Can Amazon's Mechanical Turk be used to recruit participants for Internet intervention trials?

A pilot study involving an RCT of a brief online intervention for hazardous alcohol use

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Purpose

- To test the feasibility of recruiting for alcohol Internet intervention trials through MTurk
  - Mechanical Turk is an online portal operated by Amazon
  - 'requesters' (individuals or businesses) can submit jobs for 'workers' (more than half a million people who have signed up to complete jobs on MTurk) to complete for pay.
  - Essentially anonymous
- MTurk used extensively in social sciences research

Methods

- Separate recruitments for 4 trials
  - **Trial 1: September, 2016**; Trial 2: December, 2016; Trial 3: January, 2017; March, 2017
- 'Survey on people's drinking'
  - 18 years or older, weekly drinkers
  - $1.50 payment, less than 15 minutes
- Next Step: Identify hazardous drinkers and recruit for follow-up survey (plus randomize to receive or not receive an online intervention).

Baseline survey recruitment

	Trial 1	Trial 2	Trial 3	Trial 4
Duration of recruitment	**3 hours**	7 days	9 days	32 days
Total # (N)	**1252**	4943	5412	5846
% removed	**30.0**	34.4	36.1	39.5
Final	**871**	3244	3456	3536

Methods: RCT recruitment

- Identify participants: AUDIT 8 or more
- Invite to take part in 3-month fu ($10)
  - Mention that some will be asked their impressions of additional materials
- Randomize to be sent password to access Check Your Drinking vs nothing
- 3 month follow-up
- Of the 871 baselines, 423 eligible and agreed
  - 35 years old, 57% male, 71% some post-secondary education, 73% full-time employed
  - 14.3 AUDIT, 18.6 drinks/week, 13.5% ever treated

Example brief intervention

- www.checkyourdrinking.net
  - 18 Item Survey Contains:
    - AUDIT
    - Drinking on each day of a typical week
    - Greatest amount on a single occasion
    - Experience of psychosocial consequences
    - Demographics
- Normative comparison data for USA, Canada and United Kingdom

CHECK YOUR DRINKING

English (CA) ▾

The Check Y

The 18 question CYD sur
finished the test you can p

Please begin the survey b

Your First name:

You are: ○ male ○ fem

Your date of birth: Year

What country do you live ir

How much do you weigh

You are taking this test:
- ○ For yourself
- ○ For someone you kno
- ○ You are just checking

How much would you say

Please Note: By clicking
physician or other healthc

Statistical data collected t
other personal information

☐ Please check this box
for research puposes. We

☐ Check this box if you a
professional use.

Start the Survey

CheckYourDrinking.net v.
worldwide patent rights re

CHECK DRINK

Page 1 of 4

One Standard Drink Ec

12 oz. Beer   5 oz. W
(5% alcohol) (10-12% a

1. How often do you ha
- ○ never
- ○ monthly or less
- ○ 2-4 times a month
- ○ 2-3 times a week
- ○ 4 or more times a

2. On a typical day whe
- ○ 0-2
- ○ 3-4
- ○ 5-6
- ○ 7-9
- ○ 10+

3. How often do you ha
- ○ never
- ○ less than monthly
- ○ once per month
- ○ 2-3 times per mon
- ○ weekly
- ○ 2-4 times per weel
- ○ daily or almost dai

4. How often during the
- ○ never
- ○ less than monthly
- ○ monthly
- ○ weekly
- ○ daily or almost dai

5. How often during the
- ○ never
- ○ less than monthly
- ○ monthly
- ○ weekly
- ○ daily or almost dai

Back   Next

CheckYourDrinking.net
V-CC Systems Inc. All

CHECK YOUR DR

Page

6. How ofte
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- ○ less th
- ○ month
- ○ weekly
- ○ daily o

7. How ofte
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- ○ less th
- ○ month
- ○ weekly
- ○ daily o

8. How ofte
- ○ never
- ○ less th
- ○ month
- ○ weekly
- ○ daily o

9. Have you
- ○ no
- ○ yes, bu
- ○ yes, du

10. Has a
- ○ no
- ○ yes, bu
- ○ yes, du

Back

CHECK DRIN

Page 3 o

One Standard Drir

12 oz. Beer
(5% alcohol)   (10-

11. What was you
indicate the appro

MON	TUES
--- ▾	--- ▾

12. What is the gr

--- ▾

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CheckYourDrinkir
V-CC Systems Inc

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CHECK YOUR DRINKING

Page 4 of 4: How Your Drinking Effects Your Lifestyle

13. Within the last twelve (12) months was there ever a time that you felt your alcohol use had a harmful effect on your friendships or social life?
- ○ no
- ○ yes

14. Within the last twelve (12) months was there ever a time that you felt your alcohol use had a harmful effect on your physical health?
- ○ no
- ○ yes

