EU-Dap (*Unplugged*) in Europe

Fabrizio Faggiano
"Avogadro" University - Novara (I) and
OED-Piemonte - Torino (I)

Background

- Drug use starts with an ***individual choice***, like any behavior

- But soon it becomes an ***addiction***, a compulsory behavior

(*this is the reason why primary prevention is the most rational approach*)

Background

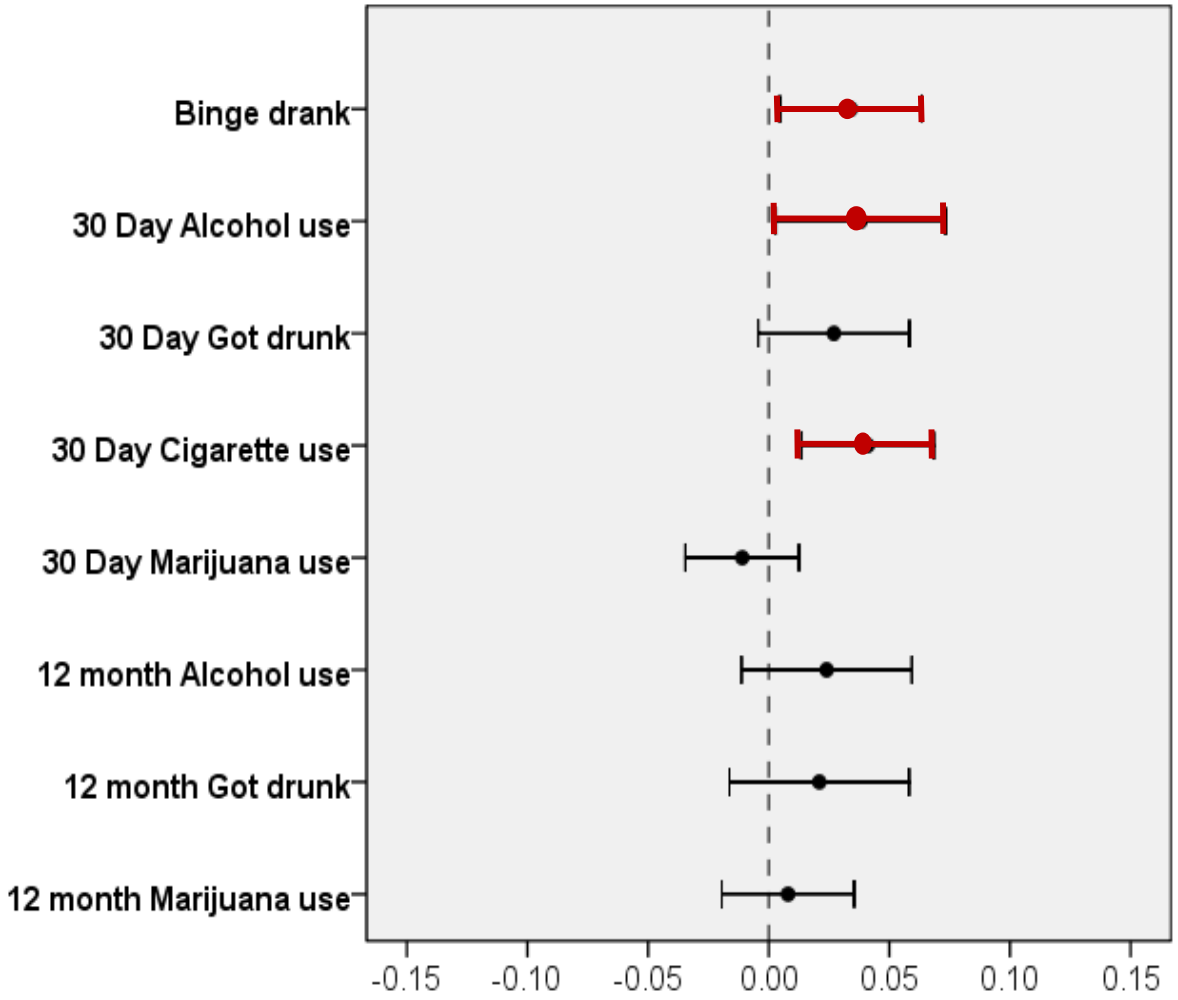
- As for any behavior, the ***major determinant*** of the individual choice ***is not rationality***
- There is a constellation of risk factors implicated on it:
  - from genetic, to substance availability,
  - from social norms to personal skills,
  - from knowledge to family functioning,
  - from school to peers influence…

Background

- No one has a predominant role
- ***Many have uncertain direction*** of effects (knowledge, self-esteem…)
- Furthermore, even the better theoretically based ***interventions*** targeting risk factors can have counterintuitive effects (***iatrogenic effects***)
- As for example TCYL

The Adolescent Substance Abuse Prevention Study (ASAPS)

- Evaluation of Take Care of Your Life (TCYL) program
- 10 lessons 7th school year plus 7 lessons 9th year
- Based on Social Influence (life skills)
- Evaluated with a large CRCT



