

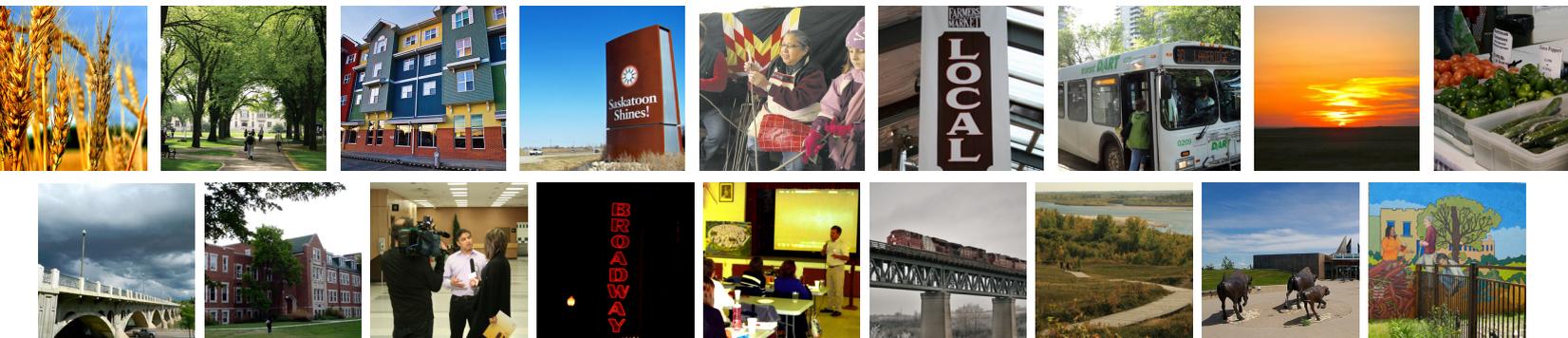


**CUISR**  
COMMUNITY-UNIVERSITY  
INSTITUTE FOR SOCIAL RESEARCH

# Fetal Alcohol Spectrum Disorder Awareness and Prevention Strategies: Learning from the Reported Alcohol Knowledge and Behaviours of College-Age Youth

A Research Report

Nicola Chopin, Sarah Hogg, Stacey McHenry, James Popham,  
Melissa Stoops, Sarah Takahashi, and Isobel M. Findlay



## Community-University Institute for Social Research

### **Building healthy, sustainable communities**

Since 1999, the Community-University Institute for Social Research (CUISR)—formally established as a university-wide interdisciplinary research centre in 2000—has remained true to its mission of facilitating “partnerships between the university and the larger community in order to engage in relevant social research that supports a deeper understanding of our communities and that reveals opportunities for improving our quality of life.”

### **Strategic Research Directions**

CUISR is committed to collaborative research and to accurate, objective reporting of research results in the public domain, taking into account the needs for confidentiality in gathering, disseminating, and storing information. In 2007 CUISR adopted five interdisciplinary strategies:

1. Saskatoon Community Sustainability
2. Social Economy
3. Rural-Urban Community Links
4. Building Alliances for Indigenous Women’s Community Development
5. Analysis of community-university partnerships

These strategic directions extend our research organized until 2007 in three modules—quality of life indicators, community health determinants and health policy, and community economic development—the result of efforts to address health, quality of life, and poverty that led to the formation of CUISR to build capacity among researchers, CBOs, and citizenry.

CUISR research projects are funded largely by SSHRC, local CBOs, provincial associations, and municipal, provincial, and federal governments. Beginning in 2007, CUISR’s reputation for high quality community-based participatory research (CBPR) enabled us to diversify our funding by responding to community agency requests to conduct research projects for them for a fee.

### **Tools and strategies**

*Knowledge mobilization:* CUISR disseminates research through newsletters, brown bag luncheons, reports, journal articles, monographs, videos, arts-based methods, listserv, website.

*Portal bringing university and community together to address social issues:* CUISR facilitates partnerships with community agencies.

*Public policy:* CUISR supports evidence-based practice and policy at these tables: provincial Advisory Table on Individualized Funding for People with Intellectual Disabilities, Saskatoon Poverty Reduction Partnership, and Saskatoon Regional Intersectoral Committee (RIC).

*Student training:* CUISR provides training and guidance to undergraduate and graduate students and encourages community agencies to provide community orientation in order to promote positive experiences with evaluators and researchers.

FETAL ALCOHOL SPECTRUM DISORDER AWARENESS AND  
PREVENTION STRATEGIES: LEARNING FROM THE REPORTED  
ALCOHOL KNOWLEDGE AND BEHAVIOURS OF COLLEGE-AGE YOUTH

A RESEARCH REPORT

NICOLA CHOPIN, SARAH HOGG, STACEY MCHENRY, JAMES POPHAM,  
MELISSA STOOPS, SARAH TAKAHASHI, AND ISOBEL M. FINDLAY

saskatchewan  
**preventioninstitute**  
our goal is **healthy** children



UNIVERSITY OF  
SASKATCHEWAN

Copyright © 2014 Nicola Chopin, Sarah Hogg, Stacey McHenry, James Popham, Melissa Stoops, Sarah Takahashi, and Isobel M. Findlay

Community-University Institute for Social Research  
University of Saskatchewan

All rights reserved. No part of this report may be reproduced in any form or by any means without the prior written permission of the publisher. In the case of photocopying or other forms of reprographic reproduction, please consult Access Copyright, the Canadian Copyrighting Licensing Agency, at 1-800-893-5777.

Cover and interior design by Jethro Cheng  
Community-University Institute for Social Research

Printed in Canada

Community-University Institute for Social Research  
R.J.D. Williams Building  
University of Saskatchewan  
432-221 Cumberland Ave.  
Saskatoon, SK. Canada S7N 1M3  
Phone: (306) 966-2121 / Fax: (306) 966-2122  
Website: [www.usask.ca/cuisr](http://www.usask.ca/cuisr)

# CONTENTS

ACKNOWLEDGEMENTS .....	i
LIST OF FIGURES.....	iii
LIST OF TABLES .....	v
LIST OF APPENDICES.....	vii
ABSTRACT.....	ix
INTRODUCTION.....	1
LITERATURE REVIEW.....	1
Alcohol Use and Impacts among College-age Youth.....	2
Alcohol Use Patterns among College-Age Youth.....	2
Factors Influencing Alcohol Use and Patterns.....	3
Harms and Benefits of Alcohol Use .....	4
Knowledge of FASD and Impacts of Alcohol Consumption.....	6
FASD .....	6
Risk Factors of FASD.....	7
Knowledge and Awareness of FASD.....	7
FASD Prevention among College-Aged Youth .....	9
Designing FASD Prevention and Low Risk Drinking Campaigns .....	9
Programs Promoting Low Risk Drinking .....	10
Brief Alcohol Screening and Intervention for College Students (BASICS) .....	10
The Georgetown University Model: Friends.....	11
My Student Body: Alcohol (MSB: Alcohol).....	11
Northern Illinois University Mass Media Campaign.....	12
Check Yourself.....	12
Early Start Plus (ESP).....	12
METHODOLOGY.....	14

Focus Group Interviews of College-aged Youth .....	14
RESULTS & INTERPRETATION.....	16
Pre/Post Focus Group Survey Results .....	17
Focus Group Findings .....	21
College Lifestyle.....	21
Reasons for Drinking .....	23
Alcohol and Pregnancy.....	23
Fetal Alcohol Spectrum Disorder (FASD).....	25
Campaigns .....	26
Focus Group Conclusions and Recommendations .....	27
Drinking Patterns of College Youth and FASD Awareness: Online Survey	
of College-Aged Youth .....	29
Recruitment.....	29
Measures .....	30
Procedure.....	30
Online Survey Findings .....	30
Drinking Habits.....	31
Purpose, Benefits, and Consequences of Drinking .....	33
Alcohol Use and Pregnancy .....	36
Fetal Alcohol Spectrum Disorder (FASD) .....	38
Campaigns.....	40
Survey Discussion and Recommendations .....	43
CONCLUSION .....	45
REFERENCES .....	47
LIST OF PUBLICATIONS.....	77

## ACKNOWLEDGEMENTS

In addition to all those who agreed to participate in this study, the Community-University Institute for Social Research gratefully acknowledges the following for their contributions to this publication:

- Sarah Hogg, Sarah Takahashi, and Melissa Stoops, student researchers
- The Saskatchewan Prevention Institute, FASD Prevention Program, who sponsored this project and contributed to the development and reporting of the research.
- Rae Mitten, whose invaluable services guided the literature review
- Louise Clarke, Edwards School of Business, and Steve Wormith, Department of Psychology, principal investigators
- Isobel Findlay and Bill Holden, co-directors, CUISR

## LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
Figure 1: Age of Focus Group Participants . . . . .	16
Figure 2: Focus Group Participants' Level of Education . . . . .	17
Figure 3: Drinking Frequency of Focus Group Participants . . . . .	17
Figure 4: Number of Drinks on Typical Weekend, Focus Group Participants . . . . .	18
Figure 5: Number of Drinks during Most Intensive Drinking Occasion, Focus Group Participants . . . . .	19
Figure 6: Frequency of Drinking by Current Education, Focus Group Participants . . . . .	19
Figure 7: Frequency of Drinking by Total Education, Focus Group Participants . . . . .	20
Figure 8: Histogram Detailing Frequency of Alcohol Consumption, Online Survey Participants . . . . .	31

## LIST OF TABLES

<u>Table</u>	<u>Page</u>
Table 1: Ethnicity and Education Level, Online Survey Participants. . . . .	31
Table 2: Number of Drinks and Hours Spent Drinking during an Average Week, Online Survey Participants . . . . .	32
Table 3: Number of Drinks and Hours Spent Drinking during a Week of Heavy Alcohol Consumption, Online Survey Participants . . . . .	32
Table 4: Number of Personal Drinks Consumed vs. Perceived Number of Drinks Consumed by Peers, Online Survey Participants . . . . .	32
Table 5: Reasons for Drinking, Online Survey Participants. . . . .	34
Table 6: Benefits of Drinking, Online Survey Participants . . . . .	34
Table 7: Participant-Indicated Negative Consequences to Consuming Alcohol, Online Survey Participants . . . . .	35
Table 8: Respondents' Experiences with Consuming Alcohol, Online Survey Participants . . . . .	35
Table 9: Reasons a College Woman Might Drink During Pregnancy, Online Survey Participants. . . . .	36
Table 10: Participant Indicated Responses to a Pregnant Acquaintance Consuming Alcohol, Online Survey Participants . . . . .	36
Table 11: Perceived Reasons for Consuming Alcohol while Pregnant, Online Survey Participants (Females only) . . . . .	37
Table 12: Factors that Influence Decision NOT to Drink Alcohol during Own Pregnancy, Online Survey Participants (Females only) . . . . .	37
Table 13: Searched for Information on Healthy Drinking, Online Survey Participants (by gender) . . . . .	38
Table 14: Method of Inquiry for Information on Healthy Drinking, Online Survey Participants . . . . .	38
Table 15: Level of Concern about Having a Child with FASD, Online Survey Participants . . . . .	38
Table 16: Respondent-Perceived Level of Risk for College-aged Persons to have a Child with FASD, Online Survey Participants . . . . .	39

Table 17: Respondent-Perceived Groups at Risk to have a Child with FASD, Online Survey Participants . . . . .	39
Table 18: Educational Courses in which FASD was Covered or Experienced, Online Survey Participants . . . . .	40
Table 19: Participant Awareness of Alcohol-related Campaigns, Online Survey Participants . . . . .	40

## LIST OF APPENDICES

<u>Appendix</u>	<u>Page</u>
Appendix A: Consent form for Focus Group Participants. . . . .	53
Appendix B: Opening survey provided to each focus group participant . . . . .	55
Appendix C: Focus Group Question Protocol . . . . .	57
Appendix D: Follow-up survey provided to each focus group participant. . . . .	60
Appendix E: Consent form provided to each online survey participant. . . . .	62
Appendix F: Survey provided to each online survey participant . . . . .	64

## ABSTRACT

**I**n the context of world-wide concerns about harms associated with alcohol consumption and the particular harm of Fetal Alcohol Spectrum Disorder (FASD), the leading cause of developmental disability among Canadian children, the purpose of the current study is to understand the context of alcohol use and FASD awareness of one specific target group—college-age youth—in order to develop effective education and prevention strategies.

Canadian youth (age 15 to 24), compared to the general population, drink more alcohol and have higher rates of lifetime harms associated with alcohol use, commonly reporting negative effects to physical health, friendships, social life, and financial position. One third of University students report experiencing harmful effects of drinking. Those harms can be cognitive, social, economic, physical, and sexual, including unplanned and unsafe sexual activity.

To gain a better understanding of the context in which college-age youth consume alcohol, this research study reports on perceptions of alcohol consumption, what role alcohol plays in the college lifestyle, the benefits and risks associated with alcohol consumption, and levels of awareness and attitudes towards FASD among college-age youth. The report highlights strategies to promote FASD awareness and prevention, to reduce or eliminate alcohol consumption during pregnancy, and to promote a healthy lifestyle on college campuses.

The report is based on a literature review; opening surveys of focus group participants; five focus groups on college lifestyle, alcohol behaviour, alcohol and pregnancy, and FASD awareness; post-focus group surveys; and an online survey (on drinking patterns and FASD awareness). The report concludes with recommendations.

## INTRODUCTION

This study conducted by Community-University Institute for Social Research (CUISR) and sponsored by the Saskatchewan Prevention Institute is designed to support the Prevention Institute mission to prevent disabling conditions in children through education, research, and knowledge exchange. One of the Prevention Institute's program areas focuses on the primary prevention of Fetal Alcohol Spectrum Disorder (FASD), the leading cause of developmental disability among Canadian children. To help develop new FASD awareness and prevention strategies for the college-age population, the Prevention Institute has sponsored this research conducted in collaboration with CUISR.

College-age students are the focus of this study because Canadian youth (age 15 to 24) are more likely to consume alcohol than adults and have higher rates than the general population of lifetime harms associated with alcohol use including negative effects to physical health, friendships, social life, and financial position. In addition to the impacts on wellbeing and relationships, potential harms include unplanned and unprotected sexual activity, which can lead to alcohol exposed pregnancies.

One third of University students report experiencing harmful effects of drinking, including a hangover, memory loss, regrets, and missed classes due to a hangover. Youth who drink heavily and more frequently are more likely to report alcohol-related harms (cognitive, social, physical, sexual, and economic); males, who tend to drink more than females, are more likely to report harmful effects from drinking. Physical harms caused by alcohol can include death (suicides, homicide, and motor vehicle collisions), injury, or illness. Against this background, this study explores alcohol consumption patterns, attitudes, peer and other pressures, FASD awareness and perception of risk among college-age youth, and factors that encourage or discourage drinking. The study is organized into the following sections: a) a literature review on college-age alcohol use and FASD prevention; b) a review of relevant online resources and programs available in colleges and universities; c) focus groups and pre- and post-focus group survey results; and d) online survey results. The gathered information and results are used to develop recommendations to assist the Prevention Institute in developing the structure and content for future strategies that promote low-risk drinking and prevent alcohol-exposed pregnancies among college-age youth.

## LITERATURE REVIEW

Prevention and intervention activities intended to reduce or eliminate alcohol consumption during pregnancy require knowledge about the specific target groups, including information about differences in alcohol consumption patterns, attitudes and awareness, and culturally appropriate methods for

delivery of services (Kaskutas, 2000). The following provides a summary of the literature on alcohol use patterns as well as programs that attempt to reduce alcohol use and the prevention of FASD as it relates to college-age youth. The first section focuses on alcohol use, factors related to alcohol use, and the positive and negative impacts among college-aged youth. The second section examines existing research on the knowledge and awareness of FASD and the impacts of alcohol consumption among college-age youth. The third section includes a review of existing awareness and alcohol reduction programs aimed at college-aged youth.

## **Alcohol Use and Impacts among College-age Youth**

### *Alcohol Use Patterns among College-Age Youth*

Alcohol abuse and dependency have become major health concerns worldwide (Miller & Spear, 2006). In Canada, alcohol is the most commonly used substance among adults and youth (Adlaf & Begin, 2005; Adlaf, Demers, & Gliksman, 2005; Health Canada, 2007). However, there are differences in the drinking patterns between youth aged 15 to 24 years old and adults aged 25 and above. Youth are more likely to report drinking in the past year than adults. According to the 2004 Canadian Addiction Survey (CAS), 82.9% of youth aged 15 to 24 reported past-year drinking compared to 78.8% of adults (Health Canada, 2007). The drinking rate increases during the college-aged years. Youth aged 18 to 19 (90.8%) and aged 20 to 24 (89.5%) are more likely than 15 to 17 year olds (62.3%) to report past-year drinking (Health Canada, 2007). Similarly, a Canadian Campus Survey (CCS) conducted in 2004 found that 90% of university students have used alcohol in their lifetime and 86% reported past-year drinking (Adlaf, Demers, & Gliksman, 2005). Additionally, youth who attend college tend to consume more alcohol than peers who do not attend college (Hustad, Carey, Carey, & Maisto, 2009).

Unlike adults, there is no gender difference among youth in the prevalence of current or lifetime alcohol use. Among adults, males are more likely than females to report current drinking. This suggests that differences in the prevalence of alcohol use appear later in life. However, male youth are more likely to drink heavily and more often than female youth (Adlaf, Demers, & Gliksman, 2005; Health Canada, 2007). The majority of Canadian college-age youth are light drinkers; however, they are more likely than adults to be heavy and high risk drinkers, as defined in the Canadian Low-Risk Drinking Guidelines<sup>1</sup> (Adlaf & Begin, 2005; Adlaf, Demers, & Gliksman, 2005).

College-aged youth are not a homogenous group when it comes to alcohol use and patterns of use; however, the university environment can be particularly problematic for some students, as it often acts to facilitate excessive drinking, alcohol abuse, and alcohol dependence (Hartford, Yi, & Hilton, 2006).

---

<sup>1</sup> Heavy drinking is defined as five or more drinks for men and four or more drinks for women, on one occasion. The Canadian guidelines for low-risk drinking suggest that for males, alcohol intake should not exceed 15 standard drinks in a week or 4 standard drinks in a day, and for females, alcohol intake should not exceed 10 standard drinks in a week or 3 standard drinks in a day (Butt, Beirness, Gliksman, Paradis, & Stockwell, 2011).

### *Factors Influencing Alcohol Use and Patterns*

There are numerous factors that influence the decision to drink and to what extent, which varies between individuals and social groups. Although not necessarily condoning drinking, popular sentiment in Western culture often views alcohol consumption as a “rite of passage” and is seen as a part of “coming of age” for young students as they engage in the college experience and make the transition from adolescence to adulthood (Riley, Durbin, & D’Ariano, 2005). Additionally, drinking is largely a social activity for university students (Adlaf, Demers, & Gliksman, 2005). Thus, social norms and the social environment influence drinking behaviour.

Alcohol use is influenced by the social habits and customs of a particular group. Social norms have been cited as being the underlying mechanisms responsible for increased alcohol use among college students and at-risk student groups (Ward & Gryczynski, 2009). According to Ward and Gryczynski, social norms have been better predictors of alcohol use in college students than factors such as demographics. It is also important to examine the beliefs and expectations that students have about how much they will drink and what effect those drinks will have on them (Read, Lau-Barraco, Dunn, & Borsari, 2009). For example, it has been shown that people have different expectations about the effects that alcohol will have on them, depending on the amount of alcohol they tend to consume. This phenomenon can include perceptions surrounding how intoxicated they will become or how much they “need” in order for them to open up and allow the alcohol to act as a social lubricant (Southwick, Steele, Maralatt, & Lindell, 1981).

One’s belief about the effects of alcohol can influence one’s experience. Similarly, one’s experience can shape expectations about what will happen when one consumes alcohol. Therefore, positive experiences in the past often lead to positive expectations of consuming alcohol in the future and negative experiences can lead to negative expectations (Read et al., 2009). Since beliefs and expectations about alcohol have been found to be important predictors of drinking behaviour in college-age students, interventions may benefit from targeting student’s positive beliefs

Peers and parents also have an important role in influencing college drinking behaviour and norms (Ward & Gryczynski, 2009). For example, poor parental relationships have been found to be related to increased drinking behaviour (Turrisi et al., 2009). In regard to peers, young adults of both genders who drink heavily indicated that their most recent drinking companions were friends, rather than parents or other relatives. These groups of friends were also most likely to be comprised of the opposite sex or both genders, rather than the same gender (Plant, Bagnall, & Foster, 1990). This finding indicates that there might be pressure to drink heavily in front of one’s peers, especially in mixed-sex groups.

Gender is an influential factor in socialization, alcohol expectations, and beliefs about acceptable and unacceptable alcohol consumption. Women and men metabolize alcohol differently, which affects the amount of alcohol that they can consume before reaching certain levels of intoxication (Read et al., 2009). However, there are also a number of social and behavioural differences between males and females (Dawson, 1996). Read et al. (2009) hypothesized that the differences in alcohol’s physical effects, in combination with societal expectations for how wom-

en should behave when they are drinking, cause women to place a greater emphasis on the negative effects of alcohol at higher quantities of alcohol consumption. As a result, women are less likely than men to drink in greater amounts.

The social environment is closely tied to social norms. Social norms develop and are learned from the social environment. Some factors related to students' social environment that influence their alcohol consumption include their living arrangements and the location and atmosphere in which they drink. In regards to living arrangements, Ward and Gryczynski (2009) found that some of the most important factors related to dangerous alcohol consumption included the type of housing (on or off campus), the number of individuals in a unit (more people equates to more alcohol consumption), and the social relationships among those who live together (stronger friendships were associated with more drinking). Among Canadian university students, students who lived on their own or with friends either on or off campus were more likely to drink heavily compared to those who lived off campus with their family. Additionally, the majority of drinking (41.8%) among Canadian university students occurred at a private premise such as someone's home. Roughly one third of drinking (35.5%) occurred in bars and nightclubs, while only 7.2% of drinking occurred in on-campus residences. Additional drinking locations included restaurants (9.7%) or were not indicated (5.8%) (Adlaf, Demers, & Gliksman, 2005). The atmosphere of drinking locations also influences drinking habits. DuRant, McCoy, Champion, & Rhodes (2008) found that a number of atmospheric factors predict heavy drinking, including the number of people intoxicated at a party, "bring your own booze" events, and the presence of illicit drugs.

### *Harms and Benefits of Alcohol Use*

There are a number of harms and benefits associated with drinking. Drinking is often believed to be a positive experience by individuals and among social groups, and it is important to note the majority of people in society consume alcohol moderately and safely (Peele & Brodsky, 2000). However, heavy drinking in college students has been related to increased rates of harms (Adlaf, Demers, & Gliksman, 2005; Health Canada, 2007; Molnar, Busseri, Perrier, & Sadava, 2009; Morgan, White, & Mun, 2008).

