Adolescent drug use was associated with psychiatric disorders in young adulthood


Question
What is the temporal relation between psychiatric disorders and drug use in adolescence and young adulthood?

Design
Cohort analytic study with 9 years follow up.

Setting
2 counties in upstate New York, USA.

Participants
A random sample of 975 children between 1 and 10 years of age was assembled based on the area of their residency in 1975. At the first follow up in 1983 the sample consisted of 776 participants (mean age 14 y). 745 participants were included in the second follow up in 1986 (mean age 16 y), and 698 (mean age 22 y) in the third follow up in 1992.

Assessment of risk factors
Psychiatric assessments and drug use measurements were completed at 3 different times. Drug use information was obtained in interviews. Psychiatric diagnoses were assessed by a supplemented version of the Diagnostic Interview Schedule for Children Version 1 using computer algorithms designed to match DSM-III-R criteria, and to combine information from mothers and youths. In the young adult assessments, the mothers were not used as informants, and interviews included additional criteria covering adult diagnoses not assessed during childhood. Interviewers assessing psychiatric diagnoses were unaware of drug use information.*

Main results
After controlling for earlier psychiatric disorders, an association was found between earlier adolescent drug use and later anxiety, depressive and disruptive disorders in young adulthood (table). Adolescent cigarette smoking and illicit drug use were associated with later depressive, anxiety, and anti-social personality disorders (table). Adolescent alcohol use was associated with later anxiety and anti-social personality disorders, and adolescent marijuana use was associated with later anti-social personality disorders (table). After controlling for previous adolescent substance use, earlier psychiatric disorders did not predict changes in young adult drug use.

Conclusion
Earlier adolescent drug use was associated with later anxiety and depressive and disruptive disorders in young adulthood.

*Information supplied by the authors.

Odds (adjusted for early psychopathology) of young adult psychiatric disorders in 1992 associated with adolescent substance use level in 1986

<table>
<thead>
<tr>
<th>Drug use</th>
<th>Depressive disorders OR (95% CI)</th>
<th>Anxiety disorders OR (95% CI)</th>
<th>Anti-social personality disorders OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobacco use</td>
<td>1.2* (1.0 to 1.4)</td>
<td>1.2* (1.0 to 1.4)</td>
<td>1.2* (1.0 to 1.3)</td>
</tr>
<tr>
<td>Alcohol use</td>
<td>1.3 (0.9 to 1.9)</td>
<td>1.3* (1.1 to 2.1)</td>
<td>1.3* (1.0 to 1.6)</td>
</tr>
<tr>
<td>Marijuana use</td>
<td>1.1 (0.9 to 1.3)</td>
<td>1.2 (1.0 to 1.4)</td>
<td>1.3* (1.1 to 1.6)</td>
</tr>
<tr>
<td>Illicit drug use</td>
<td>1.2* (1.0 to 1.4)</td>
<td>1.2* (1.0 to 1.3)</td>
<td>1.2* (1.1 to 1.3)</td>
</tr>
</tbody>
</table>

OR = odds ratio; CI = confidence interval; * p < 0.05.
Note: with control on earlier major depression, any anxiety disorder, any disruptive behaviour disorder, respectively.

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Main outcome measures
Psychiatric diagnoses and drug use information.

Commentary
Longitudinal studies encompass the most powerful analytical tools to assess the course, outcome, and stability of psychiatric diagnoses over time. They are a rare occurrence in psychiatry because of the enormous time and cost associated with conducting them—so when we see them we need to value them highly. Brook et al have been studying a cohort of youngsters from early childhood into young adulthood, examining several risk factors and correlates of substance use for well over a decade now. This study represents an outstanding contribution to the field of substance use, particularly because of the sound methodology used (population based cohort, large sample size, low attrition rates, and use of structured diagnostic criteria). The major results of this study include the finding of a linear relation between concurrent levels of substance use and psychopathology; a statistically significant relation between earlier adolescent drug use and later psychopathology (while controlling for earlier psychopathology); and a non-significant relation between young adult drug use and earlier psychopathology. The important contribution of this study to the field is the possibility that we might be able to reduce later psychopathology by focusing our intervention efforts on those people who are substance users in adolescence, even those who are still free of psychiatric disorder. This is particularly true for the role of tobacco smoking during adolescence which in this study shows a strong association with adult psychopathology.

Although there are notable strengths to this study there are some issues that should be raised as cautionary points. Firstly, these results should be replicated in other studies given that they contradict previous findings regarding the role of earlier psychopathology on later substance problems. 1 Secondly, the results of this study are limited to the role of substance use and psychopathology. Very different findings may emerge for problematic use if the authors had sufficient power to examine substance abuse/dependence in their study instead.

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