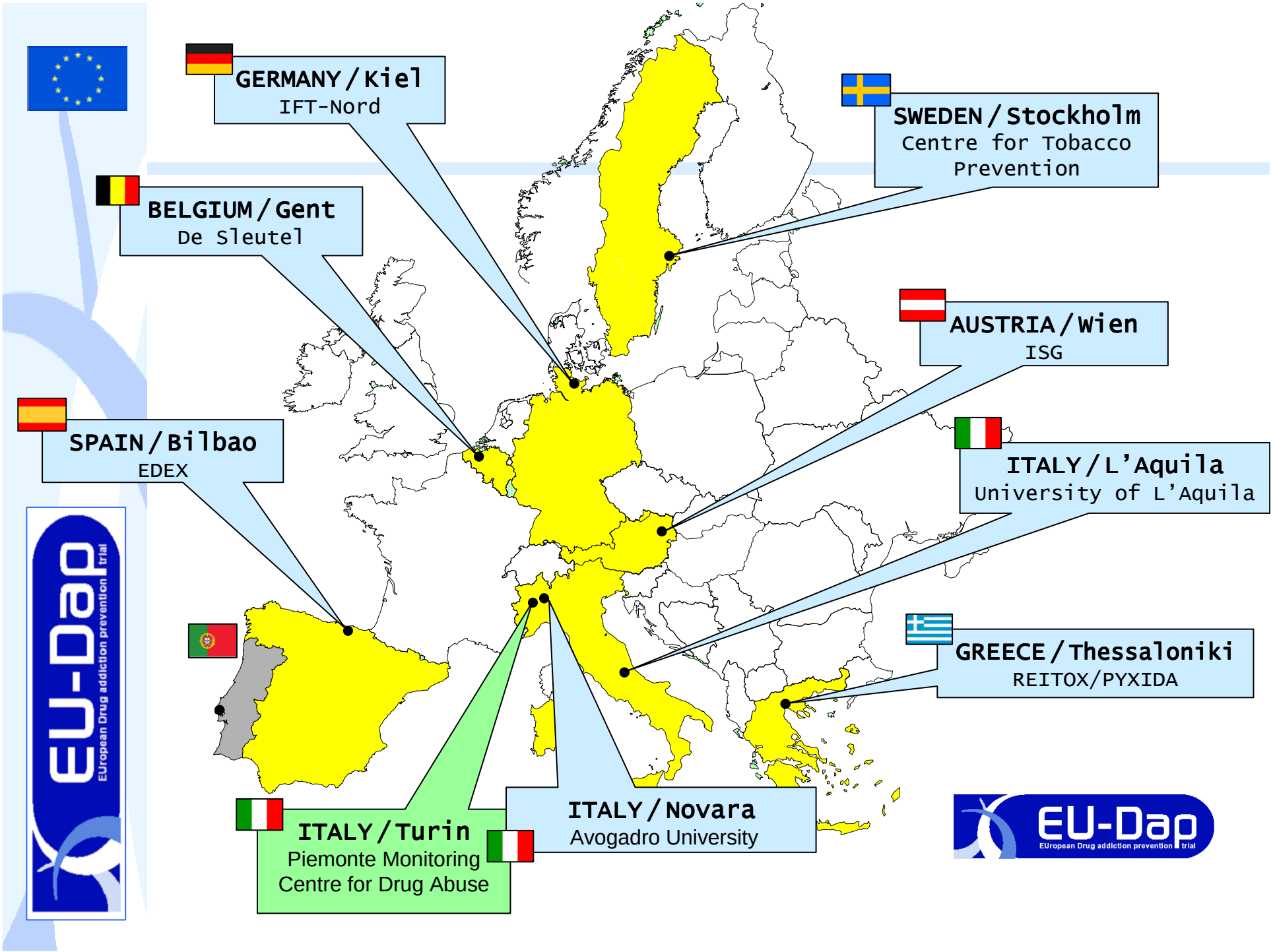
Sloboda et al., Drugs and Alcohol Dependence, 2009

Background

- This is the reason why we have assumed that ***evaluation of effectiveness has a crucial role*** in prevention
- How can we evaluate effectiveness of prevention interventions?
- It depends on the level of delivery:
  - Individual: *Randomized Controlled Trials* (RCT)
  - Groups: *Cluster RCT*
  - Environment: *Interrupted time series* (ITS)
- When EU-Dap started, there were 29 programs properly evaluated, only 1 in Europe

The EU-Dap trial

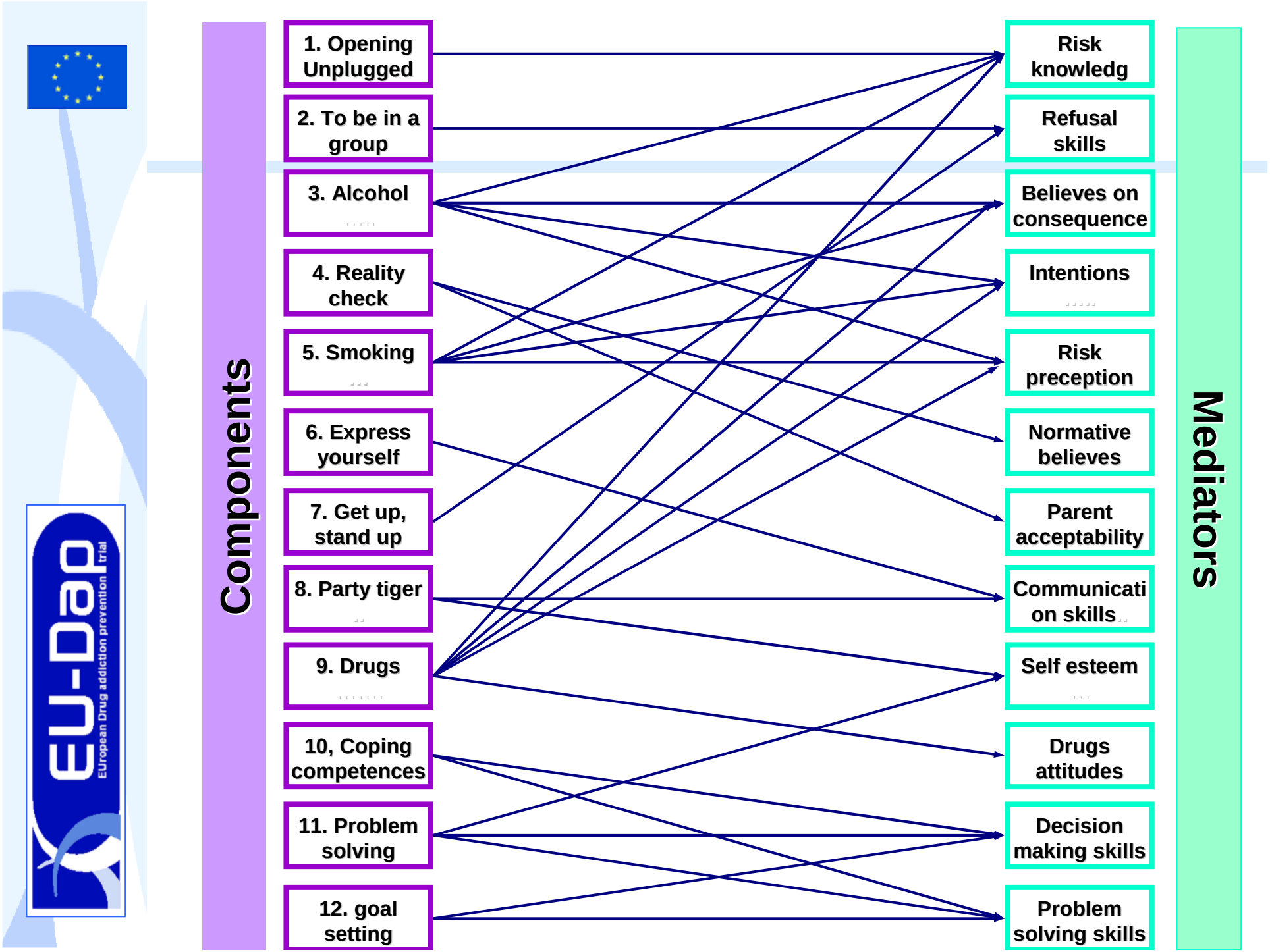
- ***EU-Dap*** **is an experimental study (CRCT)**
  - involving 9 centers in 7 European Countries
  - funded by European Commission (*Public Health Program*)
  - supported by EMCDDA
- **for the evaluation of a school program ("*Unplugged*")**
  - to prevent tobacco, alcohol and drugs onset
  - especially conceived by an internal expert group


