Alcohol use trajectories among adults in an urban area after a disaster

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ABSTRACT

Background: Alcohol use increased in the New York City (NYC) metropolitan area in the first months after the September 11, 2001 terrorist attacks. We investigated alcohol use trajectories in the NYC metropolitan area in the three years after September 11 and examined the relative contributions of acute exposure to the attacks and ongoing stressors to these trajectories.

Findings: We identified five trajectories of alcohol consumption levels and three binging trajectories. Predictors of higher levels of use over time included ongoing stressors, traumatic events, and lower income. Ongoing exposure to stressors and low income also play a central role in binging trajectories.

Conclusion: While point-in-time mass traumatic events may matter in the short term, their contribution subsides over time. Accumulated stressors and traumatic events, in contrast, lead to higher levels of consumption among respondents already vulnerable to high alcohol use.

INTRODUCTION

Patterns of lifetime alcohol use are heterogeneous, from stable nonusers, to persons who “mature out” of heavy drinking, to stable high-level drinkers.1-2

It is crucial to understand what distinguishes people who follow different alcohol use trajectories over time, in order to develop effective preventive interventions.

Stressful and traumatic life events can play a critical role in generating different pathways of alcohol use.1-4

Disaster events are an important opportunity to consider influence of acute vs cumulative life events on alcohol use trajectories at a population level.

Studies report conflicting findings on the relative influence of the acute disaster exposure and cumulative stressors on generating pathways of alcohol use.

Understanding this question can help policymakers allocate resources to facilitate the post-disaster recovery process.

SUMMARY & CONCLUSIONS

Exposure to the World Trade Center terrorist attacks did not differentiate between alcohol use or binging trajectories in the four years following the disaster.

Ongoing post-disaster exposure to traumatic events, low income and stressors were consistent independent predictors of alcohol use and binging trajectories over the long term.

In order to reduce the post-disaster risk of increased alcohol abuse, public policy investment should not only focus on managing the immediate mental health consequences of exposure to the event, but also on alleviating sources of stressors that may ensue following a mass disaster, such as loss of employment, property or the breakdown of family structures.

OBJECTIVE

We documented the trajectories of alcohol use in the three years after the World Trade Center (WTC) disaster, and assessed the relative role of exposure to the disaster and ongoing stressors in shaping the trajectories of alcohol use over several years. We examined trajectories of both level of alcohol use and odds of binging.

MATERIALS & METHODS

Source of data: Population-based cohort of 2,282 adults sampled six months after the WTC disaster and followed for three years (measures 6, 12, 24 and 39 months after WTC)

Measures: Traumatic events: death of a loved one, assault/injury/accident to self and others; Stressors: unemployment, family problems, marriage/divorce

Analyses: We used semi-parametric group-based modeling to identify the number of binging and consumption level trajectories. All models control for age, sex, marital status, race/ethnicity, education, and experience of emotional reaction to the WTC disaster.

RESULTS

Table 1. Predictors of trajectories of total alcohol use per day in past 30 days (censored normal distribution)1

<table>
<thead>
<tr>
<th>Estimated alcohol use trajectories after WTC disaster, NYC 2002-2005</th>
<th>% of sample</th>
<th>Group 1: Stable non-drinkers</th>
<th>Group 2: Low users</th>
<th>Group 3: Increasing users</th>
<th>Group 4: Decreasing users</th>
<th>Group 5: High stable users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Months (0 = 1 month pre-Sept 1, 2001)</td>
<td>39.4%</td>
<td>30.6%</td>
<td>25.1%</td>
<td>10.1%</td>
<td>0.2%</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Predictors of trajectories of binging (had 4-5+ drinks per day) in past 30 days (binary logit distribution)2

<table>
<thead>
<tr>
<th>Estimated binging trajectories after WTC disaster, NYC 2002-2005</th>
<th>% of sample</th>
<th>Group 1: Stable non-bingers</th>
<th>Group 2: Low bingers</th>
<th>Group 3: Binging desisters</th>
<th>Group 4: Later binging onset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Months (0 = 1 month pre-Sept 1, 2001)</td>
<td>89.9%</td>
<td>9.1%</td>
<td>0.2%</td>
<td>0.0%</td>
<td>0.0%</td>
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REFERENCES & ACKNOWLEDGEMENTS


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