

DRINKING AMONG COLLEGE WOMEN: RISK FACTORS, CONSEQUENCES, AND PREVENTION APPROACHES

Sharon C. Wilsnack, Ph.D.
University of North Dakota School of Medicine & Health
Sciences

Mary E. Larimer, Ph.D.
Department of Psychiatry & Behavioral Science,
University of Washington

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Goals of this Review

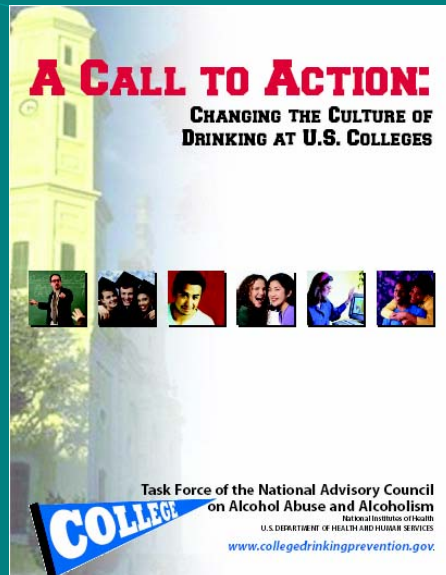
- Provide an overview of prevention strategies recommended by the college drinking task force
- Review recent literature on individual prevention to update task force report
- Evaluate outcomes for women compared to men
- Evaluate outcomes for high-risk groups
- Suggest clinical and research priorities



“Now son, you don't want to drink beer. That's for Daddies, and kids with fake IDs.”

Homer J. Simpson

Groening, The Simpsons



www.CollegeDrinkingPrevention.gov

The 3-in-1 Framework

- Individuals, including at-risk or alcohol dependant drinkers
- Student body as a whole
- College and the surrounding community

From "A Call to Action: Changing the Culture of Drinking at U.S. Colleges,"
NIAAA Task Force

Four-Tiered Recommendation

Tier 1: Evidence of effectiveness among college students

Tier 2: Evidence of success with general populations that could be applied to college environments

Tier 3: Evidence of logical and theoretical promise, but require more comprehensive evaluation

Tier 4: Evidence of ineffectiveness

From "A Call to Action: Changing the Culture of Drinking at U.S. Colleges,"
NIAAA Task Force

Tier 1: Evidence of Effectiveness Among College Students

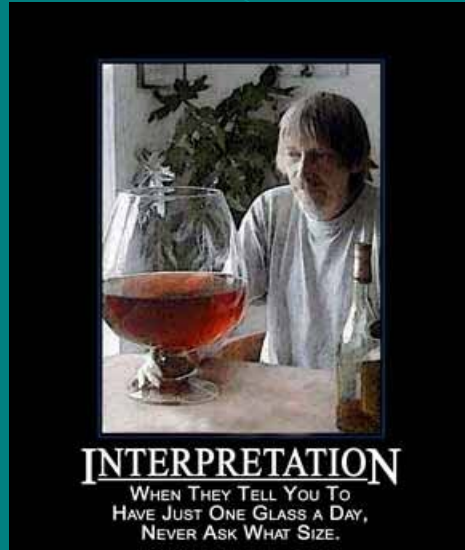
- Combining cognitive-behavioral skills with norms clarification and motivational enhancement interventions
- Offering brief motivational enhancement interventions
- Challenging alcohol expectancies

From "A Call to Action: Changing the Culture of Drinking at U.S. Colleges," NIAAA Task Force

Cognitive-Behavioral Skills Training

- Moderate drinking skills
- Blood alcohol concentration discrimination
- Altering expectancies about alcohol's effects
- Assertiveness skills (drink refusal)
- Relaxation/Stress Management skills
- Lifestyle balance skills

What is a Standard Drink?



Norms Clarification

Examines students' perceptions about:

- Acceptability of excessive drinking
- Perceptions about the drinking rates of their peers
- Perceptions about the drinking prevalence of their peers

“Look children, this is all I’m going to say about drugs... Stay away from them... There’s a time and a place for everything... and it’s called college.”