15. Within the last twelve (12) months was there ever a time that you felt your alcohol use had a harmful effect on your outlook on life (happiness)?
- ○ no
- ○ yes

16. Within the last twelve (12) months was there ever a time that you felt your alcohol use had a harmful effect on your home life or marriage?
- ○ no
- ○ yes

17. Within the last twelve (12) months was there ever a time that you felt your alcohol use had a harmful effect on your work, studies or employment opportunities?
- ○ no
- ○ yes

18. Within the last twelve (12) months was there ever a time that you felt your alcohol use had a harmful effect on your financial position?
- ○ no
- ○ yes

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
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What is the intervention?
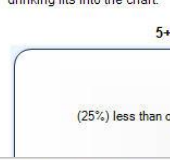
CHECK YOUR DRINKING

Print — printer friendly version of Final Re
Email — email this report to yourself or you

Final Report For Trevor

The average number of drinks you reported c

How do you compare to males your age from
to other males in your age range from Canad

Average drinks per w

(26%) 1-2

Within the last twelve (12)

- You reported drink
- You reported that y

This also means that:

- You spent approxi
- You consumed (or
  enough alcohol to
  and 3,500 calories
- You also reported

Your Drinking Patter

The following graph outlin

6

4

Drink per day

2

0

Mon   Tue

Heavy Drinking Days

How often do males from C
drinking fits into the chart:

5+

(25%) less than o

AUDIT Score

The AUDIT questionnaire was devel
shows whether a person's drinking s
in the shape of a pyramid to show tha

Your AUDIT score is 14. Based on th
score falls.

Audit score (risk of alc
Audit S

Dependance
(20 or more)

Harmful

Health Effects of Alcohol

We've included the following information in the event that you would like to learn more about how the use of alcohol can affect your health.

Your liver
Because the liver receives blood directly from the intestines, it takes the brunt of high alcohol concentrations. Heavy alcohol consumption can lead to two serious types of liver injury: *hepatic inflammation* (alcohol hepatitis) and *progressive liver scarring* (fibrosis or cirrhosis). (*Chedid et al 1991; Dufour et al 1993*)

Women are more at risk to serious alcohol-related liver injury; they develop cirrhosis at a lower dose of alcohol than men do. (*Marbet et al 1987*)

Heavy drinkers are 3 times more likely to develop liver cancer than non-drinkers. (*English & Holman, 1995*)

Reducing Your Risk

There are many things that you can do to reduce the risk of hurting yourself or others. Here are some small steps you can take to start making a change:

- Don't drink in any situation where there's a risk of accident or injury — for example, drinking and driving.
- Don't mix alcohol with other drugs — especially other depressants like tranquilizers, barbiturates, heroin or other opioids.
- Try to reduce by one or two days the number of days you drink each week.
- Decide how much you will drink ahead of time and keep yourself to this limit.
- Take a limited amount of money with you if you go out to have a drink.
- Keep track of the amount you drink.
- Alternate alcoholic with non-alcoholic beverages when you drink.
- Choose alcoholic beverages with lower alcohol content.
- If you are out drinking with friends, make sure at least one person stays sober. If that person is driving they should not drink any alcohol at all.
- Do not become intoxicated with people you do not know and trust; criminal victimization is a much greater risk when you are drunk.
- Remember the need to practice safer sex — always use condoms.

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heavy equipment safely. **If you have a**
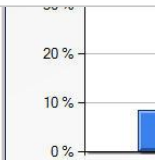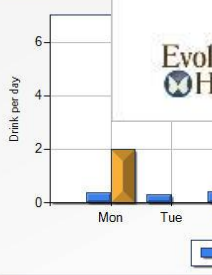
Sensible Drinking

Guidelines supported by the Centre f
significant risk to their health, in the s

Most people can and do drink safely
men and 9 drinks for women. It is als
drinks per day would be too many. Pr
amounts of alcohol could increase th
health problems such as heart disea

20 %

10 %

0 %

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13 and 18

Unlike what some people believe, vehicle occupants with high levels of alcohol in their system (high BAC) are more likely to be seriously injured or to die in the event of a crash. (*Soderstrom, 1993*)

Alcohol and Violence
In 1997, about 40% of all crimes (violent and non-violent) were committed by people who had alcohol in their system. (*Bureau of Justice Statistics, 1998*)

In 1997, 40% of convicted rape and sexual assault offenders said that they were drinking at the time of their crime. (*Greenfield, 2000*)

Approximately 72% of rapes reported on college campuses occur when victims are so intoxicated they are unable to consent or refuse. (*Wecshler, 2004*)

What is the intervention?

