Normative misperceptions about alcohol use in the general population of drinkers and associations with socio-demographic and drinking variables

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‘Normative misperception’ about alcohol use = underestimation of own alcohol consumption relative to others

Reducing this misperception can reduce subsequent alcohol use
(Collins et al., 2002; Cunningham et al., 2001, 2012; Neighbors et al., 2004).

Current research limited to college and university students (Neighbors et al., 2004), and heavy drinkers (Cunningham et al., 2001, 2012).

Not clear how widespread normative misperceptions are in the general population or if any factors are associated with them.
Research questions

1. What is the **prevalence** of normative misperceptions about alcohol use in the **general population of alcohol users** from the UK, US, Australia, and Canada?

2. To what extent are normative misperceptions about alcohol use **associated** with a range of **socio-demographic** and **drinking variables**?
Methods

Design/setting:
- Anonymous, cross-sectional online survey
  Global Drugs Survey-2012

- Participants from:
  - Australia
  - Canada
  - UK
  - US
Methods

**Measurements:**

<table>
<thead>
<tr>
<th>AUDIT questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) How often do you have a drink containing alcohol?</td>
</tr>
<tr>
<td>2) How many units of alcohol do you drink on a typical day when you are drinking?</td>
</tr>
<tr>
<td>3) How often have you had 6 or more units if female, or 8 or more if male, on a single occasion in the last year?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scoring system</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Your score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td></td>
<td></td>
<td>2 - 4 times per month</td>
<td>2 - 3 times per week</td>
<td>4+ times per week</td>
<td></td>
</tr>
<tr>
<td>Monthly or less</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 - 2</td>
<td></td>
<td>3 - 4</td>
<td>5 - 6</td>
<td>7 - 9</td>
<td>10+</td>
<td></td>
</tr>
</tbody>
</table>

**10-item questionnaire relating to 3 domains...**

Qs 1-3 assess **alcohol consumption** *(AUDIT-C)*
Qs 4-6 assess **alcohol dependence**
Qs 7-10 assess **harmful drinking**

**AUDIT-C**
Total possible score = 12

**Full AUDIT**
Total possible score = 40
# Methods

<table>
<thead>
<tr>
<th>AUDIT risk zone</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDIT Score</td>
<td>0 – 7</td>
<td>8 – 15</td>
<td>16 – 19</td>
<td>20 – 40</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>Low-risk drinking or abstinence</td>
<td>Hazardous drinking</td>
<td>Harmful drinking</td>
<td>At risk of alcohol dependence</td>
</tr>
<tr>
<td><strong>Drinking limits</strong></td>
<td>Under</td>
<td>Regularly over</td>
<td>Over</td>
<td>Over</td>
</tr>
<tr>
<td>Units</td>
<td>Daily</td>
<td>Weekly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily</td>
<td>2-3</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weekly</td>
<td>3-4</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol-related problems</td>
<td>Very-low/no risk</td>
<td>Increasing risk</td>
<td>Yes (at risk of physical and/or psychological addiction to alcohol)</td>
<td></td>
</tr>
</tbody>
</table>

**AUDIT risk zone ~ “drinking variable”**
Methods

**Measurements:**

How do you think your use of alcohol compares to other people who have used that substance recently?

- Lowest 10%
- Very low
- Low
- Low-average
- Average (middle 20%)
- High-average
- High
- Very high
- Top 10%
Methods

 Participants:
- aged 18+
- consumed alcohol in the last year
- 9,820 participants
  - mean AUDIT score = 10.5 (risk zone 2)
  - majority were
    - male (69%)
    - aged 16-24 (45%)
    - white (92%)
    - employed (49%)
    - post-16 qualification level (96%)
    - AUDIT risk zone 2 (43%)
**Methods**

**Normative misperception score = actual - belief**

- **Negative score** = overestimating their alcohol use relative to others
- **No difference** = correct estimation of their alcohol use relative to others
- **Positive score** = underestimating their alcohol use relative to others

