A Multimedia Computer-Based Intervention for College Student Drinking: Short-Term Outcomes of a Randomized Trial

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OSU

Feedback Based Interventions

- Interventions including substantial feedback-based components are the most promising evidence-based approach for reducing high-risk drinking among college students (Walters & Neighbors, 2005; Larimer & Cronce, 2002).
- Feedback both with and without in-person motivational interviewing style interaction produce comparable short-term outcomes (Walters & Neighbors, 2005).
- Additional value of interviewer or group didactics to feedback interventions is unclear.

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Problem: Dissemination

- A number of practical barriers limit the wider dissemination of feedback-based interventions:

  For feedback alone:
  - Selection of appropriate measures
  - Scoring and interpreting the measures
  - Producing meaningful feedback

  For in-person feedback:
  - *Requires staff*
  - *Training and Supervision*
  - *Adherence to MI principles and strategies*

  For both:
  - *Lack of instantaneous feedback requires multiple contacts, risking attrition*

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Possible Solution: Electronic Formats

- Perhaps the effective ingredients of feedback-based interventions can be captured in electronic formats and delivered via web, compact disk or email
- Advantages of easy dissemination to targeted population and perfect fidelity to ideal treatment strategies
- Others have developed and tested electronic adaptations:
  - e-CHUG and e-TOKE (Walters, Van Sickle, and Moyer)
  - www.mystudentbody.com (alcohol) (Chiauzzi et al., 2005)
  - e-SBI (Bendtsen, Johannson, & Åkerlind, in press)
  - Drinker's Check-up (Hester, Squires, & Delaney, 2005)

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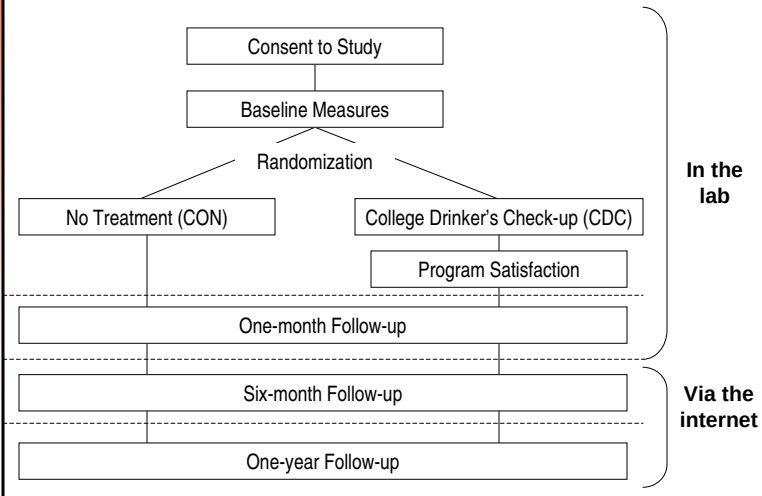
College Drinker's Check-up

- Multimedia assessment and feedback tool for high-risk drinkers
- Self-guided and self-paced
- Video "interviewer" walks the participant through the program giving instructions, offering encouragement, offering interpretive information about the feedback, and asking open-ended questions to elicit processing
- Administered via local computer, either hard drive or compact disc (cd), not over the internet
- Takes 30-40 minutes to complete

College Drinker's Check-up (continued)

Measure	Feedback Domain
Form-90	Peak and Typical Blood Alcohol Concentrations (BAC)*; costs of use (both financial and caloric)*
RAPI	*Alcohol-related life problems*
AUDIT & MAST	*Likelihood of Presence of Alcohol Use Disorder and Diagnostic Criteria*
Drinking Norms Scale	*Norms Challenge*
Brief Situational Confidence Questionnaire	*Confidence at avoiding heavy alcohol use in a number of contexts*
Behavioral Health Screener	*Likelihood of presence of behavioral or emotional problems possibly related to alcohol use*