GERMANY / Kiel
IFT-Nord
SWEDEN / Stockholm
Centre for Tobacco Prevention
BELGIUM / Gent
De Sleutel
AUSTRIA / Wien
ISG
SPAIN / Bilbao
EDEX
ITALY / L'Aquila
University of L'Aquila
GREECE / Thessaloniki
REITOX/PYXIDA
ITALY / Turin
Piemonte Monitoring Centre for Drug Abuse
ITALY / Novara
Avogadro University
EU-Dap
European Drug addiction prevention trial

"*Unplugged*"

- the program is based on a ***Comprehensive Social Influence*** approach
- It includes the following components
  - **Social skills**
  - **Personal skills**
  - **Knowledge**
  - **Normative education**
  - (No resistance education)
- It is administered by **teachers** trained in a 3-days course
- It is made by **12 units**, 1 hour each
- It is designed for **12-14 years** old students

Van der Kreeft et al., Drugs: education, prevention and policy, 2009


EU-Dap
EUropean Drug addiction prevention trial
Components
1. Opening Unplugged
2. To be in a group
3. Alcohol
4. Reality check
5. Smoking
6. Express yourself
7. Get up, stand up
8. Party tiger
9. Drugs
10, Coping competences
11. Problem solving
12. goal setting
Risk knowledg
Refusal skills
Believes on consequence
Intentions
Risk preception
Normative believes
Parent acceptability
Communicati on skills
Self esteem
Drugs attitudes
Decision making skills
Problem solving skills
Mediators

