Alcohol Problems and Interest in Self-help

A Population Study of Alberta Adults

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ABSTRACT

Background: We quantified the prevalence of alcohol problems among Alberta adults and determined relationships between sociodemographic characteristics, problem drinking status, and interest in self-help materials to reduce alcohol use.

Methods: A computer-aided telephone interview was administered to a stratified random sample of 10,014 Albertans, 18 years of age or older (5,621 women and 4,393 men; M age = 43.3 years, SD = 16.0), with a response rate of 65.4%. Measures included: 1) current drinking status, 2) prior alcohol treatment, 3) problem drinking status (using the Alcohol Use Disorders Identification Test; AUDIT), and 4) interest in receiving free self-help materials to encourage safe drinking. Data were weighted to reflect age, sex, and regional Alberta population.

Results: Of the total sample, 19.3% abstained from drinking in the past year, 4.2% had received treatment for alcohol problems at some point in their lives, and 80.7% were current drinkers (i.e., consumed alcohol in the previous year). Some 15.2% (n=1,193) of current drinkers were classified as having a drinking problem. Logistic regression analyses showed that problem drinkers had 3.5 times greater odds of being male and 2.3 times greater odds of being interested in self-help interventions, compared to other current drinkers. Being single, of younger age, and not being exposed to post-secondary education also significantly predicted problem drinking status.

Interpretation: Alcohol misuse is common among Alberta drinkers, but many of them are interested in receiving brief public health interventions designed to help them assert control over their behaviour.

La traduction du résumé se trouve à la fin de l'article.

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Alcohol is a leading contributor to preventable death and, at high consumption levels, increases the likelihood of morbidity, trauma, casualties, and violence.¹⁻³ A recent Canadian study estimated that alcohol abuse accounted for \$7.5 billion in economic costs in 1992.⁴ The spectrum of adult alcohol use includes social drinkers, problem drinkers, and those exhibiting alcohol dependence.³ In this context, the ratio of problem drinkers to people exhibiting clinical symptoms of alcohol dependence is estimated to be about 4:1.³ Despite increased risk of experiencing health and social problems,⁵ most of these problem drinkers will never access formal alcohol treatment;⁶⁻⁹ a Canadian study estimated that the ratio of treated to untreated problem drinkers is about 1:10.¹⁰ Problem drinkers generally do not seek treatment because of stigma or embarrassment,¹¹⁻¹³ and when asked why they have not sought help from a treatment program or health agency, overwhelmingly indicate that they "want to change on their own".^{14,15}

Few Canadian studies have described prevalence of problem drinking in the general public. National surveys are limited because they typically 1) occur infrequently, 2) do not provide sufficient sample sizes to describe within-province variation in alcohol problems, and 3) assess alcohol consumption and/or alcohol dependence rather than drinking problems.¹⁶ To address these limitations, we described problem drinking in a representative sample of Alberta adults. We drew a large sample in order to determine whether there was regional variation in alcohol problems across the province, and we used a reliable and well-validated instrument specifically designed for early detection of alcohol problems in the context of public health screening programs.

Not all problem drinkers need formal treatment in order to resolve their problems. This population responds well to brief, self-help interventions designed to help them assert control over alcohol use.¹⁷⁻²⁰ Given that problem drinkers will generally not seek help from alcohol treatment programs or health agencies, an important public health priority is to determine *how* such interventions could be delivered. Emerging research suggests that many drinkers in the general population are interested in receiving brief self-help

interventions designed to help them change their alcohol use.²¹ These brief public health interventions are appealing because they do not require public admission of an alcohol problem. Moreover, they can be provided at low cost to a large number of drinkers (e.g., via mail) who will never access health services for alcohol problems.^{22,23} Unfortunately, few Canadian studies have described interest in self-help interventions,²⁴ and no data are currently available for Alberta. To address these limitations, we described the extent to which current-drinking respondents would be interested in receiving a brief self-help intervention designed to help them assert control over alcohol use. We also identified demographic and drinking-related predictors of interest in self-help materials.

