

# Reducing College Women's Heavy Episodic Drinking and Sexual Assault Risk via Parent-Based Intervention

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# College Heavy Episodic Drinking (HED) is highly prevalent and has significant negative consequences

- Gender specific consequences
  - For men, aggression, property damage
  - For women, sexual vulnerability, sexual victimization

## Strong association between HED and sexual victimization in college women

- Majority of college sexual assaults involve alcohol (Abbey 2002)
- High proportion of college rapes involve incapacitated rape (IR, Mohler-Kuo et al 2004)
- Increased odds of victimization on days of heavy drinking (Parks et al 2008; Neal & Fromme 2007)

# HED increases risk of sexual victimization (1<sup>st</sup> semester)

Maximum drinks on an Occasion in Fall Semester (T1)	N	Any victimization (%)	IR (%)
0	91	7.69	0.00
1-3	76	17.11	1.32
4-6	109	25.69	5.56
7-9	86	40.70	13.95
10 or more	70	58.57	25.71
Overall	432	28.70	8.58

## Can we prevent rape by reducing HED among college women?

- Given the strong association between HED and rape, reducing HED should reduce victimization (Testa & Livingston, 2009)
- College rape prevention programs have had little success – they have not addressed women's drinking
- Several successful college drinking reduction interventions (Larimer & Cronce)

# Proposed Intervention Effects



# When and How to Intervene?

- First semester high risk for sexual victimization
- Increases in drinking occur in early weeks of college
- Waiting to identify at-risk drinkers may be too late to prevent victimization incidents
- Intervention prior to start of college ideal

# Parent-Based Intervention (PBI)

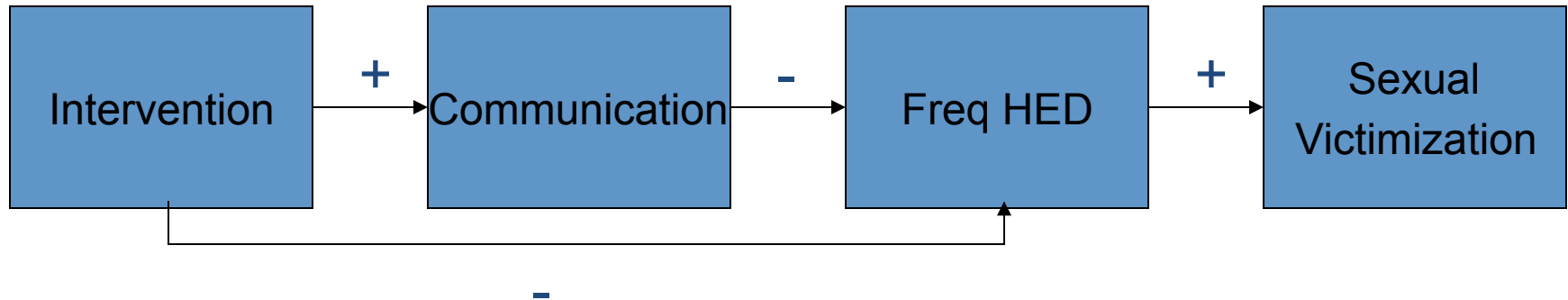
- Universal prevention program during summer prior to college
- Implemented at low cost – parents deliver intervention
- Tailored
- Used successfully to reduce college HED (Turrisi et al 2001)



# PBI

- Provide mothers of incoming freshman daughters with handbook summer before college
- Contains factual content on college drinking to be shared
  - Enhanced condition also included sex risk
- Information on improving communication – to help communicate about alcohol AND promote ongoing communication

# Proposed Intervention Effects



# Recruitment

- Community sample -yearbooks from 21 schools to identify graduating seniors
- Telephone numbers located in directories
- Recruited mother-daughter pairs by telephone (4 cohorts)
- Eligibility: daughter plans to attend college in fall, both willing to participate
- Located 47% of families targeted, of those 91% eligible, 83% completed baseline

- D0, M0 (baseline) assessment May-June
  - Randomization July 1
  - Intervention delivery July –August
- D1, M1 assessments end of 1<sup>st</sup> semester
- D2 assessment end of 2nd semester

# Mother-daughter pairs randomized to 4 conditions

- 1) Alcohol intervention
- 2) Enhanced intervention (alcohol + sex content)
- 3) Control
- 4) Unmeasured control\*

# Heavy Episodic Drinking (HED)

- How often did you consume 4 or more drinks in a row on a single occasion?
- How often did you consume enough alcohol to feel drunk or intoxicated?
- 0 (never), 1 (< once a month), 2 (1-3 times/month), 3 (1-2 /week), 4 (3-4 days/week), 5 (5 or more days)

