Associations of military service history with heavy drinking and alcohol dependence in a general population sample of US men

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(Greenfield, PI)

Presenter Disclosures

Katherine J. Karriker-Jaffe
The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:
No relationships to disclose

Thomas K. Greenfield
The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:
No relationships to disclose
SUDs in the Military

- Increased substance abuse disorders (SUDs) among veterans of the wars in Afghanistan and Iraq versus non-deployed service members
- Increased risk for SUDs over time for veterans of earlier conflicts
- 2012 Institute of Medicine report on SUDs in U.S. Armed Forces

Aims of Current Study

- Describe associations between military service and alcohol outcomes in a general population sample of men.
- Compare relationships of military service and alcohol outcomes for men at different stages of life.
- Assess contribution of heavy drinking to health status of veterans.
Methods

- Data from the 2010 National Alcohol Survey
  - Landline and cellular phone samples and ethnic oversamples
  - Response rate 52%, typical for RDD phone surveys
  - Limited to male respondents ($N = 3,071$)
- Analyses
  - Bivariate and multivariate logistic regression
  - Survey weights to adjust for sampling and non-response

Alcohol Outcomes

- History of heavy drinking
  - Drank 5+ drinks at least monthly
  - Asked of teens, 20s, 30s and 40s
- Current heavy drinking
  - Drinks 5+ drinks at least weekly
- Sought help/treatment for alcohol problem (ever, 12m)
- 2+ negative consequences of drinking (ever, 12m)
  - 15 items on work, legal, interpersonal and health problems
- 3+ DSM-IV dependence symptoms (ever, 12m)
Study Sample

- Weighted N = 3,531 drinkers
- Average age = 45 (SD = 17)
- 68% White, 14% Hispanic, 11% African American, 7% other race/ethnicity
- 61% married/cohabiting, 27% never married
- 64% employed, 9% unemployed

History of Military Service

- **Full Sample**
  - Ever active duty**
  - Current service**
  - Ever combat/war**
  - Age < 50
  - Age 50+

- **Veterans Only**
  - Spouse veteran**
  - Current service**
  - Ever combat/war
  - Age < 50
  - Age 50+
History of Heavy Drinking

- Heavy in teens
- Heavy in 20s
- Heavy in 30s
- Heavy in 40s
- Current heavy

History of Alcohol Problems

- Ever neg contact
- Current neg contact
- Ever dependence
- Current dependence
- Ever treatment
- Recent treatment

Graphs comparing data between all men, veterans <50, and veterans 50+.
Current Health Status

Regression Models: History of Heavy Drinking

<table>
<thead>
<tr>
<th></th>
<th>Heavy in teens</th>
<th>Heavy in 20s</th>
<th>Heavy in 30s</th>
<th>Heavy in 40s</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men Age &lt; 50</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Military Service</td>
<td>1.52** (1.16, 1.96)</td>
<td>2.96** (2.11, 4.15)</td>
<td>1.46* (1.05, 2.00)</td>
<td>0.62* (0.38, 0.99)</td>
</tr>
<tr>
<td></td>
<td>OR (95% CI)</td>
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<td>Military Service AOR</td>
<td>1.20 (0.90, 1.61)</td>
<td>2.44** (1.72, 3.46)</td>
<td>1.41* (1.01, 1.98)</td>
<td>0.68 (0.40, 1.14)</td>
</tr>
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<td>(95% CI)</td>
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<tr>
<td><strong>Men Age 50+</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Military Service</td>
<td>0.90 (0.71, 1.15)</td>
<td>0.97 (0.77, 1.23)</td>
<td>0.94 (0.74, 1.19)</td>
<td>1.10 (0.85, 1.42)</td>
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<td>1.22 (0.92, 1.63)</td>
<td>1.37* (1.03, 1.83)</td>
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AOR = Adjusted Odds Ratio, model controls for age, race/ethnicity, marital status, children in household, education, employment, income.  * p < .05.  ** p < .01
Regression Models: Current Outcomes

<table>
<thead>
<tr>
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<th>Current Heavy</th>
<th>Dependence</th>
<th>Poor Health</th>
<th>Depression</th>
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<td>Military Service</td>
<td>0.60 (0.33, 1.11)</td>
<td>0.78 (0.44, 1.39)</td>
<td>1.14 (0.77, 1.68)</td>
<td><em><em>0.66</em> (0.42, 1.05)</em>*</td>
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<td><strong>0.65 (0.35, 1.22)</strong></td>
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<tr>
<td>Military Service</td>
<td>1.21 (0.61, 2.41)</td>
<td><em><em>0.29</em> (0.08, 1.07)</em>*</td>
<td>1.23 (0.96, 1.65)</td>
<td>1.23 (0.91, 1.66)</td>
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<td>Military Service</td>
<td><em><em>2.15</em> (0.96, 4.83)</em>*</td>
<td>0.71 (0.17, 3.04)</td>
<td>1.12 (0.80, 1.58)</td>
<td>1.24 (0.86, 1.79)</td>
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AOR = Adjusted Odds Ratio, model controls for age, race/ethnicity, marital status, children in household, education, employment, income.  * p < .10.  * p < .05.  ** p < .01

Heavy Drinking in 30s & Health Outcomes

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<td>1.16 (0.81, 1.66)</td>
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<td>0.37* (0.14, 0.93)</td>
<td><strong>0.28</strong> (0.09, 0.84)</td>
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* p < .05  ** p < .01

### Heavy Drinking in 30s & Health Service Use

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Civilians &lt;50 with heavy use in 30s</th>
<th>Veterans &lt;50 with heavy use in 30s</th>
</tr>
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<tbody>
<tr>
<td>Sought help**</td>
<td>35</td>
<td>25</td>
</tr>
<tr>
<td>AA meetings**</td>
<td>25</td>
<td>15</td>
</tr>
<tr>
<td>Alc/drug treatment*</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Empl assist prog**</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>DUI prog**</td>
<td>10</td>
<td>5</td>
</tr>
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Civilians <50 with heavy use in 30s
Veterans <50 with heavy use in 30s
Caveats…

- Limitations
  - Do not know details of military service (dates, branch, deployments)
  - Do not know details of alcohol and/or drug treatment (dates)
  - Self-report data and possible recall bias

- Strengths
  - Large, nationally-representative sample of U.S. men
  - Well-validated alcohol measures

Conclusions

- Younger veterans (under age 50) report a longer history of heavy drinking than their civilian counterparts
  - Also report more lifetime alcohol problems
- This history of heavy alcohol use is not associated with poor current health outcomes, however
  - Younger, persistently heavy-drinking veterans are significantly more likely to access treatment services than their civilian counterparts
Conclusions (cont.)

- Younger veterans without alcohol or drug problems may benefit from targeted mental health services and additional outreach to improve their mental and physical health.
- Furthermore, service outreach to heavy drinkers who are not in the military also may help improve young men’s mental health.
- For older veterans, attention to heavy drinking also may be warranted to prevent long-term health consequences.

Questions?

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