitive errors associated with random events: Superstition and illusion of control.

**Key Source:** Wood, W. S. & Clapham, M. M. (2005). Development of the Drake Beliefs About Chance Inventory. *Journal of Gambling Studies*, 21(4), 411-430.

Scale/Item Name	Wave 1 (n=678)		Wave 3 (n=559)	
	Mean	S-D	Mean	S-D
Drake - Total Beliefs	41.18	13.94	37.28	13.64
Drake - Superstition	20.07	7.68	18.44	7.49
Drake - Illusion of Control	21.11	8.11	18.84	7.85

The Drake Beliefs about Chance Inventory is a 22-item instrument used in waves 1 and 3 of the MLSYA to assess two major cognitive errors that tend to associate with random events: Illusion of control and superstition. Error-prone and illogical thought patterns have been identified as plausible explanations for excessive gambling behavior.

Three separate scores were calculated from the Drake instrument. There is a score for 'illusion of control' (e.g. '*I will be more successful if I have a system to play the slot machines*'), a score for 'superstition' (e.g. '*I can improve my chances of winning by performing specific rituals*'), and an overall score which is the summed total of the two. All questions are 5-point Likert items ranging from 1 ('*Strongly disagree*') to 5 ('*Strongly agree*'). Possible scores range from 11 to 55 for either subscale and 22 to 110 for the overall scale.

<b>Derived Variable</b>	<b>Computation Variables</b>
Drake Total Beliefs W1 (DRAKTOTW1)	DRAKE1W1, DRAKE2W1, DRAKE3W1, DRAKE4W1, DRAKE5W1, DRAKE6W1, DRAKE7W1, DRAKE8W1, DRAKE9W1, DRAKE10W1, DRAKE11W1, DRAKE12W1, DRAKE13W1, DRAKE14W1, DRAKE15W1, DRAKE16W1, DRAKE17W1, DRAKE18W1, DRAKE19W1, DRAKE20W1, DRAKE21W1, DRAKE22W1
Drake Superstition W1 (DRAKSUPW1)	DRAKE1W1, DRAKE2W1, DRAKE3W1, DRAKE4W1, DRAKE5W1, DRAKE6W1, DRAKE7W1, DRAKE8W1, DRAKE9W1, DRAKE10W1, DRAKE11W1
Drake Illusion of Control W1 (DRAKIOCW1)	DRAKE12W1, DRAKE13W1, DRAKE14W1, DRAKE15W1, DRAKE16W1, DRAKE17W1, DRAKE18W1, DRAKE19W1, DRAKE20W1, DRAKE21W1, DRAKE22W1
Drake Total Beliefs W3 (DRAKTOTW3)	DRAKE1W3, DRAKE2W3, DRAKE3W3, DRAKE4W3, DRAKE5W3, DRAKE6W3, DRAKE7W3, DRAKE8W3, DRAKE9W3, DRAKE10W3, DRAKE11W3, DRAKE12W3, DRAKE13W3, DRAKE14W3, DRAKE15W3, DRAKE16W3, DRAKE17W3, DRAKE18W3, DRAKE19W3, DRAKE20W3, DRAKE21W3, DRAKE22W3
Drake Superstition W3 (DRAKSUPW3)	DRAKE1W3, DRAKE2W3, DRAKE3W3, DRAKE4W3, DRAKE5W3, DRAKE6W3, DRAKE7W3, DRAKE8W3, DRAKE9W3, DRAKE10W3, DRAKE11W3
Drake Illusion of Control W3 (DRAKIOCW3)	DRAKE12W3, DRAKE13W3, DRAKE14W3, DRAKE15W3, DRAKE16W3, DRAKE17W3, DRAKE18W3, DRAKE19W3, DRAKE20W3, DRAKE21W3, DRAKE22W3



## Drug Dependence Scale

Waves 1, 2, 3, 4

**Variable Names:** DRGR12W1, DRGA12W1, DRGE12W1, DRGRLW1, DRGR12W2, DRGA12W2, DRGE12W2, DRGRLW2, DRGR12W3, DRGA12W3, DRGE12W3, DRGRLW3, DRGR12W4, DRGA12W4, DRGE12W4, DRGRLW4

**Description:** This instrument detects the extent of individuals' drug use over the past year, and during their lifetime.

**Key Source:** Statistics Canada (2003). Canadian Community Health Survey, Cycle 2.1. Available Online at <http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&Id=4995>.

Scale/Item Name	Wave 1 (n=679)	Wave 2 (n=607)	Wave 3 (n=561)	Wave 4 (n=530)
	%	%	%	%
Regular Drug Use, 12 months	19.3	19.9	18.8	17.0
Any Drug Use, 12 months	41.3	43.0	40.7	37.9
Any Drug Use (excluding infrequent marijuana), 12 months	21.5	22.5	21.4	20.4
Regular Drug Use, Lifetime	23.3	23.8	22.4	22.2

Level of drug use was measured using the same instrument included in the Canadian Community Health Survey, Cycle 2.1 (Statistics Canada). Instructions for calculating derived variables were taken directly from documents published by Statistics Canada. In this manner, four dichotomous variables were created to determine: 1) Regular drug use (1 to 3 times per month or more) over the past 12 months; 2) Any drug use over the past 12 months; 3) Any drug use excluding infrequent marijuana use over the past 12 months; 4) Regular drug use (1 to 3 times per month or more) at any point during lifetime. This instrument was included in all four waves of the MLSYA project, and was given to all respondents.

<b>Derived Variable</b>	<b>Computation Variables</b>
Regular Drug Use - 12 Months W1 (DRGR12W1)	DRG1W1, DRG2W1, DRG3W1, DRG4W1, DRG5W1, DRG6W1
Any Drug Use - 12 Months W1 (DRGA12W1)	DRG1W1, DRG2W1, DRG3W1, DRG4W1, DRG5W1, DRG6W1
Any Drug Use Excluding Infrequent Marijuana - 12 Months W1 (DRGE12W1)	DRG1W1, DRG2W1, DRG3W1, DRG4W1, DRG5W1, DRG6W1
Regular Drug Use – Lifetime W1 (DRGRLW1)	DRG1W1, DRG2W1, DRG3W1, DRG4W1, DRG5W1, DRG6W1, DRG7W1
Regular Drug Use - 12 Months W2 (DRGR12W2)	DRG1W2, DRG2W2, DRG3W2, DRG4W2, DRG5W2, DRG6W2
Any Drug Use - 12 Months W2 (DRGA12W2)	DRG1W2, DRG2W2, DRG3W2, DRG4W2, DRG5W2, DRG6W2
Any Drug Use Excluding Infrequent Marijuana - 12 Months W2 (DRGE12W2)	DRG1W2, DRG2W2, DRG3W2, DRG4W2, DRG5W2, DRG6W2
Regular Drug Use – Lifetime W2 (DRGRLW2)	DRG1W2, DRG2W2, DRG3W2, DRG4W2, DRG5W2, DRG6W2, DRG7W2
Regular Drug Use - 12 Months W3 (DRGR12W3)	DRG1W3, DRG2W3, DRG3W3, DRG4W3, DRG5W3, DRG6W3
Any Drug Use - 12 Months W3 (DRGA12W3)	DRG1W3, DRG2W3, DRG3W3, DRG4W3, DRG5W3, DRG6W3
Any Drug Use Excluding Infrequent Marijuana - 12 Months W3 (DRGE12W3)	DRG1W3, DRG2W3, DRG3W3, DRG4W3, DRG5W3, DRG6W3
Regular Drug Use – Lifetime W3 (DRGRLW3)	DRG1W3, DRG2W3, DRG3W3, DRG4W3, DRG5W3, DRG6W3, DRG7W3
Regular Drug Use - 12 Months W4 (DRGR12W4)	DRG1W4, DRG2W4, DRG3W4, DRG4W4, DRG5W4, DRG6W4
Any Drug Use - 12 Months W4 (DRGA12W4)	DRG1W4, DRG2W4, DRG3W4, DRG4W4, DRG5W4, DRG6W4
Any Drug Use Excluding Infrequent Marijuana - 12 Months W4 (DRGE12W4)	DRG1W4, DRG2W4, DRG3W4, DRG4W4, DRG5W4, DRG6W4
Regular Drug Use – Lifetime W4 (DRGRLW4)	DRG1W4, DRG2W4, DRG3W4, DRG4W4, DRG5W4, DRG6W4, DRG7W4

## Gambling Motives Questionnaire (GMQ)

### Wave 4

**Variable Names:** GMQ\_ENHW4, GMQ\_SOCW4, GMQ\_COPW4

**Description:** These variables indicate scores on three separate gambling motive factors that constitute the GMQ. The dataset also includes nine additional financial motive items developed by the Manitoba Gaming Control Commission.

