



# Changes in alcohol consumption and stress level in the freshmen year at university



Claes Andersson, Mats Berglund, Kent O Johansson and Agneta Öjehagen

Clinical Alcohol Research, Lund University, Malmö, Sweden

## Introduction

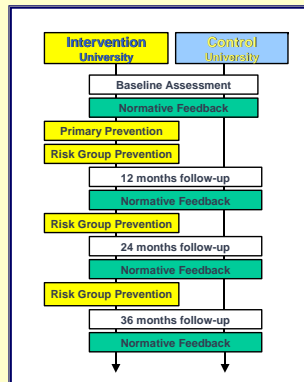
Alcohol consumption during the 18-25 year period predicts adult alcohol consumption considerably better than adolescent drinking does (Muthén and Muthén, 2000).

Stress is strongly associated with frequency of heavy drinking (Dawson et al., 2005).

There are effective intervention methods to reduce risky alcohol consumption (Marlatt et al., 2000).

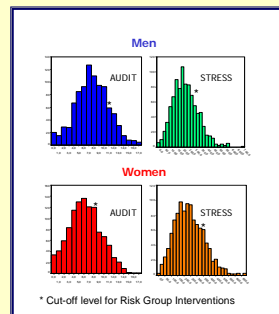
Trajectories have been useful to illustrate a wide developmental variation concerning drinking patterns during the transition to young adulthood (Schulenberg et al., 1996).

## Design



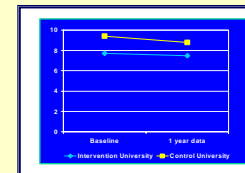
## Results

### BASELINE FREQUENCES



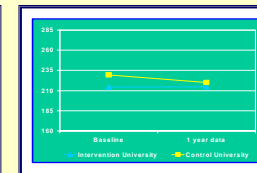
### 12 MONTHS FOLLOW UP

#### AUDIT



	Intervention University (n=351)	Control University (n=350)	Difference between groups (95% CI)	P-value
Baseline	7.7 (4.4)	8.4 (5.0)	-1.7 (-2.4 to -1.0)	0.000
Follow up	7.5 (4.9)	8.8 (6.8)	-1.3 (-2.0 to -0.7)	0.000
Change score	-0.2 (1.2)	-0.4 (0.9 to 0.1)	0.056	
ANCOVA	0.27 (0.74 to 0.3)		0.308	

#### STRESS



	Intervention University (n=351)	Control University (n=350)	Difference between groups (95% CI)	P-value
Baseline	214.2 (96.2)	229.4 (104.6)	-15.2 (-29.9 to -0.5)	0.042
Follow up	214.7 (106.8)	226.1 (105.0)	-9.4 (-21.9 to 10.1)	0.434
Change score	0.5 (108.0)	-0.2 (108.8)	-0.7 (6.1 to -25.9)	0.216
ANCOVA	1.87 (2.5 to 15.7)		0.801	

## Conclusions

### BASELINE DIFFERENCES

The **AUDIT** scores in the male populations differed significantly from the start with the highest scores at the **Control University**.

The dropout rate differed also significantly with a much higher rate in the **Intervention University** probably explained by the crisis in the university system with the strongest influence on the most northern university in Sweden.

### 12 MONTHS INTERVENTION EFFECTS

There were no significant differences in the **AUDIT** score between the **Intervention University** and the **Control University**. Women but not men in the **Intervention University** significantly reduced their stress score more than in the **Control University**.

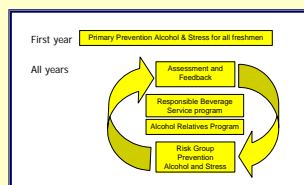
### TRAJECTORY

In the students with high initial **AUDIT** score there was no reduced **Stress**. Students with increased **AUDIT** scores lowered their level of **Stress**.

## Aim

- Does implementation of an intensive combined alcohol and stress program reduce alcohol consumption and the stress level more than a minimal intervention program at 12 months follow up?
- How does the development of alcohol consumption relate to stress when using trajectories?

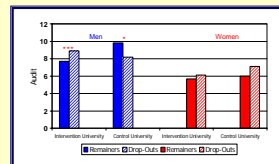
## Intervention package



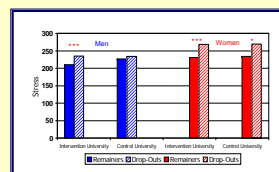
## Dropouts from University Education, Second year

Intervention University: 36 %  
Control University: 17 %

### AUDIT

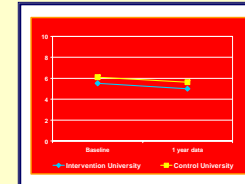


### STRESS



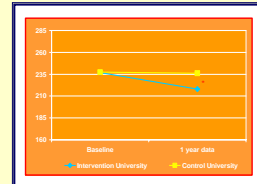
### Women

#### AUDIT



	Intervention University (n=351)	Control University (n=350)	Difference between groups (95% CI)	P-value
Baseline	5.5 (3.5)	6.1 (4.0)	-0.6 (-1.0 to 0.0)	0.092
Follow up	5.0 (3.0)	5.6 (4.0)	-0.6 (-1.0 to -0.1)	0.249
Change score	-0.5 (2.7)	-0.5 (0.0)	0.0 (0.4 to 0.9)	0.987
ANCOVA	0.2 (0.1 to 0.6)		0.212	

#### STRESS

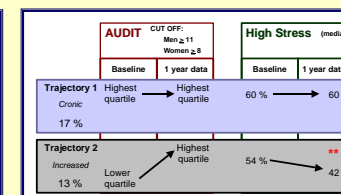


	Intervention University (n=351)	Control University (n=350)	Difference between groups (95% CI)	P-value
Baseline	236.7 (109.7)	237.2 (118.9)	-0.5 (-15.7 to 14.8)	0.970
Follow up	216.1 (124.9)	215.9 (123.0)	-17.4 (-34.5 to 0.0)	0.046
Change score	-18.7 (127.8)	-1.3 (125.8)	17.4 (0.2 to 34.5)	0.075
ANCOVA	17.6 (2.4 to 32.6)		0.022	

### TRAJECTORY

Two waves of data, chronic and increasers, where defined by using the cut-off levels for alcohol interventions at baseline and at first year follow up.

Those waves were used to examine the corresponding changes of stress in relation to median.



## Sample

A total number of 2 841 freshmen entered two middle size Swedish Universities and were invited to participate in an alcohol and stress research program. At baseline 2 032 freshmen accepted to participate. The 12 months follow up rate was 1 611.



## Instruments

10-item **AUDIT**  
(Range: 0-40)

7-item **STRESS** Questionnaire  
(Range: 0-700) (Arnetz)