# General Communication

- How often do you tell your mother
  - What you are doing in school?
  - About your social activities?
  - Discuss personal issues?
  - Discuss your romantic relationships?
  - Discuss your problems?
- Mother-daughter correlated .5

# Alcohol Communication

- 30 items
- My mother and I have talked about:
  - How alcohol works in the body
  - The ways that alcohol can impair judgment
  - How to find fun things to do instead of drinking
  - Mother-daughter correlated .35



# Sexual Victimization (RSES-20)

Testa et al, 2010 JCCP

- 4 tactics
  - Verbal coercion
  - Threats of harm
  - Physical force
  - Incapacitation
- 5 outcomes
  - Touching
  - Attempted intercourse
  - Vaginal Intercourse
  - Oral sex
  - Other penetration  
(digital, objects, anal)

# Sexual Victimization Outcomes

- 1) Any sexual victimization (positive response to any item)
- 2) Incapacitated rape  
(vaginal , attempted vaginal, oral or anal sex when you were incapacitated and unable to object or consent)

## PBI Intervention Evaluation by Mothers

	<b>N</b>	<b>%</b>	<b>Range</b>	<b>M</b>	<b>SD</b>
<b>Completed handbook eval forms returned</b>	<b>481</b>	<b>91.9%</b>	<b>0-1</b>	<b>----</b>	<b>----</b>
<b>Mother discussed handbook w/ daughter</b>	<b>456</b>	<b>95.6%</b>	<b>0-1</b>	<b>----</b>	<b>----</b>
<b>Mother planned to discuss handbook w/ daughter in future</b>	<b>454</b>	<b>96.0%</b>	<b>0-1</b>	<b>----</b>	<b>----</b>
<b>Handbook was helpful in facilitating conversations</b>	<b>462</b>	<b>----</b>	<b>1-7</b>	<b>5.66</b>	<b>1.27</b>
<b>No. of conversations w/ daughter based on handbook</b>	<b>441</b>	<b>----</b>	<b>1-20</b>	<b>4.92</b>	<b>3.72</b>
<b>How did you feel discussion went?</b>	<b>450</b>	<b>----</b>	<b>1-7</b>	<b>5.52</b>	<b>1.29</b>
<b>Openness of daughter to discussions</b>	<b>450</b>	<b>----</b>	<b>1-7</b>	<b>5.35</b>	<b>1.43</b>

# Baseline descriptives (N = 976)

	Mothers	Daughters
• Age	47.6 (4.82)	18.0 (.33)
• Married	84%	
• Caucasian	92%	91%
• Median income	\$75,000	
• College grad	42%	
• HED – any, 90 days	41%	53%
• HED (1 <once/month)	.52 (.80)	.93 (1.09)
• Any sexual victimization	40.6%	46.6%
Forcible rape	12.4%	9.7%
Incapacitated rape	9.9%	15.4%

# Key Outcome Variables

Full Sample (N = 978)