METHOD AND ANALYSES

Participants

Sample

The Population Research Laboratory at the University of Alberta administered a computer-aided telephone interview (CATI) to a large representative sample of Alberta adults. The study protocol was approved by the University of Alberta Health Research Ethics Committee. Respondents were selected through a two-stage sampling design. First, random digit dialling (RDD) was used to select eligible households. The sample frame consisted of six Alberta regions (South, Calgary, Central, Edmonton, North, Far North). People living in housing for the elderly, group homes, educational institutions, and penitentiaries were excluded from the sample, as were approximately 3% of Alberta households without telephones. Within eligible households, respondents over the age of 18 with a birth date closest to the date of telephone contact were selected. Respondents were eligible to participate if they spoke English. A quota sample of 1,669 respondents meeting these criteria was obtained for each of the 6 regions, yielding a total of 10,014 respondents. This ensured sufficient sample size for identifying regional variations, but resulted in oversampling of rural regions relative to urban areas. Consequently, data were weighted to reflect population proportions of adult females and males residing in each

Figure 1. Demographic characteristics of current drinkers (N=7,833, weighted data)

Figure 2. Interaction between age and education level in the prediction of problem drinking status

of the 6 regions in Alberta in the year 2000, using the method described by Lee et al.²⁵

Refusal Rates

The survey had a 65.4% response rate. Refusal rates in relation to age, sex, and level of education were unavailable, but an analysis revealed significant regional variation ($\chi^2 = 150.7$; $p < 0.001$). Refusal rates varied from 5.1% in the far North, to 8.6% in Calgary. Refusal rates were slightly

higher in Edmonton and Calgary than in rural areas.

Sample Characteristics

Respondents included 5,621 females (56.1%) and 4,393 males (43.9%). Mean age of the sample was 43.3 years (SD = 16.0; Range = 18-97 years). More than half (58.4%) had completed at least one year of university or college, 23.2% had completed high school only, and 18.4% did not complete high school. Full-time

TABLE I
Logistic Regression Predicting Problem Drinking Status from Demographic Characteristics

Predictors	Model/Step χ^2	Wald	Odds Ratio	95% CI
Main Effects	921.99***			
Gender		227.82		
Male			3.46***	2.94 - 4.06
Female			1.00	Reference
Marital Status		84.01		
Single, widowed, divorced			2.10***	1.79 - 2.49
Married, cohabiting			1.00	Reference
Employment		0.34		
PT or unemployed			1.05	0.89 - 1.25
FT			1.00	Reference
Education		39.83		
No university/college			1.63***	1.40 - 1.89
University/college degree			1.00	Reference
Income		1.07		
Age		274.87	0.95***	0.99 - 1.04
Region		3.79		
Interactions	41.58**			
Age X Education		26.70**		

*** $p < 0.001$; ** $p < 0.01$. Age and income were treated as interval scales.

employment was reported by 59.0% while 9.1% reported part-time employment and 31.9% were unemployed, or one of the following: on sick leave, retired, students, or homemakers. Finally, 62.4% were either married or cohabiting with a partner; 21.2% were single; and 16.4% were widowed, divorced, or separated.

Measures

Screening

Two questions were asked to assess current drinking status (i.e., "Over the past 12 months, did you drink any alcohol?") and prior alcohol treatment (i.e., "Have you ever gone for formal treatment for drinking, for example, from a doctor or AA, or gone to a drinking program?"). If a respondent answered no to the first question and/or yes to the second question, the CATI procedure skipped to the demographic items at the end of the interview.

Alcohol Problems, Interest in Self-help, Demographics

Current drinkers who had never received alcohol treatment ($n = 7,833$) were then administered the Alcohol Use Disorders Identification Test (AUDIT), a brief self-report measure developed by the World Health Organization for early detection of hazardous drinking (i.e., patterns of alcohol use that pose a high risk of future damage to physical or mental health) and harmful drinking (i.e., patterns of alcohol use that have recently created problems).²⁶⁻²⁸