**Key Source:** Stewart, S.H. & Zack, M. (2008). Development and psychometric evaluation of a three-dimensional Gambling Motives Questionnaire. *Addiction*, 103. 1110-1117.

Scale/Item Name	Wave 4 (n=453)	
	Mean	SD
Enhancement Motives	7.94	2.96
Social Motives	7.93	2.73
Coping Motives	5.87	1.79

The Gambling Motives Questionnaire (GMQ) is a 15-item self-report measure of gambling motives developed based on the widely-accepted three-factor model of drinking motives (i.e., Drinking Motives Questionnaire; Cooper et al, 1992). The GMQ was included in wave 4 of the MLSYA as an assessment tool of gambling respondents' motives for participating in gambling activities. Exploratory factor analysis has shown that the GMQ items correspond to the same three subscales as the Drinking Motives Questionnaire:

- **Enhancement:** Internal, positive reinforcement; to increase positive emotions.
- **Coping:** Internal, negative reinforcement; to reduce or avoid negative emotions.
- **Social:** External, positive reinforcement; to increase social affiliation.

The three subscales are each calculated from five Likert questionnaire items scored from 1 – 'Never or almost never' to 4 – 'Almost always or always'. Possible scores range from five to 20 for each subscale, with higher scores indicating a stronger motive for gambling.

In 2010, the Manitoba Gaming Control Commission developed nine additional financial motive items to supplement the GMQ (publication forthcoming). The psychometric properties of this subscale have not been tested and so a subscale is not calculated here. Rather, the individual item scores are simply included in the dataset. Respondents' answered each item using the same scale as the GMQ.

<b>Derived Variable</b>	<b>Computation Variables</b>
Enhancement Motives W4 (GMQ_ENHW4)	GMQ_ENH1W4, GMQ_ENH2W4, GMQ_ENH3W4, GMQ_ENH4W4, GMQ_ENH5W4
Social Motives W4 (GMQ_SOCW4)	GMQ_SOC1W4, GMQ_SOC2W4, GMQ_SOC3W4, GMQ_SOC4W4, GMQ_SOC5W4
Coping Motives W4 (GMQ_COPW4)	GMQ_COP1W4, GMQ_COP2W4, GMQ_COP3W4, GMQ_COP4W4, GMQ_COP5W4
Financial W4 ( <i>NB: individual items</i> )	GMQ_FIN1W4, GMQ_FIN2W4, GMQ_FIN3W4, GMQ_FIN4W4, GMQ_FIN5W4, GMQ_FIN6W4, GMQ_FIN7W4, GMQ_FIN8W4, GMQ_FIN9W4

## Life Events Questionnaire

Waves 1, 2, 3, 4

**Variable Names:** LEQW1, LEQW2, LEQW3, LEQW4

**Description:** This instrument measures the number of major life events reported by respondents as an indicator of their level of stress.

**Key Source:** Sarason, I. G., Johnson, J. H., & Siegel, J. M. (1978). Assessing the Impact of Life Changes: Development of the Life Experiences Survey. *Journal of Consulting and Clinical Psychology*, 46(5), 932-946.

Scale/Item Name	Wave 1 (n=679)		Wave 2 (n=607)		Wave 3 (n=561)		Wave 4 (n=518)	
	Mean	S-D	Mean	S-D	Mean	S-D	Mean	S-D
Life Events	6.24	3.04	5.70	3.02	5.28	2.83	5.13	2.7

A life events questionnaire was included in all four waves of MSLYA as a measure of respondents' stress levels. Literally dozens of instruments have been designed to measure major events experienced throughout the life-course. The particular life events questionnaire chosen for this study is a modified version of the 'Life Experiences Survey' customized for the purposes of surveying young adults. As an example, irrelevant questions to an 18 to 20 year old sample such as 'Did you experience the birth of a grandchild?', or '(if female) Have you started menopause?' were omitted.

All survey participants were asked to indicate how many times each of 40 unique life events had been personally experienced in the past 12 months. Additionally, respondents were given extra space to indicate major events not mentioned. Scores were calculated based on the total number of unique events identified as having occurred at least once in the past 12 months. Mentions of a single event occurring two or more times were counted only once. It should be noted that the questionnaire includes subjectively positive and negative life events. Therefore, results could potentially be indicative of stress that is either healthy or harmful.

Derived Variable	Computation Variables
Life Events W1 (LEQW1)	LEQ1W1, LEQ2W1, LEQ3W1, LEQ4W1, LEQ5W1, LEQ6W1, LEQ7W1, LEQ8W1, LEQ9W1, LEQ10W1, LEQ11W1, LEQ12W1, LEQ13W1, LEQ14W1, LEQ15W1, LEQ16W1, LEQ17W1, LEQ18W1, LEQ19W1, LEQ20W1, LEQ21W1, LEQ22W1, LEQ23W1, LEQ24W1, LEQ25W1, LEQ26W1, LEQ27W1, LEQ28W1, LEQ29W1, LEQ30W1, LEQ31W1, LEQ32W1, LEQ33W1, LEQ34W1, LEQ35W1, LEQ36W1, LEQ37W1, LEQ38W1, LEQ39W1, LEQ40W1, LEQ41W1, LEQ412W1, LEQ413W1, LEQ414W2, LEQ415W1, LEQ416W1
Life Events W2 (LEQW2)	LEQ1W2, LEQ2W2, LEQ3W2, LEQ4W2, LEQ5W2, LEQ6W2, LEQ7W2, LEQ8W2, LEQ9W2, LEQ10W2, LEQ11W2, LEQ12W2, LEQ13W2, LEQ14W2, LEQ15W2, LEQ16W2, LEQ17W2, LEQ18W2, LEQ19W2, LEQ20W2, LEQ21W2, LEQ22W2, LEQ23W2, LEQ24W2, LEQ25W2, LEQ26W2, LEQ27W2, LEQ28W2, LEQ29W2, LEQ30W2, LEQ31W2, LEQ32W2, LEQ33W2, LEQ34W2, LEQ35W2, LEQ36W2, LEQ37W2, LEQ38W2, LEQ39W2, LEQ40W2, LEQ41W2, LEQ412W2, LEQ413W2, LEQ414W2, LEQ415W2, LEQ416W2
Life Events W3 (LEQW3)	LEQ1W3, LEQ2W3, LEQ3W3, LEQ4W3, LEQ5W3, LEQ6W3, LEQ7W3, LEQ8W3, LEQ9W3, LEQ10W3, LEQ11W3, LEQ12W3, LEQ13W3, LEQ14W3, LEQ15W3, LEQ16W3, LEQ17W3, LEQ18W3, LEQ19W3, LEQ20W3, LEQ21W3, LEQ22W3, LEQ23W3, LEQ24W3, LEQ25W3, LEQ26W3, LEQ27W3, LEQ28W3, LEQ29W3, LEQ30W3, LEQ31W3, LEQ32W3, LEQ33W3, LEQ34W3, LEQ35W3, LEQ36W3, LEQ37W3, LEQ38W3, LEQ39W3, LEQ40W3, LEQ41W3, LEQ412W3, LEQ413W3, LEQ414W2, LEQ415W3, LEQ416W3
Life Events W4 (LEQW4)	LEQ1W4, LEQ2W4, LEQ3W4, LEQ4W4, LEQ5W4, LEQ6W4, LEQ7W4, LEQ8W4, LEQ9W4, LEQ10W4, LEQ11W4, LEQ12W4, LEQ13W4, LEQ14W4, LEQ15W4, LEQ16W4, LEQ17W4, LEQ18W4, LEQ19W4, LEQ20W4, LEQ21W4, LEQ22W4, LEQ23W4, LEQ24W4, LEQ25W4, LEQ26W4, LEQ27W4, LEQ28W4, LEQ29W4, LEQ30W4, LEQ31W4, LEQ32W4, LEQ33W4, LEQ34W4, LEQ35W4, LEQ36W4, LEQ37W4, LEQ38W4, LEQ39W4, LEQ40W4, LEQ41W4, LEQ412W4, LEQ413W4, LEQ414W2, LEQ415W4, LEQ416W4