Canadian youth (age 15 to 24), compared to the general population, have higher rates of lifetime harms (33.7% versus 24.2%) and harms in the past year (21.8% versus 8.8%). The most commonly reported harms included negative effects to physical health (18.4%), friendships and social life (15.9%), and financial position (11.2%) (Health Canada, 2007). Similarly, one third of university students have reported experiencing harmful effects of drinking. The most common effects reported by university students affected by drinking include experiencing a hangover (53.4%), memory loss (25.4%), regrets (24.5%), and missing class due to a hangover (18.8%) (Adlaf, Demers, & Gliksman, 2005). These harms are closely related to patterns of use; youth who drink heavily and more frequently are more likely to report alcohol-related harms (Health Canada, 2007; Morgan, White, & Mun, 2008). Additionally, males, who tend to drink more than females, are more likely to report harmful effects from drinking (Adlaf, Demers, & Gliksman, 2005).

Alcohol's harmful effects include cognitive, social, physical, sexual, and economic consequences. For ex-

ample, alcohol can have a negative impact on students' cognitive functioning. One of the most frequently reported consequences of consuming alcohol among college students is increased academic problems (Chiauzzi, Green, Lord, Thum, & Goldstein, 2005; Hartford, Yi, & Hilton, 2006). Heavy drinking is also related to higher rates of depression and other psychological dysfunction (Molnar et al., 2009). In addition, it has been found that for some individuals, alcohol use can potentially lead to destructive forms of socializing with family members and peers. In short, the actions and behaviours of people who drink heavily can have a negative impact on themselves and on relationships with others (Frances & Strauser, 1988).

Physical harms from alcohol include death, injury, or illness. Alcohol use is frequently associated with the three leading causes of death and injury among youth: suicides, homicides, and motor vehicle collisions (Miller & Spear, 2006). Also, alcohol is often considered a facilitator of aggressive behaviour (Hansen, 1994). Other physical harms caused by alcohol can include immediate effects such as vomiting, hangovers, and alcohol poisoning. Longer term physical effects include chronic diseases such as peptic ulcers, cirrhosis of the liver and an increased risk for some cancers (CCSA, 2012; Hingson, Heeren, Winter, & Wechsler, 2005; WHO, 2012).

Alcohol consumption can also influence sexual behaviours and practices, such as unplanned and unsafe sexual behaviour. Youth, who consumed alcohol or other drugs prior to sexual intercourse, are less likely to use a condom (Health Canada, 2007; Parks et al., 2009). According to the Canadian Campus Survey, 14% of university students reported having unplanned sexual relations as a result of drinking and 6% reported engaging in unsafe sexual practices. The occurrence of unplanned sexual relations was higher in males (15.8%) than females (12.8%); however, there was no gender difference in unsafe sexual practices as a result of drinking (Health Canada, 2007).

Adding to this concern, Parks et al. (2009) found that members of both genders often go to bars specifically to meet members of the opposite sex and use alcohol as the social lubricant to facilitate sexual encounters. Specifically focusing on women, the researchers found that women who drank in bars on a regular basis tended to be heavy drinkers, reported moderate to high levels of intoxication, and were more likely to engage in sexual intercourse without protection (Parks et al., 2009). Although this research was conducted in the United States, given that approximately one third of drinking occurrences among Canadian university students occurs in bars and nightclubs, it is possible that Canadian university students may engage in similar types of behavior (Adlaf, Demers, & Gliksman, 2005). However, this would have to be examined in more detail among the Canadian university student population.

Alcohol use also has enormous economic costs for individuals and the broader community (Frances & Strauser, 1988; Miller & Spear, 2006). Economic harms are frequently linked to the other harms caused by alcohol. Some of these costs include loss of productivity in the workplace, healthcare (including diagnosis, treatment, and prevention), motor vehicle collisions, law enforcement, and crime (e.g., homicide, rape, and aggravated assault) (Frances & Strauser, 1988; Rehm et al., 2006). In Canada, the overall social cost due to alcohol abuse was estimated to be \$14.5 billion for 2002 (Rehm et al., 2006). In addition, there can be substantial personal financial cost in purchasing alcohol (Wechsler et al., 1994).

Despite the many negative consequences that are associated with alcohol consumption, drinking alcohol remains a common activity for university students. For this reason, it is important to understand what students gain from consuming alcohol. For example, light or moderate alcohol consumption has been linked to a number of positive outcomes in the general population, such as cardiovascular benefits, better subjective health, mood enhancement, stress reduction, improved sociability, social integration, more positive mental health, and improved cognitive functioning (Molnar et al., 2009). In addition to these findings, some university students state that their positive alcohol-related experiences are more frequent and personally significant than the perceived negative consequences. Although students who reported drinking heavily were more likely to experience the negative consequences of drinking than light to moderate drinkers, they also indicated that they experienced the positive benefits of alcohol use (Molnar et al., 2009).

Since there are a number of positive and negative effects of alcohol on the college population, it is important to understand what leads some students to have positive experiences, while others to have negative experiences. Generally, this difference has been found to be based on the reasons that individuals have for drinking. For instance, Molnar et al. (2009) found that individuals who drink to overcome feelings of negative affect are more likely to experience negative outcomes, while those who drink for social relationships are likely to have more positive social experiences.

This first section has provided an overview of alcohol use, factors related to patterns of use, and the associated harms and benefits for college-aged youth. Alcohol use is widely prevalent among college-aged youth. Unlike adults, there is no gender difference in the prevalence of alcohol use, although, gender differences do exist in the pattern of use. Drinking is largely a social activity for university students, and social norms and the environment influence their drinking habits. While there are a number of harms associated with drinking, there are also a number of benefits, such as social facilitation and an increase in subjective well-being. To promote low-risk drinking among college-aged youth, it is important to understand the factors that influence their drinking behaviour as well as the harms and benefits associated with drinking.

## **Knowledge of FASD and Impacts of Alcohol Consumption**

### *FASD*

Fetal Alcohol Spectrum Disorder (FASD) is the leading cause of developmental disability among Canadian children (PHAC, 2005). FASD is an umbrella term used to describe a range of disabilities that can include cognitive, behavioural, neurodevelopmental, physiological, and/or physical impairments which have lifelong implications for the individual and society at large (PHAC, 2005; 2009). The specific impairments can vary depending on a number of factors such as the timing of the exposure to alcohol, the amount of alcohol consumed, the frequency and pattern of consumption, maternal and fetal weight, age of the mother, overall maternal health, and genetic susceptibility

(Cousins & Wells, 2005; McCreight, 1997; PHAC, 2005; 2009; Stockley, 1998). The diagnosis of FASD is challenging due to the wide range of effects from prenatal exposure to alcohol and the numerous contributing factors. As well, clinical signs are difficult to recognize in newborns and infants (PHAC, 2009).

Estimates for alcohol exposed pregnancies vary. The Public Health Agency of Canada (2009) found that 62.5% of women reported drinking alcohol during the three months before they became pregnant and 10.5% continued to consume alcohol after finding out they were pregnant. While there is disagreement about whether there is a “safe” level of alcohol intake during pregnancy, Canada’s Low-Risk Alcohol Drinking Guidelines strongly recommends that there is no known safe level of alcohol consumption and women are advised not to drink any amount of alcohol during pregnancy (Butt et al., 2011).

### *Risk Factors of FASD*

All women of childbearing age are at-risk for an alcohol-exposed pregnancy, although some groups are more at risk than others due to differences in drinking habits and the social conditions that contribute to drinking patterns. Higher-risk groups that have been identified include professionals in their 30s with a high income and education level who are predominantly social drinkers; women of lower socioeconomic status who are young, unemployed, and/or use other substances in addition to alcohol; adolescents; and individuals in poorer remote, rural, or inner city communities and some Aboriginal communities (Deshpande et al., 2006; Ma, Toubbeh, Cline, & Chisholm, 1998a; 1998b; Project CHOICES Research Group, 2002). However, it is important to emphasize that all women are at risk for an alcohol-exposed pregnancy. For example, women may drink during early pregnancy while they are unaware of the pregnancy. Awareness of pregnancy does not typically occur until six to seven weeks following conception. This can be a concern for unintended pregnancies which is approximately half of all pregnancies in North America (Caprara & Koren, 2004). However, drinking during early pregnancy was as common among women who planned the pregnancy as those who did not (Chambers et al., 2005). In addition, an over emphasis on high risk groups may lead some women to believe that they and their fetus are not at risk (Testa & Reifman, 1996).

A study by Weimann and Berenson (1999) examined risk factors that differentiated between pregnant adolescents who chose to either continue or discontinue consuming alcohol during their pregnancy. They found that the greatest predictors for continued consumption were women who had partners who used alcohol, consumed alcohol prior to sex, were forced to quit school, or used tobacco. Other risk factors include family and societal factors that placed youth at-risk for adolescent alcohol use (Allard-Hendren, 2000). In addition, women who lack financial resources as well as women who smoke are more likely to have a child with FASD (Abel, 2009).

### *Knowledge and Awareness of FASD*

Research on the college-aged population tends to focus on their knowledge and awareness of the broader impacts of alcohol rather than specifically on FASD. As a result, the following focuses on the knowledge and awareness of FASD in the general population. Additional research is needed to fully understand the knowledge and awareness

levels among college-aged youth.

Despite the general recognition of the association between alcohol consumption and impact on the fetus, some women continue to drink during pregnancy. Chambers et al. (2005) believe that this behaviour is likely due to a perceived low risk and distant potential for damage to the fetus being outweighed by the immediate benefits gained from drinking. Some women may not believe that they or their fetus are at risk, despite their awareness of FASD (Testa & Reifman, 1996).

The lack of awareness about being pregnant is an important factor in early pregnancy drinking, given that the majority of women stop drinking when they become aware of their pregnancy (Chambers et al., 2005). Most women will stop, or at least reduce, alcohol consumption once they realize they are pregnant. However, awareness of pregnancy does not typically occur until six to seven weeks following conception. Chambers et al. reported that drinking in early pregnancy was as common among women who planned a pregnancy as women who had not. This suggests that women may not be socially pressured to stop drinking until the pregnancy is recognized by others. This also highlights the importance of addressing healthy drinking and safe sex at an early age and promoting healthy living before a pregnancy occurs (Wedding et al., 2007).

Additionally, women who consume alcohol during pregnancy, whether privately or publicly, are often vilified in society (Poole, 2008; Stockley, 1998). This stigma may lead some women to hide their alcohol consumption rather than to seek help. Consequently, it is important to counteract this stigma by promoting an understanding of the reasons that women may drink during pregnancy; for example, not knowing they are pregnant, misinformation about drinking during pregnancy, and addictions (Poole, 2008). Rather than emphasizing fear or issuing warnings that condemn women who consume alcohol during pregnancy, one effective method of prevention could be a focus on education directed at high-risk groups or training health professionals to use motivational interviewing techniques with women of childbearing age (Carson et al., 2010; Stockley, 1998). With motivational interviewing, health professionals work collaboratively with the patient to identify reasons for change that are personally relevant and meaningful rather than traditional advice giving (Carson et al., 2010). It may also be effective to work towards counteracting the judgemental stigma that exists among the general public (Poole, 2008).

The expectant fathers' role in pregnancy outcomes has not received a great deal of attention in the literature on FASD. Studies typically focus on expectant fathers' roles as a support to the expectant mother, with the primary responsibility of the fetus' health remaining with the expectant mother (Chang, McNamara, Orav, & Wilkins-Haug, 2006). Regardless of these role differences, it has been found that male partners' attitudes and behaviour may have a significant effect on the expectant mothers' behaviour at the time of conception and during gestation (Chang et al., 2006). Kerr-Correa, Igami, Hiroce, and Tucci (2007), for example, found that women were more influenced by partners with drinking problems. Social influence has also been shown to play a definitive role in heavy drinking during pregnancy: the presence of work colleagues, intimate partners, close friends, or family who drink heavily or do not disapprove of drinking during pregnancy can be related to the continuing use of alcohol by pregnant mothers (Bresnahan, Zuckerman, & Cabral, 1992).

This second section provides a brief overview of FASD, its impact in Canada, known risk factors and knowledge and awareness of FASD. While there is a general awareness of FASD among the general population, some women continue to drink during pregnancy due to their perception that they and their child are not at risk of FASD or due to broader factors that influence drinking behaviours. On the other hand, awareness of FASD and social factors can also influence a woman not to drink during pregnancy. To develop an FASD prevention campaign aimed at college-aged youth, it will be necessary to assess their level of awareness of FASD, their attitudes toward FASD, their perception of risk, and factors that encourage or discourage drinking among the college-aged population.

## **FASD Prevention among College-Aged Youth**

### *Designing FASD Prevention and Low Risk Drinking Campaigns*

When designing FASD prevention campaigns, although it is important to consider the level of understanding that drinkers have about the possible risks of consuming alcohol during pregnancy, it is also important to consider other factors that encourage drinking among a specific population. For example, Chambers et al. (2005) found that drinkers have a high level of knowledge of the effects of consuming alcohol during pregnancy; however, as previously mentioned, women are likely to drink in early pregnancy when they are not aware of their pregnancy and may continue to drink despite being aware of the potential consequences. Chambers et al. believe that this reflects the importance of social factors, such as social reinforcement, in continued alcohol use.

When launching any prevention effort, it is important to remember the wide range of social norms that influence people's behaviour in certain situations. This is particularly important when targeting the youth and young adult populations due to the importance of peers in the decision making process of these groups (May, 1995). Peer pressure exerts its influence through a number of external forces which can include education, persuasion, incentive, and coercion. Peer pressure can also exert influence through internal forces such as knowledge, attitudes, and beliefs about alcohol (Allard-Hendren, 2000; Barnes, Reifman, Farrell, & Stone, 2000; Turrisi et al., 2009; Ward & Gryczynski, 2009). Additionally, these pressures can work both positively and negatively on the behaviour of others.

In addition to focusing on social factors, it is important to include an educational component that involves creative, youth-oriented strategies. To best encourage youth participation, activities and services must be appealing to young people. A high level of engagement is one key factor for an effective strategy (Dunsenbury, Brannigan, Hansen, Walsh, & Falco, 2005; Ennett et al., 2003; Gosin, Marsiglia, & Hecht, 2003). Strategies also are most effective when they are relevant and tailored to the specific needs and learning styles of the target audience (Gilik, Halpert Schilt, & Zhang, 2001). Allard-Hendren (2000) suggests that since peer relationships are so important to young people, peer role models should also be incorporated into the education component.

There can be many barriers with respect to educating youth about health issues such as FASD (Allard-Hendren, 2000). For instance, many youth and young adults have a false sense of invincibility and a willingness to

take risks (Allard-Hendren, 2000; Arnett, Kierr, & Brown, 2008). They may also focus on the present rather than the consequences of their actions in the future (Arnett, Kierr, & Brown, 2008). In addition, many youth also exhibit feelings of ambivalence and confusion related to alcohol use based on the information that they receive from multiple sources, including their home, society, and within their peer groups. Further increasing the difficulty in reaching this age group is the scepticism, distrust, fear of rejection, and hopelessness present in some youth (Allard-Hendren, 2000).

Another simple and effective way to begin prevention and intervention efforts can be to encourage universal screening for alcohol use (Allard-Hendren, 2000). This can be done by health care providers simply by asking if patients consume alcohol, and if so, how often and how much. Asking all patients, regardless of gender, age, and socio-economic status, should eliminate feelings of being targeted. Some existing barriers to universal screening that must be overcome include health providers' discomfort about discussing alcohol use or fear that pregnant patients may discontinue prenatal care when asked about alcohol use. In addition, health care providers may not realize that youth are at-risk, and, therefore, may fail to screen youth for alcohol consumption. The most effective way to prevent FASD is to counsel women of child-bearing age before they conceive (Kvigne et al., 2003). College-age women would benefit from both education and screening before they become pregnant.

### **Programs Promoting Low Risk Drinking**

A number of programs have been developed to promote low risk drinking behaviour and reduce alcohol related harms among university students. These programs include Brief Alcohol Screening and Intervention for College Students (BASICS); The Georgetown University Model: Friends; My Student Body: Alcohol (MSB: Alcohol); Northern Illinois University Mass Media Campaign; and Check Yourself. The Early Start Plus (ESP) program, which targets pregnant women, is also highlighted. This program is a computer-based intervention which provides personalized feedback on alcohol use and identifies potential discrepancies in an individual's beliefs about alcohol use. Although the majority of these programs focus specifically on drinking and not on FASD, they may provide effective models to address FASD education and prevention.

#### *Brief Alcohol Screening and Intervention for College Students (BASICS)*

Turrise et al. (2009) conducted a multisite randomized alcohol prevention trial to evaluate the BASICS program – a primary intervention designed by the National Institute on Alcohol Abuse and Alcoholism. The BASICS program provides participants with computer-generated personalized feedback on alcohol use, beliefs and expectations, negative consequences, and behavioural strategies. The BASICS program has been linked to decreased alcohol use and consequences. In this study, the Turrise et al. (2009) tested the BASICS intervention in combination with peer-facilitators and parent-based interventions, arguing that peers and parents are the two most frequent and most important referents to whom students regularly turn for advice, support, and modelling. Peer facilitators, trained by clinical

psychologists and counselors, lead motivational interviewing discussions on alcohol use, beliefs, consequences, and behavioural strategies with participants. The parent-based intervention included a handbook that provided an overview of college drinking and associated effects, as well as strategies and techniques for communicating effectively with teens and to help teens develop assertiveness and resist peer-pressure. Parents were also provided with a questionnaire about the usefulness and quality of the handbook and whether they discussed the material with their teens. The research revealed that the parent intervention was most effective when it began before college. Parental interaction further enhanced the effects of the BASICS program, possibly by priming the students to respond to the BASICS sessions (Turrise et al., 2009).

#### *The Georgetown University Model: Friends*

The “Friends” group, created at Georgetown University, was made up of students, faculty, and administrators working together to enhance student lives and campus unity by reducing the adverse effects of alcohol use on campus (Riley, Durbin, & D’Ariano, 2005). One initiative this group developed was to create campus-wide dialogue on alcohol consumption by incorporating alcohol issues into the curriculum of a mandatory undergraduate course for health studies majors. Students looked at the alcohol culture at the university, examined the role alcohol played on campus, and how alcohol affected themselves and their peers. Overall, the majority of students who took this course felt that they were better educated on the resources available to them, could educate their friends about campus resources, and learned more about the campus culture. Riley et al. concluded that the education students received in this program allowed them to become more knowledgeable about the issues related to alcohol consumption, which allowed them to make better decisions, thus promoting academic and personal growth.

#### *My Student Body: Alcohol (MSB: Alcohol)*

Chiauzzi et al. (2005) investigated the interactive website “mystudentbody.com”. This website was designed to offer “heavy drinking” college students a brief tailored intervention to reduce their alcohol consumption. Two hundred and sixty-five students from five colleges were given motivational feedback, allowing them to identify potential problems and encouraging them to engage in risk-reducing behaviours. This website was designed to give the students general information on alcohol as well as allowing them to test their own risk and provide prevention elements. The four components addressed through this intervention were beliefs about alcohol, lifestyle issues, risks, and consequences. Students were also able to look through a number of articles, strategies, and interactive tools that were specifically related to alcohol and drinking on campus. Reductions in alcohol use occurred in all of the groups using the website. In addition, this intervention was found to be particularly effective for females and heavy binge drinkers, reducing both their peak and total consumption and the number of negative consequences related to drinking. Students with a low motivation to change were also found to have lowered their number of drinks per day compared to the control group.

### *Northern Illinois University Mass Media Campaign*

An intervention tested at Northern Illinois University (NIU) was designed to change student perceptions of social norms in order to alter binge drinking and other alcohol-related problems at the university (Haines, 1996). This NIU program focused on addressing the discrepancy between student estimates and actual rates of binge drinking using a mass media campaign designed to change student perceptions and decrease alcohol-related harms on campus. Messages were delivered to the students in the form of the campus newspaper (read by 75% of the student body daily) using advertisements and columns, press releases to the general media, flyers, and posters. Over the six-year period of the program, there was a 35% decrease in binge drinking, 31% fewer alcohol related injuries to the self, and 54% fewer injuries to other people based on annual student surveys (Haines, 1996).

### *Check Yourself*

The “Check Yourself” campaign is a pilot project of the Coalition for Action on High Risk Drinking at the University of Alberta (Wolfe & Wild, 2010). The pilot project included monthly “Campus Experiences with Alcohol” surveys and an online self-assessment tool, entitled “Check Your Drinking,” designed to support students who may be experiencing drinking-related problems; however, the resource was available for all students. The on-line tool provided students with a customized feedback report of their drinking habits compared to other university students of the same age and sex. Students with problematic drinking habits tended to overestimate the amount and frequency of alcohol use by their peers and personalized feedback was meant to correct any misperceptions. Wolf and Wild assessed the appeal and usefulness of the online tool and the different marketing strategies to promote its use. The overall uptake of the tool was relatively low; however, the students who used the tool tended to report high drinking levels, more drinking problems, and more alcohol-related harms compared to the general student population. This suggests that the target audience was more likely to use it. They also found that direct referrals, print marketing, and direct e-mail invitations were the most effective means for marketing the tool. In addition, the results of the evaluation suggest that a campaign should span the academic year since drinking habits appear to be fairly stable over the course of the year. The on-line tool was actively marketed three times over the academic year which corresponded with peaks in its usage.

### *Early Start Plus (ESP)*

Witbrodt et al. (2007) tested a computer-based intervention designed to allow pregnant women identified as “at-risk” to realize how much alcohol they actually consume by identifying the discrepancy between the amount of alcohol a pregnant woman believes she is consuming and the actual amount that she is consuming. This intervention was called the “Early Start Plus” (ESP) program and was initially tested at prenatal clinics in California. The women were able to do this through the use of calibrated glassware and beverage containers. Computer graphics were also designed to illustrate the true volume for specific alcoholic beverages. Although the intervention promoted abstinence, the program planners realized that was not an obtainable goal for all women. Thus, participants were taught

how to cut down on alcohol consumption for the duration of their pregnancy, a unique intervention approach as the majority of studies have focused on abstinence messaging. This program relied on elements that have previously been demonstrated to be effective, such as cognitive-behavioural techniques, norms clarification, education, and motivational interviewing. It also included assessments, direct feedback, contracting, negotiating, and goal setting. All women who came to the clinic were screened during an “Early Start Assessment” and those who were labelled as “at-risk” for substance use were invited to join the Early Start intervention (Witbrodt et al., 2007).

When developing this program, clinicians were initially concerned that they were giving women permission to drink and that patients who did not choose to abstain would continue to drink heavily. However, the clinicians felt that the methodology of this intervention allowed them to more effectively interact with these women, encouraging an honest dialogue about alcohol consumption. Moreover, participants who did not choose to abstain from alcohol did not feel that they were given the permission to drink and, in fact, many of these women were actually able to quit drinking, none reported daily drinking, and all of the women who did drink drank less than two drinks on the days they drank. Due to the success of this trial, the ESP program continues to be offered. It is reported that this program has increased the efficiency of screening, allowing for a truer estimate of alcohol consumption, and a more frank and open discussion on drinking (Witbrodt et al., 2007).