**Magnitude of score = extent of the discrepancy**

**Analysis:**

- Prevalence was assessed through descriptive statistics and cross tabulation
- Linear and multiple regression models were used to investigate if any associations existed
High prevalence of normative misperceptions in the general population of drinkers:

Mean normative misperception score $= 0.2$

(SD=1.85)

Sig. $>0$ ($t_{(9819)}=10.443$, $p<0.001$)

- 38.6% (95% CI= 37.6%, 39.5%) Overestimate their alcohol use relative to others
- 14.5% (95% CI= 13.8%, 15.2%) Accurate in their perception
- 46.9% (95% CI= 45.9%, 47.9%) Underestimate their alcohol use relative to others

Over a third of harmful alcohol users and a quarter of alcohol users at risk of dependence believed their alcohol consumption to be average or less.
A number of socio-demographic and drinking variables associated with the normative misperception score:

- Age: $p<0.003$

Error bars: 95% CI
* $p<0.005$
A number of socio-demographic and drinking variables associated with the normative misperception score:

- Age: $p<0.003$
- Gender: $p<0.001$

* Error bars: 95% CI

* $p<0.005$
Results

A number of socio-demographic and drinking variables associated with the normative misperception score:

- Age: $p<0.003$
- Gender: $p<0.001$
- Country of origin (from UK vs US): $p<0.001$

Error bars: 95% CI
* $p<0.005$
A number of socio-demographic and drinking variables *associated* with the normative misperception score:

- Age: $p<0.003$
- Gender: $p<0.001$
- Country of origin (from UK vs US): $p<0.001$
- Qualification level: $p=0.003$

![Graph showing mean normative misperception score with error bars.](Image)
A number of socio-demographic and drinking variables associated with the normative misperception score:

- Age: $p<0.003$
- Gender: $p<0.001$
- Country of origin (from UK vs US): $p<0.001$
- Qualification level: $p=0.003$
- Employment status (unemployed vs employed): $p<0.001$

Error bars: 95% CI
* $p<0.005$
A number of socio-demographic and drinking variables associated with the normative misperception score:

- Age: $p<0.003$
- Gender: $p<0.001$
- Country of origin (from UK vs US): $p<0.001$
- Qualification level: $p=0.003$
- Employment status (unemployed vs employed): $p<0.001$
- Ethnicity: $p=0.035$

Error bars: 95% CI
* $p<0.005$
Results

A number of socio-demographic and drinking variables *associated* with the normative misperception score:

- Age: p<0.003
- Gender: p<0.001
- Country of origin (from UK vs US): p<0.001
- Qualification level: p=0.003
- Employment status (unemployed vs employed): p<0.001
- Ethnicity: p=0.035
- Level of alcohol-related risk: p<0.001
Results

Greatest tendency for large, positive normative misperception scores amongst those who were...

- Younger
- Male
- From the UK
- Without post-16 qualifications
- Unemployed
- White
- At higher levels of alcohol-related risk
Discussion

Limitations:

1. AUDIT scores may not be representative of general population
   - Consumption comparator would be higher
   - Results are likely to be an overestimate of population prevalence

2. Used all four countries to calculate the nine-point AUDIT-C scale
   - Sensitivity analysis showed similar pattern of results

3. Method chosen to calculate the normative misperception score
   - Best compromise
Conclusions

- **Underestimation of own alcohol consumption** relative to others is **common** in general population of drinkers.

- **Greatest tendency** amongst those who were...
  - Younger
  - Male
  - Less well educated
  - Unemployed
  - White
  - From the UK
  - High-risk drinkers

- Substantial minority of harmful drinkers believe their alcohol consumption to be at or below average.
Future research:

- Investigate whether interventions targeted at individuals with the associated socio-demographic and drinking variables have more impact

  -> Targeted interventions could potentially enhance the effectiveness of population wide health strategies to reduce alcohol consumption and misuse
https://www.globaldrugsurvey.com
GLOBAL DRUG SURVEY 2015
GLOBALDRUGSURVEY.COM/GDS2015
Thank you for listening.

Any questions?

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