## Multidimensional Scale of Perceived Social Support (MSPSS)

Waves 1, 2, 3, 4

**Variable Names:** PSS\_TOTW1, PSS\_FAMW1, PSS\_FRIW1, PSS\_SIGW1, PSS\_TOTW2, PSS\_FAMW2, PSS\_FRIW2, PSS\_SIGW2, PSS\_TOTW3, PSS\_FAMW3, PSS\_FRIW3, PSS\_SIGW3, PSS\_TOTW4, PSS\_FAMW4, PSS\_FRIW4, PSS\_SIGW4

**Description:** These four scales measure perceived social support in general, and specifically from family, friends, and a significant other.

**Key Source:** Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, 52(1), 30-41.

Scale/Item Name	Wave 1 (n=676)		Wave 2 (n=605)		Wave 3 (n=560)		Wave 4 (n=517)	
	Mean	S-D	Mean	S-D	Mean	S-D	Mean	S-D
MSPSS - Total	5.52	1.04	5.47	1.16	5.56	1.09	5.55	1.23
MSPSS - Family	5.36	1.34	5.34	1.45	5.43	1.35	5.48	1.42
MSPSS - Friends	5.63	1.16	5.53	1.28	5.62	1.13	5.57	1.34
MSPSS - Significant Other	5.56	1.45	5.55	1.51	5.63	1.45	5.63	1.49

The Multidimensional Scale of Perceived Social Support is a 12-item self-report measure of subjectively assessed social support. In addition to providing an overall measure of perceived social support, the MSPSS contains three subscales measuring support from: family (e.g. “*I get the emotional help and support I need from my family*”), friends (e.g. “*I can count on my friends when things go wrong*”), and significant others (e.g. “*There is a special person who is around when I am in need*”). All participants in all four waves of the Manitoba Longitudinal Study of Young Adults were asked to complete this section of the survey.

All 12 questions are 7-point Likert items ranging from 1 (“*Very Strongly Disagree*”) to 7 (“*Very Strongly Agree*”). Overall scores for each scale were derived by summing the total of the individual questions and calculating the mean average. Participants who gave no answer to one or two items had their missing responses replaced by the mean of remaining valid responses. Participants who failed to answer three or more questions were excluded from analysis<sup>3</sup>.

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<sup>3</sup> Three respondents were excluded from wave 1; two were excluded from wave 2; one was excluded from wave 3.

<b>Derived Variable</b>	<b>Computation Variables</b>
MSPSS Total W1 (PSS_TOTW1)	PSS1W1, PSS2W1, PSS3W1, PSS4W1, PSS5W1, PSS6W1, PSS7W1, PSS8W1, PSS9W1, PSS10W1, PSS11W1, PSS12W1
MSPSS FAMILY W1 (PSS_FAMW1)	PSS3W1, PSS4W1, PSS8W1, PSS11W1
MSPSS FRIENDS W1 (PSS_FRIW1)	PSS6W1, PSS7W1, PSS9W1, PSS12W1
MSPSS SIG OTHER W1 (PSS_SIGW1)	PSS1W1, PSS2W1, PSS5W1, PSS10W1
MSPSS Total W2 (PSS_TOTW2)	PSS1W2, PSS2W2, PSS3W2, PSS4W2, PSS5W2, PSS6W2, PSS7W2, PSS8W2, PSS9W2, PSS10W2, PSS11W2, PSS12W2
MSPSS FAMILY W2 (PSS_FAMW2)	PSS3W2, PSS4W2, PSS8W2, PSS11W2
MSPSS FRIENDS W2 (PSS_FRIW2)	PSS6W2, PSS7W2, PSS9W2, PSS12W2
MSPSS SIG OTHER W2 (PSS_SIGW2)	PSS1W2, PSS2W2, PSS5W2, PSS10W2
MSPSS Total W3 (PSS_TOTW3)	PSS1W3, PSS2W3, PSS3W3, PSS4W3, PSS5W3, PSS6W3, PSS7W3, PSS8W3, PSS9W3, PSS10W3, PSS11W3, PSS12W3
MSPSS FAMILY W3 (PSS_FAMW3)	PSS3W3, PSS4W3, PSS8W3, PSS11W3
MSPSS FRIENDS W3 (PSS_FRIW3)	PSS6W3, PSS7W3, PSS9W3, PSS12W3
MSPSS SIG OTHER W3 (PSS_SIGW3)	PSS1W3, PSS2W3, PSS5W3, PSS10W3
MSPSS Total W4 (PSS_TOTW4)	PSS1W4, PSS2W4, PSS3W4, PSS4W4, PSS5W4, PSS6W4, PSS7W4, PSS8W4, PSS9W4, PSS10W4, PSS11W4, PSS12W4
MSPSS FAMILY W4 (PSS_FAMW4)	PSS3W4, PSS4W4, PSS8W4, PSS11W4
MSPSS FRIENDS W4 (PSS_FRIW4)	PSS6W4, PSS7W4, PSS9W4, PSS12W4
MSPSS SIG OTHER W4 (PSS_SIGW4)	PSS1W4, PSS2W4, PSS5W4, PSS10W4



## NEO Five Factor Inventory (NEO-FFI)

Waves 1, 3

**Variable Names:** NEO\_NW1, NEO\_EW1, NEO\_OW1, NEO\_AW1, NEO\_CW1, NEO\_NW3, NEO\_EW3, NEO\_OW3, NEO\_AW3, NEO\_CW3

**Description:** These variables indicate scores on five separate personality factors as identified by the NEO-FFI.

**Key Source:** Costa Jr. P. T. & McCrae, R. R. (1992). *NEO PI-R Professional Manual*. Lutz, FL: Psychological Assessment Resources, Inc.

Scale/Item Name	Wave 1 (n=676)		Wave 3 (n=560)	
	Mean	S-D	Mean	S-D
Neuroticism	21.28	7.74	20.20	7.96
Extraversion	30.19	5.76	29.99	6.08
Openness	28.16	5.98	28.70	6.02
Agreeableness	30.50	6.43	31.34	6.16
Conscientiousness	29.84	6.20	31.19	6.08

The NEO Five Factor Inventory (NEO-FFI) was included in waves 1 and 3 of the MLSYA as an assessment tool of respondents' personality structure. A 60-item instrument, the NEO-FFI offers a standardized and comprehensive view of personality based on five major domains:

- **Neuroticism:** Most pervasive personality domain which contrasts emotional stability with emotional maladjustment.
- **Extraversion:** Measures the degree a subject tends towards sociability, preference for large groups, assertiveness, and being talkative.
- **Openness:** Elements include active imagination, aesthetic sensitivity, attentiveness to inner feelings, preference for variety, and intellectual curiosity.
- **Agreeableness:** The agreeable person is fundamentally altruistic, sympathetic to others, and believes others to be helpful in turn.
- **Conscientiousness:** Those high in conscientiousness are purposeful, strong-willed, and determined. It can also refer to self-control, planning, organization, and the ability to see tasks through to completion.

The five domains are individually calculated from 12 Likert questionnaire items scored from 0 – 'Strongly disagree' to 4 - 'Strongly agree' (or vice-versa in the case of reverse-coded questions). Possible scores range from 0 to 48 for each conceptual domain with higher scores indicating a more pronounced disposition to that personality trait. Missing responses were replaced by a score of 2 ('Neutral') as per instructions by the instrument's authors. Cases with ten or more invalid responses were excluded from analysis<sup>4</sup>.