Based on the available research, effective FASD prevention strategies for college-aged youth should include a variety of factors that have been found to influence the behaviour of university-aged youth regarding alcohol use.

These include the following:

1. addressing social factors such as the influence of peers, social norms, and the social environment;
2. including an educational component that is relevant, creative and participatory;
3. addressing obstacles such as the sense of invincibility and risk-taking common to youth;
4. addressing the ambivalence and confusion related to alcohol use based on receiving varying information from a variety of sources; and
5. recognizing that personal beliefs and attitudes, such as scepticism and hopelessness, that may make hearing the message and behavioural changes difficult.

Some specific best or promising practice methods include:

1. universal screening for alcohol use;
2. providing brief individual feedback followed by skills training and motivational discussion/interviewing;
3. cognitive-behavioural techniques;
4. incorporating alcohol issues into curriculum;
5. providing informative and interactive websites; and
6. conducting on-campus mass media campaigns.

## METHODOLOGY

Focus groups were conducted to obtain college-age students' perceptions, attitudes, beliefs, opinions, and experiences about alcohol use, alcohol-related behaviours, and perceived risks associated with alcohol consumption; to provide appropriate knowledge on FASD; to discuss what types of programs, resources, and information may be effective for promotion of low risk drinking; and to find effective ways to disseminate information about low risk alcohol usage and knowledge of FASD.

### **Focus Group Interviews of College-aged Youth**

Focus group participants were recruited through poster advertisements, online bulletin boards on Personalized Access to Web Services (PAWS) at the University of Saskatchewan, Facebook, Planet S (a free local magazine), and word of mouth. The advertisements contained the researcher's contact information (email address and phone number) so that interested potential participants could contact the researcher. Once interested participants contacted the researcher, information was provided about focus group procedures such as the location and time of the focus group, and the length of the focus group. The researcher contacted participants a day before the focus group to confirm their participation.

Five focus groups with a total of 29 participants were conducted between March and May 2010. Krueger and Casey (2000) recommended that focus groups should be organized in a way that minimizes power differentials between participants and allows participants to feel comfortable sharing their thoughts in a socially neutral environment. Based on this recommendation, the focus groups were gender-specific, and participants were encouraged to share open and honest opinions without bias or influence. Efforts were made to match the facilitator and participants' gender to avoid any gender influence. The first "female only" and "male only" groups were facilitated by a female researcher with a female note taker; the second "female only" and "mixed-gender" group were facilitated by a second female researcher with a female note taker; and a second "male only" group was facilitated by a male researcher with a male note taker. There were eight participants in the first female group, five participants in the first male group, six participants (four female and two male) in the mixed-gender group, and five participants each in the second female and male groups.

Participants were provided with a consent form (Appendix A) prior to the group discussion. The facilitator reviewed the consent form with participants to explain the purpose of the focus group, their right to withdraw, guarantee of anonymity and confidentiality, and storage and disposal of the data.

Once the consent forms were signed, participants were given a pre-focus group questionnaire (Appendix B). The Daily Drinking Questionnaire-Revised (DDQ-R; Collins, Parks & Marlatt, 1985) and Cahalan's Drinking Quantity/Frequency Index (Cahalan's Q/F Index; Cahalan, 1970) were used as questionnaire formats. The DDQ-R

contains two questions; the first one asks participants to record the number of drinks they consumed and the number of hours they drank typically on each day of the week (Monday to Sunday) in the last 30 days. The second question asks participants to record the number of drinks they consumed and the number of hours they drank on each day of their heaviest drinking week in the last 30 days.

The Drinking Quantity/Frequency contains three questions. The first question is in a multiple choice format and asks for participants' frequency of alcohol consumption:

- I did not drink at all
- About once a month
- Two to three times a month
- Once or twice a week
- Three to four times a week
- Nearly every day, and
- Once a day or more

The second and third questions ask about the amount of alcohol the participant consumed in a typical weekend evening during the 30 days, and the largest amount consumed on any day of the week during the same period. Both surveys use self-reported measures and so it can be expected that these surveys are accurate only to the extent that participants are able to precisely recall past events.

A recorded discussion was facilitated once the participants completed the pre-focus group survey. The length of each discussion ranged from one to two hours among the five focus groups (see Appendix C for question protocol). Overall, participants were respectful of others' opinions and each shared their time equally. Session length was not related to the number of participants. Sessions were longer when participants had open discussion; one-way responses to the facilitator's questions led to shorter discussions. In general, the male only group had more group discussion among participants than the female group.

The topics covered in the focus groups were alcohol consumption at the university (where participants described the environment on campus as it related to alcohol consumption), effects of alcohol (including the benefits and consequences of drinking), and alcohol campaign awareness (where participants were asked to discuss healthy drinking campaigns of which they were aware and to share ideas on effective campaigns for preventing alcohol exposed pregnancy and FASD). At the end of the discussion, the facilitator turned off the audio recorder.

Participants completed a post-focus group survey (Appendix D) once discussions were complete. At this time they were given the chance to add written comments they felt were important or were uncomfortable sharing verbally with the group. Participants then answered a series of demographic questions such as age, marital status, ethnicity, number of children, education, and income. At the end of the focus group, the researcher provided participants with

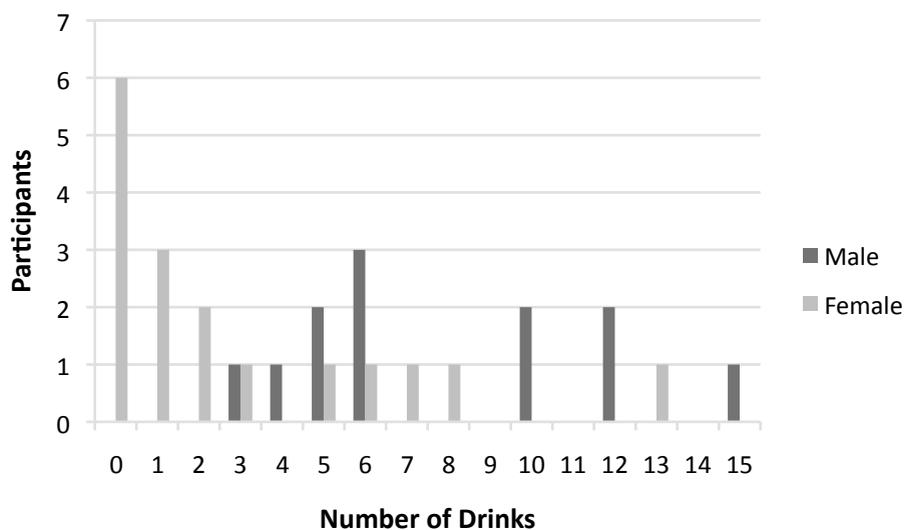
a twenty-five dollar honorarium.

The recordings of group sessions were transcribed and analyzed by the researcher. In addition, frequency distributions and significance testing of the quantitative pre- and post-focus group survey data were produced. Note that due to the small sample size, any significance testing and associated p-values reported must be interpreted with caution.

## RESULTS & INTERPRETATION

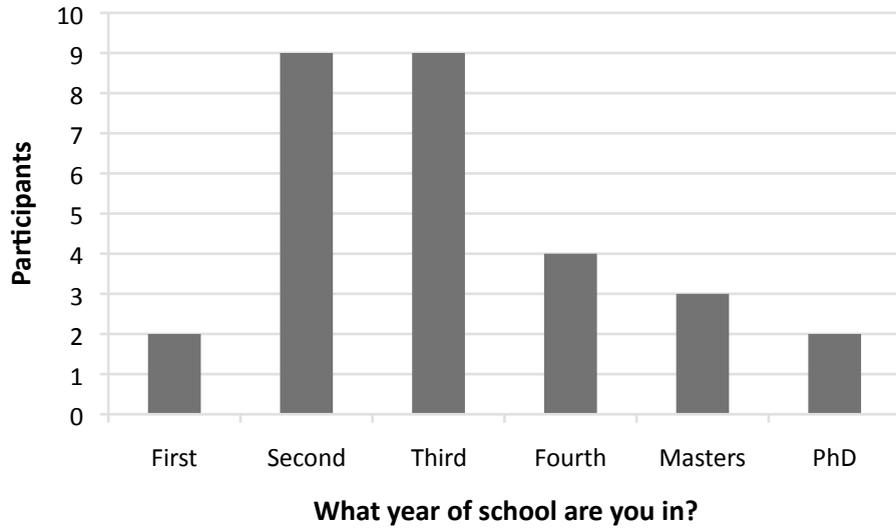
A total of twenty nine college-age students participated in one of five focus groups. Forty one percent of participants were male and 58 percent were female (n=29). Participants' ages ranged from 19 to 29 years old; the mean age was 22.8 years old (see Figure 1). There were no significant differences between the mean age of female (M=23.1) and male participants (M=22.2).

Figure 1: Age of Focus Group Participants



Participants' education levels ranged from first-year undergraduate to PhD-level graduate student; the majority of participants (75% of males and 63% of females) were either second- or third-year undergraduate students (see Figure 2). There were two first-year students, nine second-year students, nine third-year students, four fourth-year students, and five graduate students.

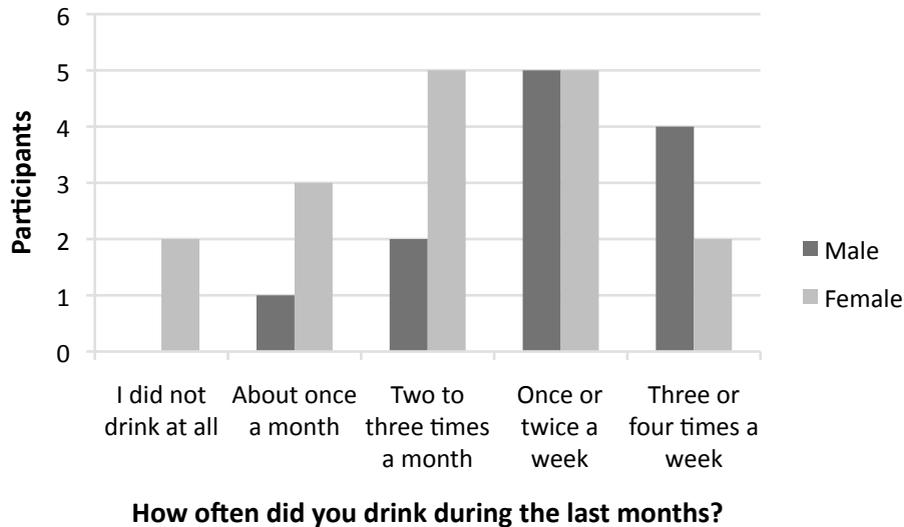
Figure 2: Focus Group Participants' Level of Education



**Pre/Post Focus Group Survey Results**

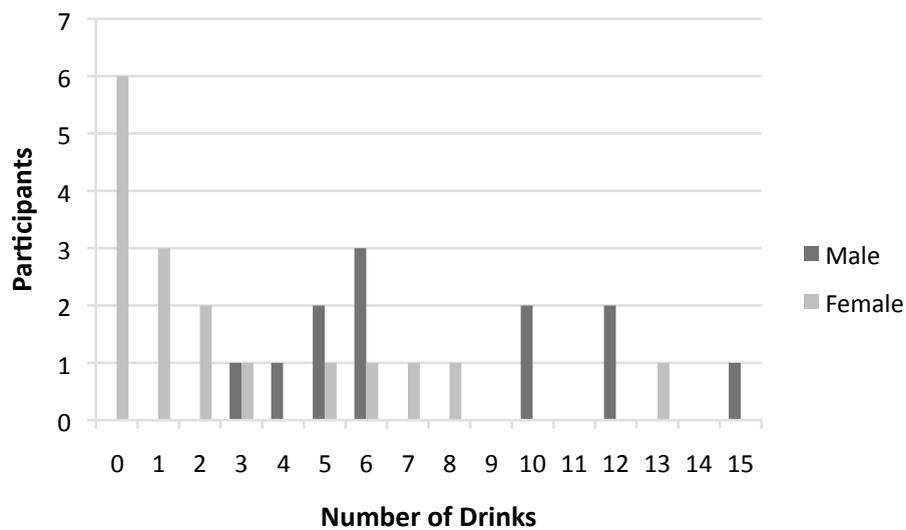
Responses ranged from “do not drink at all” to “three to four times a week”, with an average frequency of two to three times per month (see Figure 3). No participants reported drinking nearly every day. The most popular answer was “once or twice a week” (10 participants) and the second most popular answer was “two to three times a week” (7), followed by “three to four times a week” (6), “about once a month” (4), and “did not drink at all” (2). Although male participants appeared to drink slightly more frequently than female participants, the difference between male and female participants’ consumption during the last month was not large.

Figure 3: Drinking Frequency of Focus Group Participants



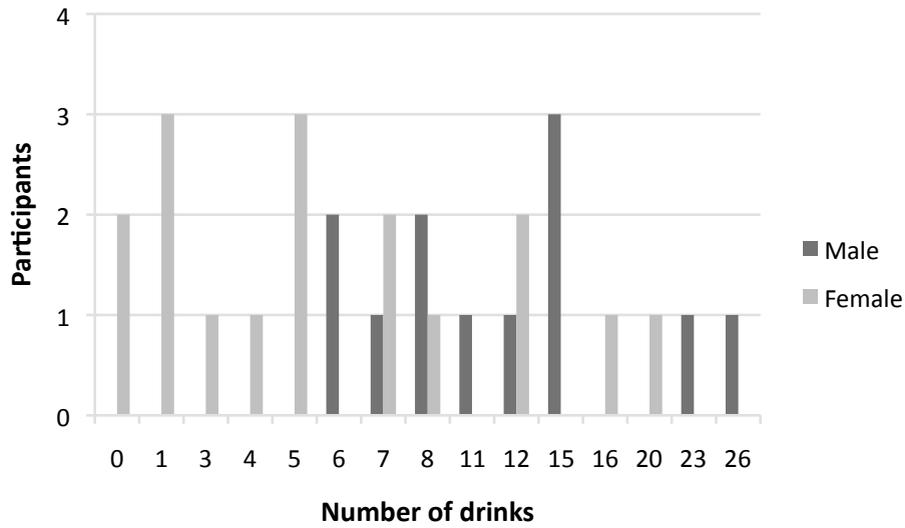
On average, on a typical weekend, participants reported drinking 4.9 drinks per evening, with responses ranging from zero to 15 drinks. Male participants appeared to drink more (M= 7.8 drinks) than female participants (M= 2.8 drinks). The majority of female participants responded that they consumed anywhere between zero and two drinks (11 participants) per evening (see Figure 4). The range of the number of drinks male participants consumed was wider than that for female participants (ranging from three to 15). Male consumption was also relatively evenly distributed; six drinks (3), five drinks (2), 10 drinks (2), and 12 drinks (2).

Figure 4: Number of Drinks on Typical Weekend, Focus Group Participants



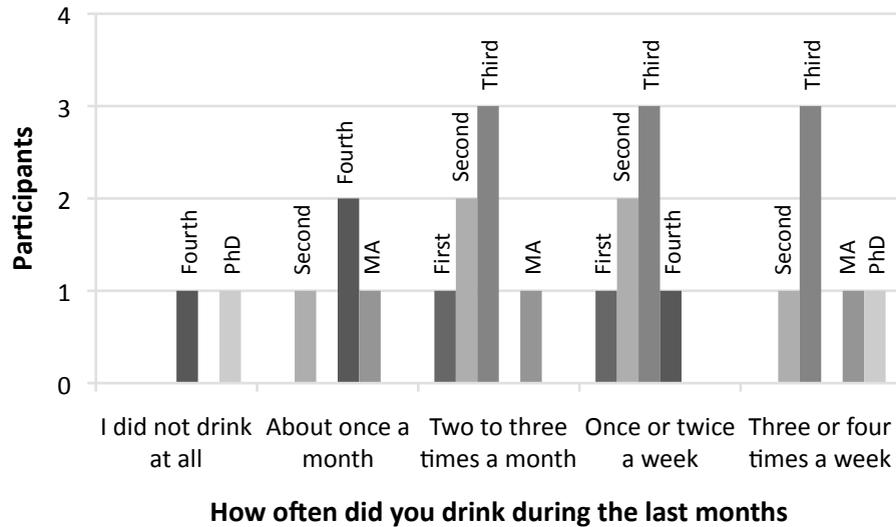
When asked “the number of drinks on the occasion you drank the most during the last month,” participants reported consuming 8.9 drinks on average, with a range of zero to 26 drinks. Male participants (M=12.6, Range=6-26) drank significantly more than female participants (M=6.2, Range=0-20,  $t(27) = 2.771, p = .01$ ). Approximately one third or five out of 17 female participants reported drinking only zero or one drink on the occasion they drank most whereas the minimum number of drinks male participants reported was six drinks (see Figure 5).

Figure 5: Number of Drinks during Most Intensive Drinking Occasion, Focus Group Participants



When comparing drinking behaviour by level of education, first-, second-, and third-year students appeared to drink more than fourth-year and graduate students during a typical weekend evening (see Figure 6). However, the difference did not appear to be substantial, and popular responses among each cohort ranged from once a month to once or twice a week. PhD students were an exception; their responses were at either extreme (“did not drink at all” or “three to four times a week”). However, the numbers of students in each cohort are too small to conclude that this is a pattern.

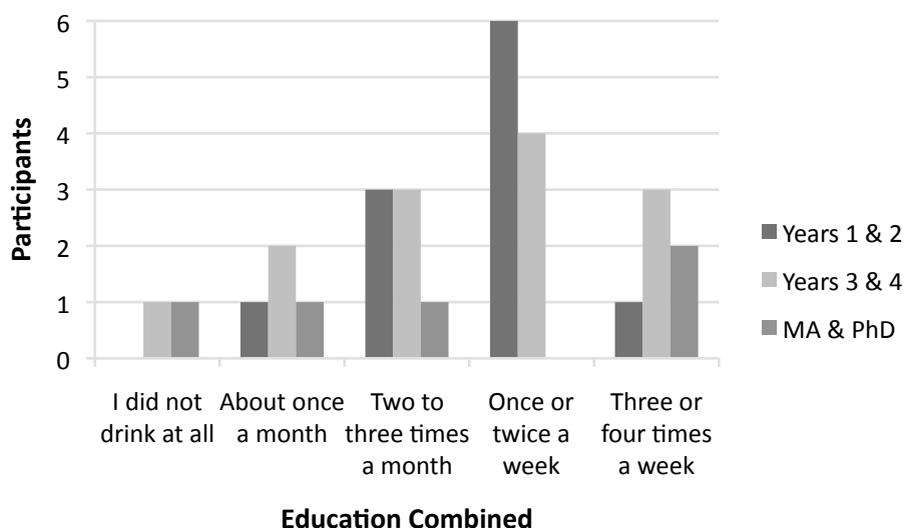
Figure 6: Frequency of Drinking by Current Education, Focus Group Participants



Because of the small number of participants in each category, some cohorts are combined for further analysis: group A, the junior group, included first- and second-year students (11 participants), group B, the senior group, included third- and fourth-year students (13 participants), and group three included graduate students (5 participants).

Figure 7 below shows that “once or twice a week” was the most popular response for undergraduate students regardless of level of education. Graduate students seemed to have a slightly different pattern from the undergraduate students, drinking either more often or not drinking at all (or only on rare occasions). However, the difference in frequency of drinking among those three groups was not significant,  $F(2, 26)=.224$ ,  $p=.801$ . The mean drinking frequencies were 3.6 drinks for junior students, 3.4 drinks for senior students, and 3.2 drinks for graduate students, with the most popular frequency of drinking being between “two to three times a month” and “once or twice a week.” Despite the popular belief among the participants that junior year students tend to drink more than senior year students, this graph shows that senior year students drink as often as junior year students.

Figure 7: Frequency of Drinking by Total Education, Focus Group Participants



For the question, “how much did you drink on a typical weekend evening,” there was no significant statistical difference in the average number of drinks reported by participants in the three groups,  $F(2, 26)=.187$ ,  $p=.831$ . The mean number of drinks for junior year students was 5.0, for senior year students was 5.2, and for graduate level students was 3.8.

The average number of drinks for other evenings (Sunday to Thursday) for both male and female was less than one drink a day. Both male and female participants responded that they drank more on Friday and Saturday than any other day of the week. For male participants, the mean number of drinks was 5.3 drinks on Friday and 6.6 drinks on Saturday.

For female participants, the mean number of drinks was 2.0 on Friday and 2.7 drinks on Saturday. For a typical weekend evening, there was a statistically significant difference in the mean number of drinks consumed by male and female participants,  $F(1, 27)=6.397$ ,  $p=.018$  for Friday, and  $F(1, 27)=5.840$ ,  $p=.023$  for Saturday. Despite the difference between male and female participants in weekend alcohol consumption level, there did not appear to be a gender-related difference in alcohol consumption during other days of the week (Sunday to Thursday).

For the question, “how much did you drink at the occasion you drank the most,” overall responses varied from zero to 26 drinks; however, there was no significant difference in how much participants drank among the three groups: junior students, senior students, and graduate students,  $F(2, 26)=.245$ ,  $p=.785$ . On average, junior students had 10 drinks, senior students had 8.2 drinks, and graduate level students had 8.2 drinks.

### **Focus Group Findings**

In general, female participants presumed they drank less alcohol than their peers. Male participants generally expressed their own alcohol consumption to be average compared to their peers. When participants rated their own alcohol consumption level either more or less than their peers, they tended to comment that their peers were not average college students. When participants compared themselves with average college students outside of their peer groups, they rated their own alcohol consumption as either average or less than average. Few people indicated that they drink more than average college students.

#### *College Lifestyle*

When participants were asked to describe the drinking environment on campus, most agreed that alcohol consumption was a part of their college life. Alcohol was not disconnected from college life and the university as an institution of learning, and units within the university such as departments or clubs were seen to promote or be conducive to alcohol use. Many participants perceived that there were no alcohol-free social activities available on campus, and felt that the university’s environment was designed to promote alcohol consumption. For example, sports games, club activities, fundraising events for departments and students’ associations/clubs, and even welcoming BBQ and beer gardens (an open-air area such as the garden or the grass yard where beer and other alcohol beverages are served) during the first week of the university were all cited as social gatherings where alcohol is present. A few participants indicated that beer gardens during the first week of the school year gave the university a poor image and gave students the “wrong message.” Participants commonly believed that beer gardens implied that the university promoted alcohol and skipping class to attend beer gardens, which put students behind in their classes. Several participants indicated that, although the university’s intention might be to welcome students with beer gardens, because most incoming new students were under-age, the event excluded most freshmen. Participants felt that if the purpose of the beer garden was to welcome students, socialize, and have fun, the event should be an alcohol-free activity so that everyone could participate. Most participants suggested that the university should stop having beer gardens during the first week of school and hold more alcohol-free social activities. One female participant commented:

... I was kind of shocked to see that there were beer gardens during the first week of school... I thought it was kind of a rude way to start the school year... I am paying like five thousand dollars to be here and you want me to get drunk my first week of school? ... I just found that like kind of irresponsible for the university. I understand they want to make it fun for all and stuff but I think that's like the wrong approach.

When participants were asked if they had ever attended a pub crawl where a group of people charter a bus, tour each pub or bar and drink in multiple pubs or bars in a single night and their reasons for attending, some indicated they attended fundraiser pub crawls to help their friends in "student societies." For those participants, the main purpose of attending pub crawls was not to drink but to support their friends and to "hang out." They stated that in order to have academic events such as guest speakers, student societies needed to have fundraising events to cover the cost—the best way to raise enough funds was usually through pub crawls, beer nights, or steak nights, activities that involve alcohol to increase attendance.

Participants also commented that university students have a uniquely flexible schedule compared to those of the same age who were not attending university, which allows students to drink more on weekdays. For example, one participant mentioned that she had no class on Friday; therefore, her weekend started on Thursday night so she usually went out to drink with her friends on that night. Participants who attended specific drinking-related events such as beer nights or pub crawls usually drank more than they would drink on a typical night. They also stated that they drank more on those occasions regardless of the day of the week. For example, many participants stated that if a pub crawl was on Tuesday night, they would still drink a lot even if it was the middle of the week. The general consensus among participants was that college-age students drank around 10 drinks a night at events and parties whereas they drank only one or two drinks a night on regular school days. One participant described the way people typically drank on beer nights and pub crawls as "like an all you can eat buffet." She stated, "You don't really need that third and fourth plate of food, but you are like, I paid for it, and so they are like want to get the most of their money worth."

When participants were asked to discuss how often they thought most students drink on average, they commented that they consumed alcohol much more in their early university life than in upper years. They commented that the reason for this was that they had more obligations and responsibilities such as homework, assignments, or jobs in upper years and they needed to commit to their work or school more than when they were freshmen. They felt that they could not "fool around" because their workload was heavier in upper years, whereas the workload was less in lower years. In addition, participants discussed how the environment in which they preferred to drink changed as they got older. Specifically, older participants preferred going to quiet bars where they could drink alcohol and socialize with their friends, rather than in dance clubs where constant loud music and dancing on the floor were the main environments when they were younger.

### *Reasons for Drinking*

There were a number of reasons participants consumed alcohol. Some of the more popular reasons were to fit in, to be social, to have fun, to relieve stress, and to relax. Participants also reported drinking alcohol because “alcohol acts as a social lubricant,” they “like the taste,” and “social/peer pressure.” One participant stated that because her friends drank, she wanted to try it as well.

When asked about the benefits of alcohol, some participants responded that there were no benefits, while others felt there were many. Perceived benefits were often related to their reasons for drinking. Some popular benefits related to drinking were that it makes them honest, makes them bold, relieves stress, acts as relaxant, makes them feel less anxious, and prevents some diseases. One participant stated that there was an automatic association between alcohol and stress—for example, when people want to relieve stress after a bad day and have a good time, alcohol will reduce stress. All the perceived benefits cited by participants were associated with psychological well-being with the exception of one response about the health benefits of alcohol. The participant who mentioned alcohol’s health benefits stated that one or two drinks every day helped to protect against cardiovascular disease, Type II diabetes, arthritis, and kidney stones. She also mentioned that her parents drank red wine in moderation, and that it was supposed to have a health benefit.

On the other hand, negative consequences included the social-emotional and physical effects of alcohol. Some popular responses were meeting people they would not meet if they were sober, having black outs (not remembering what they did or what happened), making regrettable choices or actions, gaining weight, being hung over, missing classes, driving drunk, having unprotected sex, fighting, having alcohol poisoning, and relationship problems. An interesting comment made by some participants was that there were no benefits to alcohol consumption—only negative consequences—yet people keep drinking. Most participants acknowledged that alcohol causes more problems and has more negative consequences than benefits, yet they chose not to stop drinking for the various reasons mentioned in the above discussion of the perceived benefits of alcohol use.

When participants were asked about what effect alcohol consumption can have on a student’s college career, most participants stated that alcohol interfered with class attendance and motivation to do homework, but also added that alcohol affected people differently. Some participants commented that mild or moderate drinking can actually help performance. For example, one female participant stated that “professors talk about having a glass of wine when they mark assignments or papers because it makes them less irritated.” She also stated that when she was working on and feeling anxious about her master’s project, having shots of alcohol in her coffee gave her more confidence.

### *Alcohol and Pregnancy*

When participants were asked if they knew what FASD was and reasons that women may drink during their pregnancy, there were no differences between female and male participants’ responses. Common responses included that pregnant women consumed alcohol due to habit or addiction, with others commenting about not knowing of the

pregnancy at the time of drinking.

Reasons participants gave for drinking in general differed from the reasons they gave for drinking during pregnancy. While the general reasons were associated with positive social benefits (e.g., to relax, relieve stress, be bold, and have fun), the reasons participants drank during pregnancy were less positive. Common reasons given for people drinking during pregnancy were addiction or alcohol dependency, stress relief, and being unaware of the pregnancy. Participants also believed that strain on a relationship, peer/social pressure, and being in the habit of drinking were reasons. Some participants cited that women may drink during pregnancy because their friends drank when they were pregnant, but their children appeared healthy. So, those women felt that they too were low risk. Participants seemed to be more understanding of situations where pregnant women continued their “normal” drinking lifestyle if they truly did not know if they were pregnant.

All participants, both male and female, stated that if they were pregnant, they would not drink alcohol. However, when participants in the male-only group with the male facilitator were asked, “should college students be concerned about having a baby with FASD?” none of the male participants at that focus group were concerned about FASD. , Males seemed to believe that they were excused from this issue since they could not become pregnant themselves. One participant expressed that “Yeah, I don’t think anyone’s concerned about it, I mean, especially here. There’s nothing but males here...” Another participant stated, “...once they’re pregnant that might be more relevant but it’s not exactly the demographic for that around here.” One exception is that one male participant in the male-only group with the female facilitator mentioned he would support his girlfriend if she was pregnant.

Alternatively, female participants took the issue more personally and commented that not only would they not take the risk of drinking alcohol during pregnancy, but they thought that all women should be concerned about drinking while pregnant or engaging in risky activities where they could become pregnant. One female participant stated, “Personally I would not drink from the time I was pregnant till the time I gave birth and then finish breastfeeding.” Other participants also shared this sentiment: “Personally, when I was pregnant, like, even when I was trying to get pregnant, I completely quit in that I didn’t drink until I was done breastfeeding.”

The general consensus of female participants was that they would not drink alcohol if they became pregnant because they would not want to risk their child suffering from FASD for the rest of their life although many had seen their friends drink during their pregnancies. They believed that, in general, if women were planning to have babies, they should not drink alcohol. They stated that it was only a little over a year including the breastfeeding period that women needed to abstain from alcohol while children with FASD would suffer their whole life; thus, the trade-off was not worth the risk. They emphasized that if people cared about their children more than they cared about themselves, they would not drink during pregnancy; if they could not abstain from alcohol for such a short period of time, this indicated that they were more concerned about their own well-being than their children, and they should not plan to have babies.

Knowledge of the relationship between alcohol use and pregnancy varied among participants. Some partici-

pants had ideas that the occasional use of alcohol was acceptable during pregnancy, that certain types of alcohol were actually beneficial to the fetus, and that there was a lower risk to drink in some trimesters. They did not indicate which types of alcohol were beneficial to drink (some participants guessed red wine would be safe to drink) or in which trimester(s) it would be low risk to drink alcohol. Other participants indicated that no level of alcohol consumption was acceptable during pregnancy and that pregnant women should abstain from alcohol until they finished breastfeeding.

### *Fetal Alcohol Spectrum Disorder (FASD)*

Knowledge of and concern about FASD varied among participants. Most participants seemed to know that FASD had something to do with alcohol but the depth of knowledge beyond that point varied: some participants did not know what FASD stood for, some had heard of FASD but did not know the exact cause of FASD, others were unaware of what exactly FASD was, while others did not associate alcohol consumption with FASD. Some participants understood that alcohol consumption during pregnancy caused FASD but had misinformation such as periods in which it is low risk to drink during pregnancy. Some participants expressed the view that having a child with FASD was not an issue for college students. There were a few participants who indicated that FASD was an issue and they emphasized that everyone should be concerned if women were pregnant or engaged in risky activities such as unprotected sex. Some of these participants also indicated that women should plan their pregnancy to reduce the risk of “accidental alcohol consumption.”

The second female group and male group appeared to be more personally concerned about FASD than other groups. Their comments indicated that, if women were not responsible by abstaining from alcohol while being pregnant, any woman who drank alcohol during pregnancy was at risk of having children with FASD. College-age students, including themselves, were no exception. They commented that any pregnant woman should be concerned about FASD—not just college students or a particular sub-group because “you are no different from any other person.” Participants in the other focus groups tended to suggest that FASD is a problem that affects those outside their group (i.e., well-educated college-age students). These participants felt the problem is prevalent among poor, Aboriginal populations, and the west side of Saskatoon. They did not feel college-age students are at risk of having a child with FASD because they are “too smart” to let that happen to themselves. These participants felt that prevention programs or campaigns should target “at-risk” groups such as Aboriginal populations, individuals with low-income, and residents of the west-side.

From these focus group discussions, it is apparent that although college students participating in this research had some sense of the effects of alcohol on pregnancy, their level of knowledge was very limited. Some participants were very knowledgeable about the relationship between alcohol and FASD, and many expressed concerns such as “alcohol is poison and bad for you” so they would not risk drinking during pregnancy. While these participants had some sense that alcohol was bad for the fetus, they did not know why alcohol was bad or how it affected children.

## *Campaigns*

Most participants reported that they had seen some forms of social marketing campaigns related to alcohol, but these were mostly focused on drinking and driving. Participants described TV commercials or posters which were related to alcohol abuse but did not remember sponsors or details of the campaigns. They described these television campaigns (about driving when intoxicated): where “they put the beer glass in front and then it showed after you drink each glass of beer, how hard it was to see”; a vodka commercial that stated “it is not fun if somebody get hurts drinking”; one that showed people vomiting (believed to reduce youth binge drinking); another that stated, “if you can read this in a moment, then you are fine, but if you cannot, just go home”; one that recommended limiting the number of drinks: “the next day the employer calls because the woman is not going to the office, and the boss said there is no need to come here, you are fired.”

Participants felt that rather than depicting celebrities, campaigns should be about real, everyday life experiences and people. Participants agreed that commercials such as the one described above with the woman who was fired from her job was more convincing and gave a more compelling message than celebrities making comments. Participants believed there was some truth in that specific commercial and that it looked like someone’s real life experience. Another comment participants made was that a presentation by the president of the Students’ Union on healthy drinking might be more convincing than comments made by Hollywood stars.

Many participants discussed the similarities between smoking and drinking. For example, in the past, smoking was widely accepted and normalized. Currently, the image of smoking is rather negative and smokers are stigmatized. Participants commented that healthy drinking campaigns should follow a similar approach to anti-smoking campaigns. From this perspective, they believed that campaigns should be educational rather than stigmatizing, which they felt forced the audience’s choice of what to do. For example, the participants commented that current drinking campaigns were sensational, unrealistic, and unlikely to work because they promoted abstinence. Some mentioned that strong messages, which potentially stigmatize people, might discourage those who drank alcohol from seeking professional help, which creates more problems. For example, many participants reported that scaring people by providing them with the worst possible scenario, and/or forcing them to be abstinent, were ineffective. Participants felt that stigmatizing or labelling people only prevented pregnant women who drank from getting appropriate help when necessary. In addition, the participants felt that people should be given appropriate information to make informed choices rather than stigmatizing them through advertisements. Moreover, when necessary, anyone that had appropriate knowledge could provide this information to their pregnant friends.

Most participants were aware of what FASD was, but they did not know important details. Without having correct information, they could not advise their friends who were pregnant or make informed decisions when they themselves were pregnant. Therefore, some suggestions for effective campaigns were presentations to high school students and promoting alcohol-free activities on campus. Participants agreed that drinking habits start around high school, so the earlier students were educated, the better. They believed that it might be too late for educational approaches to be effective after students have started university. Some suggestions on what “not to do” were bulletin

board poster presentations and fear-based campaigns. Participants felt that bulletin boards were overloaded with information in general and conveyed that they tended to look only for specific information, so other posters were frequently ignored. In addition, many indicated that advertisements made them think for a while but did not leave a lasting impression.

### **Focus Group Conclusions and Recommendations**

Twenty nine college-age students participated in one of five focus groups to discuss issues surrounding alcohol use and its effects. First, participants discussed alcohol in relation to college life and habit of drinking. Many participants were somewhat dissatisfied with what they felt was the university's pro-alcohol environment. The consensus among participants was that they consumed more alcohol in early university life than in upper years. Their preferred drinking environment changed as they got older, from dance clubs to quieter bars. Participants also tended to consume alcohol a lot more at events or parties than on typical days, regardless of the days of the week.

When discussing alcohol's effects, many participants associated alcohol with negative consequences before benefits. They also spent more time talking about negative consequences than benefits. However, pros and cons of alcohol consumption were cited; for example, participants discussed how beneficial a moderate amount of wine was for one's psychological well-being or health.

The focus group participants were not highly knowledgeable about FASD. Most participants seemed to know that FASD has something to do with alcohol; however, the depth of knowledge about FASD beyond that point varied. It was clear from the group discussion that not many participants were confident in their knowledge of FASD. Participants felt educational campaigns were essential to spread appropriate information about FASD to college-age students and/or the general public. Specifically, information such as the definition, causes and effects, and prevention strategies were something most participants believed important but missing in FASD campaigns.

The general consensus was that both male and female participants would not drink alcohol if they were (or could become) pregnant because they did not want their child to suffer from FASD although they had seen their friends drink during pregnancy. Female participants seemed to be more concerned about FASD than male participants as quite a few male participants felt that, because males cannot become pregnant, FASD or drinking during pregnancy was not a major concern for them.

Most participants believed that if people were planning to have babies they should not drink even if they were not yet pregnant. In addition, participants tended to individualize the problem of drinking during pregnancy, discussing how they believed that a woman who cared more about her child than herself would not drink during pregnancy.

Participants in the focus groups repeatedly criticized campaigns that promote abstinence suggesting that campaigns should not stigmatize people. Scaring people with the worst possible consequences and/or forcing them to be abstinent were seen as ineffective. Instead, participants felt campaigns should be educational and provide the public with actual, useful, and real information that is easily remembered. Participants felt that people would make

the right choices if they were given accurate information. In general, participants were aware of what FASD was, but they did not know important details. Without having correct information, they could not advise their friends who were pregnant or make informed decisions when they themselves were pregnant.

The pre/post survey analyses showed that education level was not related to the amount and frequency of drinking among college-age students although the small sample size means these findings are not conclusive. Gender seemed to be related to the amount of drinking among college students but not the frequency of drinking. Males appear to consume more alcohol than female participants at one sitting. However, when only those who drink more regularly were compared, the gender difference disappeared.

An outline for awareness campaigns is provided below. This outline was developed based on feedback from the participants during the focus groups as well as the researchers' observations of trends in participant knowledge about FASD and related issues. Following the outline, each recommendation is elaborated in detail:

- Target populations
  - College-age students
  - High school students
- Contents
  - Education
    - Safety of alcohol during pregnancy
    - Alcohol's effects on the body (both on mother and fetus)
    - Popular beliefs and misconceptions
    - Correct, useful information
  - No or limited stigmatization
  - Easy and useful take home messages
  - Treat youth with respect
  - More focus on promoting birth control and less on alcohol reduction

Both college-age students as well as high school students should be the target populations for FASD prevention campaigns. Participants observed that drinking habits are often developed while youth are in high school and that university might be too late to facilitate substantial change. Providing youth with information on low-risk drinking and the effects of alcohol (FASD and other physical implications) while in high school might be more likely to increase informed decision-making upon entering college. Educating youth while still in high school could also cover a broader range of target populations than targeting only university students because many individuals do not attend university.

It was observed that the knowledge of FASD among college students was limited and further knowledge

promotion is essential. It is clear from the focus group discussions that students could benefit from an educational campaign, as some participants were misinformed that it was okay to drink during certain trimesters of pregnancy and that certain types of alcohol were safer than others. It was also indicated that education on the effects of alcohol on the body was essential among this population since no participants seemed confident about their knowledge on the effects of alcohol.

As most participants indicated, effective campaigns should not stigmatize people; rather, they should focus on providing useful information which can be easily remembered and trusted. The information in campaigns should address popular beliefs or misconceptions and provide correct, useful information to allow people to make informed decisions. Some examples of campaigns on FASD which focus on education that participants recommended were information-sharing presentations at high schools and university orientations. Information should include the effects of alcohol on one's body and the fetus as well as information on the causes, effects, and prevention of FASD. In addition, as suggested by the focus group participants, campaigns should portray real life experiences and real people rather than using celebrities in advertisements. For example, consuming wine in moderation is good for one's body as many believe; however, it does not mean wine is also good for the fetus. It may also be advisable to include detailed information on the reasons that wine is good or bad. Providing both positive and negative information (not focusing on the negative) is the key for people to make informed decisions about their own alcohol consumption.

The message "drink responsibly" may be a more effective message than encouraging students to reduce their alcohol consumption. Many participants criticized the current major campaigns which focused on alcohol abstinence and/reduction. The participants also seemed resistant to being told what to do; however, they indicated that if they were treated with respect and given a choice, they would be more likely to behave positively. Future campaigns should focus more on birth control in concert with a "drink responsibly" message.

Finally, most participants suggested that the university should consider having more alcohol-free social activities during the first week of school. Participants believed the university events involving alcohol send the wrong message to students, especially freshmen. The first impression is very important, and the university does not want to imply that university life is about drinking alcohol. In addition, excluding certain groups during welcome week defeats the intent of welcoming new students. It may not be easy to stop having beer gardens during the first week of school; however, the university could promote or raise awareness of alcohol-free events. For example, outside organizations could collaborate with the University to provide more alcohol-free social activities in order to include all students, such as free pancake breakfast and BBQ during the welcome week.

## **Drinking Patterns of College Youth and FASD Awareness: Online Survey of College-Aged Youth**

### *Recruitment*

Following ethical approval from the University of Saskatchewan Behavioural Research Ethics Board (Beh-REB), participants were recruited through Personalized Access to Web Services (PAWS) bulletin board, poster ads on campus

at the University of Saskatchewan and the University of Regina, and an email sent out through the Community-University Institute for Social Research (CUISR) and the Saskatchewan Prevention Institute listservs/email lists.

### *Measures*

The survey items were developed using the information obtained from the focus groups conducted in Spring 2010. The survey contained 60 items (see Appendix E for the consent form and Appendix F for the online survey questionnaire). Some questions were targeted to a specific group of people (i.e. gender, education level, or other demographic specific), so not all 60 items were meant to be answered by each participant. Items included both close-ended multiple choice questions and open-ended questions. Multiple choice questions allowed participants to include an alternative answer by choosing and responding to the response choice other.

### *Procedure*

The online survey was uploaded on surveymonkey.com at the beginning of August 2010, and the survey was available to participants until the end of September 2010. For participants to access the online survey, they needed to type in or paste the URL for the survey into their Internet browser. After the participants opened the survey, the consent to participate page appeared. After reading the description, the participants had a choice of participating in or withdrawing from the study. If they responded “yes” (participate), the survey continued with further questions. If they responded “no” (do not participate), the survey directed them to the last page of the survey. Those who agreed to participate in the study were able to quit the survey at any in time, and were allowed to skip any of the survey questions.

## **Online Survey Findings**

In total, 543 participants accessed the survey, of which four participants did not agree to participate in the study on the consent page. A total of 539 participants agreed to participate in the study, of which six participants were removed from the analysis because their stated ages were outside of the target age range of 19 to 29 years old. Additionally, 155 respondents did not disclose their age and were subsequently removed from the analysis, leaving a total sample of 378 participants. The age of participants included in the analysis ranged from 19 to 29 years old with an average respondent age of 22.19 years old (SD=2.58), and a median age of 22. Of these respondents, the majority were women (n=284, 75.1%), and men were under-represented (n=94, 24.9%).

Table 1 shows ethnicity and education levels of participants. Approximately 96 per cent (n=365) of the respondents indicated their ethnicity; most respondents indicated that they are Caucasian (n=321, 87.9%), people with Asian heritage made up an additional 5.2 per cent (n=19), First Nations (n=10) and Metis persons (n=12) represented a combined total of 6 per cent, and African-Canadians made up an additional 0.8 per cent (n=3). Finally, 310 participants (82%) disclosed their education level (see Table 1) and 375 participants shared the educational institution attended: 371 (98.1%) were attending the University of Saskatchewan, two (.5%) were attending

the University of Regina, two (.5%) were attending the Saskatchewan Institute of Applied Science and Technology (SIAST).

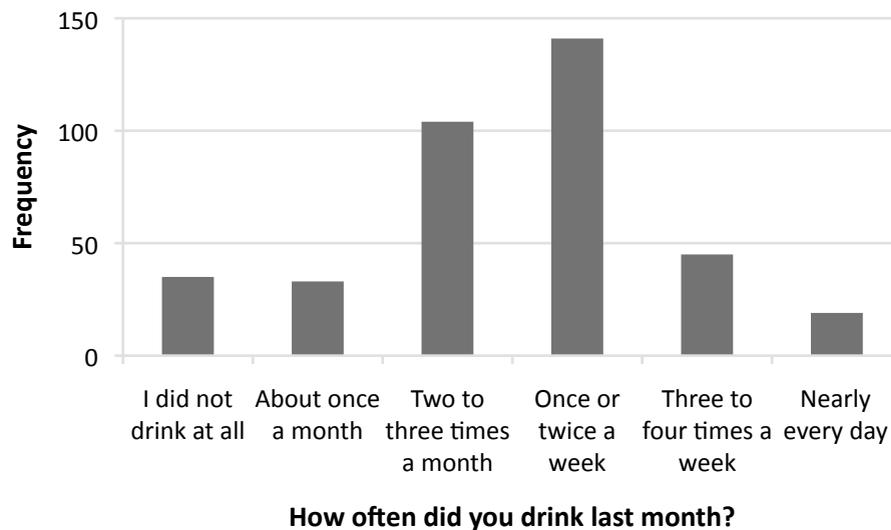
Table 1: Ethnicity and Education Level, Online Survey Participants

<b>Years of post-secondary</b>					
<b>Education</b>	<b>N</b>	<b>%</b>	<b>Ethnicity</b>	<b>N</b>	<b>%</b>
Third	105	33.9	Caucasian	321	87.9
Fourth	100	32.3	Asian	19	5.2
Second	51	16.5	Metis	12	3.3
First	39	12.6	First Nations	10	2.7
PhD	15	4.8	African-Canadian	3	0.8

*Drinking Habits*

Figure 8 shows the frequency distribution of participants who had consumed alcohol within the 30 days prior to the survey. A total of 376 participants responded to the question, “Do you drink alcohol?” Three hundred and forty-four (91.5%) of them responded yes. For the question, “How often did you drink alcohol during the last month?” 377 participants responded, and among those respondents the most frequent response was once or twice a week (37.4%, n=141), and the second most frequent response was two to three times a month (27.6%, n=104). Thirty-five (10%) respondents indicated that they did not drink at all.

