

BI IN SUBSTANCE USE AMONG ADOLESCENT PSYCHIATRIC PATIENTS. IS EFFICACY RELATED TO SEVERITY OF USE?

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BACKGROUND

- A diminished perception of risks has been noted as a factor that contributes to early involvement in psychoactive substance use.
- Thus, secondary prevention programs among adolescents oriented to reduce harms and increase awareness of risks have received increased attention.
- Brief interventions oriented to decrease substance use among adolescents, consisting in brief sessions of MI developed according to this model have shown positive results in different settings (Tait et al, 2004; Spirito 2004).



BACKGROUND

- Intervention in vulnerable groups, such as those already showing drug-related health problems or those identified as high risk subjects have been tested.
- However, one of the so called high risk adolescent population, those that present a comorbid psychiatric condition have been less investigated.



OBJECTIVES

To assess by means of a randomized control-group design the efficacy of a brief intervention (BI) oriented to enhance behavior change among adolescent substance users that undergo a psychiatric or psychological examination because of other emotional disturbance not primarily related to substance use.



MATERIAL AND METHODS

Subjects

- 237 Adolescents aged 11-18 consecutively referred for psychiatric evaluation and treatment to a Child and Adolescent Psychiatry Department
- Assessment protocol included questions regarding their substance use.
- Patients reporting **at least occasional use of tobacco, alcohol or other substances** were considered eligible for this study.
- Adolescents and their parents or mentors were apprised of the study, and informed consent was obtained.

MATERIAL AND METHODS

Exclusion Criteria

- Patients who refused to participate
- those who suffered from acute psychopathological disturbances (psychotic state, severe depression),
- patients who presented mental retardation or
- patients that fulfilled DSM-IV criteria for substance dependence other than nicotine were excluded.

Substance Use

According to quantity/frequency measures of drug use, pattern of use of tobacco, alcohol, cannabis and other drugs (basically, cocaine, amphetamines and designer drugs) was coded into five categories

Use categ. (code)	Characteristics of use)	Teen ASI Equivalency
0	No use	0
1	Occasional use: from time to time, at parties, during holidays or social events	0
2	Regular use: almost daily use for tobacco, almost weekly use for alcohol and cannabis, almost monthly use for stimulants or other drugs, with no clear evidence of drug related risks	1-2
3	Risky consumption: quantity-frequency and/or situational pattern of use with a high probability of developing health or psycho-social problems	2-3
4	Abuse or dependence (DSM-IV-TR criteria)	4

Subjects reporting use coded as “1” were considered eligible

Procedure

- ❑ After completing the evaluation, subjects were allocated at random to one out of two possible conditions:
 - ❑ An experimental group, in which both the adolescent and his parents received separate Brief intervention individual sessions.
 - ❑ A standard treatment group (*control group*) with no further intervention.
- ❑ Afterwards **all subjects received standard care** according to the established diagnose and the intervention schedule of the Child and Adolescent Psychiatry and Psychology Department.
- ❑ Follow up visits took place at 1 month, 6 month and 12 months intervals, and included only a reevaluation of part of the study variables.

Study variables

Variables e Measurement					
Variables	Tools	Pre-intervention	Post-intervention		
			1 month	6 months	1 year
<u>Socio-demographic and psychiatric diagnosis</u> <ul style="list-style-type: none"> • <i>age/gender,</i> • <i>socio-economic status</i> • <i>psychiatric status</i> • <i>school achievement</i> • <i>substance use</i> 	Semi-structured interviews based on those used in the COGA Project (Collaborative Studies on Genetics of Alcoholism)	X	X	X	X
<u>Severity of addiction</u>	Spanish adaptation of the Teen Addiction Severity Index	X			
<u>Variables relatd to use:</u> <ul style="list-style-type: none"> • <i>Knowledge about psychoactive substances</i> • <i>Risk Perception</i> • <i>Problems derived from use</i> • <i>Intention to use</i> 	Structured questionnaires; Spanish version of the Evaluation Instrument Bank (EIB), European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)	X	X	X	X

Intervention

Intervention group:

Patients received a **brief therapeutic intervention** designed according to the standards of motivational interviewing and adapted from previous work on this topic.

Control group:

Individuals assigned to this group and their parents or tutors received **standard care** and no further intervention other than completion of the **assessment** protocol.

