2008

Validity of the lifetime drinking history: A comparison of retrospective and prospective quantity-frequency measures

Laura B. Koenig
Theodore Jacob
J. Randolph Haber

Follow this and additional works at: http://digitalcommons.wustl.edu/guzeposter2008

Part of the Medicine and Health Sciences Commons

Recommended Citation
http://digitalcommons.wustl.edu/guzeposter2008/14

This Poster is brought to you for free and open access by the 2008: Alcohol, Suicide, and Suicidality at Digital Commons@Becker. It has been accepted for inclusion in Posters by an authorized administrator of Digital Commons@Becker. For more information, please contact engeszer@wustl.edu.
Validity of the Lifetime Drinking History: A Comparison of Retrospective and Prospective Quantity-Frequency Measures

Laura B. Koenig, Ph.D.
Theodore Jacob, Ph.D.
J. Randolph Haber, Ph.D.
Veterans Affairs Palo Alto Health Care System, Menlo Park, CA

Project supported by NIAAA Grant R01 AA016402 and VA Merit Award

Abstract

- The Lifetime Drinking History (LDH) has been used to examine alcohol use and abuse throughout the lifespan. Given its retrospective nature, it is important to examine the validity of the assessment. Building upon previous work establishing the reliability and validity of the LDH, the current study examined a sample of 1295 men in the Vietnam Era Twin Registry. The men were assessed retrospectively with the LDH in 2000, at an average age of 51. The drinking patterns of these same men were also assessed prospectively in four prior studies, taking place in 1987, 1990, 1992, and 1995. Validity of the LDH was undertaken by comparing the correspondence between the prospective and retrospective measures of quantity-frequency and reported age of first regular drinking. Results support the use of the LDH in reporting phases of drinking across the lifespan.
Introduction

- The Lifetime Drinking History (LDH; Jacob, 1998; Skinner & Sheu, 1982) is a retrospective interview used to identify patterns of alcohol use, abuse, and dependence beginning with the onset of regular drinking and ending with the individual’s current drinking pattern.
  - Patterns of drinking are constructed in terms of drinking phases, where a phases are defined in terms of changes in quantity or frequency of drinking.
- Past research has supported the psychometric properties of the LDH.
  - High test-retest correlations (Chaikelson et al., 1994; Jacobs et al., 2006; Lemmens et al., 1997; Sobell et al., 1988)
  - Strong correlations with other measures of alcohol use (Skinner & Schuller, 1982; Skinner & Sheu, 1982)

- No research has been done, however, examining retrospective assessments from the LDH with prospective assessments of alcohol use.
- The current study contrasted reports from four prospective assessments of drinking (in years 1987, 1990, 1992, and 1995) with the retrospective information given by the same individuals for the same years using the LDH in 2000. These comparisons focused on two major drinking domains: age at first regular drinking and quantity-frequency of alcohol consumption.
The Current Study

Sample
- Men from the Family Twin Study: a study of twins and their children (Jacob et al., 2003)
  - 1295 twins, 420 of which had a lifetime diagnosis of alcohol dependence
  - Average age in 2000 = 51 years
- Drawn from the Vietnam Era Twin (VET) Registry (Eisen et al., 1987; Henderson et al., 1990) and associated data collections

Assessments
- Age of first regular drinking

Quantity-Frequency Index of consumption
- QFI = (number of days drank per month) x (usual number of drinks on days drank)
- Retrospectively assessed in 2000 using the Lifetime Drinking History (LDH)
  - Allows for a retrospective description of alcohol use and abuse across the entire life course
  - Therefore, if an individual was 38 when reporting in 1987, his reported QFI can be compared to the QFI from the LDH which corresponds to age 38

Analyses
- Age of first regular drinking
  - Mean differences tested by t-tests after an omnibus ANOVA
  - Correlations between all ages given between all years
• QFI
  • Retrospective-prospective mean differences tested by t-tests for 1987, 1990, 1992, and 1995
  • Retrospective-prospective median differences tested by Wilcoxon Signed Rank test for each year
  • Correlations assessed rank-order stability
    ▪ Because of skewness to data, scores were first transformed (ln(QFI+1))