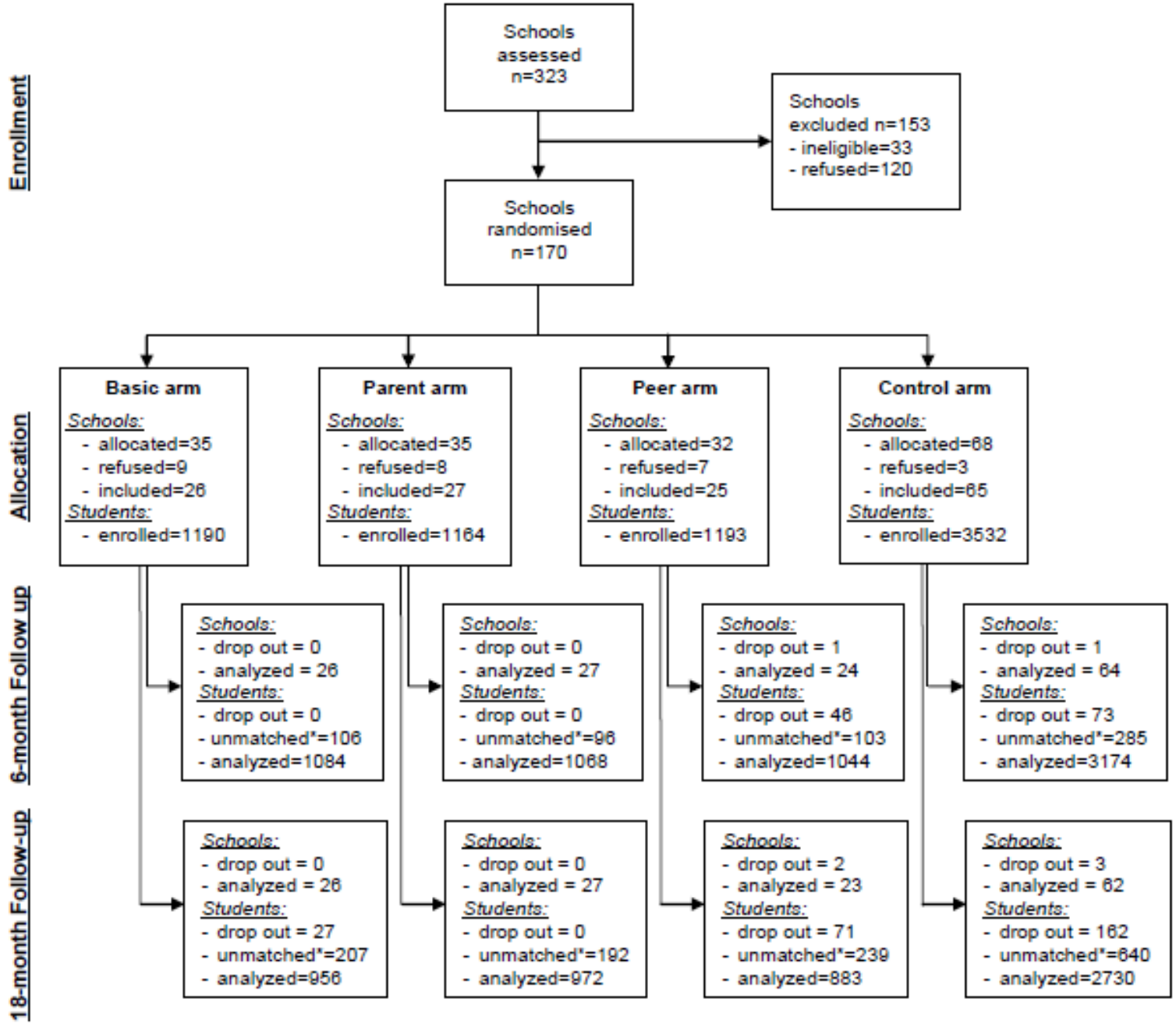
Study design

- Cluster Randomised Controlled Trial
  - *Sample of centres' schools randomised and students analysed*
- 3 intervention arms
  - **Basic - *Unplugged***
  - **Basic + peer component**
    - Election of 2 representatives of the classmates (same age), training, 7 meetings
  - **Basic + parent component**
    - 3 seminars for parents
- Control arm: usual curriculum
- Each centre was free to involve students from 12 to 14 years

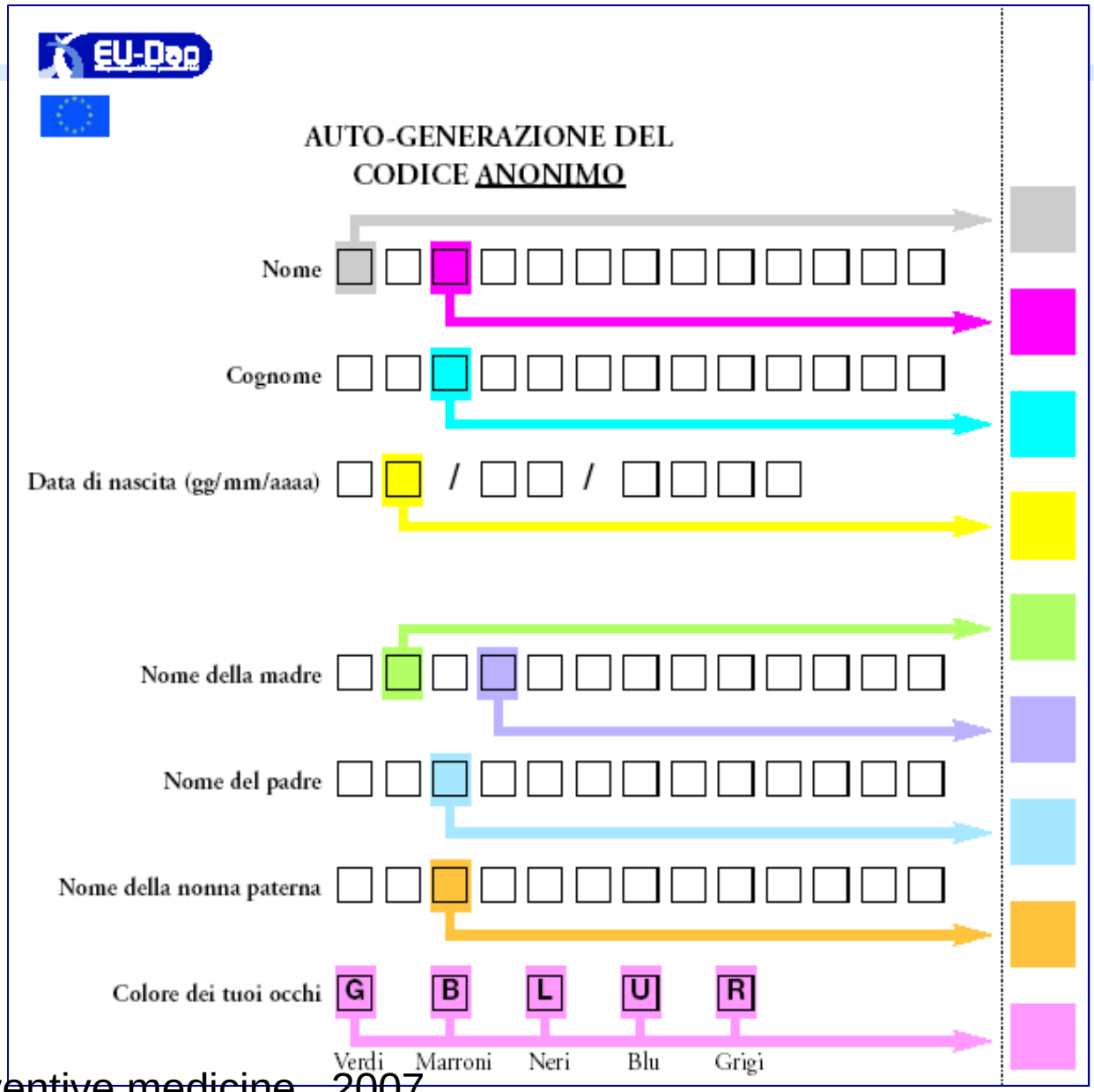
Faggiano et al, Preventive Medicine, 2007

Enrollment

- **7079** students participated in the ***baseline survey*** (November 2004)
- The program was administered between November 2004 and February 2005 in the intervention arms
- **6604** (93%) students participated in the ***first follow-up survey*** (May 2005), 3 months (at least) after the end of the program
- **5812** (82%) students participated in the ***second follow-up survey*** (May 2006), 15 months (at least) after the end of the program

