Manitoba Longitudinal Study of Young Adults

Research Plan

June 2007

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Background

The availability and accessibility of legalized gambling activities have significantly increased in Manitoba over the past two decades through the proliferation of electronic gaming machines and casinos. Research indicates that 85% of Manitobans do gamble and that, while the majority do so responsibly, between three and four percent experience harm from their gambling (Patton et al., 2002).

A debate about the social and economic impacts of gambling has emerged concomitantly with the increase in gambling opportunities. Researchers are seeking to determine the best ways of calculating gambling's benefits and costs for individuals, families and communities. Still, gambling is a relatively new research field, with a third of all studies about problem gambling published between 1999 and 2003 (Shaffer et al., 2006). While studies measuring the prevalence of problem gambling have become common, designing effective policy, educational and treatment initiatives to minimize the potential harm of gambling requires a clearer understanding of the factors that promote responsible gambling and make people susceptible to problem gambling. As such, research must transition to focus on untangling the myriad determinants of gambling risk and resiliency (Shaffer et al., 2004). This is a complex undertaking, as theories on problem gambling have shifted towards a biopsychosocial model that assumes that a web of intricately connected biological, cognitive and social factors underlies gambling behaviour. In addition, researchers have established that gambling problems rarely present in isolation and frequently co-occur with alcohol dependence (Welte et al., 2001), drug use, mood disorders (Hodgins et al., 2005) and impulsivity (Langenbucher et al., 2001). These comorbid disorders must also be accounted for in a framework of the determinants of gambling behaviours.

Developing a framework of the biopsychosocial factors that influence gambling is further complicated by research suggesting that problem gambling is more transitory and episodic in nature than it is enduring and chronic (Slutske et al., 2003). Researchers have thus stressed the need to prospectively examine gambling behaviours using longitudinal methodologies that capture more than the snapshots offered through cross-sectional research. Longitudinal studies are the optimal methodology for understanding the determinants or antecedents of responsible and problem gambling; however, few longitudinal studies of gambling exist.[1]

The Alberta Gaming Research Institute (AGRI) has launched a longitudinal study, the *Leisure, Lifestyle, Lifecycle Project*, to facilitate prospective gambling research in Alberta. The research design for this project was informed by an extensive overview of the extant literature and was reviewed by a number of experts in the gambling field. AGRI has committed more than two million dollars to this study, which will unfold over a five year period and include 400 participants from each of five separate cohorts aged 13 to 15 years, 18 to 20 years, 23 to 25 years, 43 to 45 years and 63 to 65 years at the beginning of the study.

To increase the breadth of this study and strengthen its generalizability, AGRI invited other provinces to adopt the *Leisure, Lifestyle, Lifecycle Project*'s research design. The Manitoba Gaming Control Commission (MGCC), the Addictions Foundation of Manitoba (AFM), and

[1] See el-Guebaly et al. (2004) for a comprehensive review of longitudinal addictions studies published since 1985, spanning at least five years in duration, with sample sizes greater than 200.

Manitoba Lotteries Corporation (MLC) jointly reviewed AGRI's methodology and are collaborating to implement a similar study in Manitoba with one cohort of young adults between the ages of 18 and 20 at the beginning of the study. This cohort was selected because research suggests that young adults are a high risk population who gamble frequently (Manitobans and Gambling, 2004). This study, the *Manitoba Longitudinal Study of Young Adults* (MLSYA), will collect data from participants over five years beginning in 2007. This will result in a longitudinal database to inform program and policy development in Manitoba and to stimulate gambling research in the province.

In June 2006, MGCC, AFM and MLC entered into a Memorandum of Understanding to define their respective expectations and intentions with respect to the MLSYA. This is not a legally binding document, but rather a shared commitment to successfully develop, implement and manage the MLSYA.

Research Group

A collaborative project of this size and scope requires the involvement of many people to be successful. The Memorandum of Understanding between MGCC, AFM and MLC defines the roles and responsibilities for the project; the following provides a brief outline.

Oversight Committee

The oversight committee, comprised of senior management representatives from MGCC, AFM and MLC, serves a governance role for the MLSYA. This committee provides direction for the project and has final approval of major decisions, disbursements and documents.

Research Team

The research team includes a member from each of MGCC, AFM and MLC. This team provides leadership for the project, develops the framework that guides the day-to-day operations of the project and finalizes project documents for approval by the oversight committee.

Project Coordinators

Two members of the research team, a Research Analyst from MGCC and a Research Analyst from AFM, are the MLSYA project coordinators. The project coordinators are responsible for the day-to-day operations of the MLSYA, including drafting all project documents and conducting data analysis. The project coordinators are also responsible for liaising with expert and ethics panel members, the research organization and AGRI representatives.

