Heavily concentrated alcohol consumption in India

<table>
<thead>
<tr>
<th>Country</th>
<th>Standard drinks per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>0.7</td>
</tr>
<tr>
<td>USA</td>
<td>1.4</td>
</tr>
<tr>
<td>Russia</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Per capita (age 15+) Male drinkers only
Study sample

- Cycle-rickshaw peddlers in Chennai
  - 35 years old, 5 years of education
  - 80% are married, 2 children
  - Average daily labor incomes of about Rs. 300 ($5)

- Alcohol consumption
  - Individuals drink (almost) every day, usually alone.
  - A third of labor incomes spent on hard liquor (>80 proof)
  - Individuals drink over 5 standard drinks per day.
  - High levels of intoxication, often during the day
  - 80% say they would be better off if all liquor stores closed.
Experimental design

- 229 individuals paid to visit study office for 20 days
- Daily visits any time between 6 pm and 10 pm
- Measure blood-alcohol content (BAC) using breathalyzer test
- Short survey
  - Labor market outcomes
  - Alcohol consumption
  - Expenditure patterns
- Opportunity to save money at study office
(I) **Control Group**: unconditional payments
   - Paid Rs. 90 regardless of BAC

(II) **Incentive Group**: monetary incentives to show up sober
   - Paid Rs. 60 if BAC > 0
   - Paid Rs. 120 if BAC = 0

(III) **Choice Group**
   - Choice between incentives and unconditional payments
Experimental design

Screening → Consent → Baseline → Day 1

Incentives assigned → Day 4

Choice 1 → Day 7

Choice 2 → Day 13

Choice 3 → Day 20

Incentives (2/3) → Control

Incentives (1/3) → Choice (1/3)

Control (1/3) → Choice → Control

Control (1/3) → Choice → Control
Financial incentives significantly increased daytime sobriety.

ATTENDANCE IN THE INCENTIVE GROUP IS LOWER.
...but reported overall drinking did not fall by much.
Appendix

Intertemporal substitution: time of first drink

BACK TO SUMMARY OF EFFECTS ON DRINKING
No significant effects on earnings
Measuring the impact of increased sobriety on savings

- All subjects got personalized savings box at study office.
  - Could save up to Rs. 200 per day.
  - Paid out entire amount plus matching contribution on day 20.
- Cross-randomized matching contribution to benchmark effects
  - 10% vs. 20% of amount saved
- Cross-randomized commitment savings feature
  - Allowed to withdraw any day between 6 pm and 10 pm
  - Not allowed to withdraw until day 20
Incentives for sobriety increased savings.
Incentives for sobriety increased savings.

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1) Rs/day</th>
<th>(2) Rs/day</th>
<th>(3) Rs/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pooled alcohol treatment</td>
<td>12.45**</td>
<td>13.41***</td>
<td>11.55**</td>
</tr>
<tr>
<td></td>
<td>(6.262)</td>
<td>(5.018)</td>
<td>(4.792)</td>
</tr>
<tr>
<td>High matching contribution</td>
<td>9.29</td>
<td>10.11**</td>
<td>11.65**</td>
</tr>
<tr>
<td></td>
<td>(6.532)</td>
<td>(4.873)</td>
<td>(4.619)</td>
</tr>
<tr>
<td>Commitment savings</td>
<td>7.59</td>
<td>2.88</td>
<td>2.86</td>
</tr>
<tr>
<td></td>
<td>(6.539)</td>
<td>(5.074)</td>
<td>(4.820)</td>
</tr>
<tr>
<td>Daily study payment (Rs)</td>
<td></td>
<td></td>
<td>0.35***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.050)</td>
</tr>
<tr>
<td>Observations</td>
<td>3,435</td>
<td>3,435</td>
<td>3,435</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.006</td>
<td>0.113</td>
<td>0.129</td>
</tr>
<tr>
<td>Baseline survey controls</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Phase 1 controls</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Control mean</td>
<td>20.42</td>
<td>20.42</td>
<td>20.42</td>
</tr>
</tbody>
</table>

Standard errors in parentheses, clustered by individual.
Interaction between sobriety and commitment savings

Sobriety Incentives vs. Commitment Savings

- Pooled alcohol treatment, commitment savings
- Pooled alcohol treatment, no commitment savings
- No alcohol treatment, commitment savings
- No alcohol treatment, no commitment savings

Day in Study: 0 5 10 15 20
Cumulative savings (Rs): 0 100 200 300 400 500 600 700

Withdrawals
Deposits
Sobriety incentives vs. commitment savings: deposits

Sobriety vs. Commitment Savings: Cumulative Deposits

Day in Study

Cumulative deposits (Rs)

- Sobriety incentives, commitment savings
- Sobriety incentives, no commitment savings
- No sobriety incentives, commitment savings
- No sobriety incentives, no commitment savings

BACK TO SAVINGS SECTION
Sobriety incentives vs. commitment savings: withdrawals

Sobriety vs. Commitment Savings: Cumulative Withdrawals

Day in Study vs. Cumulative Withdrawals (Rs)

- Sobriety incentives, commitment savings
- Sobriety incentives, no commitment savings
- No sobriety incentives, commitment savings
- No sobriety incentives, no commitment savings

Back to Savings Section
Eliciting willingness to pay for incentives

- Choice Group chooses between:
  - Incentives for sobriety
  - Unconditional payments

- Choice sessions on days 7, 13, 20, each for subsequent week
  - Elicit preferences for set of 3 choices
  - Then randomly select one choice to be implemented (RLIS)
Demand for incentives

- **Option A**: incentives for sobriety
  - Same payment structure as Incentive Group
  - Rs. 60 if BAC > 0, Rs. 120 if BAC = 0

- **Option B**: payment of Rs. Y regardless of BAC

<table>
<thead>
<tr>
<th>Option A</th>
<th>Option B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>BAC &gt; 0</strong></td>
</tr>
<tr>
<td></td>
<td>Rs. 60</td>
</tr>
<tr>
<td>(1)</td>
<td>Rs. 60</td>
</tr>
<tr>
<td>(2)</td>
<td>Rs. 60</td>
</tr>
<tr>
<td>(3)</td>
<td>Rs. 60</td>
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</table>
Demand for commitment persists over time.

Demand for Incentives over Time

- **Choice 1**: unconditional payment = Rs 90
- **Choice 2**: unconditional payment = Rs 120
- **Choice 3**: unconditional payment = Rs 150

<table>
<thead>
<tr>
<th>Week</th>
<th>Choice 1</th>
<th>Choice 2</th>
<th>Choice 3</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>2</td>
<td>0.6</td>
<td>0.6</td>
<td>0.4</td>
</tr>
<tr>
<td>3</td>
<td>0.6</td>
<td>0.5</td>
<td>0.3</td>
</tr>
</tbody>
</table>
Exposure to incentives increases demand for incentives.

Demand for Incentive across Treatment Groups

<table>
<thead>
<tr>
<th>Choice</th>
<th>Incentive Group</th>
<th>Choice Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choice 1 (Rs 90)</td>
<td>0.75</td>
<td>0.60</td>
<td>0.40</td>
</tr>
<tr>
<td>Choice 2 (Rs 120)</td>
<td>0.70</td>
<td>0.55</td>
<td>0.35</td>
</tr>
<tr>
<td>Choice 3 (Rs 150)</td>
<td>0.65</td>
<td>0.50</td>
<td>0.25</td>
</tr>
</tbody>
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