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Race, tobacco, and alcohol in a high risk family study

Alexis Duncan, Wilma Calvert, Collins Lewis, and Kathleen Bucholz
Objective

• To examine the prevalence of alcohol and tobacco use and dependence by race and family risk type
Methods - MOFAM

- Family study of Missouri residents – only data from offspring identified from Missouri birth records used here
- Over-sampled for African American (AfAm) race (>50% AA)
- Three risk groups based on paternal excessive alcohol use:
  - Recurrent drunk driving (RDD; ascertained from driving records), Maj. n=138, AfAm n=62
  - High risk (mother of children reported father drank excessively), Maj. n=99, AfAm n=126
  - Control (drawn from general population, irrespective of paternal alcohol status), Maj n=139, AfAm n=222
Tobacco - Full Sample

Ever smoked cigarette

Bars with different letters differ significantly p≤.05

Ever used any form of tobacco

Control  High risk  RDD
Tobacco - Users Only

Ever smoked 100 cigarettes*

Smoked daily for >= 2 months*

Bars with different letters differ significantly p ≤ .05

*Maj > AfAm p ≤ .05
Tobacco - Users Only

First cigarette <14 years old

N nicotine dependence*
First cigarette <14 years old

Bars with different letters differ significantly p ≤ .05

*Maj > AfAm p ≤ .05
Alcohol - Full Sample

Ever had an alcoholic drink*

<table>
<thead>
<tr>
<th></th>
<th>AfAM</th>
<th>Maj.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>50</td>
<td>65</td>
</tr>
<tr>
<td>High risk</td>
<td>55</td>
<td>70</td>
</tr>
<tr>
<td>RDD</td>
<td>60</td>
<td>60</td>
</tr>
</tbody>
</table>

Alcohol abuse or dependence*

<table>
<thead>
<tr>
<th></th>
<th>AfAM</th>
<th>Maj.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>High risk</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>RDD</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

*Maj > AfAm p ≤ .01
Alcohol - Full Sample

Alcohol abuse*

AfAM  Maj.

Alcohol dependence*

AfAM  Maj.

*Maj > AfAm p≤.01

Legend:
- Green: Control
- Blue: High risk
- Purple: RDD
Alcohol - Users Only

First drink >14 years old

- AfAM
- Maj.

Alcohol abuse or dependence*

- AfAM
- Maj.

*Maj > AfAm p≤.01
Alcohol - Users Only

Alcohol abuse*

AfAM
Maj.

Control
High risk
RDD

Alcohol dependence*

AfAM
Maj.

*Maj > AfAm p ≤ .01
Alcohol and Tobacco Use
Full sample – African Americans

- Abstinent
- Alc Only
- Tobac. Only
- Both

Control
High risk
RDD
Alcohol and Tobacco Use
Full sample – Majority

Abstinent | Alc Only | Tobac. Only | Both
---|---|---|---
Control | High risk | RDD

Graph showing the distribution of alcohol and tobacco use among different groups.
### Age onset of substance use and maximum drinks among users

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>High Risk</th>
<th>RDD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age first smoked</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Majority</td>
<td>14.9 (2.7)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>13.1 (2.7)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>12.0 (3.0)&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>AfAm</td>
<td>13.7 (3.0)</td>
<td>13.2 (3.2)</td>
<td>13.9 (3.4)</td>
</tr>
<tr>
<td><strong>Age first drank</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Majority</td>
<td>15.4 (2.4)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>14.6 (2.1)</td>
<td>14.6 (1.9)&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>AfAm</td>
<td>15.5 (2.6)</td>
<td>16.2 (2.8)</td>
<td>16.2 (2.5)</td>
</tr>
<tr>
<td><strong>Maximum # of drinks in 24 hrs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Majority</td>
<td>11.2 (7.8)</td>
<td>15.4 (15.3)</td>
<td>11.2 (7.8)</td>
</tr>
<tr>
<td>AfAm</td>
<td>7.8 (8.6)</td>
<td>9.5 (11.2)</td>
<td>7.8 (8.6)</td>
</tr>
</tbody>
</table>

Numbers with different subscripts differ significantly p ≤ .05

* Maj < AfAm p ≤ .05  ** Maj > AfAm p ≤ .05
Results Summary

- Maj. Offspring were significantly more likely to have substance use disorders, to ever drink, and had lower age onset of drinking and a higher number of maximum drinks in 24 hrs. than AfAm offspring
- There were no significant differences between risk groups for either AfAm or Majority Subjects for alcohol variables, with the exception that Majority control offspring were significantly younger at first alcohol use than majority RDD offspring
- Regardless of race, subjects in the high risk and RDD groups were more likely to have ever smoked or used any form of tobacco than control subjects.
Results Summary - Continued

• Among tobacco users:
  – Majority RDD offspring were more likely than majority control offspring to smoke regularly, initiate smoking at an early age, and be nicotine dependent.
  – Majority high risk offspring were more likely than majority control offspring to initiate smoking at an early age and be nicotine dependent
  – There were no significant difference among African American tobacco users for any tobacco variables
Conclusions

• Majority offspring are more likely to have alcohol and nicotine use disorders than African American offspring.

• Race may mediate the effect of paternal excessive drinking on tobacco use and dependence in offspring.