Results

• Age of first regular drinking
  • Means: see Table 1
    ▪ ~19 across the four surveys
    ▪ Men reported the latest onset of regular drinking in 2000
  • Correlations: see Table 2
    ▪ ranged from .42 to .58 (all p’s < .01)

• QFI measure of consumption
  • Means/Medians: see Table 3
    ▪ Means differed significantly from retrospective to prospective assessments of consumption for the same year
      ▪ Difference largest for AD sub-sample
Medians also differed, but not as strongly

Correlations: see Table 3

The retrospective-prospective correlations were large and significant

### Table 1. Age of First Regular Drinking

<table>
<thead>
<tr>
<th>Assessment</th>
<th>All Regular Drinkers</th>
<th>420 Lifetime AD Drinkers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td>1987</td>
<td>1030</td>
<td>19.3a</td>
</tr>
<tr>
<td>1992</td>
<td>1179</td>
<td>18.2b</td>
</tr>
<tr>
<td>1995</td>
<td>772</td>
<td>19.4a</td>
</tr>
<tr>
<td>2000</td>
<td>1094</td>
<td>20.1c</td>
</tr>
</tbody>
</table>

Note. Means with the same superscripts are not significantly different from one another at p < .01. The 1995 survey did not ask respondents about age of first regular drinking. Men reporting never having started regular drinking were not included. AD = Alcohol Dependence diagnosis.
Table 2. Correlations between Age of First Regular Drinking Across Four Datasets.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>.49</td>
<td>.52</td>
<td>.49</td>
<td>N=401</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N=319</td>
</tr>
<tr>
<td>1992</td>
<td>.45</td>
<td></td>
<td>.58</td>
<td>.54</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N=328</td>
<td>N=411</td>
</tr>
<tr>
<td>1995</td>
<td>.42</td>
<td>.51</td>
<td></td>
<td>.55</td>
</tr>
<tr>
<td></td>
<td>N=765</td>
<td>N=326</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>.42</td>
<td>.45</td>
<td>.52</td>
<td>N=970</td>
</tr>
<tr>
<td></td>
<td>N=1065</td>
<td>N=738</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. All correlations significant at p < .01. Correlations for the entire sample are below the diagonal, while correlations for the 420 lifetime AD cases are above the diagonal. Men reporting never having started regular drinking were not included.

Table 3. Descriptive Statistics and Correlations for Prospective and Retrospective Assessments of QFI.

<table>
<thead>
<tr>
<th>Year</th>
<th>Non-AD Sample</th>
<th>Entire Sample</th>
<th>Entire Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prospective Reports</td>
<td>Retrospective Reports</td>
<td>r</td>
</tr>
<tr>
<td></td>
<td>Year</td>
<td>N</td>
<td>Median</td>
</tr>
<tr>
<td>1987</td>
<td>1222</td>
<td>8.6</td>
<td>31.8</td>
</tr>
<tr>
<td>1990</td>
<td>1183</td>
<td>6.5</td>
<td>30.2</td>
</tr>
<tr>
<td>1992</td>
<td>1295</td>
<td>4.3</td>
<td>22.3</td>
</tr>
<tr>
<td>1995</td>
<td>858</td>
<td>5.0</td>
<td>26.3</td>
</tr>
</tbody>
</table>

Non-AD Sample
Conclusions

- Onset of regular drinking, reported retrospectively at each assessment, was highly similar over time. This speaks to the general reliability of retrospective reporting.
- For QFI, there was high rank-order correspondence between the prospective reports and the retrospective LDH reports. The mean differences were significant, especially for problem drinkers, who reported drinking more when being assessed retrospectively.
While an individual’s reports of the amount of alcohol consumed may be biased in the retrospective reports, there is still high consistency in reporting low, medium, or high levels of consumption.

The current study supports the use of the LDH in identifying individuals with alcohol problems and following increases and decreases in alcohol use over time.

References