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; Mage = 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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interventions designed to help them change their alcohol use. 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. Unfortunately, few Canadian studies have described interest in self-help interventions 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 of the 6 regions in Alberta in the year 2000, using the method described by Lee et al.

**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
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., “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). 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; positive correlations with biochemical measures of excessive alcohol use and other self-report measures of hazardous drinking; and excellent reliability and validity. We have successfully used CATI techniques to administer the AUDIT in other general population surveys.

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 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. 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, 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, problem drinkers were more likely to be single, male, and to report lower educational attainment. Also consistent with other research, 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 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.

### Table II

<table>
<thead>
<tr>
<th>Predictors</th>
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<tr>
<td>Female</td>
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<td>0.59 - 0.76</td>
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<td>Marital Status</td>
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<td>2.32*** 1.99 - 2.71</td>
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<tr>
<td>Age X Problem Drinking Status</td>
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</table>

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

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


RESUME

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'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 %.

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 2,2 fois plus susceptibles d'être des consommateurs 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'alcool.

Interprétation : L'alcool 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.

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

Dear Editor:


Makomaski and Kaiserman recently estimated 47,581 smoking-attributable deaths for Canada in 1998. M measuring the burden of illness caused by a risk factor is an important first step in the prioritization and implementation of control measures. In their attempt to quantify the current burden of smoking, however, the authors failed to adjust for error resulting from the latency period between exposure to smoking and the associated outcome measured (i.e., mortality). This error is largest when there is a long latency period (true of smoking and many of its associated diseases) combined with rapidly changing prevalence of the exposure in the population (current smoking has dropped more than 10% in Canada since 1985). The authors acknowledged that trends in smoking-attributable mortality (SAM) “reflect the smoking behaviour of the population two to three decades earlier,” but stop short of adjusting their estimates. The true current SAM burden in Canada is influenced by smoking prevalence estimates of the past (combined with mortality counts of the present), and is likely higher than what was estimated by Makomaski Illing and Kaiserman. An alternate set of Canadian SAM estimates found that crude adjustments for this latency period led to an 8% to 22% increase in the national SAM count (depending on method of adjustment). Because lag-time and other issues that arise from underlying assumptions in SAM estimation (and more broadly in population-attributable fraction methods) have potentially important influences, they should be identified and addressed. A good starting point would be for peer reviewers to ask for these details in manuscripts and for authors to include sensitivity analysis for potentially important assumptions.

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Response from Authors

Dear Editor:

Tanuseputro and colleagues, in commenting on our recent article, make three points. First, that the method we used would tend to underestimate smoking-attributable mortality (SAM) by an amount between 8% and 22%. Second, that authors should identify and address issues that arise from underlying assumptions. Third, that authors of similar articles should include a sensitivity analysis in their manuscript.

We are in agreement that all such calculations should include sensitivity analysis. We are not sure, however, whether Tanuseputro and colleagues actually mean sensitivity analysis or confidence intervals (CI). All of the parameters used in calculating, except for deaths, are qualified by CIs. This would ensure that readers were made aware of the fact that these are indeed estimates and subject to many variables. We regret that we did not include this analysis in the manuscript, but, given the constraints, we had to leave something out.

We also agree with Tanuseputro and colleagues that these calculations should be based upon past prevalence and current deaths. While this is the ideal, it must be remembered that prevalence changed over time and it is impossible to track individual, or even large groups of smokers. What we did find in our sensitivity analysis is that both the relative risk and prevalence have an impact on SAM. What we also found is that changes in relative risk had a greater impact on SAM than comparable changes in prevalence.

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