Intervention group

Patients received a brief therapeutic intervention designed according to the standards of motivational interviewing and adapted from previous work on this topic:

- An individual session with the adolescent lasting 60' approx. The interview was structured according to previous studies (Migneault et al., 1997; McCambridge et al., 2003).
- An individual session with parents or mentors. This interview consisted in the presentation of educational materials and a brief counseling intervention on parenting skills and adolescent substance use, its consequences and the relevance of monitoring and intervention.

Interventions were performed by two graduate practitioners trained in motivational interviewing. Training was provided by a doctoral level supervisor .

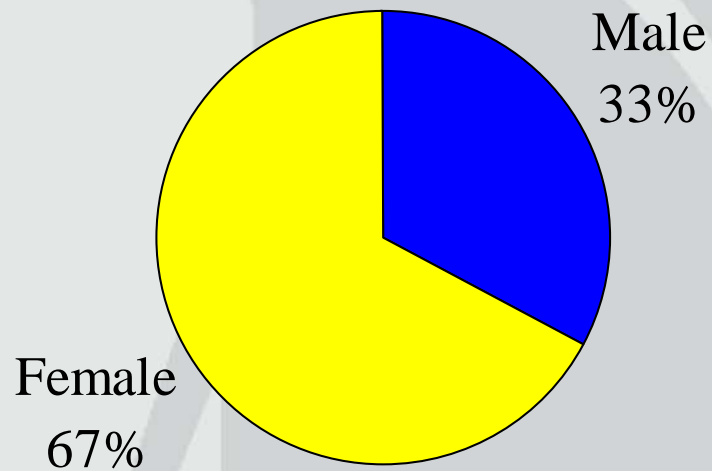


RESULTS

Characteristics of the sample

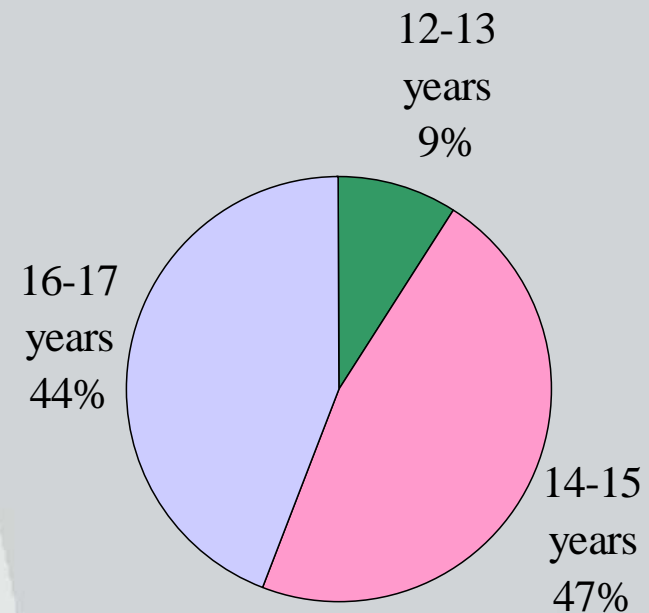
(n=143)