Expert Panel

As the MLSYA is a complex project that demands a great deal of expertise in a variety of areas, a panel of experts has been assembled to provide the project coordinators with considered opinion on research methodology, data collection, data analysis and data interpretation. Involving independent academics from the beginning is a key step for ensuring the study's validity and smooth progress.

The function of expert panel members is to take an advisory role, as the success of the project is ultimately the responsibility of the MGCC, AFM and MLC. Expert panel members will receive an annual honorarium for their contributions to the MLSYA.

Research Organization

MGCC, AFM and MLC will engage an independent research organization to carry out the recruitment and data collection for the MLSYA. This research organization will be selected through a rigorous tendering and selection process. The contract with the research organization will incorporate a strategy to ensure that the confidentiality of study participants is protected throughout the project.

Affiliation with AGRI

AGRI's *Leisure, Lifestyle, Lifecycle Project* is managed by a full-time project coordinator and AGRI's Executive Director, who report to a seven-member steering committee comprised of experts from AGRI's three universities. The project coordinator is the primary contact for the MLSYA project coordinators.

Although the MLSYA project coordinators will liaise with AGRI to ensure that its results are comparable with the AGRI data, and although AGRI will be credited in all reports for its methodological contribution, the implementation of the MLSYA is ultimately the responsibility of the MGCC, AFM and MLC.

Affiliation with Manitoba Health

It should be noted that the MLSYA project coordinators are currently in discussions with the Health Information Management Department at Manitoba Health in regards to obtaining access to health information of the MLSYA participants.

Definitions

In order to provide contextual background for the MLSYA research objectives (see page 5), the following is a list of key terms and their definitions:

Problem Gambling

Gambling that causes significant problems for a person and/or their support networks. Problem gambling is usually associated with compromised personal relationships, vocational pursuits, finances and physical and psychological health. This term refers to individuals who score in the "moderate risk gambling" or "problem gambling" categories of the Problem Gambling Severity Index (PGSI) in the Canadian Problem Gambling Index (Ferris and Wynne, 2001).

Responsible Gambling

Non-problematic gambling where the individual exercises a rational decision on gambling behaviour based on their specific circumstances. Responsible gambling does not constitute a significant risk for future problem gambling. This term refers to individuals who score in the "non-problem gambling" category of the Problem Gambling Severity Index (PGSI) in the Canadian Problem Gambling Index (Ferris and Wynne, 2001).

Protective Variables

The variables which protect an individual from developing problems with gambling. For example, research (Lesieur & Klein, 1987) suggests that individuals who come from families where gambling is a responsible activity are less likely to develop problems with gambling. Mental health, education and healthy substance use have also been labeled as protective variables and linked to non-problem gambling (Blaszczynski & Steel, 1998; Hraba & Lee, 1996; Winters, Stinchfield & Fulkerson, 1993).

Risk Variables

The variables which tend to place an individual in a circumstance where they may be more likely to develop problems with gambling. For example, mental health problems and dependency on drugs and alcohol are correlated with problem gambling (Blaszczynski & Steel, 1998; Hraba & Lee, 1996).

Resiliency

An inherent or learned ability to recover from an adversity or illness.

Biopsychosocial

Addictive behaviours and experiences are complex and are thought to arise from an ongoing interaction between various biological, psychological and sociocultural factors. The specific combinations, interactions and weightings of each factor will vary with each individual.

Research Objectives

The MLSYA is intended to investigate a broad net of variables to learn more about protective, risk and resiliency factors that promote responsible gambling or make young adults susceptible to problem gambling. This philosophy is consistent with a biopsychosocial model of addiction. More particularly, the project will seek to determine:

1. Patterns of continuity and discontinuity in gambling behaviours over time; and

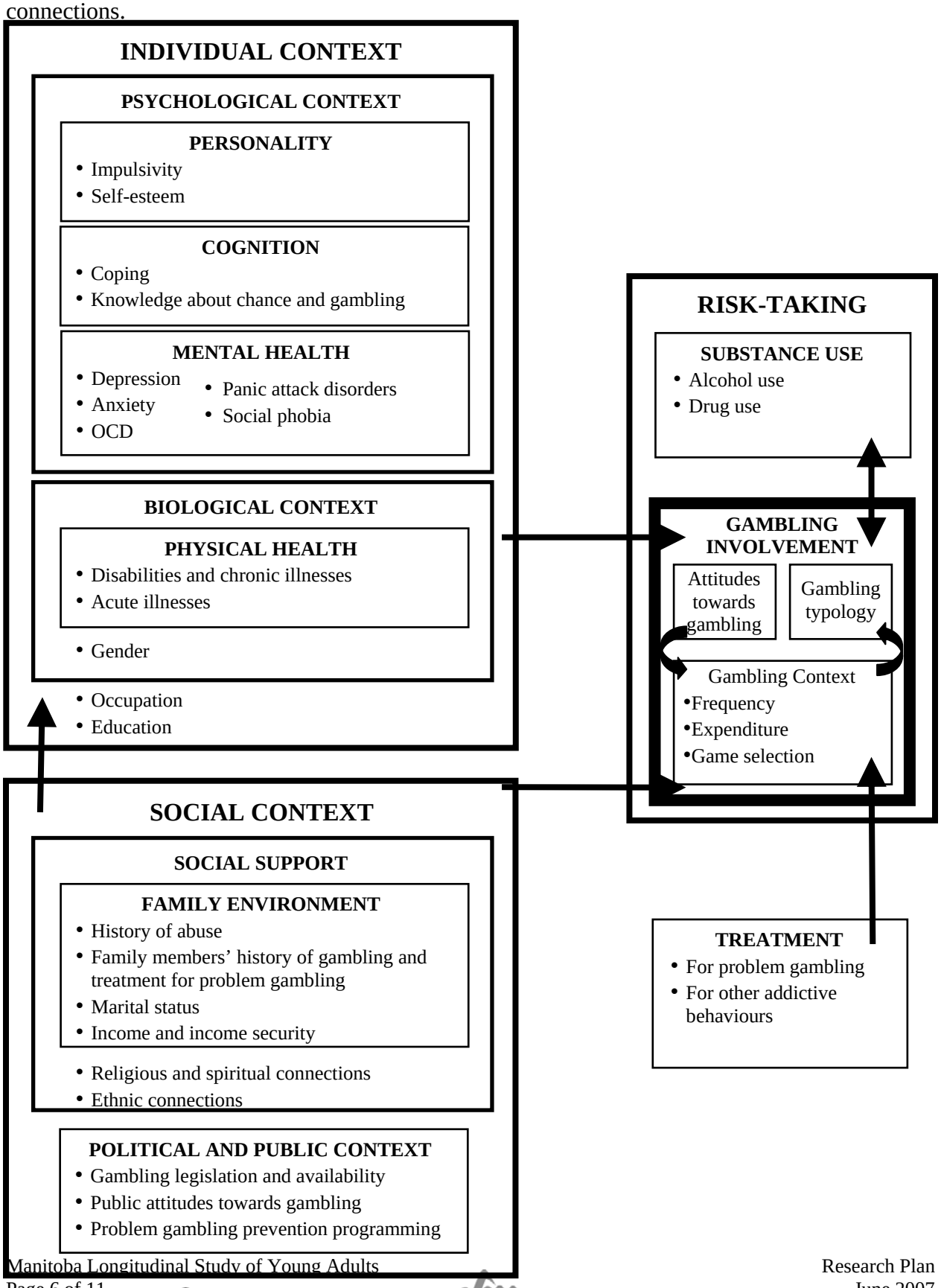
2. Biological, psychological and sociocultural variables that are associated with the spectrum of gambling behaviours in young adults, particularly with changing gambling behaviours over time.

Conceptual Framework

The following table presents the MLSYA conceptual framework. This framework is loosely based on the model from AGRI's *Leisure, Lifestyle, Lifecycle Project*; however, it has been significantly modified to reflect the above research objectives.

The conceptual framework defines the scope of inquiry for the MLSYA by explicitly presenting the relationships that are to be tested in the study. This framework thus guided and constrained the selection of instruments for the larger survey instrument, as all of the concepts presented in the framework – and only those concepts – must be operationalized in the survey instrument in order to later be tested. The conceptual framework does not necessarily include every concept

that could potentially be associated with gambling, both because this would lead to an unwieldy survey instrument and because it is impossible to know whether theory has identified all connections.



Research Design

Ethics Review

AGRI has undertaken an ethics review of its *Leisure, Lifestyle, Lifecycle Project*; however, this review does not extend to projects implemented in other provinces. As such, MGCC, AFM and MLC have invited a panel of independent academics to conduct an ethics review of the MLSYA, in order to ensure that the study meets all of the standards of ethical conduct for research involving humans.

Ethics panel members will review the research plan and survey instrument and make recommendations. Throughout the course of the project, the research team may also call upon the ethics panel to provide considered opinions on ethical issues that arise.

Sampling Strategy

The MLSYA will use a variety of methods to recruit a sample of a minimum of 400 Manitobans aged 18 to 20 years at the beginning of the study. This cohort was selected because research suggests that young adults are a high risk population who gamble frequently.

To be included in the study, participants must fall within the cohort and consent to the study requirements of providing contact information and having repeated contact over five years. Geographic and gender quotas will also be established to ensure that men and women and urban and rural Manitobans are appropriately represented.