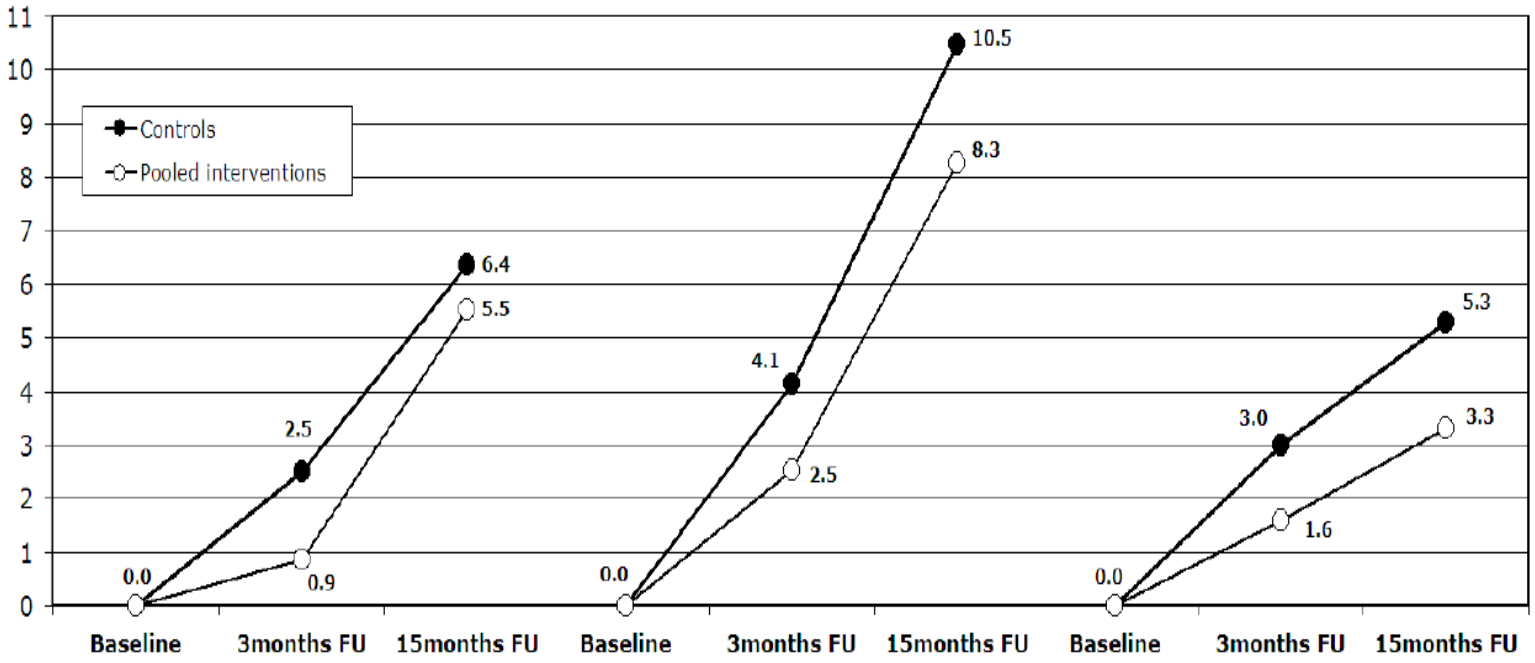

Enrollment
Schools assessed n=323
Schools excluded n=153
- ineligible=33
- refused=120
Schools randomised n=170
Allocation
Basic arm
Schools:
- allocated=35
- refused=9
- included=26
Students:
- enrolled=1190
Parent arm
Schools:
- allocated=35
- refused=8
- included=27
Students:
- enrolled=1164
Peer arm
Schools:
- allocated=32
- refused=7
- included=25
Students:
- enrolled=1193
Control arm
Schools:
- allocated=68
- refused=3
- included=65
Students:
- enrolled=3532
6-month Follow up
Schools:
- drop out = 0
- analyzed = 26
Students:
- drop out = 0
- unmatched*=106
- analyzed=1084
Schools:
- drop out = 0
- analyzed = 27
Students:
- drop out = 0
- unmatched*=96
- analyzed=1068
Schools:
- drop out = 1
- analyzed = 24
Students:
- drop out = 46
- unmatched*=103
- analyzed=1044
Schools:
- drop out = 1
- analyzed = 64
Students:
- drop out = 73
- unmatched*=285
- analyzed=3174
18-month Follow-up
Schools:
- drop out = 0
- analyzed = 26
Students:
- drop out = 27
- unmatched*=207
- analyzed=956
Schools:
- drop out = 0
- analyzed = 27
Students:
- drop out = 0
- unmatched*=192
- analyzed=972
Schools:
- drop out = 2
- analyzed = 23
Students:
- drop out = 71
- unmatched*=239
- analyzed=883
Schools:
- drop out = 3
- analyzed = 62
Students:
- drop out = 162
- unmatched*=640
- analyzed=2730

The questionnaire



Galanti et al, Preventive medicine, 2007

Changes in prevalence



Daily smoking

Any episode of drunkenness

Any use of cannabis

Adjusted statistical analysis

- A **Multi-Level** model was used to:
  - Adjust for the ***cluster effect***
  - Take into account the ***differences in the prevalence of use among centers***
  - Take into account the ***differences in the prevalence of use among arms*** (the controls show higher prevalences of use at the baseline)

Short-term vs 18 months follow-up results

	Post-test	18 months follow-up
	% reduction	% reduction
ALO smoking	-12%	-6%
Regular smoking	-14%	-11%
Daily smoking	-30%	-8%
ALO drunkenness	-28%	-20%
Regular drunkenness	-31%	-38%
ALO cannabis	-23%	-17%
Regular cannabis	-24%	-26%

