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ALCOHOL RESEARCH GROUP

**Does Brief Intervention Work for Heavy  
Episodic Drinking? A Comparison of Emergency  
Department Patients in Two Cultures**

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# BACKGROUND

- Brief intervention studies in the emergency department have shown mixed results regarding efficacy
- Lighter drinkers and those dependent may be less likely to show BI effects than moderate and heavy, non-dependent drinkers
- Little has been reported on the efficacy of BI among heavy episodic drinkers, although this drinking style is known to be especially harmful in relation to negative consequences of drinking, including alcohol-related injuries.

# Purpose of the Study

- To examine the efficacy of BI in two cultures, both of which demonstrate heavy episodic drinking as the typical drinking style:
  - Poland
  - Mexican-Americans
- A similar randomized controlled clinical trial was conducted in each location using Brief Negotiation Interviewing (BNI) (Bernstein's Project ASSERT) following the FRAMES model (Miller)

# Eligibility and Screening Criteria

- ED patients 18 years and older, 18-30 in U.S. sample
- Positive on RAPS4 (indicator of alcohol dependence)  
or
- 15 (11 PD) or more drinks for males/8 (6 PD) or more for females)/week last year  
or
- 5 (4 PD) or more drinks for males/4 (3 PD) or more for females) on an occasion last 30 days
- Not presently in treatment for problem drinking

# Patient Recruitment

- In Poland, data collected over 23 weeks (May to November 2007), 4:00 to midnight, 7 days/week
- In U.S. data collected over 17-months (November 2010 - April 2012), 10:00 am to 10:00 pm, 7 days/week
- Of target population 65% in Poland and 51% in U.S. were screened
- 26% screened positive and 446 recruited in Poland (90%)
- 27% screened positive and 698 recruited in U.S. (82%)
- Patients randomized into three groups (screened only, assessed, intervention) using a two-stage process

# Patient Retention at 12-Months

- Poland
  - Assessed 65% (n=99)
  - Intervention 59% (n=99)
- U.S.
  - Assessed 78% (n=243)
  - Intervention 75% (n=231)

# Baseline Assessment Measures

- 28-day Timeline Followback
  - number of drinking days per week
  - drinks per drinking day
  - maximum drinks in a day
- Short Inventory of Problems (SIPs + 6) - 6 questions related to injury and drinking and driving
- Readiness to Change

# Follow-up Measures

- RAPS4 score – last three months
- At risk drinking (28-day)
- 28-day Timeline Followback
  - number of drinking days per week
  - drinks per drinking day
  - maximum drinks in a day
- Short Inventory of Problems (SIPs + 6)



# Analysis

- Random effects model used to determine
  - Change in drinking outcome from baseline to 12 months for both the assessed and intervention conditions controlling for gender, age, baseline measures
  - Whether differential change is observed between the two conditions at 12-months
- Continuous outcome measures are not normally-distributed so estimates were log transformed

# Demographic and Baseline Drinking Characteristics Poland

	Total n=299	Assessed n=152	Intervention n=147	P
Gender male (%)	85.3	85.5	85.0	0.90
Age (mean)	33.6	33.8	33.4	0.76
At risk drinking days (mean)	3.7	2.6	4.8	0.07
# drinking days/week last 28-day (mean)	2.3	2.2	2.5	0.22
Drinks /drinking day last 28-day (mean)	5.3	4.7	5.9	0.09
Maximum drinks last 28-day (%)	8.3	8.0	8.5	0.71
RAPS4 positive last 3 month (%)	40.8	38.8	42.9	0.48
SIPS6+ count last 3 months (mean)	2.2	1.8	2.7	<b>0.01</b>
Readiness to change score 1-10 (mean)	4.0	3.6	4.4	<b>0.03</b>

# Demographic and Baseline Drinking Characteristics

## U.S. Mexican Americans

	Total n=620	Assessed n=310	Intervention n=310	P
Gender male (%)	56.3	54.4	58.3	0.33
Age (mean)	24.0	24.3	23.6	<b>0.01</b>
At risk drinking days (mean)	3.0	2.9	3.2	0.71
# drinking days/week last 28-day (mean)	1.1	1.1	1.1	0.39
Drinks /drinking day last 28-day (mean)	6.1	6.2	6.0	0.91
Maximum drinks last 28-day (mean)	8.5	8.5	8.5	0.70
Any RAPS4 positive last 3 month (%)	38.9	37.7	40.0	0.56
SIPS6+ count last 3 months (mean)	3.5	3.5	3.5	0.76
Readiness to change score 1-10 (mean)	6.8	6.8	6.8	0.89

# Random Effects Model Coefficients

## Poland

	Assess group 12-month change	Intervention 12-month change	12-month interaction
At risk drinking days - last 28-day	-0.06	-0.22*	-0.16
# drinking days/week - last 28-day	-0.05	-0.12*	-0.07
Drinks/drinking day - last 28-day	-0.09	-0.27***	-0.19
Maximum drinks/day - last 28-day	-0.07	-0.21*	-0.14
RAPS4 positive - last 3 months	-0.94*	-1.31***	-0.37
SIPS6+ count - last 3 months	-0.28***	-0.55***	-0.27**

# Random Effects Model Coefficients

## U.S. Mexican Americans

	Assess group 12-month change	Intervention 12-month change	12-month interaction
At risk drinking days - last 28-day	-0.26***	-0.53***	-0.27***
# drinking days/week - last 28-day	-0.01	-0.18***	-0.17***
Drinks/drinking day - last 28-day	-0.63***	-0.81***	-0.18*
Maximum drinks/day - last 28-day	-0.65***	-0.89***	-0.24*
RAPS4 positive - last 3 months	-1.74***	-1.86***	-0.12
SIPS6+ count - last 3 months	-0.60***	-0.71***	-0.11

# Summary

- Similar proportion in both studies met eligibility criteria for the study based on at-risk and dependent drinking
- Both samples showed similarities in episodic heavy drinking, reflecting the predominate drinking style in both cultures
- In Poland, significant improvement in only 2 problem variables at 12-months for the assessed condition, but improvement in all outcomes for the intervention condition; however, non-significant interaction terms reflect lack of significantly improved outcomes of the intervention condition over the assessed condition
- In U.S., significant improvement in nearly all outcomes at 12-months for both conditions; interaction terms suggest significant improvement of the intervention condition over the assessed condition for all drinking but not problem variables.

# Discussion

- Patient differences in apparent efficacy of BI among Mexican-Americans ED patients
  - Higher readiness to change scores (mean score of 4 for Poland and 7 for U.S.)
  - Social desirability bias – strong cultural emphasis on harmony in interpersonal relationships and respect and obedience for authority figures
  - Larger proportion of females (15% in Poland and 44% in U.S.)

# Discussion

- Interventionist differences in apparent efficacy of BI among Mexican-Americans
  - Promotores trained as interventionists in U.S. study – peer educator health promotion advocates who were part of the Mexican-American community
  - In Poland ED nurses were trained as interventionists
  - It has been suggested that the ED milieu, which is often hectic, could account for lack of observed positive effects of BI



# CONCLUSIONS

- Findings here are mixed regarding the treatment effect of BI for heavy episodic drinking in ED patients
- Future studies need to explore the efficacy of BI in other populations and cultures exhibiting different drinking patterns to help identify what type of drinker would most benefit from BI in the ED setting

# THANK YOU

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