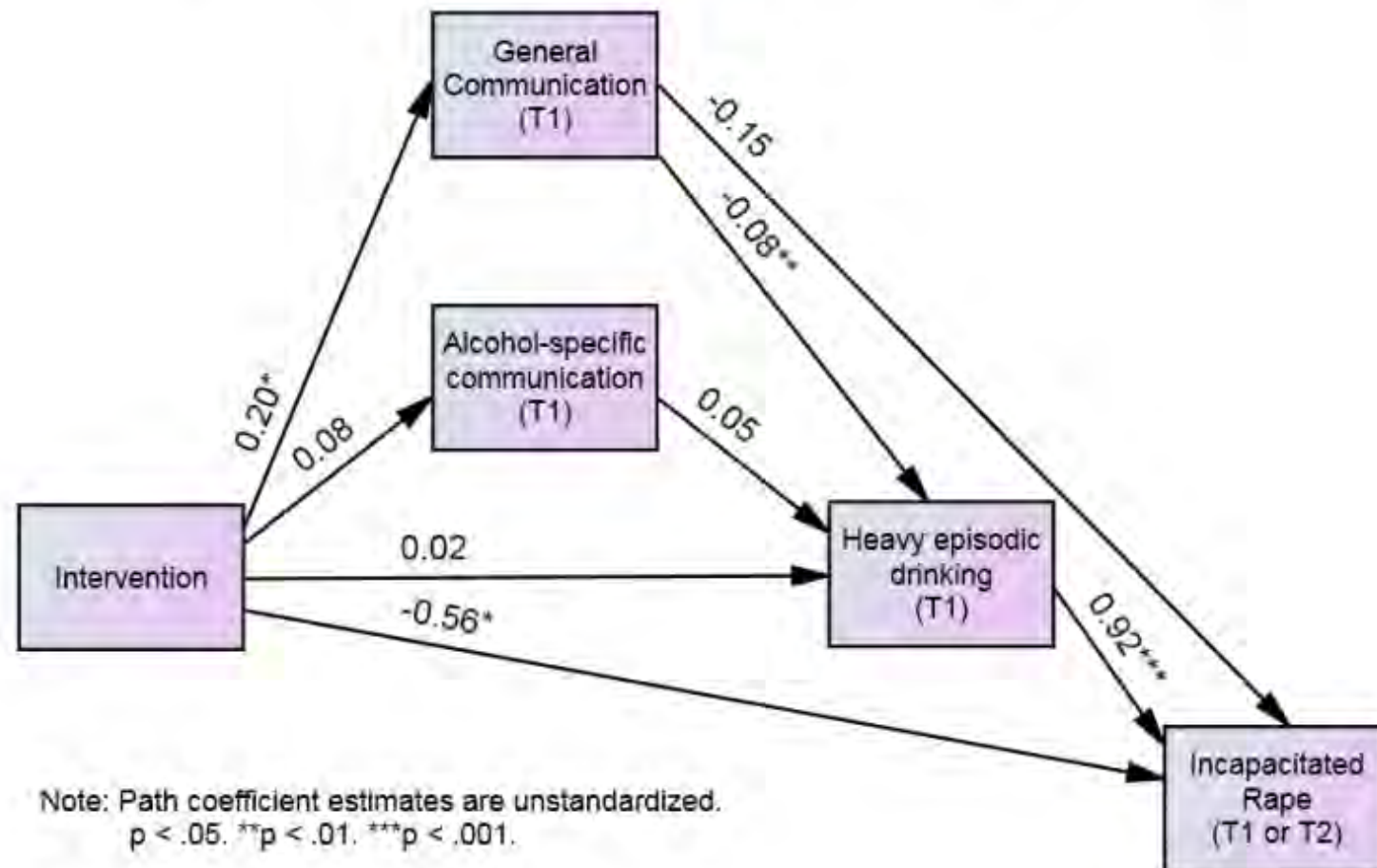
Follow-Up 1 (Fall Semester )	Control	Alcohol Intervention	Enhanced Intervention (alcohol + sex content)	F
HED frequency	1.25	1.26	1.33	0.36
Max drinks	5.11	5.06	5.34	0.29
Any victimization	29%	27%	26%	0.29
Incapac rape	8%	6%	4%	1.50
Communication (D)	4.62	4.79	4.84	2.04
Communication (M)	5.04	5.25	5.42	5.84**

# Key outcome variables

Full sample (N = 978)

	Control	Any Intervention	F
Fall Semester			
• HED frequency	1.25	1.29	0.32
• Max drinks	5.11	5.18	0.05
• Any victimization	29%	27%	0.56
• Incapac rape	8%	6%	2.37
• Communication (D)	4.62	4.81	3.96*
• Communication (M)	5.04	5.32	9.88**
• Alcohol comm (D)	1.75	1.85	4.44*
• Alcohol comm (M)	2.17	2.44	27.83***

## Path Model Predicting Incapacitated Rape (IR)



Testa et al. 2010, Prevention Science

# Conclusions: Can we prevent college rape via drinking reduction?

- Supports strong link between college drinking and sexual victimization
- Reducing college HED can be an effective means of reducing rape
- But...



# Is PBI the intervention to use?

- PBI had modest, indirect effects on HED and sexual victimization risk
  - As predicted, effects mediated via general mother-daughter communication in college (not thru alcohol communication)
- Significant direct effect only on Incapac Rape – not mediated through drinking – was unexpected