<sup>4</sup> Three cases were excluded for this reason in wave 1; one case was excluded in wave 3.

Derived Variable	Computation Variables
Neuroticism W1 (NEO_NW1)	NEO1W1, NEO6W1, NEO11W1, NEO16W1, NEO21W1, NEO26W1, NEO31W1, NEO36W1, NEO41W1, NEO46W1, NEO51W1, NEO56W1
Extraversion W1 (NEO_EW1)	NEO2W1, NEO7W1, NEO12W1, NEO17W1, NEO22W1, NEO27W1, NEO32W1, NEO37W1, NEO42W1, NEO47W1, NEO52W1, NEO57W1
Openness W1 (NEO_OW1)	NEO3W1, NEO8W1, NEO13W1, NEO18W1, NEO23W1, NEO28W1, NEO33W1, NEO38W1, NEO43W1, NEO48W1, NEO53W1, NEO58W1
Agreeableness W1 (NEO_AW1)	NEO4W1, NEO9W1, NEO14W1, NEO19W1, NEO24W1, NEO29W1, NEO34W1, NEO39W1, NEO44W1, NEO49W1, NEO54W1, NEO59W1
Conscientiousness W1 (NEO_CW1)	NEO5W1, NEO10W1, NEO15W1, NEO20W1, NEO25W1, NEO30W1, NEO35W1, NEO40W1, NEO45W1, NEO50W1, NEO55W1, NEO60W1
Neuroticism W3 (NEO_NW3)	NEO1W3, NEO6W3, NEO11W3, NEO16W3, NEO21W3, NEO26W3, NEO31W3, NEO36W3, NEO41W3, NEO46W3, NEO51W3, NEO56W3
Extraversion W3 (NEO_EW3)	NEO2W3, NEO7W3, NEO12W3, NEO17W3, NEO22W3, NEO27W3, NEO32W3, NEO37W3, NEO42W3, NEO47W3, NEO52W3, NEO57W3
Openness W3 (NEO_OW3)	NEO3W3, NEO8W3, NEO13W3, NEO18W3, NEO23W3, NEO28W3, NEO33W3, NEO38W3, NEO43W3, NEO48W3, NEO53W3, NEO58W3
Agreeableness W3 (NEO_AW3)	NEO4W3, NEO9W3, NEO14W3, NEO19W3, NEO24W3, NEO29W3, NEO34W3, NEO39W3, NEO44W3, NEO49W3, NEO54W3, NEO59W3
Conscientiousness W3 (NEO_CW3)	NEO5W3, NEO10W3, NEO15W3, NEO20W3, NEO25W3, NEO30W3, NEO35W3, NEO40W3, NEO45W3, NEO50W3, NEO55W3, NEO60W3

## Rosenberg Self-Esteem Scale

Waves 1, 3

**Variable Names:** RSESW1, RSESW3

**Description:** This variable indicates individuals' subjective level of self-esteem.

**Key Source:** Rosenberg, M. (1965). *Society and the Adolescent Self-Image*. Princeton, NJ: Princeton University Press.

Scale/Item Name	Wave 1 (n=677)		Wave 3 (n=560)	
	Mean	S-D	Mean	S-D
Rosenberg Self-Esteem Scale	20.37	5.22	20.62	5.20

The Rosenberg Self-Esteem Scale is a 10-item instrument used for measuring the concept of self-esteem. Survey participants were asked to complete the RSES in waves 1 and 3 of the MLSYA. Possible scores range from 0 to 30 with higher scores indicating higher levels of self-esteem. Note that five items are negatively framed (e.g. 'I feel I do not have much to be proud of') and were reverse-coded to match the positively worded questions. Missing data were replaced by the mean average of remaining valid responses on an individual basis. Those missing more than two responses were excluded from analysis<sup>5</sup>.

Derived Variable	Computation Variables
Rosenberg Self-Esteem Scale W1 (RSESW1)	RSES1W1, RSES2W1, RSES3W1, RSES4W1, RSES5W1, RSES6W1, RSES7W1, RSES8W1, RSES9W1, RSES10W1
Rosenberg Self-Esteem Scale W3 (RSESW3)	RSES1W3, RSES2W3, RSES3W3, RSES4W3, RSES5W3, RSES6W3, RSES7W3, RSES8W3, RSES9W3, RSES10W3

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<sup>5</sup> Two respondents were excluded from wave 1 for this reason; one was excluded from wave 3.

## SF-8 Health Survey

Waves 1, 2, 3, 4

**Variable Names:** SF8\_PCSW1, SF8\_MCSW1, SF8\_PCSW2, SF8\_MCSW2, SF8\_PCSW3, SF8\_MCSW3, SF8\_PCSW4, SF8\_MCSW4

**Description:** This instrument indicates respondents' levels of physical and mental health.

**Key Source:** Ware, J. E., Kosinski, M., Dewey, J. E., & Gandek, B. (2001). *How to Score and Interpret Single-Item Health Status Measures: A Manual for Users of the SF-8 Health Survey*. Lincoln, RI: QualityMetric Inc.

Scale/Item Name	Wave 1 (n=672)		Wave 2 (n=598)		Wave 3 (n=554)		Wave 4 (n=518)	
	Mean	S-D	Mean	S-D	Mean	S-D	Mean	S-D
SF8 - Physical Scale	53.45	5.54	52.12	7.17	52.98	5.97	50.07	4.47
SF8 - Mental Scale	49.34	8.62	50.26	8.09	50.47	8.33	49.06	8.55

The SF-8 Health Survey is a short, 8-item instrument asked of all respondents in all waves of the MLSYA that provides data on physical and mental health. Items on the SF-8 are asked in the form of either five- or six-point Likert-type questions. Normative values were then attributed to each response from parallel data obtained through a representative general population survey in the United States. In the absence of a comparable Canadian study, the American data were deemed suitable. Following the weighting scheme prescribed in the SF-8 manual, overall scores were then calculated for the physical summary (PCS-8) and the mental summary (MCS-8) measures. Missing or invalid responses were removed from analysis using a list-wise deletion method<sup>6</sup>.

Derived Variable	Computation Variables
Physical Health W1 (PCS8W1)	SF81W1, SF82W1, SF83W1, SF84W1, SF85W1, SF86W1, SF87W1, SF88W1 (PCS-8 Weighting)
Mental Health W1 (MCS8W1)	SF81W1, SF82W1, SF83W1, SF84W1, SF85W1, SF86W1, SF87W1, SF88W1 (MCS-8 Weighting)
Physical Health W2 (PCS8W2)	SF81W1, SF82W1, SF83W1, SF84W1, SF85W1, SF86W1, SF87W1, SF88W1 (PCS-8 Weighting)
Mental Health W2 (MCS8W2)	SF81W1, SF82W1, SF83W1, SF84W1, SF85W1, SF86W1, SF87W1, SF88W1 (MCS-8 Weighting)
Physical Health W3 (PCS8W3)	SF81W1, SF82W1, SF83W1, SF84W1, SF85W1, SF86W1, SF87W1, SF88W1 (PCS-8 Weighting)
Mental Health W3 (MCS8W3)	SF81W1, SF82W1, SF83W1, SF84W1, SF85W1, SF86W1, SF87W1, SF88W1 (MCS-8 Weighting)
Physical Health W4 (PCS8W4)	SF81W1, SF82W1, SF83W1, SF84W1, SF85W1, SF86W1, SF87W1, SF88W1 (PCS-8 Weighting)
Mental Health W4 (MCS8W4)	SF81W1, SF82W1, SF83W1, SF84W1, SF85W1, SF86W1, SF87W1, SF88W1 (MCS-8 Weighting)

<sup>6</sup> Seven cases excluded in wave 1; nine cases excluded in wave 2; seven cases excluded in wave 3.