Figure 8: Histogram Detailing Frequency of Alcohol Consumption, Online Survey Participants



As illustrated in Tables 2 and 3, participants tended to drink more on Friday and Saturday than any other days of the week consuming on average 2 drinks more during both typical and heavy drinking weeks. Additionally, respondents reported participating in drinking activities for longer periods of time on weekends in both typical and heavy weeks of alcohol consumption.

Table 2: Number of Drinks and Hours Spent Drinking during an Average Week, Online Survey Participants

		Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	Sun.
<b>Number of drinks</b>	<b>Mean</b>	1.86	2.29	2.91	2.90	4.27	4.81	2.75
	<b>Mode</b>	1	1	1	1	2	2	1
	<b>Std. Dev.</b>	1.568	2.095	2.577	2.836	3.328	3.691	2.856
<b>Hours spent drinking</b>	<b>Mean</b>	2.22	2.58	2.47	2.97	3.97	4.31	2.59
	<b>Mode</b>	1	1	1	1	4	5	1
	<b>Std. Dev.</b>	1.744	3.094	1.643	3.239	1.907	2.266	1.889

Table 3: Number of Drinks and Hours Spent Drinking during a Week of Heavy Alcohol Consumption, Online Survey Participants

		Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	Sun.
<b>Number of drinks (heavy week)</b>	<b>Mean</b>	3.47	4.19	4.16	4.99	6.47	7.25	5.7
	<b>Mode</b>	1	2	1	1	4	6	1
	<b>Std. Dev.</b>	2.927	3.864	3.725	4.272	4.174	4.794	5.082
<b>Hours spent drinking</b>	<b>Mean</b>	3.01	3.30	3.33	4.02	5.23	5.82	4.82
	<b>Mode</b>	2	1	1	1	5	4	2
	<b>Std. Dev.</b>	1.991	2.367	2.334	2.977	3.082	3.385	3.881

Furthermore participants tended to rate their own alcohol consumption as less than their peers (see Table 4). For example, participants estimated that during typical weekends they consumed 4 drinks and that the highest number of drinks they consumed on any occasion during the past month to be 6 drinks.

Table 4: Number of Personal Drinks Consumed vs. Perceived Number of Drinks Consumed by Peers, Online Survey Participants

		Typical wknd.	Most drinks
<b>Number of drinks (self)</b>	<b>Mean</b>	4.00	6.61
	<b>Mode</b>	2	0*
	<b>Std. Dev.</b>	3.925	5.61
<b>Number of drinks (peer)</b>	<b>Mean</b>	8.37	11.8
	<b>Mode</b>	5	10
	<b>Std. Dev.</b>	11.894	16.487

\* Please note that 0 is the most frequently reported number in response to this question; however, more than 80% of respondents report a number of drinks greater than 0.

However, they presumed that their peers consumed close to 8 drinks during typical weekends and upwards of 11 to 12 drinks on the heaviest drinking occasion during the past month. This pattern continued when the participants were asked to consider their drinking habits in light of the habits of a typical university student. Only 33 (8.8%) respondents felt that they drank more than the average university student, while 245 (65%) felt that they drink less. Twenty six percent felt that they drink about the same as an average university student.

When the participants were asked if they thought junior students (first- and second-year undergraduates) tend to drink more than senior students, 286 respondents (75.7%) said yes. However, contrary to the popular belief, less than half of the senior students (36.5%, n=138) responded that they drank less than during their junior years. The rest of respondents either claimed to drink more (16.1%, n=61) than during their junior years or continued to consume the same amount (24.1%; n=91). When junior students were asked about drinking patterns of senior students with whom they went out to drink, their responses corresponded with senior students' responses described above.

The majority of participants (61.9%, n=234) believed that pub crawls should be promoted by the university. Accordingly, only 20% of participants (n=75) felt it was either very problematic or somewhat problematic for the university to promote or encourage alcohol-related events. On the other hand, about 40% of the participants (n=153) felt that the university's role in promoting or encouraging alcohol-related events was somewhat or very favourable. This contrasts with the results of the focus groups conducted as part of this research project, wherein the majority of participants indicated that they attend the pub crawl to support friends' fundraising event; however, they often stated that the university should promote alcohol-free activities on campus and should not have a beer garden during "Welcome Week."

### *Purpose, Benefits, and Consequences of Drinking*

In this section, the participants were allowed to check off any response choices to each item that they felt was applicable to their own drinking behaviour (see Table 5). When participants were asked their reasons for drinking alcohol, the most popular response was "to socialize" (85.9%, n=325), followed up by "to relax" (48.6%, n=184). Participants also had the option to explain other reasons for drinking; amongst the most common responses were work related reasons and that participants enjoyed the taste of various alcoholic beverages, particularly wine and beer. The details about participants' reason for drinking are illustrated in Table 5.

Table 5: Reasons for Drinking, Online Survey Participants

<b>Reason</b>	<b>N</b>	<b>%</b>
To socialize	325	85.9
To relax	184	48.6
To get drunk	133	35.2
Drinking is part of college culture/life	82	21.7
Too much stress	64	16.9
Do not want to be sober among drunk friends	62	16.4
Peer/social pressure	48	12.7
Nothing else to do	32	8.4

Participants were also asked about their thoughts on the benefits of drinking alcohol (see Table 6). The most popular response was “to have fun” (76.2%, n=288). The second and third most popular responses were consistent with the primary reason people indicated that they drank (i.e. “to socialize”). Roughly half (49.7%, n=188) of the respondents indicated drinking activities benefited them by helping to meet people, and just under half (44.4%, n=168) felt alcohol consumption made them more courageous. Twelve participants commented that there were not any benefits associated with alcohol, whereas six participants mentioned the health benefits associated with alcohol in other.

Table 6: Benefits of Drinking, Online Survey Participants

<b>Reason</b>	<b>N</b>	<b>%</b>
Have fun	288	76.2
Meet people	188	49.7
Become more courageous to converse with friends and/or dance	168	44.4
Relieve stress	154	40.7
Feel less anxious	136	36.0

As a follow-up to questions about the benefits of alcohol consumption participants were asked what they generally thought might be the negative consequences of alcohol consumption (see Table 7). The majority of participants (87.6%, n=331) felt that having a hangover was a negative consequence of drinking alcohol. The second most popular response was spending too much money (87%, n=329). The third most common response was making regrettable choices or doing something they regretted (321 responses or 59.8%).

Table 7: Participant-Indicated Negative Consequences to Consuming Alcohol, Online Survey Participants

<b>Consequence</b>	<b>N</b>	<b>%</b>
Hangovers	331	87.6
Spending too much money	329	87.0
Regrettable actions and/or choices	294	77.8
Weight gain	239	63.2
Blacking out	226	59.8
Experiencing negative emotions (e.g. angry, sad, depressed, etc.)	220	58.2
Fighting	194	51.3
Alcohol poisoning (e.g. health problems, death, etc.)	190	50.3
Missing classes, work and/or other obligations	187	49.5
Drunk driving (DUI)	185	48.9
Unprotected sex	169	44.7
Relationship problems (parents, friends, coworkers, etc.)	168	44.4
Trouble with the law	158	41.8
Meeting people you would not want to meet when sober	131	34.7

Participants were also asked if they have ever personally experienced negative consequences due to drinking alcohol (see Table 8). Their own experiences followed a similar pattern to their responses about the general negative consequences associated with drinking. The most common response was having a hangover (75.9%, n=287) followed by “spending too much money” (68.5%, n=259) and “regrettable actions or choices” (64.8%, n=245).

Table 8: Respondents’ Experiences with Consuming Alcohol, Online Survey Participants

<b>Consequence</b>	<b>N</b>	<b>%</b>
Hangovers	287	75.9
Spending too much money	259	68.5
Regrettable actions and/or choices	245	64.8
Blacking out	171	45.2
Experiencing negative emotions (e.g. angry, sad, depressed, etc.)	168	44.4
Missing classes, work and/or other obligations	124	32.8
Meeting people you would not want to meet when sober	104	27.5
Weight gain	104	27.5
Relationship problems (parents, friends, coworkers, etc.)	92	24.3
Fighting	88	23.3
Unprotected sex	82	21.7
Drunk driving (DUI)	64	16.9
Trouble with the law	35	9.3
Alcohol poisoning (e.g. health problems, death, etc.)	34	9.0

### *Alcohol Use and Pregnancy*

In this section, participants were asked to check off all applicable response choices to the question “Why do you think some women in college drink during pregnancy?” (see Table 9). The most popular response was not being aware of being pregnant (84%, n=318). Other popular responses included addiction (62.2%, n=235), stress of life/school (57.4%, n=217), and habit (55.8%, n=211).

Table 9: Reasons a College Woman Might Drink During Pregnancy, Online Survey Participants

<b>Reason</b>	<b>N</b>	<b>%</b>
Not aware of being pregnant	318	84.1
Addiction	235	62.2
Stresses of life/school	217	57.4
Habit	211	55.8
Strain on relationships	147	38.9
Not knowing that drinking alcohol can harm the fetus	123	32.5
Peer/social pressure	116	30.7
Certain types/amounts of alcohol are beneficial for pregnancy and fetus	22	5.80

Participants were also asked about how they would react to a pregnant spouse, partner, or friend ordering alcoholic beverages (see Table 10). The overwhelming majority of the participants indicated that they would not encourage this behaviour and not drink in order to support the pregnant women.

Table 10: Participant Indicated Responses to a Pregnant Acquaintance Consuming Alcohol, Online Survey Participants

<b>Response</b>	<b>N</b>	<b>%</b>
Support her by not drinking yourself	305	80.7
Insist that she does not drink	270	71.4
Encourage her not to drink	251	66.4
Remind her that she is pregnant	248	65.6
Remain silent	9	2.4
Encourage her to drink	0	0

A set of questions was presented to female participants asking them to reflect upon the factors that may lead them to drink while pregnant (see Table 11). The data for two male participants who completed these questions was removed. When the female participants were asked about their own potential pregnancies, their responses were very different from their belief about why other women might drink. For example, for the question, “What are the rea-

sons that you might drink alcohol during your pregnancy?” the majority of participants (76.2%, n=214) responded that they would drink because they were not aware of being pregnant. This was the only response option to receive any sort of a significant response; less than 10 per cent of the participants indicated that stress, habit, addiction, peer pressure, or other reasons might contribute to them consuming alcohol while pregnant. Furthermore, when questioned about the likelihood of drinking during their own pregnancy, most participants (95.7%, n=269) indicated that it would be very unlikely, and none of the participants responded very likely or somewhat likely.

Table 11: Perceived Reasons for Consuming Alcohol while Pregnant, Online Survey Participants (Females only)

<b>Reason</b>	<b>N</b>	<b>%</b>
Not knowing I was pregnant	214	76.2
Stress	25	8.9
Addiction	20	7.1
Strain on a relationship	18	6.4
Habit	18	6.4
Peer/social pressure	6	2.1
Certain types/amounts of alcohol are beneficial for pregnancy and fetus	5	1.8

The female respondents also responded to a set of questions about the influences that have persuaded them not to consume alcohol during their pregnancy (see Table 12). The most frequently cited response was the knowledge that alcohol could potentially harm the fetus (97.2%, n=273). Most respondents also indicated that they would want to be as healthy as possible during their pregnancy (93.6%, n=263).

Table 12: Factors that Influence Decision NOT to Drink Alcohol during Own Pregnancy, Online Survey Participants (Females only)

<b>Reason</b>	<b>N</b>	<b>%</b>
Alcohol can potentially harm the fetus	273	97.2
Goal to be as healthy as possible during pregnancy	263	93.6
Doctor or medical professional advice	215	76.5
Education/information acquired in school	189	67.3
Family and friends' advice	153	54.4
Information from government websites (e.g. Health Canada)	131	46.6
Information attained from pamphlets, television ads, or other types of media	119	42.3
Negative judgements from others	104	37.0
Information from health-related websites (e.g. Mayo Clinic)	102	36.3
Information from online health-related forums	92	32.7

Surprisingly, online searches were not found to be a large influence on participants’ decision not to drink alcohol during their pregnancy (see Table 13). Supporting this was the finding that more than 80 per cent of participants from both genders indicated that they had not looked up information on healthy drinking. Only 51 per cent (n=49) of the respondents that had searched for this information were able to identify where they looked. Of those that could, 81.6 per cent (n=40) indicated they had used the Internet, whereas only 10% (n=5) of these respondents had used health clinics and only 4% (n=2) had relied on information from healthy drinking campaign posters or student services (Table 14).

Table 13: Searched for Information on Healthy Drinking, Online Survey Participants (by gender)

	Yes	%	No	%
Male	13	25.0	39	75.0
Female	83	25.8	239	74.2

Table 14: Method of Inquiry for Information on Healthy Drinking, Online Survey Participants

Information Source	N	%
Internet	40	81.6
Health clinics	5	10.2
Healthy drinking campaign posters	2	4.1
Student services	2	4.1

*Fetal Alcohol Spectrum Disorder (FASD)*

Among the participants who responded to the question, “How concerned are you about having a child with FASD?,” about 45% (n=170) were extremely concerned; 30% (n=114) were not concerned at all; and 23% (n=86) were a little bit to somewhat concerned (see Table 15).

Table 15: Level of Concern about Having a Child with FASD, Online Survey Participants

Level of Concern	N	%
Extremely concerned	170	45.9
Somewhat concerned	46	12.4
A little bit concerned	40	10.8
Not concerned at all	114	30.8

Interestingly, the respondents felt that the risk of a college-aged person having a child with FASD was neither very high nor very low (see Table 16). Over half of the respondents (56.3%, n=213) stated that the risk was moderate, while 23.3 per cent (n=88) suggested that this risk was high to very high and the remaining 20 per cent (n=75) indicated they felt the risk was low to very low.

Table 16: Respondent-Perceived Level of Risk for College-aged Persons to have a Child with FASD, Online Survey Participants

<b>Level of Risk</b>	<b>N</b>	<b>%</b>
Very high	11	2.9
High	77	20.4
Moderate	213	56.3
Low	69	18.3
Very low	6	1.6

In comparison to their own risk as college-age students, respondents perceived that marginalized populations presented the greatest risk to having a child with FASD (see Table 17). The most frequent response was women who are addicted to alcohol (93.7%, n=354). Other frequent factors were vulnerable and/or marginalized women living in poverty (73.5%, n=278), teen mothers (61.9%, n=234), and individuals who themselves have FASD (50.5%, n=191).

Table 17: Respondent-Perceived Groups at Risk to have a Child with FASD, Online Survey Participants

<b>Level of Risk</b>	<b>N</b>	<b>%</b>
Women who are addicted to alcohol	354	93.6
Vulnerable and/or marginalized women living in poverty	278	73.5
Teen mothers	234	61.9
Individuals who themselves have FASD	191	50.5
Single mothers	121	32.0
University/college students	115	30.4
All women of childbearing age	70	18.5
Well-educated professional women in their 20s and 30s	30	8.0

Participants were asked to detail educational programs or classes providing information about FASD that they had attended (see Table 18). In general, courses focusing on health, biology, and psychology were most prevalent by a large margin. For instance, 16.67% of all participants recalled learning about FAS during their high school health classes. Similarly, 14.5% of all respondents indicated some form of FAS education in various university-level psychology classes. Notably missing from the results were alcohol-specific initiatives. Furthermore, only a few students (1.85%, n=7) mentioned informal education through media or parental advice.

Table 18: Educational Courses in which FASD was Covered or Experienced, Online Survey Participants

<b>High School</b>	<b>N</b>	<b>%</b>	<b>University</b>	<b>N</b>	<b>%</b>	<b>Other</b>	<b>N</b>	<b>%</b>
Health classes	78	16.67	Psychology classes	55	14.55	Informal education (parents, media)	7	1.85
Biology classes	20	5.29	Medical / Health classes	36	9.52	Employment / Volunteer experience	6	1.59
Christian ethics / Ethical living	16	4.23	Nutrition	13	3.44	Other	6	1.59
Psychology classes	15	3.97	Sociology	13	3.44	Elementary school	3	0.59
Career / Life training	22	5.82	Criminology / Law classes	9	2.38	Junior High	2	0.53
Alcohol awareness programs (SADD, MADD, DARE, FAS info)	6	1.59	Biology	5	1.32			

### *Campaigns*

In this section, participants were asked questions regarding their awareness of campaigns to reduce alcohol consumption, to promote healthy drinking, and to prevent FASD (see Table 19). Participants were also asked to provide information on effective campaigns. The majority of the participants were not aware of campaigns to reduce alcohol consumption, to promote healthy drinking, and to prevent FASD. In comparison, only roughly 30% of respondents were aware of any alcohol-related campaign.

Table 19: Participant Awareness of Alcohol-related Campaigns, Online Survey Participants

	<b>Yes</b>	<b>%</b>	<b>No</b>	<b>%</b>
Aware of campaigns to reduce alcohol consumption	121	32.1	256	67.9
Aware of campaigns to promote healthy drinking	108	28.7	268	71.3
Aware of campaigns to prevent FASD	105	27.9	271	72.1

Participants who had campaign awareness were asked to describe the campaigns that they recalled. Memorable campaigns related to reduction in levels of alcohol consumption included the following: Mothers Against Drunk Driving (MADD); Student Against Drunk Driving (SADD); Saskatchewan Liquor and Gaming Authority (SLGA) liquor store materials; and government posters, billboards, and TV commercials. Recall of healthy drinking campaigns include those produced by MADD; Saskatchewan Government Insurance (SGI), Saskatchewan Health,

SLGA (posters, commercials and billboards); and the Student Health Centre and Student Health Initiative Program (SHIP) at the University of Saskatchewan. The majority of those who recalled FASD prevention initiatives recalled SLGA's messages placed on posters, paper bags, and TV commercials. Of these participants, only 3.4 per cent (n=12) could describe the kangaroo message on SLGA packaging material. While the SLGA initiative was the most commonly recalled campaign amongst those who were aware of any initiatives, very few people could recollect its details.

Next, the participants were asked to provide keywords they would use if they were to look for information on healthy drinking on the Internet. The popular keywords were "healthy drinking," "alcohol safe consumption," "safe drinking," "moderate drinking," "how much is too much," "binge drinking," and "social drinking." Some other keywords included: "negative effects of alcohol," "alcoholism," "Health Canada," "low calorie drinks," "alcohol 411," and "alcohol abuse."

The next three questions asked the participants to share their ideas about what types of information should be included in healthy drinking campaigns and what types of messages would be most effective. The first question was "what types of information should be included in healthy drinking campaigns?" Some of the popular responses were:

- Health risk related information such as effects of bad drinking (negative consequences of drinking too much),
- How everyone reacts to alcohol differently (different tolerance),
- How alcohol is absorbed by the body,
- Long-term effects of alcohol,
- Impact of number of consumed drinks,
- Impact of weight and height,
- Relationship to blood alcohol level,
- Amount of alcohol safe to drink, and
- Disorders affected by or result of alcohol consumption

Other popular responses were:

- Self-education/learning information such as self-control guidelines (how to learn self-control),
- How to learn own alcohol consumption upper limit,
- How to have fun without alcohol,
- How to cope with peer pressure, and
- Known dangerous drink combinations

Many participants also mentioned that pictures of damaged organs (caused by alcohol consumption) should be included in healthy drinking campaigns for deterrence purposes. Participants also indicated that healthy drinking

campaigns should focus on moderation (versus abstinence) and to cite the sources of information provided (to add legitimacy to messaging).

The second question asked participants to share what messages would be most successful at promoting alcohol reduction during pregnancy: “What do you feel would be the most effective messages to reduce drinking during pregnancy?” The majority of participants believed that the real life experiences (challenges or difficulties) of mothers raising children with FASD or individuals who have FASD would have the greatest impact on the public. Another popular response was to provide information on the lifelong effects of FASD (struggles that they would face through their life). Some participants also mentioned that educational messages such as “healthy babies come from healthy moms” and general tips about healthy living and alcohol-related risks would be effective. For the question, “What do you feel would be the most effective message to increase awareness of FASD,” some of the major responses were similar to the previous question:

- Discussions/ stories of people with FASD,
- What happened to mothers who have children with FASD and individuals with FASD for the rest of their lives,
- Effects FASD has on people with FASD from their perspective
- Images, photos, and/or video of family with FASD
- Let pregnant women spend some time with individuals with FASD
- FASD education should have started as early as elementary schools
- The campaigns should avoid “scare tactics”

The last question was “who are the appropriate target groups for each of the following kinds of prevention campaigns?” The participants provided information on which they thought were the appropriate target groups for healthy drinking campaigns, drinking during pregnancy campaigns, and reducing FASD campaigns. Common target groups for each of the three types of campaigns were teenagers, college students, Aboriginal people, and young women. Men did not appear to be a frequent target for these campaigns. For example, a few participants mentioned older men (middle-aged or older) and men aged between 19 and 35 as the target groups for healthy drinking campaigns, and a few participants mentioned everyone or both men and women for drinking during pregnancy campaigns. However, the majority of the participants did not make a comment on men, in particular, for healthy drinking campaigns and drinking during pregnancy campaigns.

For healthy drinking campaigns, the majority of the participants chose everyone: college students, high school students, young adults, and teenagers. The response of the participants for healthy drinking campaign was more gender neutral than for the other two campaigns; there were fewer responses specifically targeting women than drinking during pregnancy or FASD awareness campaigns. For drinking during pregnancy campaigns, the popular responses were everyone: all ages, all ages capable of reproduction, teens, young adults, women, and impoverished people. A few participants mentioned everyone including men who should be just as aware as women. For FASD

awareness campaigns, participants chose men as the appropriate target groups slightly more often than the other kinds of campaigns. Some participants mentioned men should be as aware about FASD as women; men should be aware so that they can help women. Other popular responses for this campaign type included everyone: young women, all women, young mothers, women between the ages of 15 and 35, pregnant women, anyone who consumes alcohol, women of childbearing age, married women, those living in poverty (i.e. low socio-economic class), women with alcohol addictions, single parents, and health care professionals.

### **Survey Discussion and Recommendations**

Similar to focus group participants, the online survey participants also had little knowledge about FASD. In fact, only approximately 30% of survey respondents perceived college-age youth as at risk of having a child with FASD. Moreover, the majority of participants believed that FASD was a problem among “other” women – those who were addicted to alcohol, vulnerable and/or marginalized, living in poverty, teen mothers, or individuals with FASD. That said, the majority of participants indicated that they would be supportive of a friend who was pregnant by also not drinking themselves. In short, it appears that the study participants did not believe that FASD was an issue or “risk” that was relevant to themselves.