Gender



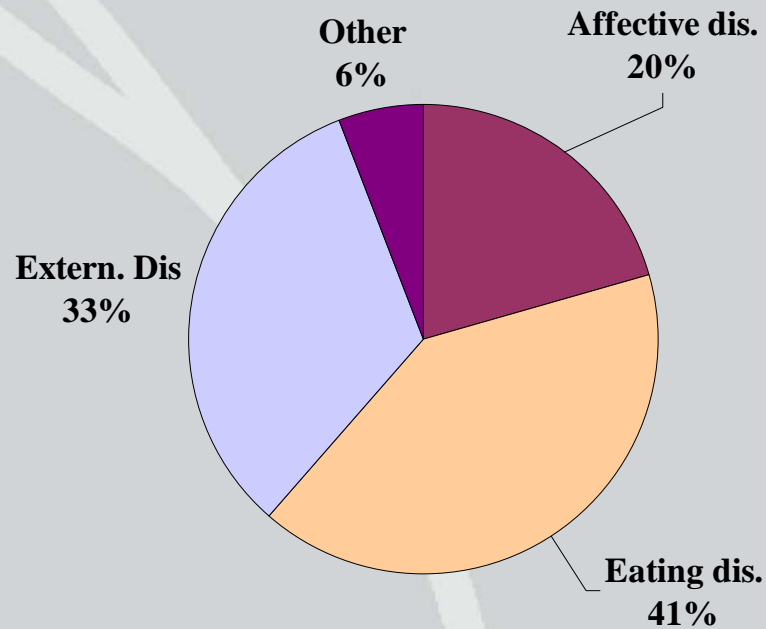
Age

M:15,2 ± 1,28



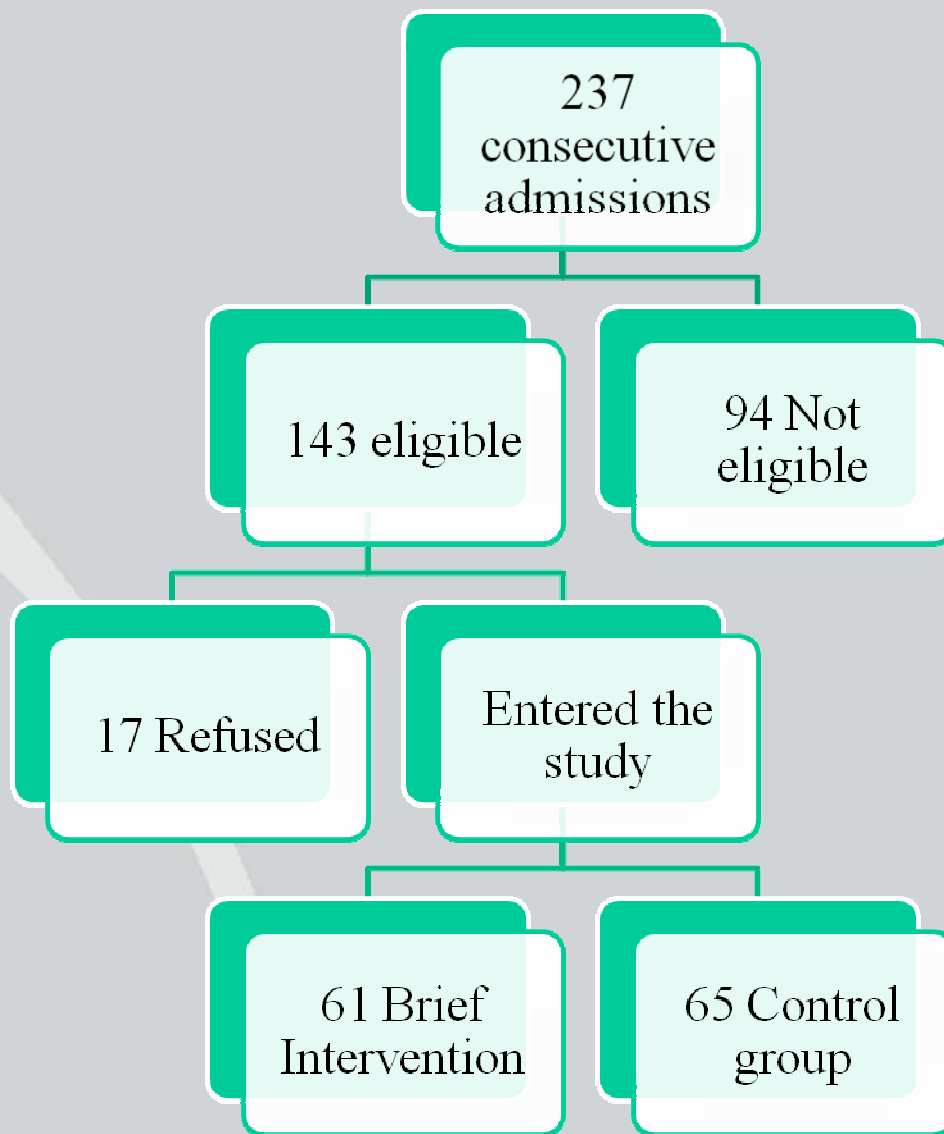
Characteristics of the sample

(n=143)



Main diagnosis

Patients flow





Baseline data

- At baseline no significant differences between the two groups were found in:
 - Age/gender distribution
 - Main Diagnosis
 - Pattern of substance use

Pattern of substance use at baseline

		Experimental (n=61)	Control (n=65)	T-Students
		Mean (SD)	Mean (SD)	
Tobacco	Age onset (years)	12.4 (2)	12.4 (1.8)	n.s
	Cigarr./week	50 (65)	47,7 (58)	n.s
Alcohol	Age onset (years)	13.4 (1.7)	13.3 (1.3)	n.s
	N° UBEs/week	3.1 (4.1)	3.4 (5.6)	n.s
Cannabis	Age onset (years)	13.8 (1.3)	13.8 (1.6)	n.s
	N° “joints”/week	5 (10.2)	5.5 (16.7)	n.s
Other substances	Age onset (years)	14.9 (1.2)	14.8 (1.7)	n.s
	N° episodes of use	2.3 (8)	2.3 (15.5)	n.s

