



STRESS, COFFEE DRINK, TOBACCO AND ALCOHOL CONSUMPTION IN A STUDENT SAMPLE OF SMOKERS

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INTRODUCTION

Emotional responses to stress play an important role in health behavior change. During times of low and high academic demands, health behaviors tend to be deteriorated in college undergraduate students (Weidner et al., 1996). A similar study found increasing anxiety and smoking behaviors, but a decrease in the consumption of alcohol during the examination period in medical students (Ogden & Mtandabari, 1997). In current smokers, mean score on Perceived Stress Scale is significantly higher than that of the students who don't smoke (Naquin & Gilbert, 1996).

Smoking and caffeine use have shown metabolic interrelationships (Benowitz et al., 1989). Several positive correlations among the use of caffeine and/or nicotine with other addictive drugs have been observed : persons with histories of alcohol are more likely to smoke (Kozłowski et al., 1986).

Alcoholism and coffee drinking are positively related (Nil et al, 1984) ; amount of coffee drinking and cigarette smoking are positively related (Thomas, 1973).

Finally, among alcoholics, caffeine and nicotine are the most common antecedent psychoactive drugs (Johnston et al., 1987).

AIMS

This study focused on the influence of stress on tobacco, alcohol and coffee consumption in a student sample of smokers, during and after an exam session.

HYPOTHESES

- Subjects will show higher stress, anxiety, coffee consumption and nicotine use and less alcohol drinking during examen period than out of session.
- Use of coffee, alcohol and tobacco will be related to stress and psychological distress during the exams

METHODS

SUBJECTS

63 smoking students (39 female and 24 males) were recruited

	M	SD
Age	24.03	5.35
Duration of tobacco use (in years)	8.33	5.56
Number of cigarettes/day	12.63	7.35
Number of cup of coffee/day	1.97	2.34
Number of alcohol unit/day	2.9	2.6

DESIGN

Smokers filled in questionnaires the day of the exam and two weeks later (out of exam session) at the same moment of the day.

MEASURES

Each subject completed before and after an exam session

- an evaluation of coffee, smoke and alcohol use
- the Fagerström test (Heatherton & Fagerström, 1991) \Rightarrow measure of nicotine dependence
- the Psychiatric Symptoms Index (ISP) (Hfeld, 1976) \Rightarrow measure of psychological distress
- the State Trait Anxiety Inventory (STAI) (Spielberger, 1983) \Rightarrow measure of anxiety
- The Psychiatric Stress Measure (MSP) (Lemyre & Tessier 1988) \Rightarrow measure of stress

RESULTS

Students reported more stress ($t=7.71$; $p=.0001$), anxiety ($t=5.05$; $p=.00004$), psychological distress ($t=3.53$; $p=.0007$) and coffee drinking ($t=2.16$; $p=.035$) but less alcohol consumption ($t=-3.46$; $p=.001$) during the day of the exam. No difference was found in tobacco consumption.

	Pretest		Post test	
	M	SD	M	SD
MSP	88.85	31.5	70.84	24.4
STAI	54.68	10.68	49.11	11.17
ISP	27.18	13.38	22.79	12.96
Number of cigarettes the day of the exam	9.95	8.8	8.6	7.5
Number of cup of coffee the day of the exam	1.91	2.33	1.3	1.24
Number of alcohol unit the day of the exam	0.18	0.89	0.61	1.32

The symptoms of stress (MSP) were inversely correlated with coffee drinking behavior ($R= -0.17$; $p=.019$). No significant correlation was found with alcohol or tobacco consumption. The symptoms of psychological distress (ISP) were inversely correlated with coffee ($R= -0.32$; $p=.014$) and positively correlated with tobacco use ($R= 0.78$; $p=.046$) but not with alcohol use.

CONCLUSION

We found increased stress, anxiety, psychological distress and coffee drinking during the exams, but less alcohol consumption. The relatively acute stress experienced by the subjects in the present study may have reduced alcohol intake because the students were studying and alcohol would be detrimental to their ability to concentrate. Surprisingly, examination stress did not increased smoking behavior, but we found a positive relation between psychological distress and use of nicotine. Psychological distress and substance use and dependence have prospectively predicted the onset of smoking and the inability to stop smoking. There are several plausible biological and behavioral hypotheses to explain whether smoking causes psychological problems, psychological problems cause smoking, or some third variable causes both. Colleges and universities offer an unique area for changing smoking behaviors. Educators must rise to the challenge of developing and implementing smoking prevention and cessation programs for this unique population.

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