# Limits of PBI

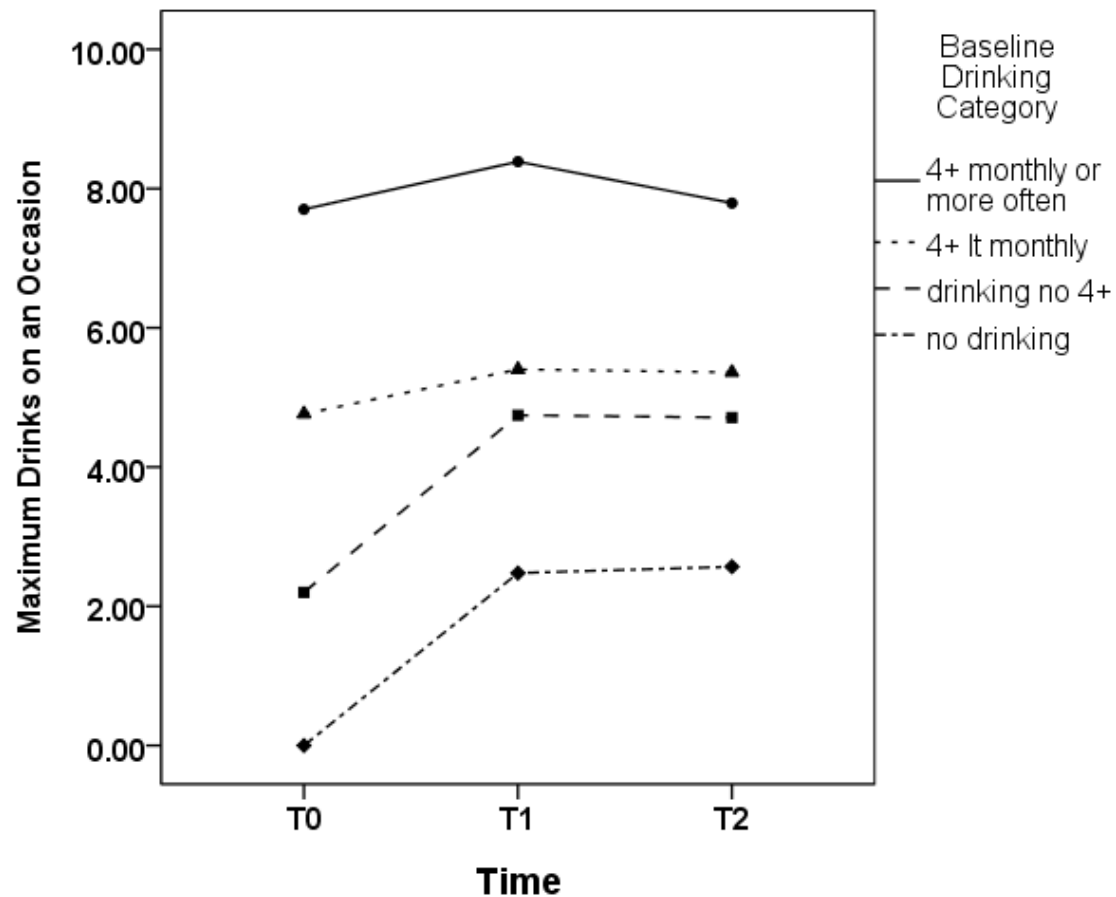
- Subsequent studies not as promising as initial Turrisi 2001
  - Ichiyama et al – PBI reduced transition from nondrinker to drinker; less drinking growth women only
  - Wood et al 2010 – PBI vs BMI, PBI did not enhance or work on its own – harm reduction version
  - Turrisi et al 2009 – PBI + BMI effective but not PBI alone

# Limits of PBI

- Abstention oriented materials
- May be better suited to preventing initiation/escalation than to reducing already established HED (50% already engage in HED at T0)

# Trajectories of maximum drinks from high school graduation (T0) to fall (T1) and spring semester (T2) by baseline drinking category (n = 405)

Testa & Hoffman JSAD 2012



Test of PBI effectiveness for lowest two  
baseline drinking categories:  
“lighter” drinkers (n=503)

Measure	Control	Any Intervention	t or $\chi^2$
Incapacitated rape (T1 or T2)	6.2%	3.3%	2.12, p=.15
Total SES items endorsed (T1 & T2)	0.71	0.63	0.53
Freq HED (T1)	0.74	0.63	1.21
Weekend drinks (T1)	2.58	1.99	1.87, p=.06
General communication-D (T1)	4.59	4.83	1.80, p=.07
Alcohol communication-D (T1)	1.78	1.80	0.07
General communication-M (T1)	5.07	5.39	2.56*
Alcohol communication-M (T1)	2.13	2.42	3.85***

# Implications

- Preventing sexual victimization via reducing HED is warranted because of strong association between the two
- PBI effects are modest but
  - it is cost-effective and easy to implement
  - universal
  - parents like it , teachable moment
  - may be worth considering/modifying

# Options for PBI

## **Target/tailor to abstainers/ light drinkers?**

- May be more receptive to PBI/abstention based message
- More growth in drinking
- But at lower risk of heavy drinking and victimization even without intervention

## **Target / Tailor to heavier drinkers?**

- At much higher risk of sexual victimization and other negative outcomes
- Need to reduce drinking or use more protective behavioral strategies

- Need collaboration between alcohol interventionists and sexual assault researchers
- Reducing women's HED will not end all sexual victimization since some occurs without alcohol
- Women don't cause SV – male perpetrators do – need to put more focus on men



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