ALCOHOL & VIOLENCE
Effects of drinking & alcohol availability on harm

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As required by the Alcohol Policy 18 Conference, I have signed a disclosure statement and note the following conflict(s) of interest:

NONE
Harm to Others: Interpersonal violence
- Aggression, fighting, gun violence, homicide
- Intimate partner violence & sexual assault
- Child abuse and other harm to children

Harm to Self & Others: Suicide

★ Relationships with alcohol consumption and with alcohol availability and pricing/taxation
★ Most data from published reviews
ALCOHOL & VIOLENCE

THE DRUNKARD'S PROGRESS.
FROM THE FIRST GLASS TO THE GRAVE.
“There is substantial evidence to suggest that alcohol use is significantly associated with violence of all kinds”


“In the case of alcohol, evidence from laboratory and empirical studies support the possibility of a causal role in violent behavior”

(Boles & Miotto, 2003, Aggression & Viol Beh 8: 155-174)
AGGRESSION & FIGHTING
• Consistent relationship between alcohol use and aggressive behavior

• Possible biological mechanisms include effects on neurotransmitters, cognitive impacts, effects on expectancies
  (Cunradi et al., 2014, *J Drug Educ* 44: 19-33)

• Possible social mechanisms include disinhibition and desire to attain status
PHYSICAL HARM BY DRINKING OTHERS

- Data from 2014-15 U.S. National Alcohol Survey (5,922 adults ages 18+)
- In the prior year:
  - 6.7% felt threatened/afraid of someone who had been drinking
  - 3.6% were pushed/hit/assaulted
  - 2.0% were physically harmed

★ Of those assaulted in past year, only 36% had been drinking at the time of most recent event
PHYSICAL HARM BY DRINKING OTHERS

• Data from 2015 U.S. National Alcohol’s Harm to Others Survey (2,727 adults ages 18+)

• Risk for physical harm by someone who had been drinking significantly higher if live with a heavy drinker
Effects of alcohol consumption on violence likely depend on physical and social context


Drinking in certain contexts (like bars and pubs) may lower barriers to violence

(Cunradi et al., 2014, *J Drug Ed* 44: 19-33)
An increase in a population’s drinking level is followed by increases in rates of violence (Rossow 2000, *Contemp Drug Probs* 37: 397-433)

Greater alcohol outlet density associated with higher violent crime rates

Extending hours of sale in bars increases police-recorded assaults

Limiting hours of sale in bars (such as from 24h to 11pm closing) reduces homicides (Popova et al., 2009, *A&l & A&l* 44: 500-516)

Possible mechanisms:

- Volume of alcohol sold from off-premise outlets
- Norms accepting of aggression
- Attraction of criminal activities (Kearns et al., 2015, *JSAD* 76: 21-30)
INTIMATE PARTNER VIOLENCE
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- As alcohol use increases, odds of IPV increase
  (Foran & O’Leary, 2008, Clinical Psychology Rev 28: 1222-1234)

- Drinking by one or both partners during IPV events is associated with severity of violence
  (Cunradi et al., 2014, J Drug Ed 44: 19-33)
IPV AND WOMEN’S ALCOHOL USE

Alcohol-subsequent IPV

<table>
<thead>
<tr>
<th>Author</th>
<th>Type</th>
<th>Intake</th>
<th>Odds Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gilbert</td>
<td>Physical and/or sexual</td>
<td>Binge</td>
<td>1.19 (0.86, 1.63)</td>
</tr>
<tr>
<td>Testa</td>
<td>Physical</td>
<td>Binge</td>
<td>1.20 (0.93, 1.56)</td>
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<tr>
<td>Martino</td>
<td>Physical</td>
<td>Binge</td>
<td>1.58 (1.09, 2.30)</td>
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<tr>
<td>Subtotal</td>
<td>(I-squared = 0.0%, p = 0.437)</td>
<td></td>
<td>1.27 (1.07, 1.52)</td>
</tr>
</tbody>
</table>

IPV-subsequent alcohol

<table>
<thead>
<tr>
<th>Author</th>
<th>Type</th>
<th>Intake</th>
<th>Odds Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exner Cortens</td>
<td>Physical</td>
<td>Binge</td>
<td>0.98 (0.64, 1.48)</td>
</tr>
<tr>
<td>Gao</td>
<td>Physical</td>
<td>Binge</td>
<td>1.24 (0.69, 2.23)</td>
</tr>
<tr>
<td>Ackard</td>
<td>Physical and/or sexual</td>
<td>Regular use</td>
<td>1.26 (0.79, 2.01)</td>
</tr>
<tr>
<td>Martino</td>
<td>Physical</td>
<td>Binge</td>
<td>1.35 (0.93, 2.00)</td>
</tr>
<tr>
<td>Gilbert</td>
<td>Physical and/or sexual</td>
<td>Binge</td>
<td>1.46 (0.93, 2.27)</td>
</tr>
<tr>
<td>Subtotal</td>
<td>(I-squared = 0.0%, p = 0.751)</td>
<td></td>
<td>1.25 (1.02, 1.52)</td>
</tr>
</tbody>
</table>