Chef

Parker & Stone, South Park



Motivational Enhancement Interventions



**The Twinkie Pursuit
Motivation Device**

The Stages of Change Model

(Prochaska & DiClemente, 1982, 1984, 1985, 1986)

- Precontemplation
- Contemplation
- Preparation/Determination
- Action
- Maintenance

Motivational Interviewing

BASICS Principles

(Miller and Rollnick, 2002)

1. Express Empathy
2. Develop Discrepancy
3. Roll with Resistance
4. Support Self-Efficacy

Challenging Expectancies



What Have These Studies Shown?

- Combining cognitive-behavioral skills with norms clarification and motivational enhancement interventions
 - Reductions in drinking rates and associated problems (e.g., ASTP) for men and women
- Offering brief motivational enhancement interventions
 - Reductions in drinking rates and associated problems for men and women (e.g., BASICS)
- Challenging alcohol expectancies
 - Reductions in alcohol use for men

From "A Call to Action: Changing the Culture of Drinking at U.S. Colleges," National Advisory Council on Alcohol Abuse and Alcoholism Task Force

What's new since this report was released?

Categories of Programs Reviewed:

- Educational/Awareness Programs
- Cognitive/Behavioral Skills Training
- Motivational Enhancement Approaches

Education/Awareness Programs

- Information/knowledge programs
- Values clarification programs
- Normative re-education programs

Information/Knowledge

- Tier IV (evidence of ineffectiveness) in prior review. In current review, only 1 study tested information against waitlist control. Report drinking reduction, but no statistical analysis*
- Only 1 of 8 studies using information as a comparison group found pre-post drinking reductions*; no studies found information alone to be better than alternative treatment

Collins, et al., 2002; Keillor, et al., 1999; LaChance, 2004; Lysaught et al. 2003*; Murphy, et al., 2001; Neal & Carey, 2004; Saunders, et al., 2004; Sharrow, 2001; Steffian, 1999*

Values Clarification

- 3 studies used brief values clarification as comparison groups. None showed significant drinking reductions

Neal and Carey 2004; Smith, 2004; Stamper et al. 2004

Normative Re-education

- 5 studies reported changes in norms after in-person intervention; 2 of 5 found reductions in drinking^{*}
- 2 studies of computerized personalized normative feedback found reductions in both perceived norms and drinking[†]

McNally and Palfai 2003^{*}; Neighbors et al. (in press) [†]; Neighbors et al. 2004[†]; Peeler et al. 2000; Smith et al. 2004; Stamper et al. 2004^{*}; Steffian 1999

Education/Awareness Programs

- Knowledge and Values Clarification approaches demonstrate little or no effect on drinking behavior
- Poor use of campus resources for alcohol prevention
- Normative feedback more promising, when personalized feedback included-- ready for Tier I?

Source: Larimer and Cronce, Under Review

Cognitive/Behavioral Skills Training

- Alcohol specific skills
 - Expectancy challenge
 - BAC training
- Multi-component skills training
- General life-skills training

Expectancy Challenge

- 2 of 7 studies reported reductions in drinking in comparison to control or comparison conditions*

Corbin et al. 2001; Hunt 2004; Keillor et al. 1999; Musher-Eizenman and Kulick 2003; Wiers and Kummeling 2004; Wiers et al. 2005*; Wood (in Wiers et al. 2003)*

BAC Training

- 1 study reviewed found positive effects for fraternity males

Fourneir et al. 2004

Multi-Component Skills Training

- 6 studies tested 8 interventions; 4 found to reduce alcohol use and/or consequences*

Barnett et al. 2004*; Donohue et al. 2004*; Fromme and Corbin 2004*; Guarna 2000; LaChance 2004*; Sharmer 2001

General Life-Skills Training

- 1 study found no reductions in drinking for a general life skills program*

Peeler et al. 2000

Cognitive–Behavioral Skills Training

- Both specific and broad (multi–component) skills–training approaches associated with positive changes in drinking behavior
- Research quality is mixed—stronger research designs yield more positive findings

Source: Larimer and Cronce, Under Review

Motivational Enhancement Approaches

- Brief motivational interventions
- Mailed or computerized motivational feedback

Brief Motivational Interventions

- 8 of 11 studies of in-person interventions reported reductions in drinking and/or consequences*