## Spiritual Involvement and Beliefs Scale (SIBS-R)

Waves 1, 2, 3, 4

**Variable Names:** SIBSW1, SIBSIW1, SIBSEW1, SIBSW2, SIBSIW2, SIBSEW2, SIBSW3, SIBSIW3, SIBSEW3, SIBSW4, SIBSIW4, SIBSEW4

**Description:** This instrument measures the level of religiosity/spirituality exhibited by respondents in terms of their external actions and internal beliefs.

**Key Source:** Hatch, R. L., Burg, M. A., Naberhaus, D. S. & Hellmich, L. K. (1998). The Spiritual Involvement and Beliefs Scale: Development and Testing of a New Instrument. *Journal of Family Practice*, 46(6), 476-486.

Scale/Item Name	Wave 1 (n=674)		Wave 2 (n=600)		Wave 3 (n=559)		Wave 4 (n=518)	
	Mean	S-D	Mean	S-D	Mean	S-D	Mean	S-D
SIBS - Total	89.43	24.55	88.02	25.66	88.78	24.73	87.73	26.36
SIBS - Internal	46.83	8.70	42.26	8.28	44.01	7.70	43.36	8.18
SIBS - External	46.56	20.32	46.52	20.55	44.77	20.80	44.46	21.77

The Spiritual Involvement and Beliefs Scale is a 22-item instrument included in all four waves of MLSYA to measure key components of spirituality. SIBS was designed to be widely applicable across religious faiths and traditions. It is meant to assess general spirituality, external traits of spirituality (i.e. actions/rituals), and importance of internal beliefs<sup>7</sup>. All questions are asked as 7-point Likert items, with valid response categories ranging from 1 – *Strongly disagree* to 7 – *Strongly agree*, and 4 serving as a neutral point. Negatively worded questions were reverse coded during analysis. Possible scores range from 22 to 154 on the overall scale, and 11 to 77 on both the internal and external subscales.

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<sup>7</sup> The scale's authors proposed 4 distinct subscales: External/ritual, internal/fluid, existential/meditative, and humility/personal application. In the current study, the data did not support this classification scheme. Instead, a two category distinction between internal and external spirituality fit more consistently with the empirical evidence.

<b>Derived Variable</b>	<b>Computation Variables</b>
SIBS – Total W1 (SIBSW1)	SIBS1W1, SIBS2W1, SIBS3W1, SIBS4W1, SIBS5W1, SIBS6W1, SIBS7W1, SIBS8W1, SIBS9W1, SIBS10W1, SIBS11W1, SIBS12W1, SIBS13W1, SIBS14W1, SIBS15W1, SIBS16W1, SIBS17W1, SIBS18W1, SIBS19W1, SIBS20W1, SIBS21W1, SIBS22W1
SIBS – Internal W1 (SIBSIW1)	SIBS1W1, SIBS2W1, SIBS4W1, SIBS7W1, SIBS10W1, SIBS11W1, SIBS17W1, SIBS18W1, SIBS21W1
SIBS – External W1 (SIBSEW1)	SIBS3W1, SIBS5W1, SIBS6W1, SIBS8W1, SIBS9W1, SIBS12W1, SIBS13W1, SIBS14W1, SIBS15W1, SIBS16W1, SIBS19W1, SIBS20W1, SIBS22W1
SIBS – Total W2 (SIBSW2)	SIBS1W2, SIBS2W2, SIBS3W2, SIBS4W2, SIBS5W2, SIBS6W2, SIBS7W2, SIBS8W2, SIBS9W2, SIBS10W2, SIBS11W2, SIBS12W2, SIBS13W2, SIBS14W2, SIBS15W2, SIBS16W2, SIBS17W2, SIBS18W2, SIBS19W2, SIBS20W2, SIBS21W2, SIBS22W2
SIBS – Internal W2 (SIBSIW2)	SIBS1W2, SIBS2W2, SIBS4W2, SIBS7W2, SIBS10W2, SIBS11W2, SIBS17W2, SIBS18W2, SIBS21W2
SIBS – External W2 (SIBSEW2)	SIBS3W2, SIBS5W2, SIBS6W2, SIBS8W2, SIBS9W2, SIBS12W2, SIBS13W2, SIBS14W2, SIBS15W2, SIBS16W2, SIBS19W2, SIBS20W2, SIBS22W2
SIBS – Total W3 (SIBSW3)	SIBS1W3, SIBS2W3, SIBS3W3, SIBS4W3, SIBS5W3, SIBS6W3, SIBS7W3, SIBS8W3, SIBS9W3, SIBS10W3, SIBS11W3, SIBS12W3, SIBS13W3, SIBS14W3, SIBS15W3, SIBS16W3, SIBS17W3, SIBS18W3, SIBS19W3, SIBS20W3, SIBS21W3, SIBS22W3
SIBS – Internal W3 (SIBSIW3)	SIBS1W3, SIBS2W3, SIBS4W3, SIBS7W3, SIBS10W3, SIBS11W3, SIBS17W3, SIBS18W3, SIBS21W3
SIBS – External W3 (SIBSEW3)	SIBS3W3, SIBS5W3, SIBS6W3, SIBS8W3, SIBS9W3, SIBS12W3, SIBS13W3, SIBS14W3, SIBS15W3, SIBS16W3, SIBS19W3, SIBS20W3, SIBS22W3
SIBS – Total W4 (SIBSW4)	SIBS1W4, SIBS2W4, SIBS3W4, SIBS4W4, SIBS5W4, SIBS6W4, SIBS7W4, SIBS8W4, SIBS9W4, SIBS10W4, SIBS11W4, SIBS12W4, SIBS13W4, SIBS14W4, SIBS15W4, SIBS16W4, SIBS17W4, SIBS18W4, SIBS19W4, SIBS20W4, SIBS21W4, SIBS22W4
SIBS – Internal W4 (SIBSIW4)	SIBS1W4, SIBS2W4, SIBS4W4, SIBS7W4, SIBS10W4, SIBS11W4, SIBS17W4, SIBS18W4, SIBS21W4
SIBS – External W4 (SIBSEW4)	SIBS3W4, SIBS5W4, SIBS6W4, SIBS8W4, SIBS9W4, SIBS12W4, SIBS13W4, SIBS14W4, SIBS15W4, SIBS16W4, SIBS19W4, SIBS20W4, SIBS22W4

## Ways of Coping Questionnaire

Waves 2, 4

**Variable Names:** WOCARW2, WOCCCW2, WOCDW2, WOCEAW2, WOCPPSW2, WOCPRW2, WOCSSSW2, WOCSCW2, WOCARW4, WOCCCW4, WOCDW4, WOCEAW4, WOCPPSW4, WOCPRW4, WOCSSSW4, WOCSCW4

**Description:** This instrument measures the coping strategies typically used by respondents to manage a notable stressful situation.

**Key Source:** Folkman, S. & Lazarus, R. S. (1988). *Ways of Coping Questionnaire Sampler Set: Manual, Test Book, Scoring Key*. Menlo Park, CA: Mind Garden, Inc.

Scale/Item Name	Wave 2 (n=599)		Wave 4 (n=512)	
	Mean	S-D	Mean	S-D
WOC - Confrontive Coping	4.8	3.6	4.7	3.4
WOC - Distancing	5.6	3.5	5.1	3.3
WOC - Self-Controlling	7.4	4.3	7.9	5.9
WOC - Seeking Social Support	5.9	3.8	6.4	3.9
WOC - Accepting Responsibility	3.9	2.9	3.7	2.8
WOC - Escape-Avoidance	6.1	4.8	5.6	6.0
WOC - Planful Problem Solving	7.0	3.8	6.9	3.8
WOC - Positive Reappraisal	5.9	4.3	5.8	4.2

Ways of Coping is a 66-item instrument designed to measure the degree that respondents employed particular coping strategies during *'the most stressful situation experienced in the past week'*. This instrument was included in waves 2 and 4 of the MLSYA project, and was asked of all respondents. All questions are formatted as 4-point Likert items, with valid responses of 0 – *Does not apply or not used*, 1 – *Used somewhat*, 2 – *Used quite a bit*, and 3 – *Used a great deal*. Of the 66 questions asked, only 40 are factored into the calculation of eight distinct subscales as defined by the instrument's authors. These subscales include: Confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape-avoidance, planful problem solving, and positive reappraisal (see Table 1 for descriptions, next page). Scores for each subscale<sup>8</sup> are calculated by a straight summation of the relevant questionnaire items.