Based on what the survey participants recommended, an outline of recommendations for prevention campaigns aimed at college-age students is provided below. Along with the focus on college-age students, participants felt that it would be useful to focus efforts on high school students as well as women of childbearing age / expectant mothers.

#### Recommended Contents for Prevention Campaigns

- Common to all three types of campaigns
  - Education
  - Negative consequences of drinking
  - Long-term effects of alcohol
  - How to have fun without alcohol
  - How to cope with peer pressure
  - Known dangerous drink combinations
  - Avoid fear-based campaigns
  - Visual aids
- Healthy drinking campaigns
  - How everyone reacts to alcohol differently (different tolerance)
  - Relationship among number of consumed drinks, weight and height (body-weight ratio),

- Self-control guidelines (how to learn self-control)
- How to learn own “upper limit” of alcohol consumption
- How to have fun without alcohol
- How to cope with peer pressure
- Emphasize moderation rather than abstinence
- Drinking during pregnancy campaigns
  - How to have fun without alcohol
  - How to cope with peer pressure
  - Risks and effects of alcohol on pregnancy
- FASD awareness campaigns
  - Presentations at high schools, universities and colleges by mothers who have children with FASD and individuals with FASD
  - Video of mothers and children with FASD; video presentations showing everyday living

A large number of participants mentioned high school students as one of the target groups for the campaigns since many people begin drinking long before the legal age. In addition, 37.6% of the participants indicated having taken courses that discussed FASD during high school. From this, it could be assumed that less than half of high school students are being taught about FASD. For this reason, one opportunity to increase knowledge among college-age youth is through campaigns directed at high school-age youth. This may help them make more informed decisions when consuming alcohol (both in high school and in the later years).

Another finding of interest is that when the participants were asked about various types of existing health campaigns, the majority were not aware of any of alcohol-related campaigns. Even among those who were aware of some form of campaign, many of them could only vaguely remember the campaign content. However, the use of visual aids or a consistent “theme” or character seemed to positively influence campaign recall.

Some comments on campaigns were similar between the focus group participants and the online survey participants. For example, both groups believed that educational information should be included in campaigns. Moreover, both groups recommended the campaigns should avoid fear tactics (stigmatization) and emphasized moderation rather than abstinence.

What was unique about responses to the online survey was the belief that showing images of people with FASD was an effective strategy for the public, as it would act as a major deterrent for alcohol use by pregnant women. Another strategy not mentioned in the focus groups was the use of stories from families and individuals with FASD. An additional unique response from the online survey participants was to let women – pregnant women in

particular – spend time with individuals with FASD. It is likely that this approach would offer insight into FASD at a more personal level, and may lead to greater awareness, especially for expectant mothers. Just as the participants mentioned, the real life experience and real people’s messages have more impact on the public than other messages. However, it must be acknowledged that the Prevention Institute would have to consider the use of these approaches very carefully, as they may be exploitative of vulnerable individuals/groups, and would need to fit with the program’s guiding principles of hope, respect, compassion, cooperation, and understanding. One currently existing resource consistent with this method is a DVD documentary created by the Prevention Institute that tells the story of Myles Himmelreich, a young man living with FASD. Myles is a confident speaker/presenter and advocate for those with FASD, and is one possibility for providing public presentations and delivering key messages. Overall, what can be derived from these findings is that personal messages help make things “real” to the college-age audience, and that this should be considered when designing future campaigns—while ensuring that individuals with FASD and their families/caregivers are not exploited in any way.

## CONCLUSION

**E**ducational campaigns could be a key strategy for reaching college-age students who appear to have a number of misconceptions about the effects of alcohol in general and FASD in particular. In regards to healthier drinking, the majority of participants indicated that they wanted information on safe/healthy amounts of alcohol one can consume. In addition, the participants were interested in learning how to cope with peer pressure and how to enjoy their lives and be social without consuming alcohol. In regards to drinking during pregnancy, a number of participants had misconceptions about the effects of alcohol on the human body. For example, some participants believed that since wine has been found to be good for health in some populations, drinking wine during pregnancy may also be good for the fetus. Another misconception is the belief that FASD is primarily a problem among women who are poor, have low socio-economic status, or marginalized. Although some respondents were aware that all women of childbearing age could potentially give birth to a child with FASD if alcohol was consumed during pregnancy, many believed that college-age women, as a population, were not at risk for having a child with FASD. The reality that women in their mid-20s and 30s with high levels of education and income comprise one of the “highest risk” groups makes this finding particularly alarming. Overall, these findings highlight the importance of focusing on this demographic in future awareness campaigns, and providing messages that counter these types of misconceptions by providing information on the effects of alcohol and highlighting the potential risk and implications of FASD among this population.



## REFERENCES

- Abel, E. (2009). "Fetal alcohol syndrome: Same old, same old." *Addiction* 104(1), p. 1274-1280.
- Adlaf, E., & Begin, P. S. (2005). *Canadian Addiction Survey (CAS): A national survey of Canadians' use of alcohol and other drugs: Prevalence of use and related harms: Detailed report*. Ottawa: Canadian Centre on Substance Abuse.
- Adlaf, E., Demers, A., & Gliksman, L. (2005). *Canadian Campus Survey 2004*. Toronto: Centre for Addiction and Mental Health.
- Allard-Hendren, R. (2000). "Alcohol use and adolescent pregnancy." *The American Journal of Maternal and Child Nursing* 25(3), p. 159-162.
- Arnett, J., Kierr, C., & Brown, J. (2008). *Adolescents and emerging adulthood*. Toronto, ON: Pearson Education Canada.
- Barnes, G., Reifman, A., Farrell, M., & Stone, M. (2000). "The effects of parenting on the development of adolescent alcohol misuses: A six-wave latent growth model." *Journal of Marriage and the Family*, 62, p. 175-186.
- Bresnahan, K., Zuckerman, B., & Cabral, H. (1992). "Psychosocial correlates of drug and heavy alcohol use among pregnant women at risk for drug use." *Obstetrics and Gynecology* 80, p. 976-980.
- Butt, P., Beirness, D., Gliksman, L., Paradis, C., & Stockwell, T. (2011). Alcohol and health in Canada: A summary of evidence and guidelines for low-risk drinking. Ottawa, ON: Canadian Centre on Substance Abuse. Retrieved from <http://www.ccsa.ca/2011%20CCSA%20Documents/2011-Summary-of-Evidence-and-Guidelines-for-Low-Risk%20Drinking-en.pdf>
- Cahalan, D. (1970). *Problem Drinkers, a National Survey*. San Francisco: Jossey Bass.
- Caprara, D., & Koren, G. (2004). "To label or not to label: The pros and cons of alcohol warning labels in pregnancy." *Journal of Fetal Alcohol Syndrome International* 2(9), p. 1-3.
- Carson, G., Cox, L., Crane, J., Croteau, P., Graves, L., Kluka, S., Koren, G., Martel, M.J., Midmer, D., Nulman, I., Poole, N., Senikas, V., & Wood, R. (2010). "Alcohol use and pregnancy consensus clinical guidelines." *Journal of Obstetrics and Gynaecology Canada* 32(8), p. S1-S32.
- CCSA. (2012). *Canada's low-risk alcohol drinking guidelines*. Retrieved from Canadian Centre on Substance Abuse: <http://www.ccsa.ca/eng/priorities/alcohol/canada-low-risk-alcohol-drinking-guidelines/Pages/default.aspx>
- Chambers, C., Hughes, S., Meltzer, S., Wahlgren, D., Kassem, N., Larson, S., Riley, E., & Hovell, M. (2005). "Alcohol consumption among low-income pregnant Latinas." *Alcoholism: Clinical and Experimental Research* 29(11), p. 2022-2028.
- Chang, G., McNamara, T., Orav, E., & Wilkins-Haug, L. (2006). "Alcohol use by pregnant women: Partners, knowledge and other predictors." *Journal of Studies on Alcohol and Drugs*, 67(2), p. 245-251.

- Chiauzzi, E., Green, T., Lord, S., Thum, C., & Goldstein, M. (2005). "My student body: A high risk drinking prevention web site for college students." *Journal of American College Health* 53, p. 263-274.
- Chudley, A., Conry, J., Cook, J., Looock, C., Rosale, T., & LeBlanc, N. (2005). "Fetal alcohol spectrum disorder: Canadian guidelines for diagnosis." *Canadian Medical Association Journal* 172(Suppl. 5), p. S1-S21.
- Collins, R. L., Parks, G. A., & Marlatt, G. A. (1985). "Social determinants of alcohol consumption: The effects of social interaction and model status on the self-administration of alcohol." *Journal of Consulting and Clinical Psychology*, 53, 189-200.
- Cousins, W., & Wells, K. (2005). "'One more for my baby': Foetal alcohol syndrome and its implications for social workers." *Child Care in Practice* 11(3), p. 375-383.
- Dawson, D. (1996). "Gender differences in the risk of alcohol dependence: United States." *Addiction* 91(12), p. 1831-1842.
- Deshpande, S., Basil, M., Basford, L., Thorpe, K., Piquette-Tomei, N., Droessler, J., Cardwell, K., Williams, R., & Bureau, A. (2006). "Promoting alcohol abstinence among pregnant women: Potential social change strategies." *Health Marketing Quarterly* 23(2), p. 45-67.
- Dunsenbury, L., Brannigan, R., Hansen, W., Walsh, J., & Falco, M. (2005). "Quality of implementation: Developing measures crucial to understanding the diffusion of prevention interventions." *Health Education Research* 20, p. 308-313.
- DuRant, R., McCoy, T., Champion, H., & Rhodes, S. (2008). "Party behaviours and characteristics and serial drunkenness among college students." *Journal of Studies on Alcohol and Drugs* 69(1), p. 91-99.
- Ennett, S., Ringwalt, C., Thorne, J., Rohrbach, L., Vincus, A., Simons-Rudolph, A., & Jones, S. (2003). "A comparison of current practice in school-based substance use prevention programs with meta-analysis findings." *Prevention Science* 4, p. 1-14.
- Frances, R., & Strauser, W. (1988). "Psychosocial aspects of alcohol abuse." In J. Howells (ed.) *Modern perspectives in psychosocial pathology* (pp. 113-134). New York: Brunner/Mazel.
- Gilik, D., Halpert Schilt, E., & Zhang, W. (2001). "Narrowcasting risk of drinking during pregnancy among African and Latino adolescent girls." *Health Promotion Practice* 2, p. 222-232.
- Gosin, M., Marsiglia, F., & Hecht, M. (2003). "Keeping it R.E.A.L.: A drug resistance curriculum tailored to the strengths and needs of pre-adolescents of the Southwest." *Journal of Drug Education* 33, p. 119-142.
- Haines, M. (1996). *A social norms approach to preventing binge drinking at colleges and universities*. Newton, MA: The High Education Center for Alcohol and Other Drug Prevention, U.S. Department of Education.
- Hansen, J. (1994). "Violent and aggressive behavior among patients in emergency wards." *Ugeskr Laeger* 156, p. 804-808.
- Hartford, T., Yi, H., & Hilton, M. (2006). "Alcohol abuse and dependence in college and non college samples: A ten-year prospective follow-up in a national sample." *Journal of Studies on Alcohol* 67(6), p. 803-809

- Health Canada. (2007). *Canadian Addiction Survey (CAS): A National survey of Canadians' use of alcohol and other drugs. Substance use by Canadian youth*. Ottawa: Minister of Health Canada.
- Hingson, R., Heeren, T., Winter, M., & Wechsler, H. (2005). "Magnitude of alcohol-related mortality and morbidity among U.S. college students ages 18-24: Changes from 1998 to 2001." *Annual Review of Public Health, 26*, p. 259-279.
- Hustad, J., Carey, K., Carey, M., & Maisto, S. (2009). "Self-regulation, alcohol consumption and consequences in college student heavy drinkers: A simultaneous latent growth analysis." *Journal of Studies on Alcohol and Drugs, 70*, p. 373-382.
- Kaskutas, L. (2000). "Understanding drinking during pregnancy among urban American Indians and African Americans: health messages, risk beliefs, and how we measure consumption." *Alcoholism: Clinical and Experimental Research, 24*, p. 1241-1250.
- Kerr-Correa, F., Igami, T., Hiroce, V., & Tucci, A. (2007). "Patterns of alcohol use between genders: A cross-cultural evaluation." *Journal of Affective Disorders, 102*(1-3), p. 265-275.
- Krueger, R., & Casey, M. (2000). *Focus Groups: A Practical Guide for Applied Research* (3rd ed.). Newbury Park, CA: Sage.
- Kvigne, V., G.R., L., Borzelleca, J., Brock, E., Neff-Smith, M., & Welty, T. (2003). "Characteristics of mothers who have children with fetal alcohol syndrome or some characteristics of fetal alcohol syndrome." *Journal of American Board of Family Practice, 16*, p. 296-303.
- Ma, G., Toubbeh, J., Cline, J., & Chisholm, A. (1998a). "The use of a qualitative approach in fetal alcohol syndrome prevention among American Indian youth." *Journal of Alcohol and Drug Education, 43*(3), p. 53-65.
- Ma, G., Toubbeh, J., Cline, J., & Chisholm, A. (1998b). "Fetal alcohol syndrome among Native American adolescents: A model prevention program." *The Journal of Primary Prevention, 19*(1), p. 43-55.
- May, P. (1995). "A multiple-level, comprehensive approach to the prevention of fetal alcohol syndrome (FAS) and other alcohol-related birth defects." *The International Journal of the Addictions, 30*(12), p. 1549-1602.
- Miller, M., & Spear, L. (2006). "The Alcoholism Generator." *Alcoholism: Clinical and Experimental Research, 30*(9), p. 1466-1469.
- Molnar, D., Busseri, M., Perrier, C., & Sadava, S. (2009). "A longitudinal investigation of alcohol use and subjective well-being in a university sample." *Journal of Studies on Alcohol and Drugs, 70*, p. 704-713.
- Morgan, T., White, H., & Mun, E. (2008). "Changes in drinking before a mandated brief intervention with college students." *Journal of Studies on Alcohol and Drugs, 69*(2), p. 286-290.
- Muhajarine, N., D'Arcy, C., & Edouard, L. (1997). "Prevalence and predictors of health risk behaviours during early pregnancy: Saskatoon pregnancy and health study." *Canadian Journal of Public Health, 88*(6), p. 375-379.

- Parks, K., Hsies, Y., Collins, R., Levonyan-Redloff, K., & King, L. (2009). "Predictors of risky sexual behavior with new and regular partners in a sample of women bar drinkers." *Journal of Studies on Alcohol and Drugs*, 70, p. 197-205.
- Peele, S., & Brodsky, A. (2000). "Exploring psychological benefits associated with moderate alcohol use: A necessary corrective to assessments of drinking outcome?" *Drug and Alcohol Dependence*, 60, p. 221-247.
- PHAC. (2005). *Fetal Alcohol Spectrum Disorder (FASD): A framework for action*. Ottawa: Public Health Agency of Canada.
- PHAC. (2009). *What mothers say: The Canadian maternity experiences survey*. Ottawa: Public Health Agency of Canada.
- Plant, M., Bagnall, G., & Foster, J. (1990). "Teenage heavy drinkers: Alcohol-related knowledge, beliefs, experiences, motivation and the social context of drinking." *Alcohol and Alcoholism* 25, p. 691-698.
- Poole, N. (2008). *Fetal Alcohol Spectrum Disorder (FASD) Prevention: Canadian Perspectives*. Ottawa: Public Health Agency of Canada.
- Project CHOICES Research Group. (2002). "Alcohol-exposed pregnancy: Characteristics associated with risk." *American Journal of Prevention Medicine* 23(3), p. 166-173.
- Read, J., Lau-Barraco, C., Dunn, M., & Borsari, B. (2009). "Projected alcohol dose influences on the activation of alcohol expectancies in college drinkers." *Alcoholism: Clinical and Experimental Research* 33(7), p. 1265-1277.
- Rehm, J., Baliunas, D., Brochu, S., Fischer, B., Gnam, W., Patra, J., Popova, S., Samocinska-Hart, A., Taylor, B. (2006). *The costs of substance abuse in Canada 2002: Highlights*. Ottawa: Canadian Centre on Substance Abuse.
- Riley, J., Durbin, P., & D'Ariano, M. (2005). "Under the influence: taking alcohol issues into the classroom." *Health Promotion Practice* 6(2), p. 202-206.
- Southwick, L., Steele, C., Maralatt, A., & Lindell, M. (1981). "Alcohol-related expectancies: Defined by phase of intoxication and drinking experience." *Journal of Consulting and Clinical Psychology*, 49, p. 713-721.
- Stockley, C. (1998). "The safe use of alcohol during pregnancy." *International Journal of Drug Policy*, 9, p. 273-327.
- Testa, M., & Reifman, A. (1996). "Individual differences in perceived riskiness of drinking in pregnancy: antecedents and consequences." *Journal of Studies on Alcohol and Drugs*, 57, p. 360-367.
- Turrisi, R., Larimer, M., Mallet, K., Kilmer, J., Ray, A., Mastroleo, N., Montoya, H. (2009). "A randomized clinical trial evaluating a combined alcohol intervention for high-risk college students." *Journal of Studies on Alcohol and Drugs*, 70(4), p. 555-567.
- Ward, B., & Gryczynski, J. (2009). "Social learning theory and the effects of living arrangement on heavy alcohol use: Results from a national study of college students." *Journal of Studies on Alcohol*, 70, p. 364-372.
- Wechsler, H., Davenport, A., Dowdall, G., Moeykens, B., & Castillo, S. (1994). "Health and behavioural consequences in binge drinking in college: A national survey of students at 140 campuses." *Journal of the American Medical Association*, 272, p. 1672-1677.

- Wedding, D., Kahout, J., Mengel, M., Ohlemiller, M., Ulione, M., Cook, K., Braddock, S. (2007). "Psychologists' knowledge and attitudes about fetal alcohol syndrome, fetal alcohol spectrum disorder, and alcohol use during pregnancy." *Professional Psychology: Research and Practice*, 27(2), p. 167-177.
- Wiemann, C., & Berenson, A. (1999). "Factors associated with recent and discontinued alcohol use by pregnant adolescents." *Journal of Adolescent Health*, 22(5), p. 417-423.
- Witbrodt, J., Kaskutas, L., Diehl, S., Armstrong, M., Escobar, G., Taillac, C., & Osejo, V. (2007). "Using drink size to talk about drinking during pregnancy: Early Start Plus." *Journal of Addictions Nursing*, 18(4), p. 199-206.
- Wolfe, J., & Wild, C. (2010). *Check Yourself: Final research report*. Edmonton: Coalition for Action on High Risk Drinking.



## Appendix A: Consent form for Focus Group Participants



### *College Drinking Patterns: The Pros and Cons of Alcohol Consumption*

You are invited to participate in a research study entitled “College Drinking Patterns: The Pros and Cons of Alcohol Consumption.” Please read this form carefully, and feel free to ask any questions you might have about the study.

**Student-Researcher:** Sarah Hogg, Department of Psychology, 251-1816,  
Sarah.Hogg@usask.ca

**Supervisors:** Stacey McHenry, Saskatchewan Prevention Institute  
Nicola Chopin, Community-University Institute for Social Research  
(CUISR)  
Dr. Steve Wormith, Department of Psychology

**Purpose and Procedure:** The purpose of the current study is to examine participants’ perceptions on alcohol consumption; what role alcohol plays in the college lifestyle and the benefits and risks associated with alcohol consumption, in your own experience and the experience of those around you. You will be asked to take part in an audio-taped discussion group focused with approximately 8-10 other students. You will then be asked to complete a short survey, where you will be asked to share any additional comments and to record some demographic information.

**Risks/Benefits:** There are no known risks associated with participation in this study. Furthermore, you may receive no personal benefit from participation in the study. At the end of the study you will be given a chance to ask any further questions that you might have, and given a \$25 honorarium for your assistance in this study.

**Confidentiality:** As a participant in a focus group, please understand that there are limits to which the confidentiality of the information you share can be protected. The researcher will undertake to safeguard the confidentiality of the discussion, but cannot guarantee that other members of the group will do so. Please respect the confidentiality of the other members of the group by not disclosing the contents of this discussion outside the group, and be aware that others may not respect your confidentiality. The focus group session will be audio taped, but the session will be transcribed and any identifying information will be removed. The majority of the data will be presented in aggregate form. In other words, the majority of the data will be combined and reported as categories and themes. In instances where direct quotations are used (either from the survey or the focus group session), participants’ names will not be included. The audiotapes, transcripts, and any hard copy materials produced as a result of this focus group will be safeguarded and securely stored in password protected files and locked cabinets by CUISR at the University of Saskatchewan. This consent form will be stored separately from the data materials so

that it will not be possible to associate names with any given data. If after five years there is no further requirement for the data, it will be destroyed.

**Right to withdraw:** Your participation is voluntary and you may withdraw from the study for any reason, at any time, without penalty of any sort. If you withdraw from the study, any data that you have contributed will be destroyed.

**Questions:** If you have any questions concerning the study, please feel free to ask at any point. You are also free to contact the researchers at the numbers provided above if you have questions at a later time. This research was reviewed and considered exempt by the University of Saskatchewan Behavioural Research Ethics Board. Any questions regarding your rights as a participant may be addressed to the Behavioural Research Ethics Board through the Ethics Office (966-2084). Out of town participants may call collect.

The results of this evaluation will be available in the summer of 2010. You may obtain a copy of the results of the study by contacting the student-researcher or the supervisors using the contact information provided above.

**Consent to Participate:** I have read and understand the description of the research study provided above. I have been provided with an opportunity to ask questions and my questions have been answered satisfactorily. I agree to participate in the study described above, understanding that I may withdraw my consent to participate at any time. A copy of this consent form has been given to me for my records.

\_\_\_\_\_  
(Signature of Participant)

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Signature of Researcher)

\_\_\_\_\_  
(Date)

**Appendix B: Opening survey provided to each focus group participant**

**DDQ-R (Daily Drinking Questionnaire-Revised)**

Adapted from Collins, Parks & Marlatt, 1985; DDQ-R retrieved from [www2.edc.org/cchs/tools/ddq.pdf](http://www2.edc.org/cchs/tools/ddq.pdf)

Gender: Male \_\_\_\_\_ Female \_\_\_\_\_ Height \_\_\_\_\_ ' \_\_\_\_\_ " Weight \_\_\_\_\_ lbs.  
(Feet) (Inches)

**INSTRUCTIONS FOR RECORDING DRINKING DURING A TYPICAL WEEK**

IN THE CALENDAR BELOW, PLEASE FILL-IN YOUR DRINKING RATE AND TIME DRINKING DURING A TYPICAL WEEK IN THE LAST 30 DAYS.

First, think of a typical week in the last 30 days you. (Where did you live? What were your regular weekly activities? Where you working or going to school? Etc.) Try to remember as accurately as you can, how much and for how long you typically drank in a week during that one month period?

For each day of the week in the calendar below, fill in the number of standard drinks typically consumed on that day in the upper box and the typical number of hours you drank that day in the lower box.