Transition among stages: smoking

Intensity of use			FOLLOW-UP SURVEY: no use	sporadic	frequent	daily	total (n)
Pooled intervention arms							
BASELINE	no use	%	**91.4**	*5.4*	*1.8*	*1.5*	**2597**
		95%CI	90.2-92.4	*4.6-6.3*	*1.3-2.3*	*1.1-2.0*	
	sporadic	%	*49.1*	**26.0**	*16.6*	*8.3*	**169**
		95%CI	*41.7-56.6*	20.0-33.1	*11.7-22.9*	*5.0-13.4*	
	frequent	%	*22.4*	*17.1*	**28.9**	*31.6*	**76**
		95%CI	*14.5-32.9*	*10.3-27.1*	20.0-40.0	*22.2-42.7*	
	daily	%	*7.3*	*1.5*	*5.8*	**85.4**	**137**
		95%CI	*4.0-12.9*	*0.4-5.2*	*3.0-11.1*	78.5-90.3	
	total (n)		**2483**	**199**	**104**	**193**	**2979**
Control arm							
BASELINE	no use	%	**90.2**	*5.8*	*1.8*	*2.2*	**2516**
		95%CI	89.0-91.3	*4.9-6.8*	*1.3-2.4*	*1.7-2.9*	
	sporadic	%	*38.0*	**28.6**	*13.4*	*19.9*	**171**
		95%CI	*31.1-45.5*	22.4-35.8	*9.1-19.4*	*14.6-26.5*	
	frequent	%	*16.2*	*19.2*	**26.3**	*38.4*	**99**
		95%CI	*10.2-24.6*	*12.6-28.0*	18.6-35.7	*29.4-48.2*	
	daily	%	*7.1*	*2.2*	*8.8*	**81.9**	**182**
		95%CI	*4.2-11.8*	*0.9-5.5*	*5.5-13.8*	75.6-86.8	
	total (n)		**2363**	**218**	**110**	**277**	**2968**

The program works better in **preventing** (or **delaying**?) the use more than promoting the cessation

Transition among stages: 18 months FU

Tobacco use in past 30 days

Intensity of use			18-MONTH FOLLOW-UP SURVEY			
			no use	occasional	daily	total (n)
Pooled intervention arms						
BASELINE	no use	%	**83.3**	*11.5*	*5.2*	**2319**
		95%CI	81.7-84.8	*10.2-12.8*	*4.3-6.1*	
	occasional*	%	*30.7*	**28.6**	*40.6*	**192**
		95%CI	*24.2-37.3*	22.3-35.0	*33.7-47.6*	
	daily**	%	*6.6*	*4.4*	**89.0**	**91**
		95%CI	*1.5-11.7*	*0.2-8.6*	82.6-95.4	
	total (n)		**1996**	**326**	**280**	**2602**
Control arm						
BASELINE	no use	%	**81.4**	*12.4*	*6.2*	**2209**
		95%CI	79.8-83.1	*11.0-13.8*	*5.2-7.2*	
	occasional*	%	*25.7*	**35.0**	*39.4*	**226**
		95%CI	*20.0-31.4*	28.7-41.2	*33.0-45.8*	
	daily**	%	*7.3*	*4.9*	**87.8**	**123**
		95%CI	*2.7-11.9*	*1.1-8.7*	82.0-93.6	
	total (n)		**1866**	**359**	**333**	**2558**

Transition among stages: 18 months FU

Drunkenness episodes in past 30 days

Intensity of use			18-MONTH FOLLOW-UP SURVEY			
			None	sporadic	frequent	total (n)
Pooled intervention arms						
BASELINE	none	**%**	**87.3**	*9.5*	*3.2*	**2584**
		95%CI	86.1-88.6	*8.4-10.6*	*2.5-3.8*	
	sporadic*	**%**	*58.6*	**25.3**	*16.1*	**87**
		95%CI	*48.3-69.0*	16.2-34.4	*8.4-23.8*	
	frequent**	**%**	*59.3*	*18.5*	**22.2**	**27**
		95%CI	*40.7-77.8*	*3.9-33.2*	6.5-37.9	
	total (n)		**2324**	**272**	**102**	**2698**
Control arm						
BASELINE	none	**%**	**85.0**	*10.5*	*4.5*	**2466**
		95%CI	83.5-86.4	*9.3-11.7*	*3.7-5.4*	
	sporadic*	**%**	*37.8*	**28.8**	*33.3*	**111**
		95%CI	*28.8-46.9*	20.4-37.3	*24.6-42.1*	
	frequent**	**%**	*29.3*	*24.4*	**46.3**	**41**
		95%CI	*15.3-43.2*	*11.2-37.5*	31.1-61.6	
	total (n)		**2149**	**301**	**168**	**2618**

Transition among stages: 15 months FU

Cannabis use in past 30 days

Intensity of use			18-MONTH FOLLOW-UP SURVEY			
			no use	sporadic	frequent	total (n)
Pooled intervention arms						
BASELINE	no use	%	**94.4**	*2.6*	*3.0*	**2720**
		95%CI	93.5-95.2	*2.0-3.2*	*2.4-3.7*	
	sporadic*	%	*48.0*	**12.0**	*40.0*	**25**
		95%CI	*28.4-67.6*	-0.7-24.7	*20.8-59.2*	
	frequent**	%	*26.1*	*17.4*	**56.5**	**23**
		95%CI	*8.1-44.0*	*1.9-32.9*	36.3-76.8	
	total (n)		**2585**	**78**	**105**	**2768**
Control arm						
BASELINE	no use	%	**92.4**	*3.5*	*4.2*	**2618**
		95%CI	91.3-93.4	*2.8-4.2*	*3.4-4.9*	
	sporadic*	%	*41.2*	**11.8**	*47.1*	**34**
		95%CI	*24.6-57.7*	0.9-22.6	*30.3-63.8*	
	frequent**	%	*25.5*	*4.3*	**70.2**	**47**
		95%CI	*13.1-38.0*	*-1.5-10.0*	57.1-83.3	
	total (n)		**2444**	**97**	**158**	**2699**

