



PREVENTION OF ALCOHOL USE IN COLLEGE STUDENTS
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**PREVENTION OF ALCOHOL USE IN COLLEGE
STUDENTS**

RATIONALE

- ✓ **Binge drinking, an important cause of risk behavior**
- ✓ **Is seen in 25-30% of the Brazilian college students**
- ✓ **Often have moved away from parents and are experiencing new life context which can include drugs, sex and alcohol use**
- ✓ **Professors, staff and direction are preoccupied with alcohol abuse, especially after accidents and some deaths**



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OBJECTIVE

The aim of this paper was to assess 24-month follow-up for excessive alcohol using college students who had the *Brief Alcohol Screening and Intervention for College Students (BASICS)*.



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• METHODOLOGY

- ✓ **Several instruments were used including**
 - AUDIT**
 - RAPI**
 - Drinking frequency & quantity, peak consumption**
 - Alcohol dependence assessment**
 - Family/friends abuse assessment**
 - Accidents frequency**



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METHODOLOGY

Brief intervention

✓ **BASICS** - *Brief Alcohol Screening and Intervention for College Students* – Marlatt et al 1998; Dimeff et al., 2002)

- Aimed at reducing quantity and frequency of alcohol use and related problems during years 2001-2004.
- Based in motivational interviewing (Miller & Rollnick, 1991) and the harm reduction approaches.



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METHODOLOGY

Brief intervention (*Basics*)

- Students assigned to receive the intervention were provided with alcohol consumption monitoring cards and asked to keep track of their drinking on a daily basis for two weeks prior to their scheduled interview.
- Interviewers extensively trained and supervised
 - 5 social workers
 - 1 clinical psychologist with a specialization in mental health,
 - 2 post-doctoral clinical psychologists
 - 1 psychiatrist
 - 8 women and 1 man



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METHODOLOGY

Screening

AUDIT ≥ 8 and/or RAPI ≥ 7 identified 1,057 (N=5,052) high-risk alcohol use college students 2000, 2001 and 2004



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METHODOLOGY

Participants

- ✓ 641 student were excluded (>70% Exacts & Humanities or far away campi, 5.6% refused BI, 1.2% dependence, 3% abstinence) and the remaining 416 Biology areas freshman were randomized:
 - 278 got **BASICS** and were compared to
 - **Control** (N=138): got a short assessment interviews



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• Statistical Analysis

For nominal measurements, the non-parametric χ^2 test was used. For continuous variables, the repeated measures ANOVA was used. The analyses were performed through the statistical program SAS.



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Demographics

- ✓ Young, single, predominantly middle to upper class
- ✓ More males (56.3%) than females (43.7%)
- ✓ Most of them living with friends and/or mates in fraternity lodgings (75.2%)



RISKY GROUP **NON-RISKY GROUP**
N= 278 N= 138

| | RISKY GROUP | | NON-RISKY GROUP | |
|---------------------------|-------------|-----|-----------------|-----|
| | N= 278 | | N= 138 | |
| | M | SD | M | SD |
| Drinks per Occasion | 6.0 | 2.5 | 2.1 | 2.4 |
| Frequency of Drinking | 1.6 | 1.3 | 0.5 | 0.7 |
| Drinks per Weekend | 4.4 | 2.1 | 1.4 | 1.6 |
| RAPI Problems | 6.9 | 5.9 | 1.0 | 1.8 |
| AUDIT Score | 10.2 | 3.7 | 2.7 | 2.4 |
| % Female | 43.7 | | 47.1 | |
| % Greek System | 75.2 | | 29.0 | |
| % Family History Positive | 25.5 | | 27.5 | |
| Accidents (All) | 9.0 | | 8.7 | |
| Accidents W. Alcohol | 3.2 | | 1.5 | |



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RESULTS

FOR MEN

AUDIT scores **BI 9.6-7.2 vs C 9.9-8.4; p=.014**
RAPI consequences **BI 7.2-3.5 vs C 8.0-8.4; p<.001**
Drinks per occasion **BI 6.2- 5.4 vs Control 6.8-6.6; p=.003**
Drinks per weekend **BI 3.8- 4.1 vs Control 3.9-4.2; p=.099**
Frequency **BI 1.4-1.5 vs Control 1.7-1.3; p=.004**

FOR WOMEN

AUDIT scores **BI 9.1-7.2 vs C 9.3-7.9; n.s.**
RAPI assessed consequences **BI 6.9-4.7 vs C 7.5-3.5; n.s.**
Drinks per occasion **BI 5.4-5.4 vs Control 6.0-5.1; n.s**
Drinks per weekend **BI 3.5-4.2 vs Control 3.7-3.4; .004**
Frequency **BI 1.2- 1.0 vs Control 1.4-1.3; n.s.**



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RESULTS

- ✓ Men have more accidents than women
- ✓ There was no significant diminishing of accidents for them after BI (All reported BI 8-5.5% vs C 11.5-10.2% and After Alcohol 4.5-3.1 vs C 5.1-4.0%)
- ✓ Women had no accidents in follow-up after alcohol use.



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CONCLUSIONS

- **Problems associated with alcohol use were severe (accidents and death)**
- **Decline in problems over time suggested a maturational effect beside BASICS.**
- **Men responded better than women and different intervention should be developed for women**
- **Brazil lacks public policies on alcohol use (low prices, universal assess, media advertising) or laws are not enforced (places of selling, drinking & driving). Implementation of prevention programs are difficult against a culture which promotes alcohol (FAPESP 00/03583-7).**



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CONCLUSION

- ✓ **Alcohol is a major risk factor for disease and disability in Brazil and other low mortality developing countries of South America where alcohol is the highest contributor to disease burden (WHO's Global Alcohol Database (GAD), the annual world health reports).**
- ✓ **It is difficult to work with prevention in a country which culture is towards alcohol: no policy (low prices including of over 40% alcohol content, no control of media able to do marketing in primetime, using soccer team idols and other pop stars, glamouring drinking, no control over places which sell alcoholic beverages).**



Thank you!