Barnett et al. 2004*; Borsari and Carey 2005*; Collins 2003; Gregory 2001; Labrie 2002*; LaChance 2004*; McNally et al. 2005*; Murphy et al. 2001, 2004*; Neal and Carey 2004

Mailed or Computerized Motivational Feedback

- All 4 studies reviewed found significant effects on drinking and/or consequences

Collins et al. 2002; Kypri in Saunders et al. 2004; Laforge in Saunders et al. 2004; Murphy et al. 2004

Motivational Enhancement Approaches

- Considerable support for brief motivational interventions incorporating information, skills training, and personalized feedback
- Also support for mailed or computerized feedback without in-person intervention
- Combined with success of computerized PNF, may suggest viable first-step

Source: Larimer and Cronce, Under Review

What about Women?

- Expectancy Challenge
 - Mixed findings—Of 2 with positive outcomes, one found iatrogenic effects for women, another found effects only for women
 - May need to target different expectancies for women—more relationship expectancies

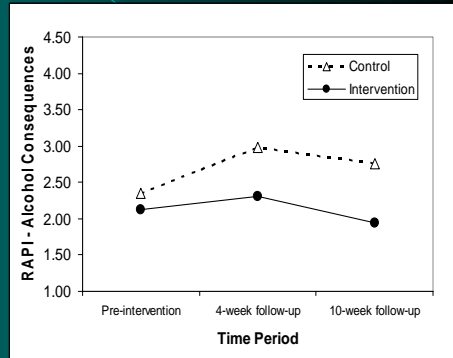
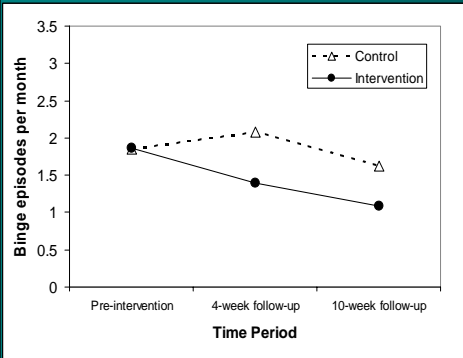
What about Women?

- Multi-component Skills Training
 - Most studies fail to assess gender as a moderator of intervention outcomes.
 - Some studies only include men.
 - Studies that have evaluated typically find no differences in intervention effects between men and women.

What about Women?

- Motivational Feedback Interventions
 - Most studies fail to assess gender as a moderator of intervention outcomes. Some studies only include men.
 - Studies that have evaluated sex differences find mixed results. Most find no differences. Several studies find women are more responsive to motivational interventions than men.
 - Includes web-based motivational feedback as well as in-person group interventions

Heavy Episodic Drinking & RAPI



Source: LaBrie, et al., in preparation

What about Women?

- Normative Feedback Interventions
 - Most studies fail to assess gender as a moderator of intervention outcomes.
 - Some studies find no sex differences. However, recent research suggests there may be differences based on degree of female gender identity and level of specificity of the normative reference group*

Lewis, et al., under review*

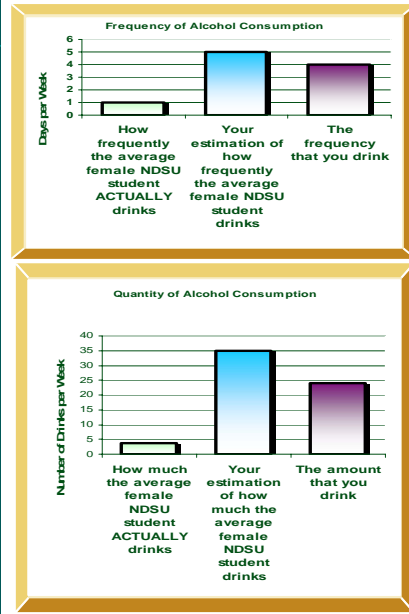
Gender-Specific Personalized Normative Feedback

According to the information you provided us during the computer assessment, the number of occasions you drank (frequency) was 4 times a week. The average amount you drank on each occasion (quantity) was 6 drinks.

You completed questions asking you what you believed the average frequency and quantity of alcohol consumed by other female college students. You told us that you believed that the average female student drank 5 times a week and during each occasion, she consumed 7 drinks.

