Distinguishing general and specific personality disorder features: Implications for comorbidity with alcohol

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Introduction

- There is an abundance of evidence indicating that the prevalence of several different personality disorders (PDs) is high in individuals with alcohol use disorders (AUDs; Sher & Trull, 2002).
- However, Axis II disorders are frequently comorbid with each other and existing research has generally failed to distinguish the extent to which Axis I/Axis II comorbidity is general or specific.
- The failure to resolve this important issue precludes strong conclusions about the very nature of Axis I/Axis II comorbidity and impedes etiological and treatment research.
- The present study used hierarchical factor models to statistically control for general personality disorder symptomatology while simultaneously testing for specific PD-AUD relations using data from Wave 1 of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC).

Method

- The data used for the present analysis were collected as Wave 1 of the National Institute on Alcohol Abuse and Alcoholism (NIAAA) 2001-2002 National Epidemiologic Survey on Alcohol and Related Conditions (NESARC).
- The NESARC is a publicly available survey of non-institutionalized, nationally representative U.S. citizens (including citizens residing in Hawaii and Alaska) conducted for the purpose of examining rates, correlates, and trends of alcohol use and problems (http://niaaa.census.gov/).
- Participants included the 43,093 individuals who participated in Wave 1 of the NESARC. These individuals are between the ages of 18 and 65+ African Americans, Hispanic Americans, and young adults (ages 18 to 25) were oversampled.
- Personality Disorder Symptoms.
  - Wave 1 of the NESARC included measurement of Avoidant, Dependent, Obsessive-Compulsive, Paranoid, Schizoid, Histrionic, and Antisocial personality disorders.
  - Symptoms of each PD were measured using interview responses of the extent to which each DSM-IV PD criterion (as assessed by at least 1 interview question) was a) descriptive of the participant (0 = no, 1 = yes), and b) a cause of problems at work/school or in personal relationships (0 = no, 1 = yes).
  - A composite item for each symptom which was created by adding a + b above for each item, providing an ordered 0,1,2 item representing combined symptom and significant problem endorsement (0 = did not endorse the symptom, 1 = endorsed symptom but did not cause significant problems, 2 = endorsed symptom and indicated that it had caused significant problems).
  - For the combined symptom and significant problem (0,1,2 scale) items created for the present study, reliability coefficients for these PDs were in the acceptable range from .67 to .80.

Analytic Approach

- We used the Schmid-Leiman (Schmid & Leiman, 1957) approach to hierarchical structural equation modeling in the present analysis to simultaneously model general PD symptomatology (shared among all PDs) and features specific to each PD (unique variability) and their relation to SUDs.
- This involves using each indicator to simultaneously measure both a general factor (representing shared variance among all PD indicators) and a specific PD factor (representing the specific PD diagnosis as defined by the DSM-IV). This model is depicted in the Figure.

Results

- A measurement model was tested in which individual items loaded onto both the general PD symptomatology factor and their respective specific PD factor.
- After dropping 2 OCPD items, 4 Paranoid PD items, and 2 Histrionic PD items due to factor loadings below .10, the measurement model demonstrated adequate fit to the data ($\chi^2$($df=127$) = 2372.482, $p < .0001$, CFI = .93, TLI = .95, RMSEA = .02).
- All factor loadings were equal to or greater than .14.

<table>
<thead>
<tr>
<th>General PD</th>
<th>AD</th>
<th>Tobacco</th>
<th>Marijuana</th>
<th>Other Drug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptomatology</td>
<td>.29*</td>
<td>.34*</td>
<td>.43*</td>
<td>.42*</td>
</tr>
<tr>
<td>Specific PD</td>
<td>A</td>
<td>D</td>
<td>M</td>
<td>O</td>
</tr>
</tbody>
</table>

Table: Standardized Coefficients From PD Factors to Substance Diagnoses

Structural Model

- The model included each specific PD factor and the general PD symptomatology factor as exogenous latent variables predicting each manifest substance use disorder.
- The model showed adequate fit to the data ($\chi^2$($df=128$) = 2286.508, $p < .0001$, CFI = .93, TLI = .95, RMSEA = .02). Path values from latent PD factors to each substance use disorder are presented in the Table.

Discussion

- The general PD symptomatology factor was associated with an increased probability of receiving each substance dependence diagnosis. For lifetime alcohol dependence, each specific PD factor was associated with a higher probability of alcohol dependence except Dependent PD, which demonstrated a negative association with AD diagnosis.
- Findings indicate that alcohol dependence/Axis II comorbidity is characterized both by general (pervasive) pathology but also that alcohol dependence shows some differential associations with specific PD features.

Note: $N = 43,093$. * $p < .05$. 

<table>
<thead>
<tr>
<th>Personality Disorder</th>
<th>Avoidant</th>
<th>Dependent</th>
<th>OCPD</th>
<th>Paranoid</th>
<th>Schizoid</th>
<th>Histrionic</th>
<th>Antisocial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>-.07*</td>
<td>-.08*</td>
<td>-.02</td>
<td>.01</td>
<td>.07</td>
<td>-.03</td>
<td>.13*</td>
</tr>
<tr>
<td>Standardized Coef.</td>
<td>.29*</td>
<td>.34*</td>
<td>.43*</td>
<td>.42*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table: Correlation of Personality Disorders

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