Short-term changes in variables related to drug use: Changes in Questionnaire Scores at baseline/ 1month follow up

	Experimental gr.				Control gr.				Group Differences	
	Basal	1 month			Basal	1 month				
	Mean (DS)	Mean (DS)	z	p	Mean (DS)	Mean (DS)	z	p	F	p
Knowledge	16.9 (4.8)	19.6 (4.7)	- 4.08	0.000 1^a	15.9 (4.2)	17.2 (4.5)	- 2.08	0.03 a	6.25	0.01^b
Problems	11.7 (4.2)	11.9 (4.3)	- 1.13	0.26	11.1 (4.2)	10.8 (3.5)	- 0.61	0.54	0.803	0.37
Intention of use	37.6 (7)	37.3 (4.9)	-0.4	0.69	37.1 (5)	37.9 (6.5)	- 0.83	0.4	1.26	0.26
Perception of risk	39 (8.2)	42 (6.2)	- 2.06	0.04^a	40 (7.9)	40.1 (7.8)	- 0.85	0.39	2.37	0.127

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- Using Wilcoxon’s signed rank test a significant change across time (basal-1 month) in mean scores in the “Global Knowledge” questionnaire, both in the experimental ($z=-4.08;p<.001$) and the control ($z=-2.08;p<.05$) group was identified. Furthermore, among subjects in the experimental group a significant change in the mean scores of the “Risk perception” questionnaire ($z=-2.06;p<.05$) was observed. No other changes were found.
- Using ANCOVA, with mean difference in the scores (basal-1 month) as dependent variable, basal score as covariable and allocation to group as the allocation factor, only a significant difference favoring the experimental group in the scores on the “Global Knowledge” questionnaire was found ($F=6.2;p=0.01$).

Short-term changes in variables related to drug use: Comparison between subjects with none to mild use and subjects with sever use in the experimental group

	Severe use n=22)			None to mild use (n=39)				
	basal	1 month	Mean Difference	Basal	1 month	Mean Difference	<i>Group Differences</i>	
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	<i>F</i>	<i>p^a</i>
Knowledge	18.1 (4.5)	19.1 (4.7)	0.6(3.5)	16.2 (4.8)	19.8 (4.7)	3.6 (4.3)	4.18	0.04
Problem	14.5 (5.2)	15 (5)	0.35 (3.1)	10.1 (2.4)	10.3 (2.7)	0.23 (1.1)	1.59	0.21
Intention of use	35.3 (10.5)	35.1 (5.2)	-0.28 (9)	38.9 (3.4)	38.5 (4.4)	-0.41 (4.1)	3.73	0.05
Perception of risks	37.1 (9.7)	40.5 (6)	3.4 (8.8)	41.2 (6.8)	42.7 (6.2)	1.5 (6.5)	0.61	0.43

Scores in questionnaire at baseline, 1-month follow and mean differences.

ANCOVA with mean difference in questionnaires' scores (baseline-1 month) as dependent variable, baseline scores as covariable and severity of use grouping factor:

- Significant difference in “Global Knowledge scores”, favoring subjects with mild to none use ($F=4.18;p=0.04$).

Short-term changes in variables related to drug use: Comparison between subjects with mild use and subjects with severe use in the experimental group

	Severe use n=22			None to mild use (n=39)				
	basal	1 month	Mean Diff.	Basal	1 month	Mean Diff.	<i>Group Differences</i>	
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	<i>F</i>	<i>p^a</i>
Knowledge	18.1 (4.5)	19.1 (4.7)	0.6 (3.5)	16.2 (4.8)	19.8 (4.7)	3.6 (4.3)	4.18	0.04
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Conclusions

- Brief intervention in this sample of adolescent substance users entering psychiatric treatment resulted in an increase in **Global Knowledge about drugs** and **Perception of risks**, being the effect however modest, without changes in **Intention of use**.
- Among the subjects in the experimental group, those whose substance use at baseline was less severe obtained apparently more profit of the intervention.



Conclusions

- Our results contrast with those from previous reports on brief intervention in adolescent substance use.
- Substance using adolescents with comorbid psychiatric disorders, especially those already presenting a pattern of risky use, might be less receptive to brief interventions.
- Neither BI nor standard care decrease drug use
- A more intensive therapeutical approach may be necessary for this population, that constitute a significant vulnerable group.