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<sup>8</sup> Folkman and Lazarus also propose a methodology to calculate relative coping scores. This entails comparing individuals' raw scores on each subscale to their overall mean score of all subscales.

Table 1: Description of the Ways of Coping subscales

<b>Confrontive Coping</b>	Describes aggressive efforts to alter the situation and suggests some degree of hostility and risk-taking
<b>Distancing</b>	Describes cognitive efforts to detach oneself and to minimize the significance of the situation
<b>Self-Controlling</b>	Describes efforts to regulate one's feelings and actions
<b>Seeking Social Support</b>	Describes efforts to seek informational support, tangible support, and emotional support
<b>Accepting Responsibility</b>	Acknowledges one's own role in the problem with a concomitant theme of trying to put things right
<b>Escape-Avoidance</b>	Describes wishful thinking and behavioral efforts to escape or avoid the problem.
<b>Planful Problem Solving</b>	Describes deliberate problem-focused efforts to alter the situation, coupled with an analytic approach to solving the problem
<b>Positive Reappraisal</b>	Describes efforts to create positive meaning by focusing on personal growth. It also has a religious dimension.



<b>Derived Variable</b>	<b>Computation Variables</b>
WOC – Confrontive Coping W2 (WOCCCW2)	WOC6W2, WOC7W2, WOC17W2, WOC28W2, WOC34W2, WOC46W2
WOC – Distancing W2 (WOCDW2)	WOC12W2, WOC13W2, WOC15W2, WOC21W2, WOC41W2, WOC44W2
WOC – Self-Controlling W2 (WOCSCW2)	WOC10W2, WOC14W2, WOC35W2, WOC43W2, WOC54W2, WOC62W2, WOC63W2
WOC – Seeking Social Support W2 (WOCSSW2)	WOC8W2, WOC18W2, WOC22W2, WOC31W2, WOC42W2, WOC45W2
WOC – Accepting Responsibility W2 (WOCARW2)	WOC9W2, WOC25W2, WOC29W2, WOC51W2
WOC – Escape-Avoidance W2 (WOCEAW2)	WOC11W2, WOC16W2, WOC33W2, WOC40W2, WOC47W2, WOC50W2, WOC58W2, WOC59W2
WOC – Planful Problem Solving W2 (WOCPPSW2)	WOC1W2, WOC26W2, WOC39W2, WOC48W2, WOC49W2, WOC52W2
WOC – Positive Reappraisal W2 (WOCPRW2)	WOC20W2, WOC23W2, WOC30W2, WOC36W2, WOC38W2, WOC56W2, WOC60W2
WOC – Confrontive Coping W4 (WOCCCW4)	WOC6W4, WOC7W4, WOC17W4, WOC28W4, WOC34W4, WOC46W4
WOC – Distancing W4 (WOCDW4)	WOC12W4, WOC13W4, WOC15W4, WOC21W4, WOC41W4, WOC44W4
WOC – Self-Controlling W4 (WOCSCW4)	WOC10W4, WOC14W4, WOC35W4, WOC43W4, WOC54W4, WOC62W4, WOC63W4
WOC – Seeking Social Support W4 (WOCSSW4)	WOC8W4, WOC18W4, WOC22W4, WOC31W4, WOC42W4, WOC45W4
WOC – Accepting Responsibility W4 (WOCARW4)	WOC9W4, WOC25W4, WOC29W4, WOC51W4
WOC – Escape-Avoidance W4 (WOCEAW4)	WOC11W4, WOC16W4, WOC33W4, WOC40W4, WOC47W4, WOC50W4, WOC58W4, WOC59W4
WOC – Planful Problem Solving W4 (WOCPPSW4)	WOC1W4, WOC26W4, WOC39W4, WOC48W4, WOC49W4, WOC52W4
WOC – Positive Reappraisal W4 (WOCPRW4)	WOC20W4, WOC23W4, WOC30W4, WOC36W4, WOC38W4, WOC56W4, WOC60W4

## Demographics

### Waves 1, 2, 3, 4

**Variable Names:** See below

**Description:** These variables indicate demographic information.

**Key Source:** N/A

### MARITAL STATUS, EDUCATION, AGE, REGION & GENDER

Scale/Item Name	Wave 1 (n=679)	Wave 2 (n=624)	Wave 3 (n=578)	Wave 4 (n=530)
	%	%	%	%
<b>Marital Status</b>				
Single (never married)	66.4	62.0	59.9	50.6
In a relationship	31.7	34.6	33.9	37.5
Married/common-law	1.9	3.4	6.2	11.9
Divorced/Separated/Widowed	-	-	-	-
<b>Education</b>				
< High school	9.0	3.7	3.3	3.2
High school	32.8	22.4	15.7	13.2
Some college	7.5	9.6	8.7	6.6
Some university	48.9	57.2	48.8	34.9
Diploma/certificate	1.5	5.0	10.9	15.7
University degree	0.1	2.1	12.6	26.4
DK/NR	0.1	-	-	-
<b>Age at time of survey</b>				
18	35.6	0.6	-	-
19	36.8	33.2	-	-
20	27.5	38.0	24.9	-
21	-	26.6	36.9	24.9
22	-	1.6	31.1	35.1
23+	-	-	7.1	40.0
(mean)	18.9 years	20.0 years	21.2 years	22.2 years
<b>Region</b>				
Winnipeg	79.7	78.8	79.2	79.1
Non-Winnipeg	20.2	20.8	20.4	19.4
Outside Manitoba	0.1	0.3	0.3	1.3
<b>Gender</b>				
Female	51.8	52.6	52.6	52.3
Male	48.2	47.4	47.4	47.7
Note: Totals may not sum to 100% due to rounding.				

## MAIN ACTIVITY & EMPLOYMENT

Scale/Item Name	Wave 1 (n=679)	Wave 2 (n=624)	Wave 3 (n=578)	Wave 4 (n=530)
	%	%	%	%
<b>Main activity past 12 months</b>				
School	69.8	60.6	58.7	53.4
Working	26.5	35.9	36.9	41.7
Looking for work	1.5	1.4	2.1	2.1
Other	2.1	2.1	2.4	2.8
<b>School FT/PT</b>	(n=474)	(n=378)	(n=339)	(n=283)
Full-time	92.0	94.7	91.4	93.6
Part-time	7.8	5.3	8.6	6.4
DK/NR	0.2	-	-	-
<b>Working as a student?</b>	(n=474)	(n=378)	(n=339)	(n=283)
No	29.1	29.1	28.3	28.6
Yes, full-time	6.1	2.9	6.2	7.4
Yes, part-time	64.6	67.5	65.5	64.0
DK/NR	0.2	0.5	-	-
<b>Ever been employed?</b>	(n=164)	(n=134)	(n=122)	(n=107)
No	14.0	7.5	1.6	4.7
Yes, full-time	40.2	54.5	68.9	83.2
Yes, part-time	40.9	33.6	24.6	11.2
DK/NR	0.9	4.5	4.9	0.9
<b>How many weeks employed in past 12 months?</b>	(n=656)	(n=614)	(n=576)	(n=525)
0-10 weeks	12.7	8.6	11.1	8.6
11-20 weeks	14.5	13.4	13.9	12.6
21-30 weeks	9.8	8.3	7.1	5.7
31-40 weeks	8.8	8.1	6.9	7.2
41-51 weeks	5.5	7.2	3.8	6.9
52 weeks	47.6	53.7	56.8	58.5
DK/NR	1.2	0.7	0.3	0.6
(mean)	36.5 weeks	39.2 weeks	38.5 weeks	40.6
<b>How many hours worked per week?</b>	(n=656)	(n=614)	(n=576)	(n=519)
0-9 hours	6.6	6.8	8.2	6.9
10-19 hours	19.1	18.2	16.5	12.0
20-29 hours	31.6	24.3	19.1	20.2
30-39 hours	16.5	18.6	22.2	22.5
40 or more hours	25.3	31.4	33.0	37.3
DK/NR	1.1	0.7	1.0	1.1
(mean)	26.6 hours	27.9 hours	28.8 hours	29.9

Note: Totals may not sum to 100% due to rounding.