Possible reduction in SES inequalities

Post-test Differences in Prevalence of use (last 30 days)
Low to High area SES

	Controls	Interventions
ALO smoking	+6.3%	+5.0%
Daily smoking	+4.9%	+7.0%
ALO drunkenness	+5.1%	+2.7%
Regular drunkenness	+2.9%	+1.6%
ALO cannabis	+0.5%	-0.9%
Regular cannabis	+0.3%	+0.1%
ALO drugs	+0.2%	+0.1%

* ALO: At Least Once in the last 30 days

The analyses suggest **a possibe reduction of the inequalities among low and high SES**

The distance in prevalence among the two groups seems reduced

Conclusions on the effect

- ***Unplugged*** appears to be effective in reducing use of **drugs, alcohol and cigarettes at the post-test**
- and the results are maintained for **alcohol** (and **cannabis**) **at the 18-month follow-up**
- The program works better in **preventing the use** more than promoting cessation, especially for smoking and cannabis

Conclusions on cost/effect

- Numbers Needed to Treat (NNTs) at 18 months are 34 for cannabis use and 26 for drunkenness
- The cost to deliver the program in 1 class (30 pupils) is about 200 €
- Thus the cost of preventing (or delaying for at least 1.5 years) one onset of cannabis use and one alcohol intoxication is about 200 €

Dissemination projects

- EU-Dap 2 has been funded by EU to test the effectiveness of an instrument for the dissemination of effective programs in European schools

Preventing Substance Abuse among Students

A guide to successful implementation of Comprehensive Social Influence (CSI) curricula in schools

See: www.eudap.net

Dissemination projects

- EU-Dap 2 also improved the Manuals for intervention and edited the 2°release of them, available in many languages

Contribution to policy development

"*Unplugged*"

Unplugged can be downloaded by www.eudap.net

Teacher's Handbook

The **Unplugged Curriculum** has been tested to be effective during the EU-Dap intervention trial. Based on the evaluation, it is now available in its revised version. This programme is for students between the ages of 12 and 14 and is to be led by trained teachers.

See Teachers manual

Student's Workbook

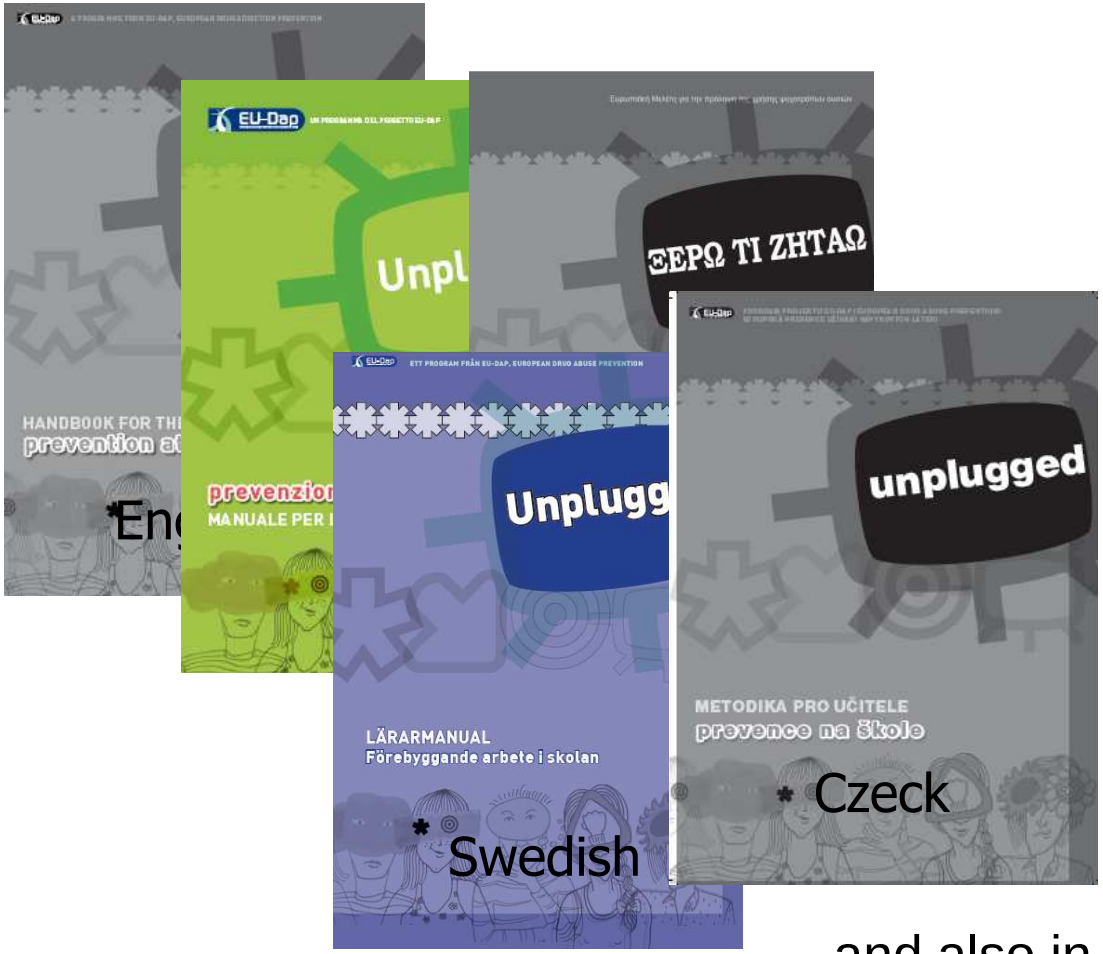
The **Student's Workbook** complements the Unplugged Curriculum. It contains activities that students are to work through during the Unplugged lessons.

See Students workbook

Based on the EU-Dap evaluation, we recommend that teachers attend a Training for Teachers before using the free material.