It consists of a) three items assessing quantity and frequency of drinking, b) three items assessing alcohol dependence (e.g., inability to stop drinking once started), and c) four items assessing problems caused by alcohol use in the past year (e.g., injuries). Respondents exhibiting a weighted score of 8 or greater are classified as 'problem drinkers'. The AUDIT exhibits: very good sensitivity and specificity among males and females (values of .80 and above) for detection of alcohol problems;^{27,29} positive correlations with biochemical measures of excessive alcohol use^{28,30} and other self-report measures of hazardous drinking;³¹ and excellent reliability and validity.³² We have successfully used CATI techniques to administer the AUDIT in other general population surveys.³³

Current drinkers were then asked: "A self-help pamphlet is being prepared that would help people decide whether or not they would like to reduce their drinking. If such a pamphlet were available, would you be interested in receiving a free copy?" Respondents answered either yes or no. This item was designed to decrease demand effects since no personal or identifying information was required from the respondent. If asked to clarify whether the pamphlet was for their own use, or the type of information they hoped to see, respondents may have refused to answer or might have fabricated responses to please the interviewer. This item was previously used in a recent Canadian study of brief

alcohol interventions.³⁴ Finally, respondents answered a set of items assessing age, sex, education, current employment, and income.

Analyses

Hierarchical set-wise logistic regression analyses predicted the 2 study outcomes from 7 predictors (i.e., respondent sex, age, marital status, employment status, education, income, and region of residence). First, we predicted the presence or absence of problem drinking from the predictor set (Step 1) and from all 2-way interactions between predictors (Step 2). Exactly the same approach was adopted for the second analysis except that we predicted the presence or absence of interest in self-help.

RESULTS

Description of current drinkers

Of the total sample ($N = 10,014$), 19.3% abstained from drinking alcohol in the previous year, 4.2% had received formal treatment at some point in their lives, and 80.7% were current drinkers, i.e., had consumed alcohol in the previous 12 months.

Figure 1 shows that, of current drinkers who had never received alcohol treatment ($n = 7,833$), 15.2% were identified as having a drinking problem (i.e., had an AUDIT score of 8 or greater) and 22.0% were interested in self-help.

Predicting problem drinking status

As shown in Table I, male respondents had 3.46 times greater odds of being problem drinkers, compared to females. Also, single, divorced, or widowed respondents had 2.10 times greater odds of being problem drinkers, compared to married respondents. Younger age and high school or lesser education also significantly predicted problem-drinking status.

There was a significant age by education interaction (see Figure 2), such that 18-24 year olds *without* exposure to post-secondary education were more likely to be problem drinkers than respondents in this age group who had attended university or college.

Predicting interest in self-help

Male respondents were less likely to be interested in self-help materials, as were respondents who were either working part-

time or unemployed. Table II also shows that current drinkers with alcohol problems had 2.3 times greater odds of being interested in self-help than current drinkers with no alcohol problems.

There was a significant age by sex interaction (see Figure 3) such that females were more likely to report an increased interest in self-help between the ages of 35 and 44, compared to males.

There was also a significant age by problem drinking status interaction (see Figure 4), such that under the age of 35, respondents with drinking problems reported greater interest in self-help than non-problem drinkers, while that pattern was reversed for respondents over the age of 35.

DISCUSSION

This study found that 15% of the 80% of Alberta adults who consumed alcohol in the 12 months preceding the interview were classified as problem drinkers (i.e., an estimated 12% of the total Alberta population). This contrasts with a 4% estimate of alcohol dependence among current-drinking Canadians reported using the CAGE measure,³⁵ but is not surprising given that the AUDIT was designed to identify *recent* hazardous and harmful drinking rather than longer-term alcohol dependence. Little geographic variability in problem drinking was observed across Alberta regions; however, consistent with other studies using the AUDIT,²⁶ problem drinkers were more likely to be single, male, and to report lower educational attainment. Also consistent with other research,³⁶⁻³⁸ we found a steady decline in problem drinking over the life course. However, 18-24 year olds *without* exposure to postsecondary education were more likely to be problem drinkers than respondents in this age group who had attended university or college. It may be worthwhile to conduct research specifically on this age group to identify social and cultural factors that are associated with these differences.