## PERSONAL & HOUSEHOLD INCOME

Scale/Item Name	Wave 1 (n=679)	Wave 2 (n=624)	Wave 3 (n=578)	Wave 4 (n=530)
	%	%	%	%
<b>Main source of personal income in past 12 months?</b>				
Employment/self-employment	88.5	90.4	91.2	89.6
Parents/family	2.2	1.4	1.7	0.8
Student loans	1.9	2.2	1.9	2.3
Other	1.4	3.3	3.3	4.0
No income	5.4	1.6	1.2	2.3
DK/NR	0.6	1.1	0.7	1.1
<b>What is your total personal income before taxes in the past 12 months?</b>				
No income/loss	5.9	1.6	1.2	2.3
\$1 - \$10,000	49.0	40.2	31.3	22.6
\$10,001 - \$20,000	22.9	28.4	31.7	32.5
\$20,001 - \$30,000	6.1	10.2	16.1	17.0
\$30,001 - \$40,000	1.3	4.1	5.7	9.2
\$40,000+	2.2	1.7	4.3	8.7
DK/NR	12.5	13.8	9.7	7.7
(mean)	\$12,998	\$14,361	\$18,228	\$21,478
<b>How many members of your household received income in the past 12 months?</b>				
0	3.4	6.1	6.7	9.2
1	15.5	17.9	22.0	26.8
2	39.2	34.5	32.9	32.3
3	29.2	29.8	26.1	20.4
4	7.2	9.0	10.2	8.7
5+	2.7	1.1	2.1	0.9
DK/NR	2.8	1.6	-	0.6
(mean)	2.3	2.2	2.2	2.0
<b>What is your total household income before taxes in the past 12 months?<sup>a</sup></b>				
< \$10,000	2.1	2.2	0.3	0.4
\$10,000 - \$19,999	2.2	2.9	3.8	2.5
\$20,000 - \$29,999	4.0	5.0	5.2	7.0
\$30,000 - \$39,999	4.9	5.3	4.7	5.7
\$40,000 - \$49,999	5.3	4.5	5.4	4.2
\$50,000 - \$59,999	6.5	5.8	7.8	7.0
\$60,000 - \$79,999	11.5	11.7	10.4	10.8
\$80,000 - \$99,999	9.6	10.7	7.3	9.2
\$100,000+	34.2	33.3	35.6	36.4
DK/NR	19.9	18.6	19.6	17.0

Note: Totals may not sum to 100% due to rounding.  
<sup>a</sup>Question asked in Wave 1 only.  
<sup>a</sup> Mean could not be calculated.

## MANITOBA RESIDENCY & CANADIAN CITIZENSHIP

Scale/Item Name	Wave 1 (n=679)	Wave 2 (n=624)	Wave 3 (n=578)	Wave 4 (n=530)
	%	%	%	%
<b>How long have you been living in Manitoba?*</b>				
0-4 years	3.1	2.7	2.6	2.7
5-9 years	3.5	3.7	3.8	4.0
10+ years	14.1	13.8	13.8	13.0
All my life	79.2	79.8	79.8	80.4
<b>Born in Canada?*</b>				
Yes	94.1	94.4	94.5	94.3
No	5.9	5.6	5.5	5.7
<b>In what year did you first come to Canada to live?*</b>	(n=40)	(n=34)	(n=31)	(n=30)
Before 1990	25.0	23.5	22.6	23.3
1990 to 1999	32.5	32.2	32.3	30.0
2000 or later	42.5	44.0	45.2	46.7
<b>Were you born a Canadian citizen?*</b>	(n=40)	(n=34)	(n=31)	(n=30)
Yes	15.0	17.6	19.4	16.7
No	85.0	82.4	80.6	83.3
<b>Are you currently a Canadian citizen?</b>	(n=34)	(n=29)	(n=25)	(n=25)
Yes	79.4	75.9	80.0	80.0
No	20.6	24.1	20.0	20.0
Note: Totals may not sum to 100% due to rounding.				
*Question asked in Wave 1 only.				

## ETHNICITY & RELIGION

Scale/Item Name	Wave 1 (n=679)	Wave 2 (n=624)	Wave 3 (n=578)	Wave 4 (n=530)
	%	%	%	%
<b>In addition to Canadian, to what other ethnic groups do you belong?*</b> <sup>a</sup>				
Ukrainian	21.1	20.6	20.3	20.4
German	18.6	19.1	19.6	19.8
English	15.6	16.5	16.9	17.2
Scottish	14.7	15.0	15.2	15.3
Irish	11.3	11.7	11.8	9.4
French	9.7	10.0	10.2	8.9
Polish	9.4	9.2	9.1	7.5
Aboriginal/Métis/First Nation	7.9	7.1	7.1	7.2
Filipino	5.3	5.1	5.0	4.7
All others	<5.0	<5.0	<5.0	<5.0
DK/NR	8.2	7.7	6.8	6.8
<b>How important is your ethnic or cultural identity?</b>				
1 - Not important at all	12.4	13.0	14.9	12.1
2	17.4	19.9	18.5	16.2
3	26.7	27.2	25.8	28.9
4	21.4	22.8	24.2	24.7
5 - Very important	22.2	17.1	16.6	18.1
<b>How strong is your sense of belonging to your cultural/ethnic group?</b>				
1 - Not strong at all	15.5	16.2	17.8	13.4
2	20.2	24.2	21.3	22.1
3	28.4	26.8	28.9	29.8
4	20.6	18.9	20.2	20.4
5 - Very strong	15.2	13.9	11.8	14.3
DK/NR	0.1	-	-	-
<b>Are you Aboriginal, Métis or Inuit?</b> <sup>b</sup>	(n=625)	(n=577)	(n=537)	(n=492)
No	95.0	95.0	95.0	95.5
Aboriginal	0.6	0.5	0.6	0.6
Métis	3.2	3.3	3.4	2.8
Inuit	0.2	0.2	0.2	-
Other	0.2	0.2	-	-
DK/NR	0.8	0.9	1.0	1.0
<b>What is your religion, if any?</b> <sup>a</sup>	(n=679)	(n=624)	(n=578)	(n=530)
No religion/agnostic/atheist	38.9	39.6	38.8	39.2
Christian	17.4	16.8	17.1	17.5
Roman Catholic	14.7	14.3	14.5	14.5
All others	24.2	24.4	24.4	24.3
Note: Totals may not sum to 100% due to rounding.				
*Question asked in Wave 1 only.				
<sup>a</sup> Multiple responses accepted.				
<sup>b</sup> Question not asked to those who indicated Aboriginal, Métis, First Nation, or Inuit as their ethnicity.				

## ETHNIC IDENTITY

Scale/Item Name	Wave 1 (n=679)	Wave 2 (n=624)	Wave 3 (n=578)	Wave 4 (n=530)
	%	%	%	%
<b>How many friends have the same ethnicity as you?</b>				
None	10.6	10.3	9.2	7.4
A few	47.0	43.8	46.7	37.4
About half	16.2	21.8	19.7	25.1
Most	23.3	20.7	21.5	27.9
All	1.5	2.2	2.2	0.9
DK/NR	1.5	1.3	0.7	1.3
<b>How important is it to carry on the customs and traditions of your ethnicity/ancestry?</b>				
1 - Not important at all	17.8	19.1	20.8	14.7
2	20.6	20.5	19.4	19.6
3	27.4	26.6	26.8	29.4
4	21.2	21.5	21.3	21.5
5 - Very important	12.5	12.2	11.6	14.7
DK/NR	0.4	0.2	0.2	-
<b>How often do you feel discriminated against because of your ethnicity/race?</b>				
Never	67.7	67.6	65.6	63.2
Rarely	22.5	23.7	26.1	28.7
Some of the time	7.2	7.2	7.6	7.2
Most of the time	1.6	0.8	0.5	0.6
All of the time	0.7	0.6	0.2	0.4
DK/NR	0.1	-	-	-
Note: Totals may not sum to 100% due to rounding. *Question asked in Wave 1 only.				