As it is not possible to study a large enough sample of the general population to ensure a reasonable incidence and prevalence of gambling disorders, only 75% of participants will be selected from the general population through random-digit dialing. The remaining 25% will be a sample of people who are potentially at elevated risk for developing gambling problems because of their involvement in gambling activities. The at-risk group will be defined using gambling expenditure and frequency information from the general population sample to establish gender-specific cutoffs for the 70^{th} percentile, having defined those above the 70^{th} percentile as being at elevated risk. These participants will be invited to self-select to participate in the MLSYA through news releases and information placed in gambling facilities. Snowball sampling will also be used to generate this sample.

Following recruitment, a two-part survey will be administered with participants. The first part of the survey is a telephone interview that includes both open- and closed-ended questions, requires a great deal of skip logic, and is expected to take between 30 and 45 minutes. Participants will have the option of completing the second part of the survey either through an online questionnaire or a mail-in questionnaire. Like the telephone survey, this questionnaire includes open- and closed-ended questions and requires complex skip logic.

Recruitment and the first cycle of data collection will take place in fall 2007. The research organization will administer an appropriate pretest prior to beginning data collection in order to examine problems encountered by interviewers with questionnaire wording, design or programming. The research organization will collaborate with the project coordinators following the pretest to discuss problems and implement appropriate solutions.

All participants will be contacted for follow-up three more times throughout the study (in fall 2008, spring 2010 and spring 2011), for a total of four cycles of data over five years. Again at follow-up, initial telephone interviewing will be followed by either online or mail-in questionnaires. The research organization will maintain comprehensive contact information for participants and will be responsible for tracking down contacts at each data collection point. Participants will be reimbursed for their participation in the MLSYA and the consultant will also use this contact information to send compensation cheques to participants. The research organization will work with MGCC, MLC and AFM to implement strategies to decrease sample attrition by emphasizing appreciation and the importance of participants' contributions to the project. Necessary steps will be taken to ensure the confidential information of participants is protected throughout the project. The literature suggests that there are three main aspects of confidentiality of concern to longitudinal studies: the release of individual level data to third parties, the linkage of interview data to other records, and the methods used to contact individuals for subsequent interviews.

Survey Instrument

Standardization of measurement over the course of a longitudinal study is critical for ensuring that differences across cycles of data collection reflect actual changes, rather than merely differences in measurement. As such, it is essential that the MLSYA survey instrument be carefully planned prior to the first cycle of data collection so that variations will not be necessary.

The MLSYA survey instrument differs significantly from AGRI's instrument, although both use a wide net of comparable measures to capture a similar range of variables. Some measures have been removed for the MLSYA, and others substituted or altered in some cases, in order to shorten the instrument and tailor it to Manitoba's particular needs. Also, because in-person interviews will not be conducted, measures that must be administered face-to-face have been removed.

With these changes, the proposed MLSYA instrument includes the following measures:

- Canadian Problem Gambling Index (CPGI)
- Questions from the Composite International Diagnostic Interview (CIDI) Gambling Module
- Gambling attitudes and fallacies questions
- Composite International Diagnostic Interview (CIDI) Short Form
- NEO Five-Factor Inventory (NEO FFI)
- SF-8 Health Survey
- Spiritual Involvement and Beliefs Scale-Revised (SIBS-R)
- Multidimensional Scale of Perceived Social Support (MSPSS)
- Childhood Trauma Questionnaire (CTQ)
- Life Events Questionnaire
- Lazarus Ways of Coping Questionnaire
- Alcohol and drug use questions from the Canadian Community Health Survey
- Ethnicity questions from Statistics Canada
- Demographic questions from Statistics Canada

- Rosenberg Self-Esteem Scale
- Drake Beliefs about Chance Inventory

The following measures have been removed from AGRI's instrument:
- Weshsler Abbreviated Scale of Intelligence (WASI)
- Wisconsin Card Sorting Task
- Personality Assessment Inventory (PAI)
- Lubben Social Network Scale
- Family Environment Scale
- Rohrbaugh-Jessor Religiosity Scale
- York Ethnicity Scale
- Health Utility Index (HUI)
- Kansas Marital Satisfaction Scale
- Buckner Neighbourhood Cohesion Scale

MGCC, MLC and AFM developed the draft questionnaire based on AGRI's study. The questionnaire will only be finalized, however, once the research organization has advised in consideration of appropriate length of questionnaire and possible modifications that may be required related to interview techniques and survey programming requirements. The research organization will program and prepare the telephone, online and mail-in questionnaires.

Data Analysis & Reporting

Data analysis will begin after the first cycle of data collection and will focus on testing fundamental assumptions of a biopsychosocial model of gambling, based on the research objectives. The data analysis and reporting protocol will be thoroughly developed and presented in a separate document.

As the MGCC, AFM and MLC recognize peer review as an important standard in the research field, all MLSYA research reports will be peer reviewed.

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