Overall, 22% of current drinkers wanted to obtain free self-help materials about reducing alcohol use, but problem drinkers were over two times more likely to report such interest, compared to non-problem drinkers. Interest in self help was also greater among young problem drinkers compared to older respondents, and this

TABLE II

Logistic Regression Predicting Interest in Self-help from Demographic Characteristics

Predictors	Model/Step χ^2	Wald	Odds Ratio	95% CI
Main Effects	174.68***			
Gender		40.95		
Male			0.67***	0.59 - 0.76
Female			1.00	Reference
Marital Status		2.39		
Single, widowed, divorced			0.90	0.79 - 1.03
Married, cohabiting			1.00	Reference
Employment		8.52		
PT or unemployed			0.82**	0.71 - 0.94
FT			1.00	Reference
Education		1.91		
No university/college			1.09	0.97 - 1.23
University/college degree			1.00	Reference
Income		1.93		
Age		2.21	0.99	0.96 - 1.01
Region		7.62	1.00	0.99 - 1.00
Problem Drinking Status		113.12		
Problem drinker			2.32***	1.99 - 2.71
Non-problem drinker			1.00	Reference
Interactions	192.38***			
Age X Gender		35.37***		
Age X Problem Drinking Status		39.32***		

*** $p < 0.001$; ** $p < 0.01$. Age and income were treated as interval scales.

Figure 3. Interaction between age and gender in the prediction of interest in self-help materials

subpopulation may particularly benefit from early interventions designed to reduce hazardous and harmful alcohol use.

A number of limitations affect the generalizability of our findings. First, our results reflect the drinking patterns of Albertans and may not be generalizable to other regions of Canada. Second, screening questions limited information on alcohol problems only to current drinkers who had

never received treatment. Finally, there was significant variation in refusal rates across 6 regions, which may have obscured regional variation in alcohol problems. Despite these limitations, the present study suggests that although alcohol misuse is common among Alberta drinkers, many of them are interested in receiving brief public health interventions designed to help them assert control over their behaviour.

Figure 4. Interaction between age and problem drinking status in the prediction of interest in self-help materials

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RÉSUMÉ

Contexte : Nous avons quantifié la prévalence des problèmes d'alcool chez les adultes de l'Alberta et déterminé les relations entre le profil sociodémographique, l'abus d'alcool et l'intérêt pour les outils d'autothérapie lorsqu'on veut réduire sa consommation.

Méthode : Nous avons administré une entrevue téléphonique assistée par ordinateur à un échantillon aléatoire stratifié de 10 014 Albertains de 18 ans et plus (5 621 femmes et 4 393 hommes; âge moyen : 43,3 ans; déviation sensible : 16,0) et obtenu un taux de réponse de 65,4 %. Nos mesures étaient : 1) la consommation actuelle d'alcool, 2) les traitements antérieurs pour alcoolisme, 3) l'abus d'alcool (selon le test AUDIT – Alcohol Use Disorders Identification Test) et 4) l'intérêt à recevoir des outils d'autothérapie gratuits favorisant une consommation en toute sécurité. Les données ont été pondérées selon l'âge, le sexe et la région de l'Alberta.

Résultats : Sur l'échantillon total, 19,3 % des répondants n'avaient pas consommé d'alcool depuis un an, 4,2 % avaient été traités pour des problèmes d'alcool durant leur vie, et 80,7 % étaient des consommateurs actuels d'alcool (ils avaient consommé de l'alcool au cours des 12 mois précédents). Environ 15,2 % (n=1 193) des consommateurs actuels ont été classés dans la catégorie des buveurs, c'est-à-dire des personnes ayant un problème d'alcool. Des analyses de régression logistique ont montré que les buveurs étaient 3,5 fois plus susceptibles d'être des hommes et 2,3 fois plus susceptibles d'être intéressés par les mesures d'autothérapie que les consommateurs actuels d'alcool. Le fait d'être célibataire, relativement jeune et de n'avoir pas fait d'études postsecondaires étaient aussi des prédicteurs significatifs de l'abus d'alcool.

Interprétation : L'abus d'alcool est répandu chez les consommateurs de l'Alberta, mais beaucoup d'entre eux sont intéressés par de brèves mesures d'intervention en santé publique qui les aideraient à maîtriser leur comportement.

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