## HOUSEHOLD COMPOSITION

Scale/Item Name	Wave 1 (n=679)	Wave 2 (n=624)	Wave 3 (n=578)	Wave 4 (n=530)
	%	%	%	%
<b>Who lives in your household with you?</b>				
Parent	84.2	76.9	71.5	62.5
Brother/sister/sibling	61.8	61.1	55.9	44.0
Roommate	8.3	10.4	11.9	13
Other relative	3.3	2.7	2.2	1.5
Child	2.8	2.1	2.6	4.3
Grandparent	2.5	2.2	1.6	1.7
Boyfriend/girlfriend/partner	2.3	5.1	8.1	10.2
Husband/wife/spouse	0.6	1.3	2.8	6.4
In-law	0.1	0.6	0.2	.8
Lives alone	2.2	4.8	5.4	7.4
DK/NR	0.7	0.2	0.2	0.8
<b>How many of your parents live with you?</b>	(n=569)	(n=480)	(n=413)	(n=331)
1	14.6	16.7	15.5	18.7
2	84.9	83.3	84.5	81.3
3+	0.4	-	-	-
DK/NR	0.2	-	-	-
<b>How many of your siblings live with you?</b>	(n=418)	(n=381)	(n=323)	(n=233)
1	60.0	63.0	64.4	67.4
2	29.7	28.1	26.9	25.3
3+	10.1	8.9	8.6	7.3
DK/NR	0.2	-	-	-
<b>How many roommates live with you?</b>	(n=56)	(n=65)	(n=69)	(n=69)
1	46.4	55.4	46.4	52.2
2	21.4	29.2	33.3	29.0
3+	32.2	15.3	20.3	18.8
DK/NR	-	-	-	-
<b>How many other relatives live with you?</b>	(n=22)	(n=17)	(n=13)	(n=8)
1	68.2	70.6	100.0	87.5
2	9.1	17.6	-	-
3+	22.7	11.8	-	12.5
DK/NR	-	-	-	-
<b>How many of your children live with you?</b>	(n=19)	(n=13)	(n=15)	(n=23)
1	68.4	69.2	80.0	82.6
2	21.1	23.1	20.0	13.0
3+	10.6	7.7	-	4.3
DK/NR	-	-	-	-



<b>How many of your grandparents live with you?</b>	(n=17)	(n=14)	(n=9)	(n=9)
1	70.6	64.3	55.6	77.8
2	29.4	35.7	44.4	22.2
3+	-	-	-	-
DK/NR	-	-	-	-
<b>How many of your in-laws live with you?</b>	(n=1)	(n=4)	(n=1)	(n=4)
1	-	75.0	100.0	75.0
2	100.0	25.0	-	25.0
3+	-	-	-	-
DK/NR	-	-	-	-
Note: Totals may not sum to 100% due to rounding. *Question asked in Wave 1 only.				

Variable Label	Variable Name
<b>Marital Status, Education, Age, Region &amp; Gender</b>	
What is your marital status?	DEM1W1, DEM1W2, DEM1W3, DEM1W4
What is your highest level of schooling?	DEM2W1, DEM2W2, DEM2W3, DEM2W4
Age of respondent at time of survey	DEM3W1, DEM3W2, DEM3W3, DEM3W4
Region	DEM4W1, DEM4W2, DEM4W3, DEM4W4
Gender	DEM5W1
<b>Main Activities &amp; Employment</b>	
In the past 12 months, was your main activity...	DEM6W1, DEM6W2, DEM6W3, DEM6W4
Are you going to school full-time or part-time?	DEM7W1, DEM7W2, DEM7W3, DEM7W4
Are you working FT or PT while you are enrolled as a student?	DEM8W1, DEM8W2, DEM8W3, DEM8W4
Have you ever been employed FT or PT?	DEM9W1, DEM9W2, DEM9W3, DEM9W4
For how many weeks during the past 12 months were you employed?	DEM10W1, DEM10W2, DEM10W3, DEM10W4
In the past 12 months, how many hours a week did you usually work at all jobs?	DEM11W1, DEM11W2, DEM11W3, DEM11W4
<b>Personal &amp; Household Income</b>	
What was your main source of personal income in the past 12 months?	DEM12W1, DEM12W2, DEM12W3, DEM12W4
What is your best estimate of your total personal income, before taxes and deductions, from all sources in the past 12 months?	DEM13W1, DEM13W2, DEM13W3, DEM13W4
How many other members of your household received income from any source in the past 12 months?	DEM14W1, DEM14W2, DEM14W3, DEM14W4
What is your best estimate of the total income, before taxes and deductions, of all members of your household, from all sources in the past 12 months?	DEM15W1, DEM15W2, DEM15W3, DEM15W4
Can you estimate in which of the following groups your household income in the past 12 months falls?	DEM16W1, DEM16W2, DEM16W3, DEM16W4
<b>Manitoba Residency &amp; Canadian Citizenship</b>	
How long have you been living in Manitoba?	DEM17W1
Were you born in Canada?	DEM18W1, DEM18W2
In what year did you first come to Canada to live?	DEM19W1, DEM19W2
Were you born a Canadian citizen?	DEM20W1, DEM20W2
Are you currently a Canadian citizen?	DEM21W1, DEM21W2, DEM21W3, DEM21W4
<b>Ethnicity &amp; Religion</b>	
In addition to being Canadian, to what other ethnic or cultural group do you belong?	DEM22W1, DEM22W2, DEM22W3, DEM22W4 (up to 3 multiple responses)
How important is your ethnic or cultural identity to you?	DEM23W1, DEM23W2, DEM23W3, DEM23W4
How strong is your sense of belonging to your ethnic or	DEM24W1, DEM24W2, DEM24W3, DEM24W4

cultural group?	
Are you Aboriginal, Métis or Inuit?	DEM25W1, DEM25W2, DEM25W3, DEM25W4 <i>(up to 4 multiple responses)</i>
What is your religion, if any?	DEM26W1, DEM26W2, DEM26W3, DEM26W4 <i>(up to 3 multiple responses)</i>
<b>Ethnic Identity</b>	
As far as you know, how many of your friends have the same ethnicity or ancestry as you?	DEM27W1, DEM27W2, DEM27W3, DEM27W4
How important is it for you to carry on the customs and traditions of your ethnicity and ancestry, such as holidays and celebrations, food, clothing or art?	DEM28W1, DEM28W2, DEM28W3, DEM28W4
How often do you feel uncomfortable, out of place, or discriminated against in Canada because of your ethnicity, culture, race, skin colour, language, accent or religion?	DEM29W1, DEM29W2, DEM29W3, DEM29W4
<b>Number of People in Household</b>	
Can you please tell me who lives in your household with you?	DEM30W1, DEM30W2, DEM30W3, DEM30W4 <i>(up to 10 multiple responses)</i>
How many of your parents, either birth, adoptive, step or foster, live with you?	DEM31W1, DEM31W2, DEM31W3, DEM31W4
How many of your siblings live with you?	DEM32W1, DEM32W2, DEM32W3, DEM32W4
How many non-relative roommates live with you?	DEM33W1, DEM33W2, DEM33W3, DEM33W4
How many other relatives live with you?	DEM34W1, DEM34W2, DEM34W3, DEM34W4
How many of your children, either birth, adoptive, step or foster, live with you?	DEM35W1, DEM35W2, DEM35W3, DEM35W4
How many of your grandparents live with you?	DEM36W1, DEM36W2, DEM36W3, DEM36W4
How many of your in-laws live with you?	DEM37W1, DEM37W2, DEM37W3, DEM37W4