Day of Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Number of Drinks							
Number of Hours Drinking							

**INSTRUCTIONS FOR RECORDING DRINKING FOR YOUR HEAVIEST DRINKING WEEK**

IN THE CALENDAR BELOW, PLEASE FILL-IN YOUR DRINKING RATE AND TIME DRINKING DURING YOUR HEAVIEST DRINKING WEEK IN THE LAST 30 DAYS.

First, think of your heaviest drinking week in the last 30 days. (Where did you live? What were your regular weekly activities? Where you working or going to school? Etc.)

Try to remember as accurately as you can, how much and for how long did you drink during your heaviest drinking week in that one month period?

For each day of the week in the calendar below, fill in the number of standard drinks consumed on that day in the upper box and the number of hours you drank that day in the lower box.

Day of Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Number of Drinks							
Number of Hours Drinking							

Drinking Quantity/Frequency Index (Cahalan's Drinking Quantity/Frequency Index/Cahalan's Q/F Index; Cahalan, 1970)

1. How often did you drink during the last month? (check one)

- a. I did not drink at all.
- b. About once a month.
- c. Two to three times a month.
- d. Once or twice a week.
- e. Three to four times a week.
- f. Nearly every day.
- g. Once a day or more.

2. Think of a typical weekend evening (Friday or Saturday) during the last month.. How much did you drink on that evening? (check one)

- |          |           |           |              |
|----------|-----------|-----------|--------------|
| 0 drinks | 8 drinks  | 16 drinks | 24 drinks    |
| 1 drink  | 9 drinks  | 17 drinks | 25 drinks    |
| 2 drinks | 10 drinks | 18 drinks | 26 drinks    |
| 3 drinks | 11 drinks | 19 drinks | 27 drinks    |
| 4 drinks | 12 drinks | 20 drinks | 28 drinks    |
| 5 drinks | 13 drinks | 21 drinks | 29 drinks    |
| 6 drinks | 14 drinks | 22 drinks | 30 drinks    |
| 7 drinks | 15 drinks | 23 drinks | More than 30 |

3. Think of the occasion (any day of the week) you drank the most during the last month. How much did you drink? (check one)

- |          |           |           |              |
|----------|-----------|-----------|--------------|
| 0 drinks | 8 drinks  | 16 drinks | 24 drinks    |
| 1 drink  | 9 drinks  | 17 drinks | 25 drinks    |
| 2 drinks | 10 drinks | 18 drinks | 26 drinks    |
| 3 drinks | 11 drinks | 19 drinks | 27 drinks    |
| 4 drinks | 12 drinks | 20 drinks | 28 drinks    |
| 5 drinks | 13 drinks | 21 drinks | 29 drinks    |
| 6 drinks | 14 drinks | 22 drinks | 30 drinks    |
| 7 drinks | 15 drinks | 23 drinks | More than 30 |

## Appendix C: Focus Group Question Protocol

(approximately 1.5 hours)

### Introduction

Good morning everyone. I want to start by thanking all of you for coming in today. My name is Sarah Hogg and I am a student at the University of Saskatchewan. The reason that we are here today is to discuss perceptions of alcohol consumption and the university lifestyle. I will be asking you questions about your own personal alcohol consumption, your perceptions of the alcohol consumption of others, and the risks and benefits associated with alcohol consumption as well as your suggestions for promoting a healthy lifestyle on the University of Saskatchewan campus.

During the discussion session, because we will be talking as a group, I ask that you respect people's privacy by not talking about the content of the discussion outside of the group. The session will be tape recorded, but the tapes will only be available to the researchers. Since the session is being recorded, I ask that you please speak clearly and loudly. Only one person should talk at a time because we do not want to miss any of your comments. Although we may address each other by our first names today, in future reports your names will not be attached to the comments. Please remember that all comments are helpful and there are no right or wrong answers. We are interested in what you really think and feel. What you share with us will be used by the Saskatchewan Prevention Institute to inform and improve future campaigns.

Before we start the discussion, I will hand out the consent forms. For those of you that still wish to participate, please sign the consent forms before we begin.

- Distribute the consent forms.

Does anyone have any questions? If not, then we will begin.

- Focus group session

Get everyone to sit in a circle and set up the voice recorder. Make sure to press record.

#### A. Opening Question (easy and quick to answer, to get everyone speaking)

Let's find out some more about each other by going around the room one at a time. Please tell us your name, if you drink alcohol, and whether you think you drink less, more or the same amount as other students you know.

#### B. Alcohol Consumption

1. First, I would like to talk about alcohol consumption at the University. How would you describe the environment on campus as it relates to alcohol consumption?

- Probes: Do you drink alcohol? How would you describe your own alcohol consumption patterns? How often do you think most students drink on average? How would you compare your drinking to your friends? Fellow classmates? How many drinks would someone have in a typical night? Is there a difference between how much is drunk on weekdays and weeknights? (10 minutes)

2. Why do people you know drink?

- Probes: What is the purpose of alcohol? If you consume alcohol, what is your motivation for doing so? If you don't consume alcohol, what is your motivation for abstaining? (5-10 minutes)

3. Where do you typically go if you are drinking?

- Probes: Have you ever been on a pub crawl? Have you ever been to a beer night? Do you drink different amounts of alcohol in these different atmospheres? How do they differ? Why? (<5 minutes)

#### C. Alcohol Effects

4. What are some of the benefits of drinking? (<5 minutes)

5. What are some of the consequences of drinking?

- Probes: What effects can alcohol consumption have on a student's college career? What are things that people have done while they are drunk that they've regretted? Have you ever, or do you know anyone who has ever missed a class, been in a fight, gotten sick, damaged property, had unprotected sex or done something else that they regret as a result of drinking? (10 minutes)

6. Do you know what FASD is?

- Probe: What causes FASD? (<5 minutes)

7. Is there an amount or type of alcohol that is low risk to drink during pregnancy? (<5 minutes)

8. What do you think are the reasons women might drink when they are pregnant? (<5 minutes)

9. Should college students be concerned about having a baby with FASD? (<5 minutes)

#### D. Alcohol Campaign Awareness

10. If you were looking for information on responsible (healthy) drinking, where would you typically go for answers? Would you use the internet? What key words would you use? (10 minutes)

11. Do you know of any healthy drinking campaigns?

- Probes: What format? Do they affect you? What media format do you think is most effective of college students? (5 minutes)

12. What campaigns do you think will be most effective on college age students to promote responsible drinking? What about to prevent alcohol exposed pregnancy?

- Probes: What suggestions do you have to increase the effectiveness of responsible drinking campaigns? What do you think would work with students? (5 minutes)

13. What makes it likely for women to reduce the risk of an alcohol exposed pregnancy? (5 minutes)

14. Thinking about what you knew about FASD before coming here today, what kind of information do you think an awareness campaign should focus on?

- Probes: Who do you think needs this information the most? Who would benefit the most from this information?(5 minutes)

## F. Ending Questions

Briefly summarize the key points that were made.

Is there anything else you would like to say or add before we move on to the survey? You may comment about anything we have discussed, or any related issue.

15. Do you have any final thoughts regarding alcohol consumption at the UofS, the role of the University in promoting responsible drinking, or FASD?

## G. Conclusion

Thank you for taking the time to come in and share your thoughts with us. If you have any questions, I'd be happy to answer them. If not, I will quickly hand out this short survey for you to fill in. Once you are done with that, you are free to go. Thank you again for your help!

- Distribute surveys.
- Distribute honorariums and get participants to sign receipts.

## Appendix D: Follow-up survey provided to each focus group participant

### Post-Discussion Survey

Thank you very much for taking part in our discussion session today. Your thoughts and suggestions are appreciated! Before you leave, please take a few moments to answer the following questions. If you do not want to answer a specific question, please leave it blank.

1. Do you have any additional comments or thoughts that you did not feel comfortable sharing in the group discussion? If so, please take a few moments and write them in the space provided below.

---

---

---

---

---

---

---

---

This section asks a few questions about you. These questions help us to determine if we have surveyed a wide variety of people. This ensures that our results will reflect the many differing views that different people may have. Please take a few minutes to answer these questions.

1. What is your age? \_\_\_\_\_ (years)

2. Are you:

- Single
- In a committed relationship
- Married/Common Law
- Divorced/Separated
- Widowed

3. Are you:

- Caucasian
- First Nations
- Metis
- Asian
- African-Canadian
- Other \_\_\_\_\_

4. Do you have children?

No

No, but I am currently expecting

Yes, if yes, how many children do you have? \_\_\_\_\_

5. What year of school are you in?

First

Second

Third

Fourth

Master's

PhD

Other \_\_\_\_\_

6. What is your main source of income? \_\_\_\_\_

7. In comparison with other families in Saskatoon, how would you describe your financial situation?

Much above higher

Above average

Average

Below average

Much below average

## Appendix E: Consent form provided to each online survey participant



### *College Drinking Patterns: The Pros and Cons of Alcohol Consumption*

You are invited to participate in a research study entitled “College Drinking Patterns: The Pros and Cons of Alcohol Consumption.” Please read this form carefully, and feel free to ask any questions you might have about the study.

**Student-Researcher:** Sarah Takahashi, Department of Psychology, 979-5809,  
Sarah.Takahashi@usask.ca

**Supervisors:** Stacey McHenry, Saskatchewan Prevention Institute  
Nicola Chopin, Community-University Institute for Social Research  
Dr. J. Stephen Wormith, Department of Psychology

**Purpose and Procedure:** The purpose of the current study is to examine participants’ perceptions on alcohol consumption, what role alcohol plays in the college lifestyle and the benefits and risks associated with alcohol consumption, in your own experience and the experience of those around you. You will be asked to complete an online survey, where you will be asked to share your experience and attitudes or experience of others on alcohol-related issues and some demographic information.

**Risks/Benefits:** There are no known risks associated with participation in this study. Furthermore, you may receive no personal benefit from participation in the study. At the end of the study you will be given a chance to provide any further comments that you might have and the contact information of the researcher. At the end of the study you will be given a chance to enter a draw to compensate for your time.

**Confidentiality:** As a participant in online survey, your identity will be protected since your personal information will not be associated with your responses even if you choose to enter a draw. The researcher will not be able to identify specific responses to any particular individual. The majority of the data will be presented in aggregate form. In other words, the majority of the data will be combined and reported as categories and themes. In instances where direct quotations are used, participants’ names will not be included. Any information provided during the survey will be safeguarded and securely stored in password protected files and locked cabinets by CUISR at the University of Saskatchewan. This consent form will be stored separately from the data materials so that it will not be possible to associate names with any given data. If after five years there is no further requirement for the data, it will be destroyed.

**Right to withdraw:** Your participation is voluntary and you may withdraw from the study for any reason, at any time, without penalty of any sort. If you withdraw from the study, any data that you have contributed will be destroyed.

**Questions:** If you have any questions concerning the study, please feel free to ask at any point. You are also free to contact the researchers at the email address provided above if you have questions at a later time. This research was reviewed and considered exempt by the University of Saskatchewan Behavioural Research Ethics Board. Any questions regarding your rights as a participant may be addressed to the Behavioural Research Ethics Board through the Ethics Office (966-2084). Out of town participants may call collect.

The results of this evaluation will be available in the Fall of 2010. You may obtain a copy of the results of the study by contacting the student-researcher or the supervisors using the contact information provided above.

**Consent to Participate:** I have read and understand the description of the research study provided above. I agree to participate in the study described above, understanding that I may withdraw my consent to participate at any time. A copy of this consent form has been given to me for my records (You can print this page for your record).

YES NO

**Appendix F: Survey provided to each online survey participant**

Gender: Male \_\_\_\_\_ Female \_\_\_\_\_ Height \_\_\_\_\_' (Feet) \_\_\_\_\_" (Inches) Weight \_\_\_\_\_ lbs.

**1. INSTRUCTIONS FOR RECORDING DRINKING DURING A TYPICAL WEEK**

IN THE CALENDAR BELOW, PLEASE FILL-IN YOUR DRINKING RATE AND TIME DRINKING DURING A TYPICAL WEEK IN THE LAST 30 DAYS.

First, think of a *typical week* in the last *30 days you*. (Where did you live? What were your regular weekly activities? Were you working or going to school? Etc.) Try to remember as accurately as you can, *how much* and for *how long* you *typically drank* in a week during that one month period?

For each day of the week in the calendar below, fill in the number of standard drinks typically consumed on that day in the upper box and the typical number of hours you drank that day in the lower box.

Day of Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Number of Drinks						
Number of Hours Drinking						

**2. INSTRUCTIONS FOR RECORDING DRINKING FOR YOUR HEAVIEST DRINKING WEEK**

IN THE CALENDAR BELOW, PLEASE FILL-IN YOUR DRINKING RATE AND TIME DRINKING DURING YOUR HEAVIEST DRINKING WEEK IN THE LAST 30 DAYS.

First, think of your *heaviest drinking week* in the last *30 days*. (Where did you live? What were your regular weekly activities? Where you working or going to school? Etc.)

Try to remember as accurately as you can, *how much* and for *how long* did you drink during your *heaviest drinking week* in that one month period?

For each day of the week in the calendar below, fill in the number of standard drinks consumed on that day in the upper box and the number of hours you drank that day in the lower box.

Day of Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Number of Drinks						
Number of Hours Drinking						

3. How often did you drink during the last *month*? (check one)

- a. I did not drink at all.
- b. About once a month.
- c. Two to three times a month.
- d. Once or twice a week.
- e. Three to four times a week.
- f. Nearly every day.
- g. Once a day or more.

4. Think of a typical weekend evening (Friday or Saturday) during the last *month*. How much did you drink on that evening? (check one)

Number of drinks (Self): \_\_\_\_\_

Number of drinks (Peers): \_\_\_\_\_

5. Think of the occasion (any day of the week) you drank the most during the last *month*. How much did you drink? (check one)

Number of drinks (Self): \_\_\_\_\_

Number of drinks (Peers): \_\_\_\_\_

6. In general, do you think do you drink more or less alcohol than the *average* university student?

More/ the Same/ Less

7. Your gender

Male/Female

8. Your height (Feet and Inches)

Feet: \_\_\_\_\_ Inches: \_\_\_\_\_

9. Your weight

Pounds: \_\_\_\_\_

10. Do you drink alcohol?

Yes/No

If No, why?: \_\_\_\_\_

11. What are your reasons for drinking? (check all that apply)

- a. To relax
- b. Too much stress
- c. To get drunk
- d. Peer/social pressure
- e. To socialize
- f. Do not want to be sober among drunk friends
- g. Drinking is a part of college culture/life
- h. Nothing else to do
- i. Other \_\_\_\_\_

12. What are the benefits of drinking alcohol? (check all that apply)

- a. Relieve stress
- b. Have fun
- c. Feel less anxious
- d. Meet people
- e. Become more courageous to converse with friends and/ or dance
- f. Other \_\_\_\_\_

13. What are the negative consequences of drinking alcohol? (check all that apply)

- a. Blackout
- b. Meeting people you would not want to meet when sober
- c. Regrettable actions and/or choices
- d. Experiencing negative emotions (e.g. Angry, sad, depressed, etc)
- e. Weight gain
- f. Hangovers
- g. Missing classes, work and/or other obligations
- h. Drunk driving/ DUI
- i. Unprotected sex
- j. Fighting
- k. Alcohol poisoning (e.g. health problems, death, etc)
- l. Spending too much money
- m. Relationship problems (parents, friends, coworkers, etc)
- n. Trouble with the law
- o. Other \_\_\_\_\_

14. Have you ever experienced the following due to alcohol? (check all that apply)

- a. Blackout
- b. Meeting people you would not want to meet when sober
- c. Regrettable action sand/or choices
- d. Experiencing negative emotions (e.g. Angry, sad, depressed, etc)
- e. Weight gain
- f. Hangover
- g. Missing classes, work and/or other obligations
- h. Drunk driving/ DUI
- i. Unprotected sex
- j. Fighting
- k. Alcohol poisoning (e.g. health problems, death, etc)
- l. Spending too much money
- m. Relationship problems (parents, friends, coworkers, etc)
- n. Trouble with the law
- o. I have never been negatively affected by alcohol
- p. Other \_\_\_\_\_

15. How much money do you usually spend on alcohol in a typical month?

\$ \_\_\_\_\_

17. Do you think that junior students (first and second year) tend to drink more than senior students (third year and beyond)?

Yes/ No

18. Are you a junior student (first and second year)?

Yes/ No

19. For Senior Students ONLY: Please think back about your junior years and compare them to now. How has your drinking pattern changed from your junior years?

More/ the Same/ Less

20. For Junior Students ONLY: Please compare you and your friends with senior students with whom you associate. Do senior students drink more or less than you and your friends?

Less More/ the Same/ Less

21. If you go to the bar, pub, or club for drinks, do you usually drink alcohol (“predrink”) before you go?

Yes/ No

If yes, why would you drink before you go to the bar, pub, or club? (check all that apply)

- a. To save money
- b. To have fun earlier
- c. Not able to socialize without drinks
- d. Other \_\_\_\_\_

22. How many pub crawls have you attended in last academic year (Sep 2009 to Apr 2010)?

\_\_\_\_\_

23. What was your purpose for attending these pub crawls? (check all that apply)

- a. To get drunk
- b. To socialize with friends
- c. To meet new people
- d. To drink free alcohol
- e. To support a college department/ program
- f. To help fundraise for a team or organization (e.g. baseball team)
- g. Peer/ social pressure
- h. A birthday or other celebration (e.g. Halloween, Thanksgiving, Christmas)
- i. Other \_\_\_\_\_

24. How likely is it that you will attend another pub crawl in the future? (If you have never attended one, how likely are you to attend one in the future?)

- a. Very likely
- b. Somewhat likely
- c. Uncertain
- d. Somewhat unlikely
- e. Very unlikely

25. When you attend events such as pub crawls and beer nights, how does your drinking behaviour compare to when you attend other social events such as bar or home party?

Amount:

- a. Much more
- b. More
- c. The Same
- d. Less
- e. Much less

Speed:

- a. Much faster
- b. Little faster
- c. The Same
- d. Little slower
- e. Much slower

Type of drink:

Same/ Different

26. What is your opinion about the university's role in promoting/ encouraging alcohol related events such as beer night, pub crawl, football game, steak night, and other fundraising events with alcohol?

- a. Very problematic
- b. Somewhat problematic
- c. Neutral/ Not sure
- d. Somewhat favourable
- e. Very favourable

27. Should pub crawls be promoted by the university?

- a. Yes/ No
- b. Why or why not? \_\_\_\_\_

28. Why do you think some women in college drink during pregnancy? (check all that apply)

- a. Addiction
- b. Stresses of life/ school
- c. Strain on relationships
- d. Habit
- e. Not aware of being pregnant
- f. Peer/ social pressure
- g. Not knowing that drinking alcohol can harm the foetus
- h. Certain types/amounts of alcohol are beneficial for pregnancy and foetus
- i. Other \_\_\_\_\_

29. If you were out with a pregnant friend who is about to order alcohol, what would you do? (check all that apply)

- a. Encourage her to drink
- b. Remain silent
- c. Remind her that she is pregnant
- d. Encourage her not to drink
- e. Insist that she does not drink

30. How likely are you to support a friend in abstaining from alcohol if you know she is pregnant? (choose one)
- a. Very likely
  - b. Somewhat likely
  - c. Not sure
  - d. Somewhat unlikely
  - e. Very unlikely

31. What is your gender?

Male/Female

Questions for this section are for women only:

32. What are the reasons that you might drink alcohol during your pregnancy? (check all that apply)
- a. Addiction
  - b. Stress
  - c. Strain on a relationship
  - d. Habit
  - e. Not knowing I was pregnant
  - f. Peer/ social pressure
  - g. Certain types/amounts of alcohol are beneficial for pregnancy and foetus
  - h. Other \_\_\_\_\_

33. How likely is it that you will drink during your pregnancy?

- a. Very likely
- b. Somewhat likely
- c. Not sure
- d. Somewhat unlikely
- e. Very unlikely

34. What would influence your decision to NOT drink alcohol during your pregnancy? (check all that apply)

- a. Alcohol can potentially harm the foetus
- b. Family and friends' advice
- c. Doctor or medical professional advice
- d. Information from government websites (e.g., Health Canada)
- e. Negative judgements from others
- f. Goal to be as healthy as possible during pregnancy
- g. Information from online health-related forums
- h. Information attained from pamphlets, television ads, or other types of media
- i. Education/ information acquired in school
- j. Information from health-related websites (e.g., Mayo Clinic)

k. Other \_\_\_\_\_

35. How likely is it that you will abstain from drinking alcohol during your pregnancy?

- a. Very likely
- b. Somewhat likely
- c. Not sure
- d. Somewhat unlikely
- e. Very unlikely

Questions for this section are for men only:

36. How likely are you to or have you been to support your partner's abstinence from alcohol during pregnancy? (choose one)

- a. Very likely
- b. Somewhat likely
- c. Not sure
- d. Somewhat unlikely
- e. Very unlikely

Why would you decide to support or not support your partners' abstinence from alcohol?

\_\_\_\_\_

Questions about FASD:

37. What does the acronym "FASD" stand for?

\_\_\_\_\_

38. Please list any courses that you have taken in which FASD was covered. (Please list course name and FASD contents)

	Course name	FASD Content
a. High school:	_____	_____
	_____	_____
	_____	_____
b. University:	_____	_____
	_____	_____
	_____	_____
c. Other:	_____	_____
	_____	_____
	_____	_____

Definition of Foetal Alcohol Spectrum Disorder (FASD):

Foetal Alcohol Spectrum Disorder (FASD) is the broad category for non-reversible birth defects that can affect a variety of domains, including attention and memory; executive functioning; motor skills; and learning and judgement. Many children with FASD have a cluster of problems, which can include; impulsivity, disorganization, short-term memory problems, and difficulty understanding subtle social cues. Often, as individuals with FASD get older, their behavioural difficulties attract the attention of social services due to their involvement with the criminal justice system.

Foetal Alcohol Syndrome (FAS) is one of the subcategories of FASD, which is a specific set of symptoms found in the children of women who consumed alcohol during pregnancy. Children with FAS exhibit a set of facial dysmorphologies, mental dysfunction, growth retardation and central nervous system disorders. Additional symptoms of FAS often include mental retardation, speech and language problems, and hearing difficulties. The most consistent areas of retardation are developmental delays, hyperactivity, and poor or delayed motor development.