INTIMATE PARTNER VIOLENCE

• Stronger associations of alcohol and IPV in clinical samples than general population samples
  
  (Foran & O’Leary, 2008, Clinical Psychology Rev 28: 1222-1234)

• Treatment for alcohol use disorders significantly reduces IPV risk
  • Both male and female perpetrators
  • Assault by person in treatment and by partner

• Relapse after treatment increases risk of IPV
  
  (Murphy & Ting, 2010, Aggression & Violent Beh 15: 325-333)
Greater alcohol outlet density linked with IPV

Mechanisms include:
- Promotion of (heavy) drinking among high-risk persons and couples
- Less social control and normative constraints against violence
- Contexts where high-risk groups gather
  (Cunradi et al., 2014, J Drug Ed, 44: 19-33)

Less evidence pricing policies or restrictions on hours and days of sale in relation to IPV
  (Kearns et al., 2015, JSAD, 76: 21-30)
SEXUAL VIOLENCE

• Estimates suggest 1/3 to 3/4 of sexual assaults involve alcohol consumption by perpetrator, victim or both
  (Boles & Miotto, 2003, Aggression & Viol Beh 8: 155-174)

• Young women’s substance use associated with experiences of sexual aggression
  (Capaldi et al., 2012, Partner Abuse 3: 231-280)

• Less definitive evidence men’s substance use contributes to sexual aggression
  (Testa 2004, J Interpers Viol 19: 1494-1505)

• Higher alcohol prices and increased alcohol taxes associated with less sexual violence
  (Kearns et al., 2015, JSAD 76: 21-30)
CHILD ABUSE
• Up to 50% of substantiated child abuse cases include parental substance use, with 60% due to alcohol use
  (Freisthler et al., 2006, *Child Maltreatment* 11: 263-280)

• Alcohol contributing factor in child sexual abuse by familial and other perpetrators

• Methodological challenges in studies of alcohol consumption and child abuse
  (Rossow 2000, *Contemp Drug Probs* 37: 397-433)
CHILD ABUSE

• Higher alcohol outlet density (and rates of drug possession crimes) related to greater rates of child abuse and neglect
  • Bar density $\rightarrow$ neglect
  • Off-premise outlet density $\rightarrow$ physical abuse

• Minor reductions in alcohol availability may substantially reduce child abuse

(Freisthler et al., 2006, Child Maltreatment 11: 263-280)
SUICIDE

Harm to Self & Others

• Suicidal behaviors include suicide attempts
  • Grief, pain and guilt of family and friends

• “Social contamination” or “suicide clusters”

• Loss to society due to premature death

(Rossow 2000, *Contemp Drug Probs* 37: 397-433)
Consistent findings across studies show more drinking associated with higher risk of suicide.

Mechanisms include:

- Long-term negative effects of chronic alcohol use (depression, social isolation)
- Acute intoxication effects (negative mood, hopelessness, behavioral disinhibition)
- Predisposition to both alcohol use disorders and suicide

(Rossow 2000, *Contemp Drug Probs* 37: 397-433)
SUICIDE

- Men more at risk for alcohol-involved suicide

**Figure 1** Percent of suicide decedents with a blood alcohol concentration $\geq 0.08$ g/dl by National Violent Death Reporting System

(Kaplan et al., 2013 *Injury Prev* 19: 38-43)
• Risk highest in young adulthood

• Firearm suicides more likely to involve alcohol

(Conner et al., 2014 AJPH 104: 171-178)
• Density of alcohol outlets positively associated with alcohol-involved suicide
  • Greater off-premise density, greater proportion of suicides with BAC > 0 and with BAC > 0.08g/dl
  • Same pattern for on-premise density

• Increases risk for men in particular (not significant for women)

• Off-premise availability increases risk for American Indian/Alaska Native groups as well

(Giesbrecht et al. 2015 *Addiction* 110: 300-307)
IS ALCOHOL JUST LIKE “OTHER DRUGS”?  

• Alcohol more closely linked to violent crimes (murder, rape, assault) than any other substance  
  • Drug use most strongly associated with property crimes (theft)  
    (Boles & Miotto, 2003, Aggression & Viol Beh 8: 155-174)  

• Mechanisms may be different  
  • Alcohol & violence may be related due to effects of consumption and effects of decreased social control around and inside alcohol outlets  
  • Drugs & violence may be related due to aspects of the illicit drug distribution system  
CONCLUSIONS

- Strong, consistent evidence of links between alcohol and many serious types of violence
  - Fighting/assault, crime, IPV, sexual violence, child abuse & suicide
- Findings hold in the U.S. and many other countries
- Alcohol policies may help reduce alcohol-involved violence
ACKNOWLEDGEMENTS

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