Study Design



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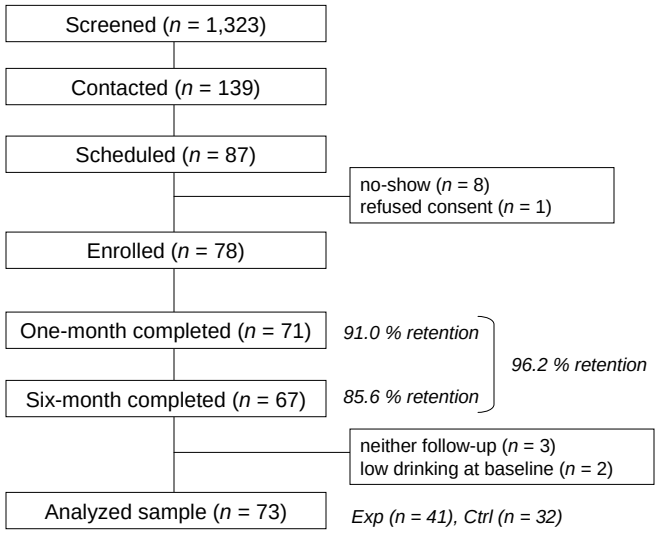
Participant Flow



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Measures

Baseline Only:

- Demographics
- AUDIT (Saunders et al., 1993)
- Self-Monitoring Scale (Attention to Social Comparison Subscale) (Lennox & Wolfe, 1984)
- California Psychological Inventory (Socialization Subscale) (Gough, 1994)

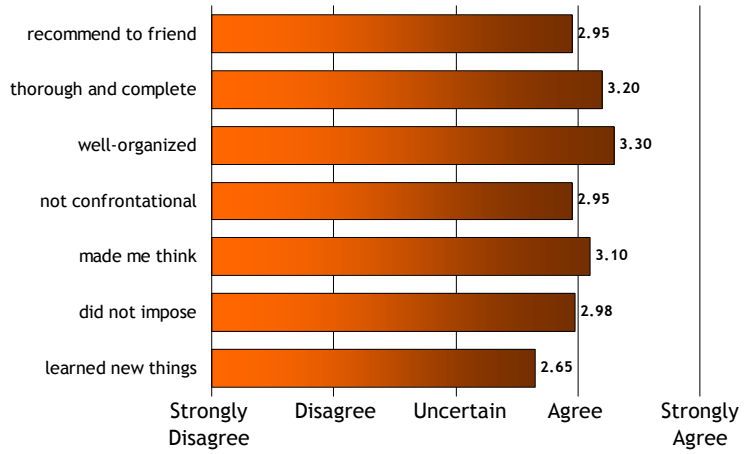
Baseline and All Follow-ups:

- Daily Drinking Questionnaire (Collins, Parks & Marlatt, 1985)
- Frequency-Quantity Questionnaire (modified) (Cahalan & Cisin, 1968)
- CAPS-r (Maddock, Laforge, Rossi, & O'Hare, 2001
- SOCRATES (Miller & Tonigan, 1996)
- Other Drugs (past 6 months) (Collins, Parks & Marlatt, 1985)
- Worry about Drinking (McCaul & Mullens, 2003)

Sample Characteristics

- Both men (*n*=62) and women (*n*=16)
- Average age 19.9 (range 18 to 24)
- Mostly white, non-hispanic (89.6%)
- Used an average of 1.6 other drugs, marijuana most popular (55.1%)
- Average AUDIT score of 14, all > 8
- Average baseline Total Drinks per Week (DPW) = 31.5 (*SD* = 12.8)
- Average Drinks per Peak Drinking Occasion = 14.68 (*SD* = 3.6)
- Average Drinks per Typical Occasion = 12.5 (*SD* = 4.5)
- CAPS-r Total = 8.0 (*SD* =4.8)
- SOCRATES – Ambivalence = 9.3 (*SD* = 3.64)
- Worry – Total = 2.8 (*SD* = 2.41)