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| | Brief Intervention | | | | Control | | | | |
|---|--------------------|------------|--------------|-------------------------|---------------|--------------|--------------|-------------------------|------------------------------------|
| | Time (months) | | | | Time (months) | | | | |
| | Initial | 12 | 24 | p for time ¹ | Initial | 12 | 24 | p for time ¹ | p for group ² |
| 1. Number of drinks per occasion | | | | | | | | | |
| Male | 6.2 (0.24) | 5.6 (0.24) | 5.4 (0.25) | 0.063 | 6.8 (0.27) | 6.0 (0.27) | 6.6 (0.29) | ns | 0.003^a |
| Female | 5.4 (0.28) | 5.6 (0.28) | 5.4 (0.34) | ns | 6.0 (0.30) | 5.1 (0.30) | 5.1 (0.31) | 0.047 | ns |
| p for sex ³ | 0.027 | ns | ns | | 0.045 | 0.021 | 0.000 | | |
| 2. Frequency | | | | | | | | | |
| Male | 1.4 (0.10) | 1.4 (0.10) | 1.5 (0.11) | ns | 1.7 (0.11) | 0.6 (0.11) | 1.3 (0.11) | <0.001 | 0.016^{c/} |
| Female | 1.2 (0.11) | 1.2 (0.11) | 1.0 (0.13) | ns | 1.4 (0.12) | 1.0 (0.12) | 1.1 (0.13) | 0.074 | <0.001^b ns |
| p for sex ³ | ns | ns | 0.012 | | 0.049 | 0.016 | ns | | |

| | Brief Intervention | | | | Control | | | | |
|---------------------------------------|--------------------|------------|------------|-------------------------|---------------|------------|--------------|-------------------------|------------------------------|
| | Time (months) | | | | Time (months) | | | | |
| | Initial | 12 | 24 | p for time ¹ | Initial | 12 | 24 | p for time ¹ | p for group ² |
| 3. Number of doses per weekend | | | | | | | | | |
| Male | 3.8 (0.16) | 3.5 (0.16) | 4.1 (0.18) | 0.052 | 3.9 (0.18) | 3.9 (0.18) | 4.2 (0.20) | ns | 0.099^b |
| Female | 3.5 (0.17) | 3.5 (0.17) | 4.2 (0.20) | 0.013 | 3.7 (0.19) | 3.7 (0.19) | 3.4 (0.20) | ns | 0.004^a |
| p for sex ³ | ns | ns | ns | | ns | ns | 0.002 | | |
| 4. RAPI | | | | | | | | | |
| Male | 7.2 (0.50) | 2.4 (0.50) | 3.5 (0.60) | <0.001 | 8.0 (0.6) | 5.4 (0.60) | 4.0 (0.6) | <0.001 | <0.001^b |
| Female | 6.9 (0.60) | 3.5 (0.60) | 4.7 (0.70) | <0.001 | 7.5 (0.6) | 4.6 (0.63) | 3.5 (0.70) | <0.001 | ns |
| p for sex ³ | ns | ns | ns | | ns | ns | ns | | |

| | Brief Intervention | | | | Control | | | | |
|------------------------|--------------------|----|------------|-------------------------|---------------|----|------------|-------------------------|--------------------------|
| | Time (months) | | | | Time (months) | | | | |
| | Initial | 12 | 24 | p for time ¹ | Initial | 12 | 24 | p for time ¹ | p for group ² |
| 5. AUDIT | | | | | | | | | |
| Male | 9.6 (0.30) | - | 7.2 (0.35) | <0.001 | 9.9 (0.34) | - | 8.4 (0.35) | 0.006 | 0.014^a |
| Female | 9.1 (0.33) | - | 7.2 (0.40) | 0.001 | 9.3 (0.38) | - | 7.9 (0.39) | 0.012 | ns |
| p for sex ³ | ns | ns | ns | | ns | ns | ns | | |

¹ comparison for time within groups; ² comparison between BI and Control; ³ comparison between sex; ^a at 24 months; ^b at 12 months and ^c at baseline.

| | MEN | | | | | |
|------|----------------------|-----------------------------|----------------------|-----------------------------|------------------|-------------------------|
| | BI | | CONTROL | | p BI×C | |
| | All ¹ (%) | W. alcohol ² (%) | All ¹ (%) | W. alcohol ² (%) | All ¹ | W. Alcohol ² |
| 0 | 8.3 | 4.5 | 11.5 | 5.1 | n.s. | n.s. |
| 12 m | 8.3 | 1.3 | 9.6 | 3.8 | n.s. | n.s. |
| 24 m | 5.5 | 3.1 | 10.2 | 4.0 | n.s. | n.s. |
| | WOMEN | | | | | |
| | BI | | CONTROL | | p BI×C | |
| | All ¹ (%) | W. alcohol ² (%) | All ¹ (%) | W. alcohol ² (%) | All ¹ | W. Alcohol ² |
| 0 | 5.0 | 4.1 | 4.1 | 0 | n.s. | n.s. |
| 12 m | 4.1 | 0.8 | 7.4 | 0 | n.s. | n.s. |
| 24 m | 4.1 | 0 | 5.1 | 0 | n.s. | - |

¹ Percentage of reported accidents with and without use of alcohol; ² percentage of reported accidents after alcohol use.