Binge Drinking and Pregnancy Intention


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Binge Drinking

• Defined as having 5 or more drinks during one sitting
• Linked to several adverse outcomes for both women and children including
  – Intentional and unintentional injuries, unplanned sexual intercourse, and sexually transmitted disease
• Most prevalent among persons in their late teens/early 20’s
• Has been increasing in prevalence in recent years
• Exposure to alcohol in the prenatal period has been linked with miscarriage, mental retardation, and other preventable birth defects
Unintended Pregnancy

• Over 40% of pregnancies are unintended
• Unintended pregnancy is associated with undesirable outcomes including:
  – Late entry into prenatal care
  – Low birthweight
  – Poor childhood development

Objective

• Describe the profile of women who binge drank during the preconceptional period.

• Explore the association between pregnancy intention and binge drinking prior to pregnancy.
Methods (1)

- Utilized data from July 2001-December 2002 PRAMS, which is a population-based survey of maternal behaviors and experiences prior to and during a woman’s pregnancy, as well as during early infancy of her child.
- Used the following questions:
  - During the 3 months before you got pregnant, how many alcoholic drinks did you have in an average week?
  - During the 3 months before you got pregnant, how many times did you drink 5 alcoholic drinks or more in one sitting?
  - Thinking back to just before you got pregnant, how did you feel about becoming pregnant?

Methods (2)

- Exploratory data analysis (univariate and bivariate analysis)
- Logistic regression models were developed to explore the association between preconceptional binge drinking and unintended pregnancy
- SUDAAN 9.0 software was used
Prevalence of Drinking Prior to Pregnancy

Drank 3 months prior to pregnancy

- Yes – 79.4%
- Didn’t drink then – 20.6%

Binge Drank – Yes 33.1%
Binge Drank – No 47.4%

Didn’t drink then
- 19.5%

Cases: Women who reported binge drinking (441 women)
Controls: Women who reported ‘didn’t drink then’ in both the three months prior to pregnancy question and the binge drinking question (268 women)

Prevalence of Pregnancy Intention In Michigan

- Unintended: 43.3%
- Intended: 56.7%
Prevalence of Preconceptional Binge Drinking by Pregnancy Intention

Crude Odds Ratio: 1.82

Statistical Methods

- Variables in initial model
  - Pregnancy intention
  - Maternal race
  - Marital status
  - Contraceptive use
  - Maternal age
  - Maternal education
  - Smoking status
  - Prenatal care start
  - Birthweight
  - Income
  - Gestational Age
  - Medicaid Status

- Variables in final model
  - Smoking status
  - Prenatal care start
  - Maternal race
  - Maternal age
  - Medicaid Status
  - Marital Status
Logistic Regression Results

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Odds Ratio</th>
<th>95% Confidence Interval</th>
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</thead>
<tbody>
<tr>
<td>Intended</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>2.00</td>
<td>(1.31, 3.04)</td>
</tr>
<tr>
<td>Yes</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
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<tr>
<td>&lt;25</td>
<td>1.00</td>
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</tr>
<tr>
<td>25+</td>
<td>1.90</td>
<td>(1.22, 2.96)</td>
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<td>Marital Status</td>
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<tr>
<td>Married</td>
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<td>(0.46, 1.33)</td>
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<tr>
<td>Other</td>
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<tr>
<td>Smoke</td>
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<tr>
<td>Yes</td>
<td>2.25</td>
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<tr>
<td>Race</td>
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<tr>
<td>White</td>
<td>3.20</td>
<td>(1.70, 6.04)</td>
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<tr>
<td>Black</td>
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<tr>
<td>Medicaid Status</td>
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</tr>
<tr>
<td>Ever</td>
<td>1.14</td>
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<td>Never</td>
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<tr>
<td>Prenatal Care Start</td>
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<td></td>
</tr>
<tr>
<td>After 1st trimester/Neve</td>
<td>0.72</td>
<td>(0.43, 1.20)</td>
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<tr>
<td>1st trimester</td>
<td>1.00</td>
<td></td>
</tr>
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</table>

Conclusions

- Unintended pregnancy as well as older women (>25 years), white women and smoking, were significantly associated with binge drinking.
- Also, since over 40% of unintended pregnancies end in abortions, these findings likely an underestimate.
Limitations

• Misclassification due to recall bias
• Validity of current questions in detection of intent
• Small sample size when stratified for statistical analysis
• PRAMS data represents only women who had a live-birth, and does not include women who had abortions or fetal deaths

Public Health Implications

• Promote education about alcohol exposure to women of child bearing age especially to those who consider pregnancy
• Assure that prenatal providers discuss the negative effects alcohol consumption has on a developing fetus
• Develop follow-up procedures for children exposed to alcohol during the prenatal period.
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Questions????

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