Program Satisfaction



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Results

- Randomization check
  - Only one significant difference between groups at baseline, CDC group reported more days “drinking to get drunk” than control group (11.07 vs. 8.12, $F(1,71)=4.94$, $p < .03$)
- Mixed-model ANOVA
  - Time x treatment interaction

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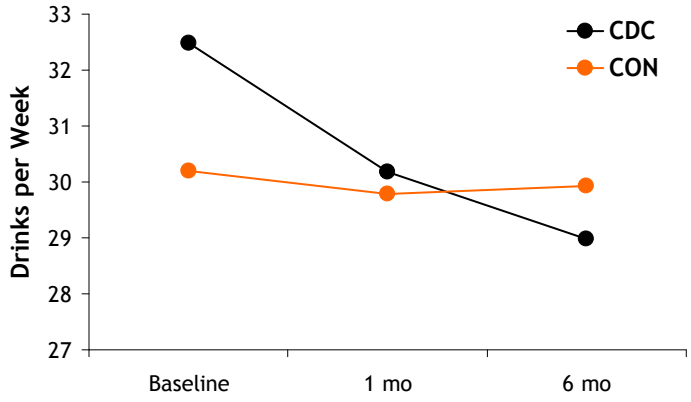
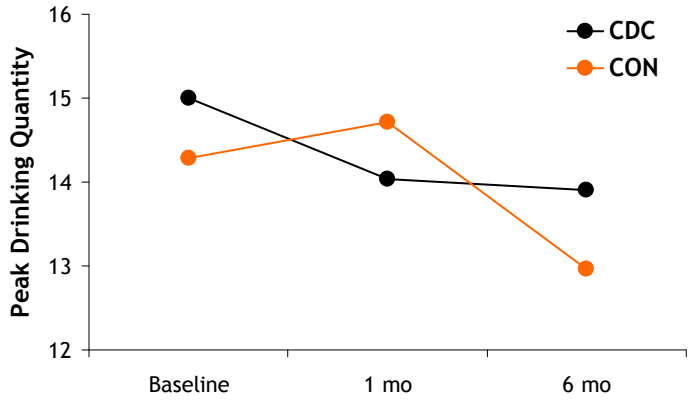
Results (cont.)



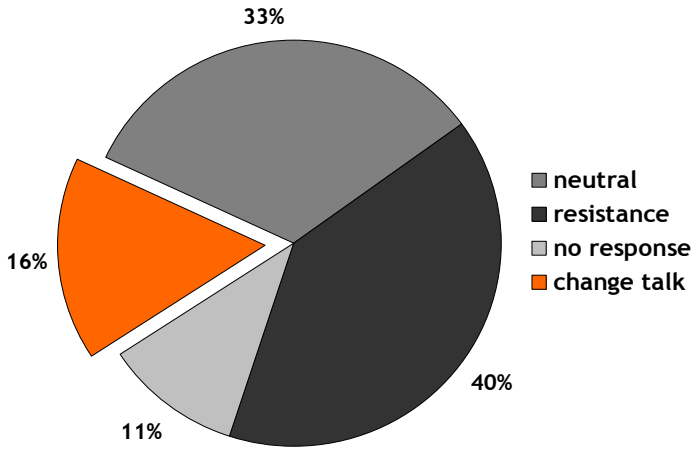
Time	$F(2,142) = .44$, $p = .65$, $\eta^2 = .01$
Time x Treatment	$F(2,142) = .31$, $p = .74$, $\eta^2 = .004$

Results (cont.)



Time	$F(2,142) = 4.45$, $p = .01$, $\eta^2 = .06$
Time x Treatment	$F(2,142) = 2.12$, $p = .12$, $\eta^2 = .03$

Participant Responses during Feedback



Conclusions and Future Plans

- Program was generally well-liked by participants
- Instantaneous feedback reduces assessment-feedback attrition to zero
- High-risk sample and little attrition to follow-up
- Program failed to produce changes in drinking behavior comparable to other feedback-based brief interventions
- Interactive features of feedback may have amplified resistance rather than encouraged more thorough processing
- Software has been modified to remove requests for responses to feedback, trial underway

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