The actual drinking norm for female students at North Dakota State University is 1 time a week drinking about 3.8 drinks on each occasion.

Your percentile rank (comparing you to other NDSU students) is 91%, which suggests that you drink more than 91% of other NDSU students.



Results for Other High-Risk Groups

- Children of Alcoholics
- Fraternity/Sorority Members
- Mandated Students
- Athletes
- First-year students

Children of Alcoholics (COAs)

- One study of expectancy challenge showed no differences between intervention and attention control for COA women or non-COA women.
- All women monitored drinking using daily diary.

Kulick, 2002

Fraternity/Sorority Members

- Several interventions (skills-based, norms-challenging, motivational interventions) help reduce consumption
- Fraternity/sorority residents similarly responsive to interventions despite higher baseline drinking levels
- BAC training with incentive to reduce BAC was efficacious in one study*

*Fournier et al., 2004

Athletes

- Motivational feedback/skills groups shown to reduce negative consequences*
- Difficulties with recruitment/retention

Gregory 2001*

First Year Students

- 11 studies focused entirely or predominately on freshmen
- Strong support for motivational, skills-based, and normative re-education approaches with both male and female first-year students

Source: Larimer and Cronce, under review

Mandated Students

- Most significant area of progress in past 6 years
- 5 new studies with mandated students found support for multi-component skills training and brief motivational feedback interventions

Source: Larimer and Cronce, Under Review

Summary: Progress

- Tier 1 recommendations unchanged at this time:
 - Multi-component skills training still strong support, though less consistent than in prior review
 - Motivational feedback, with or without in-person intervention, consistently efficacious
 - Expectancy challenge findings mixed and weaker than prior review—methodologically stronger studies have better findings

Source: Larimer and Cronce, Under Review

Summary: Progress

- Generic norms–challenging interventions successfully change perceptions, but findings mixed regarding impact on drinking behavior
- Personalized normative feedback interventions (including computer–delivered) reliably found to change drinking behavior and consequences for both men and women.

Source: Larimer and Cronce, Under Review

Summary: Progress

- Emerging research on sex differences in intervention efficacy
 - Interventions for women may be enhanced by focusing on relationship goals and gender–specific expectations.
 - Interventions for women high in female gender identity may be enhanced by providing women–specific normative feedback
 - More studies needed evaluating gender and gender identity as moderators of intervention efficacy
- Emerging research on mediators—self–other discrepancy, perceived norms, expectancies

Source: Larimer and Cronce, Under Review

Summary: Pitfalls

- Much of the research suffers from serious methodological limitations
 - Low response rates
 - Small sample sizes
 - High attrition
 - Lack of appropriate control groups
 - Short term follow-ups
 - Failure of randomization
 - Unknown intervention fidelity

Source: Larimer and Cronce, Under Review

Summary: Pitfalls

- Despite efficacious interventions, many students not reached
- Research on recruitment to intervention*
 - heavier drinkers more interested in research and intervention than lighter drinkers, but...
 - Heaviest drinkers less likely to participate
 - Food, beverages, convenience, message about personal benefit increase likelihood to attend among heavier drinkers

Neighbors, Palmer, and Larimer 2004*; Palmer, Kilmer, and Larimer in press*

Source: Larimer and Cronce, Under Review

Summary: Clinical Priorities

- Implement and evaluation screening and intervention in naturalistic settings:
 - Health-care
 - Judicial
 - Housing
 - Orientation
 - Curriculum infusion

Source: Larimer and Cronic, Under Review

Summary: Clinical Priorities

- Use MI to increase participation and retention
- Improve marketing and outreach
- Use peers to recruit, refer and/or provide services
 - Peers may be LESS effective for women
- Implement interventions with parents of students
- Standardize and disseminate training and materials for Tier I interventions

Source: Larimer and Cronic, Under Review

Summary: Research Priorities

- Methodologically sound research on intervention outcomes—larger studies, longer follow-ups, multiple control groups
- Test mediators and moderators of intervention effects
- Special populations (women, COAs, greets, athletes, mandated, ethnic minority students, students with comorbid disorders)
- Comparison of implementation methods
- Studies of web-based implementation
- Evaluation of commercially available interventions

Source: Larimer and Cronce, Under Review

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