Download										
Read More										

Teachers' manual



…and also in Spanish, Polish, Deutch, Flammish, and soon in French, Russian, Romanian etc

Workbook for students

EUropean Drug Addiction Prevention trial

What's New

EU-Dap implementation Guide NOW available

EU-Dap UNPLUGGED Teacher's Handbook and Student's Workbook NOW available

A new paper published The effectiveness of a school-based substance abuse prevention program: EU-Dap cluster randomised controlled trial

Read the other EU-Dap papers: EU-Dap cluster randomized controlled trial design and study population and Anonymous link

The European Drug Addiction Prevention (EU-Dap) trial project took place between 2003-2005. Results indicate a positive shift to prevent the use of alcohol, tobacco and other drugs among European students aged 12-14 years.

Today, the EU-Dap project continues by offering access to the **study trial information**, **classroom resources** for teachers and students, a **dissemination guide**; for spreading better practices and an evaluation of the dissemination strategy.

EU-Dap Faculty

- To ensure standardized training across Europe (funded by JLS Justice, Freedom and Security)
  - training of trainers
  - dissemination of effective programs
  - stimulus to further research
- A network of 40 Master Trainers in more than 15 European Countries

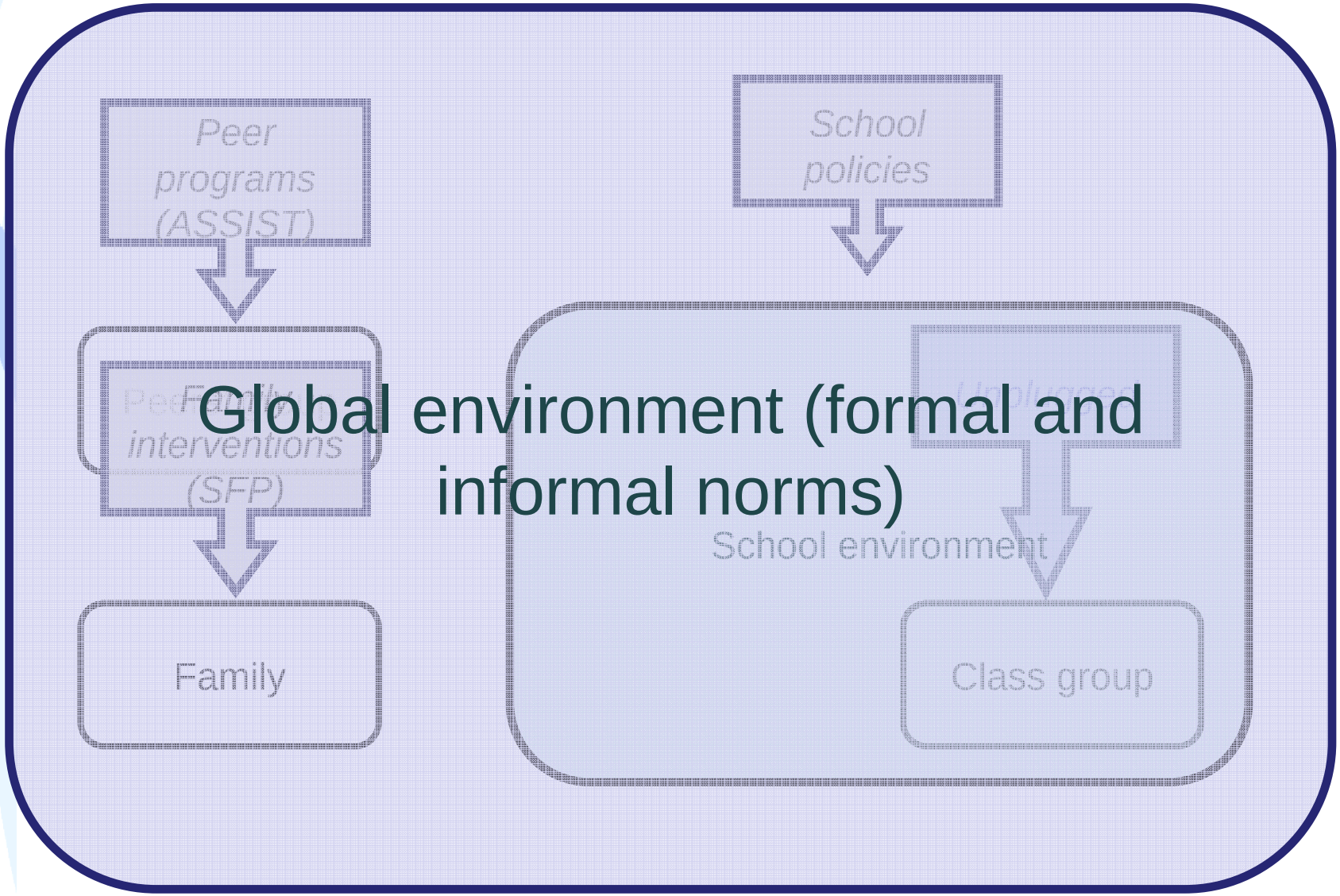
International dissemination

- Apart from local projects of dissemination, 2 main international projects have been lauched:
  - Unplugged-Mentor-UNODC involving:
    - Russia, Romania, Kirgisistan, Lituania, Croatia
  - Unplugged-Mentor Romena involving:
    - Egypt, Afganistan, Libanon, Iran, Morocco,
- Both projects will replicate a randomised evaluation

Conclusions

- *Unplugged* is the first school based prevention program evaluated in a large European setting
- The program is of *public domain* (free download from the Net), even if the teacher training performed by Eudap faculty members is required to replicate results
- Further research needs:
  - How to improve effectiveness?

A strategy to improve effects



A strategy to improve effects

- Every component of the strategy must have rigorous evidence of effectiveness

- The strategy at a whole can be evaluated by specific scientific tools (ITS)

These is the scientific way to ensure EFFECTIVENESS AND SAFETY