39. After reading the definition above, how concerned are you about having a child with FASD?

- a. Extremely concerned
- b. Somewhat concerned
- c. A little bit concerned
- d. Not concerned at all

40. Who do you think is most at risk of having a child with FASD? (check all that apply)

- a. Vulnerable and/or marginalized women living in poverty
- b. Women who are addicted to alcohol
- c. University/college students
- d. Well-educated professional women in their 20s and 30s
- e. Teen mothers
- f. Single mothers
- g. Individuals who themselves have FASD
- h. All women of childbearing age
- i. Other \_\_\_\_\_

41. How high is the risk of having a child with FASD among college students?

- a. Very high
- b. High
- c. Moderate
- d. Low
- e. Very low

42. Are you aware of any campaigns to reduce alcohol consumption?

Yes/ No

If Yes, please briefly describe: \_\_\_\_\_

43. Are you aware of any campaigns to promote healthy drinking?

Yes/ No

If yes, please briefly describe: \_\_\_\_\_

44. Are you aware of any campaigns to prevent FASD?

Yes/ No

If yes, please briefly describe: \_\_\_\_\_

45. Have you ever looked for information on healthy drinking?

Yes/ No

If yes, where did you look (check all that apply)

- a. Internet
- b. Healthy drinking campaign posters
- c. Health clinics
- d. Counsellors
- e. Student services
- f. Other \_\_\_\_\_

46. If you were going to look for information on healthy drinking on the internet, what keywords would you use?

\_\_\_\_\_

47. What types of information should be included in healthy drinking campaigns?

\_\_\_\_\_

48. What do you feel would be the most effective messages to reduce drinking during pregnancy?

\_\_\_\_\_

49. What do you feel would be the most effective messages to increase awareness of FASD?

\_\_\_\_\_

50. Who are the appropriate target groups for each of the following kinds of prevention campaigns?

Healthy drinking campaign: \_\_\_\_\_

Drinking during pregnancy campaign: \_\_\_\_\_

Reducing FASD campaign: \_\_\_\_\_

This section asks a few questions about you. These questions help us to determine if we have surveyed a wide variety of people. This ensures that our results will reflect the many differing views that different people may have. Please take a few minutes to answer these questions.

51. What is your age?

\_\_\_\_\_ (years)

52. Are you

- a. Single
- b. In a committed relationship
- c. Married/Common Law
- d. Divorced/Separated
- e. Widowed

53. Are you

- g. Caucasian
- h. First Nations
- i. Metis
- j. Asian
- k. African-Canadian
- l. Other \_\_\_\_\_

54. Do you have children?

- a. No
- b. No, but I am currently expecting
- c. Yes  
If yes, how many children do you have? \_\_\_\_\_

55. What year of school are you in?

- a. First
- b. Second
- c. Third
- d. Fourth
- e. Master's
- f. PhD
- g. Other \_\_\_\_\_

56. Which educational institution do you attend?

- a. University of Saskatchewan
- b. University of Regina
- c. SIAST
- d. SIIT
- e. Gabriel Dumont Technical Institute
- f. Other \_\_\_\_\_

57. What is your main source of income?

\_\_\_\_\_

58. In comparison with other families in Saskatoon, how would you describe your financial situation?

- a. much above higher
- b. above average
- c. average
- d. below average
- e. much below average

59. If you have questions or comments about this research or survey, please feel free to comment below.

Comments/ questions: \_\_\_\_\_

Thank you so much for your time to take the survey. This is the end of the survey. If you wish to enter for the draw to win the prize of \$150, please leave your contact information below.

60. Please leave your name and email address if you wish to enter for the draw to win the prize of \$150.

\_\_\_\_\_  
Thank you so much for your time!



## LIST OF PUBLICATIONS

### Community-University Institute for Social Research

- Allan, Nancy, & Michael Gertler. (2006). *Remaking the Links: Fair Trade for Local and Global Community Development*. Saskatoon: Community-University Institute for Social Research.
- Amankwah, Dinah. (2003). *Integrative Wraparound (IWRAP) Process Training*. Saskatoon: Community-University Institute for Social Research.
- Avis, Kyla, & Angela Bowen. (2004). *Postpartum Depression Support Program Evaluation*. Saskatoon: Community-University Institute for Social Research.
- Banks, Christopher. (2003). *The Cost of Homophobia: Literature Review on the Human Impact of Homophobia On Canada*. Saskatoon: Community-University Institute for Social Research.
- Banks, Christopher. (2004). *The Co\$ of Homophobia: Literature Review on the Economic Impact of Homophobia On Canada*. Saskatoon: Community-University Institute for Social Research.
-  Basualdo, Maria, & Kangayi, Chipu. (2010). *Cypress Hills Abilities Centres, Inc: Exploring Alternatives. A Research Report*. Saskatoon: Centre for the Study of Co-operatives and Community-University Institute for Social Research.
- Berntson, Ron. (2003). *Peer Victimization Experiences in High School*. Saskatoon: Community-University Institute for Social Research.
- Bidonde, Julia. (2006). *Experiencing the Saskatoon YWCA Crisis Shelter: Residents' Views*. Saskatoon: Community-University Institute for Social Research. Please contact Clara Bayliss at the YWCA at 244-7034, ext. 121 or at [info@ywcaskatoon.com](mailto:info@ywcaskatoon.com) for copies of this report.
-  Bidonde, Julia, & Catherine Leviten-Reid. (2011). *"A Place to Learn, Work, and Heal": An Evaluation of Crocus Co-operative*. Saskatoon: Centre for the Study of Co-operatives and Community-University Institute for Social Research.
-  Bidonde, Julia, Mark Brown, Catherine Leviten-Reid, & Erin Nicolas. (2012). *Health in the Communities of Duck Lake and Beardy's and Okemasis First Nation: An Exploratory Study*. Saskatoon: Centre for the Study of Co-operatives and Community-University Institute for Social Research.
- Bowditch, Joanne. (2003). *Inventory of Hunger Programs in Saskatoon*. Saskatoon: Community-University Institute for Social Research.
- Bowen, Angela. (2004). *Healthy Mother Healthy Baby: Program Logic Model and Evaluability Assessment*. Saskatoon: Community-University Institute for Social Research.



Brown, K., I. Findlay, & R. Dobrohoczki (2011). *Community Resilience, Adaptation, and Innovation: The Case of the Social Economy in LaRonge*. Saskatoon: Centre for the Study of Co-operatives and Community-University Institute for Social Research.

Brownlee, Marilyn, & N. Chopin. (2009) *Evaluation Report: Snapshot of Collaborative Processes*. Saskatoon: Saskatoon Regional Intersectoral Committee and Community-University Institute for Social Research. Saskatoon: Community-University Institute for Social Research.

Chopin, N., S. Hogg, S. McHenry, J. Popham, M. Stoops, S. Takahashi, & I.M. Findlay. (2012). *Fetal Alcohol Spectrum Disorder Awareness and prevention Strategies: Learning from the Reported Alcohol Knowledge and Behaviours of College-Age Youth — A Research Report*. Saskatoon: Community-University Institute for Social Research.

Chopin, Nichola, Bill Holden, Nazeem Muhajarine, & James Popham. (2010). *Ten Years of Quality of Life in Saskatoon: Summary of Research 2010 Iteration*. Saskatoon: Community-University Institute for Social Research.



Chopin, N., & I. Findlay. (2010). *Exploring Key Informants' Experiences with Self-Directed Funding: A Research Report*. Saskatoon: Community-University Institute for Social Research

Chopin, N., & S. Wormith. (2008) *Count of Saskatoon Homeless Population: Research Findings*. Saskatoon: Community-University Institute for Social Research

CUISR. (2001). *Proceedings of the Prairie Urban Congress 2001*. With support from Canada Mortgage and Housing Corporation, City of Saskatoon, GE Capital Mortgage & Insurance Canada, Government of CANADA, Saskatchewan Housing Corporation, and Western Economic Diversification Canada. Saskatoon: Community-University Institute for Social Research.

CUISR. (2002). *Partnerships for a Healthy Sustainable Community: CUISR—Present and Future*. Saskatoon: Community-University Institute for Social Research.

CUISR. (2003). *“We Did It Together”: Low-Income Mothers Working Towards a Healthier Community*. Saskatoon: Community-University Institute for Social Research.

CUISR. (2004). *Building Community Together: CUISR—Present and Future*. Saskatoon: Community-University Institute for Social Research.

CUISR. (2004). *CUISR at the Crossroads: Strategic Planning Session, June 23, 2004*. Saskatoon: Community-University Institute for Social Research.

CUISR. (2010). *Saskatoon HIFIS Report on Homelessness*. Saskatoon: Community-University Institute for Social Research.

Daniel, Ben. (2006). *Evaluation of the YWCA Emergency Crisis Shelter: Staff and Stakeholder Perspectives*. Saskatoon: Community-University Institute for Social Research. Please contact Clara Bayliss at the YWCA at 244-7034, ext. 121 or at [info@ywcaskatoon.com](mailto:info@ywcaskatoon.com) for copies of this report.



Diamantopoulos, Mitch, & Isobel M. Findlay. (2007). *Growing Pains: Social Enterprise in Saskatoon's Core Neighbourhoods*. Saskatoon: Centre for the Study of Co-operatives and Community-University Institute for Social Research



Dozar, Marsha, Don Gallant, Judy Hannah, Emily Hurd, Jason Newberry, Ken Pike, & Brian Salisbury. (2012). *Individualized Funding: A Framework for Effective Implementation*. Saskatoon: Centre for the Study of Co-operatives and Community-University Institute for Social Research.

Drechsler, Coralee. (2003). *Influencing Poverty Reduction Policy Through Research Evidence: Immigrant Women's Experience in Saskatoon*. Saskatoon: Community-University Institute for Social Research.

Dressler, Mary Pat (2004). *Aboriginal Women Share Their Stories in an Outreach Diabetes Education Program*. Saskatoon: Community-University Institute for Social Research.

Dunning, Heather. (2004). *A Mixed Method Approach to Quality of Life in Saskatoon*. Saskatoon: Community-University Institute for Social Research.

Dyck, Carmen. (2004). *"Off Welfare... Now What?": A Literature Review on the Impact of Provincial Welfare to Work Training Programs in Saskatchewan*. Saskatoon: Community-University Institute for Social Research.

Dyck, Carmen G. (2005). *"Off Welfare ... Now What?": Phase II, Part 2: Analysis*. Saskatoon: Community-University Institute for Social Research.



Elliott, Patricia W. (2011). *Participatory Action Research: Challenges, Complications, and Opportunities*. Saskatoon: Centre for the Study of Co-operatives and Community-University Institute for Social Research.

Engler-Stringer, Rachel. (2006). *Collective Kitchens in Three Canadian Cities: Impacts on the Lives of Participants*. Saskatoon: Community-University Institute for Social Research.

Engler-Stringer, R., & J. Harder. (2011). *Toward Implementation of the Saskatoon Food Charter: A Report*. Saskatoon: Community-University Institute for Social Research

Evitts, Trina, Nazeem Muhajarine, & Debbie Pushor. (2005). *Full-Time Kindergarten in Battlefords School Division #118 Community Schools*. Saskatoon: Community-University Institute for Social Research.

Fernandes, Neville. (2003). *Saskatchewan's Regional Economic Development Authorities: A Background Document*. Saskatoon: Community-University Institute for Social Research.

Fillingham, Jennifer. (2006). *SEN-CUISR- Environmental Charitable Organization Feasibility Study, Phase Two*. Saskatoon: Community-University Institute for Social Research.



Findlay, Isobel M. & Anar Damji. (2013). *Self-Directed Funding: An Evaluation of Self-Managed Contracts in Saskatchewan*. Saskatoon: Community-University Institute for Social Research and Centre for the Study of Co-operatives.



Findlay, Isobel M., Julia Bidonde, Maria Basualdo, & Alyssa McMurtry. (2009). *South Bay Park Rangers Employment Project for Persons Living with a Disability: A Case Study in Individual Empowerment and Community Interdependence*. Saskatoon: Community-University Institute for Social Research and Centre for the Study of Co-operatives.



Findlay, Isobel M., James Popham, Patrick Ince, & Sarah Takahashi. (2013). *Through the Eyes of Women: What a Co-operative Can Mean in Supporting Women during Confinement and Integration*. Saskatoon: Community-University Institute for Social Research and Centre for the Study of Co-operatives.

Gauley, Marg. (2006). *Evaluation of Respectful Conflict Resolution and Peer Mediation Program*. Saskatoon: Community-University Institute for Social Research.

Gold, Jenny. (2004). *Profile of an Inter-Sectoral Issue: Children Not In School*. Saskatoon: Community-University Institute for Social Research.

Grosso, Paula. (2003). *Uprooting Poverty and Planting Seeds for Social Change: The Roots of Poverty Project*. Saskatoon: Community-University Institute for Social Research.

Grosso, Paula, & Jodi Crewe. (2004). *Project Greenhorn: Community Gardening*. Saskatoon: Community-University Institute for Social Research.

Harlington, Leora. (2004). *Saskatoon Charging and Disposition Patterns Under Section 213 of the Criminal Code of Canada*. Saskatoon: Community-University Institute for Social Research.



Heit, Jason. (2012). *Mapping Social Capital in a Network of Community development Organizations: The South West Centre for Entrepreneurial Development Organizational Network*. Saskatoon: Centre for the Study of Co-operatives and Community-University Institute for Social Research.

Henry, Carol J., Carol Vandale, Susan Whiting, Flo Woods, Shawna Berenbaum, & Adrian Blunt. (2006). *Breakfast/Snack Programs in Saskatchewan Elementary Schools: Evaluating Benefits, Barriers, and Essential Skills*. Saskatoon: Community-University Institute for Social Research.



Hurd, Emily. (2012). *Community Conversations about the Good Food Junction Co-operative*. Saskatoon: Centre for the Study of Co-operatives and Community-University Institute for Social Research.

Jackson, Maureen. (2004). *Closer to Home: Child and Family Poverty in Saskatoon*. Saskatoon: Community-University Institute for Social Research.

- Janzen, Bonnie. (2003). *An Evaluation Of The Federation of Canadian Municipalities Quality of Life Reporting System*. Saskatoon: Community-University Institute for Social Research.
- Jonker, Peter, Colleen Whitedeer, & Diane McDonald. (2005). *Building Capacity of Fond du Lac Entrepreneurs to Establish and Operate Local Tourism Business: Assessment and Proposed Training*. Saskatoon: Community-University Institute for Social Research.
- Kelsey, Melissa V. (2004). *Determining Saskatoon's Value Profile*. Saskatoon: Community-University Institute for Social Research.
- Klymyshyn, Sherry, & Lee Everts. (2007). *Evaluation of Saskatoon Community Clinic Group Program for "At Risk" Elderly*. Saskatoon: Community-University Institute for Social Research.
- Kynoch, Bev. (2003). *The Brightwater Environmental and Science Project: Respecting Traditional Ecological Knowledge—The Soul of a Tribal People*. Saskatoon: Community-University Institute for Social Research.
- Li, Song. (2004). *Direct Care Personnel Recruitment, Retention and Orientation*. Saskatoon: Community-University Institute for Social Research.
- Lisoway, Amanda. (2004). *211 Saskatchewan Situational Analysis*. Saskatoon: Community-University Institute for Social Research.
-  Lynch, Karen, & Isobel M. Findlay. (2007). *A New Vision for Saskatchewan: Changing Lives and Systems through Individualized Funding for People with Intellectual Disabilities – A Research Report*. Saskatoon: Centre for the Study of Co-operatives and Community-University Institute for Social Research.
-  Lynch, Karen, Cara Spence, & Isobel M. Findlay. (2007). *Urban Aboriginal Strategy Funding Database: A Research Report*. Saskatoon: Centre for the Study of Co-operatives and Community-University Institute for Social Research.
- MacDermott, Wendy. (2003). *Child Poverty in Canada, Saskatchewan, and Saskatoon: A Literature Review and the Voices of the People*. Saskatoon: Community-University Institute for Social Research.
- MacDermott, Wendy. (2004). *Youth . . . on the brink of success. Youth Addictions Project*. Saskatoon: Crime Prevention—Community Mobilization and Community-University Institute for Social Research..
- MacDermott, Wendy. (2004). *Common Functional Assessment and Disability-Related Agencies and Departments in Saskatoon*. Saskatoon: Community-University Institute for Social Research.
- MacDermott, Wendy. (2004). *Evaluation of the Activities of the Working Group to Stop the Sexual Exploitation of Children*. Saskatoon: Community-University Institute for Social Research.
- McRae, Stacy, & Keith Walker. (2007). *An Evaluation of Family to Family Ties: A Review of Family Mentorship in Action*. Saskatoon: Community-University Institute for Social Research.

- Moneo, Cameron, Maria Basualdo, Isobel M. Findlay, & Wendy MacDermott. (2008). *Broadway Theatre Membership Assessment. A Research Report*. Saskatoon: Community-University Institute for Social Research.
- Muhajarine, Nazeem, Stacey McHenry, Jethro Cheng, James Popham, and Fleur MacQueen-Smith. (2013). *Phase One Evaluation: Improving Outcomes for Children with FASD in Foster Care: Final Report*. Saskatoon: Community-University Institute for Social Research and Saskatchewan Population Health and Evaluation Research Unit.
- Muhajarine, Nazeem, Maureen Horn, Jody Glacken, Trina Evitts, Debbie Pushor, and Brian Keegan. (2007). *Full Time Kindergarten in Saskatchewan, Part One: An Evaluation Framework for Saskatchewan Full-Time Kindergarten Programs*. Saskatoon: Community-University Institute for Social Research.
- Muhajarine, Nazeem, Trina Evitts, Maureen Horn, Jody Glacken, and Debbie Pushor. (2007). *Full-Time Kindergarten in Saskatchewan, Part Two: An Evaluation of Full-Time Kindergarten Programs in Three School Divisions*. Saskatoon: Community-University Institute for Social Research.
- Ofosuhene, Maxwell. (2003). *Saskatchewan River Basin-Wide Survey of Residents' Attitudes Towards Water Resources and the Environment*. Saskatoon: Community-University Institute for Social Research.
- Olfert, Sandi. (2003). *Quality of Life Leisure Indicators*. Saskatoon: Community-University Institute for Social Research.
-  Pattison, D. and I. Findlay. (2010). *Self-Determination in Action: The Entrepreneurship of the Northern Saskatchewan Trapper's Association Co-operative*. Saskatoon: Community-University Institute for Social Research and Centre for the Study of Co-operatives.
- Prokop, Shelley Thomas. (2009). *Program Evaluation of the Saskatoon Community Clinic: Strengthening the Circle Program*. Saskatoon: Community-University Institute for Social Research.
- Propp, A.J. (Jim). (2005). *Preschool: As Essential As Food. An Effectiveness Review of the Saskatoon Preschool Foundation Tuition Subsidy Program*. Saskatoon: Community-University Institute for Social Research.
- Quinlan, Elizabeth, Ally Clarke, and Natasha Miller. (2013). *Coordinating and Enhancing Care and Advocacy for Sexual Assault Survivors: New Collaborations and New Approaches*. Saskatoon: Community-University Institute for Social Research.
- Radloff, Karla. (2006). *Community Resilience, Community Economic Development, and Saskatchewan Economic Developers*. Saskatoon: Community-University Institute for Social Research.
- Reed, Maureen. (2003). *Situating Indicators of Social Well-Being in Rural Saskatchewan Communities*. Saskatoon: Community-University Institute for Social Research.
- Roberts, Claire. (2006). *Refugee Women and Their Postpartum Experiences*. Saskatoon: Community-University Institute for Social Research.

- Ruby, Tabassum. (2004). *Immigrant Muslim Women and the Hijab: Sites of Struggle in Crafting and Negotiating Identities in Canada*. Saskatoon: Community-University Institute for Social Research.
- Sanderson, K. (2005). *Partnering to Build Capacity and Connections in the Community*. Saskatoon: Community-University Institute for Social Research.
- Sanderson, Kim, Michael Gertler, Diane Martz, & Ramesh Mahabir. (2005). *Farmers' Markets in North America: A Literature Review*. Saskatoon: Community-University Institute for Social Research.
- Schmidt, Heather, Cynthia Chataway, Patrick Derocher, Jeff McCallum, & Yolanda McCallum. (2006). *Understanding the Strengths of the Indigenous Communities: Flying Dust First Nation Focus Group Report*. Saskatoon: Community-University Institute for Social Research.
- Seguin, Maureen. (2006). *Alberta Mentoring Partnerships: Overview and Recommendations to Saskatoon Mentoring Agencies*. Saskatoon: Community-University Institute for Social Research.
- Sinclair, Raven, & Sherri Pooyak (2007). *Aboriginal Mentoring in Saskatoon: A cultural perspective*. Saskatoon: Indigenous Peoples' Health Research Centre in collaboration with Big Brothers Big Sisters of Saskatoon and the Community-University Institute for Social Research.
- Soles, Kama. (2003). *Affordable, Accessible Housing Needs Assessment at the North Saskatchewan Independent Living Centre*. Saskatoon: Community-University Institute for Social Research.
-  Spence, Cara, & Isobel M. Findlay. (2007). *Evaluation of Saskatoon Urban Aboriginal Strategy: A Research Report*. Saskatoon: Community-University Institute for Social Research.
- Stadnyk, Nadia, Nazeem Muhajarine, & Tammy J. Butler. (2005). *The Impact of KidsFirst Saskatoon Home Visiting Program in Families' Lives*. Saskatoon: Community-University Institute for Social Research.
- Sun, Yinshe. (2005). *Development of Neighbourhood Quality of Life Indicators*. Saskatoon: Community-University Institute for Social Research.
- Tannis, Derek. (2005). *Mentoring in Saskatoon: Toward a Meaningful Partnership*. Saskatoon: Community-University Institute for Social Research.
- Tupone, Juliano. (2003). *The Core Neighbourhood Youth Co-op: A Review and Long-Term Strategy*. Saskatoon: Community-University Institute for Social Research.
- Victor, Janice. (2011). *Report to the Saskatoon Regional Intersectoral Committee: The Middle Ring Evaluation*. Saskatoon: Community-University Institute for Social Research.
- Waikar, Rahul, Suresh Kalagnanam, & Isobel M. Findlay. (2013). *Financial Proxies for Social Return on Investment Analyses in Saskatchewan: A Research Report*. Saskatoon: Community-University Institute for Social Research.

- Williams, Alison with Sylvia Abonyi, Heather Dunning, Tracey Carr, Bill holden, Ron Labonte, Nazeem Muhajarine, & Jim Randall. (2001). *Achieving a Healthy, Sustainable Community: Quality of Life in Saskatoon, Saskatchewan. Research Summary*. Saskatoon: Community-University Institute for Social Research.
- Wohlgemuth, Nicole R. (2004). *School Fees in Saskatoon*. Saskatoon: Community-University Institute for Social Research.
- Woods, Florence. (2003). *Access to Food in Saskatoon's Core Neighborhood*. Saskatoon: Community-University Institute for Social Research.
- Wright, Judith and Nazeem Muhajarine. (2003). *Respiratory Illness in Saskatoon Infants: The Impact of Housing and Neighbourhood Characteristics*. Saskatoon: Community-University Institute for Social Research.



## COMMUNITY-UNIVERSITY INSTITUTE FOR SOCIAL RESEARCH

432 - 221 Cumberland Avenue

Saskatoon, SK S7N 1M3

Phone: 306.966.2121

Fax: 306.966.2122

[www.usask.ca/cuisr](http://www.usask.ca/cuisr)