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Follow-up

- 85% follow-up rate
- 38% of participants in intervention condition (n = 214) accessed the CYD (214 used in analyses)
- Primary outcome variable – Drinks per week
  - No impact of providing access to the intervention
- Secondary outcomes – AUDIT-C, Highest number, # of consequences
  - Only AUDIT-C showed an impact of the being provided access to the intervention

AUDIT-Consumption subscale
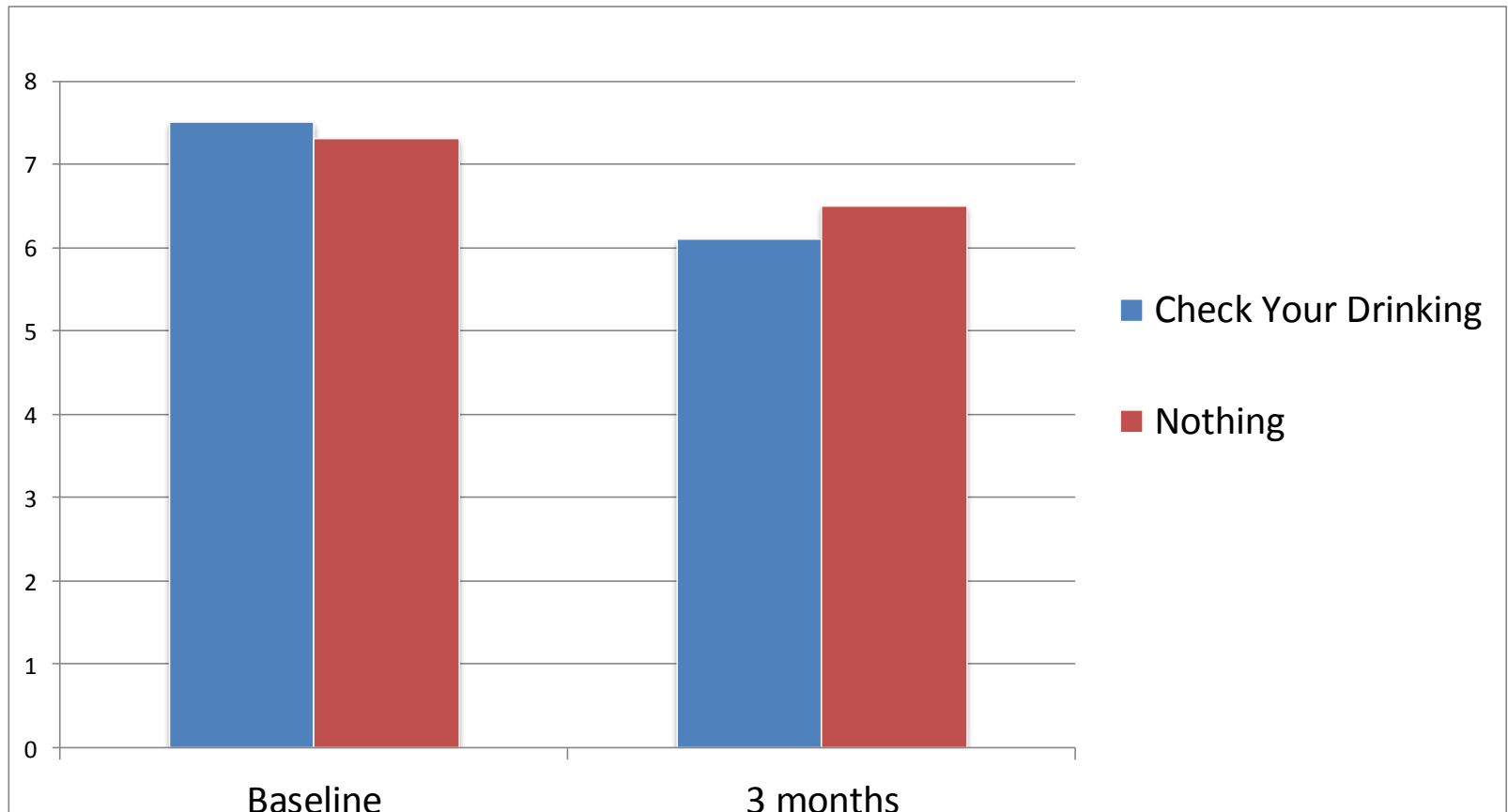
Time X Condition = .004

Summary

- Possible to recruit large numbers of hazardous drinkers and to follow them up
  - Recruitment slows down after a few thousand
- Methods needed to improve compliance with accessing the intervention
  - Possible explanation for limited evidence of impact?
- Unusual sample – generalizability of the results?
  - Experienced survey completers (Median = 500) who are doing this for pay
- Useful sample during the development phase of an intervention

Declarations

- Sources of funding
  - Canada Research Chair in Addictions
  - Canadian Institutes of Health Research

- No conflicts of interest to declare

- For more information, see: