

# LES RENCONTRES DE SANTÉ PUBLIQUE FRANCE

20 & 21  
JUN 2023

EN FORMAT  
HYBRIDE



## Le programme UNPLUGGED

Analyse du parcours de réalisation, évaluation et dissémination à l'échelle européenne d'un programme de prévention des dépendances en milieu scolaire

Fabrizio Faggiano & Federica Vigna-Taglianti

Università del Piemonte Orientale (I)

# Objective of the presentation

- Thanks to the sollecitation of the organisers, I will try to reconstruct a part of the history of the EUDAP Project to learn some lessons

# Once upon a time...

- 12 January 1998, the Cochrane Drugs and Alcohol Review Groups was registered by the Cochrane Collaboration
- Out of the 8 group members, FF was appointed for the primary prevention of drug use
- Soon the FF team started to work for the first Systematic Review on School Based prevention of drug use.

# Some time after...

- Presentation of preliminary findings
- Among the first studies (DARE x 2, Life Education)
- Two congress participants: from this encouragement

Prevenção de drogodependências

Madrid, 22 June 2001

VI Jornadas sobre Prevención de Drogodependencias

## **The need for sound evidence of effectiveness in drug abuse prevention**

Fabrizio Faggiano

Dept. of Public Health - University of Torino - Italy  
Cochrane Drug and Alcohol Group

# The EUDAP 1 Project

- With the help of the EMCDDA (GB), a network of prevention professionals was established, and the ***EUDAP (European Drug Abuse Prevention)*** project was submitted to the EU Commission.
- The project involved 7 countries (Italy, Spain, Greece, Belgium, Swedish, Germany, Austria) (9 centres).
- Participants were practitioners of prevention of drug abuse, epidemiologists, psychologists of adolescence.
- EUDAP was funded by EU Commission in 2003

# UNPLUGGED

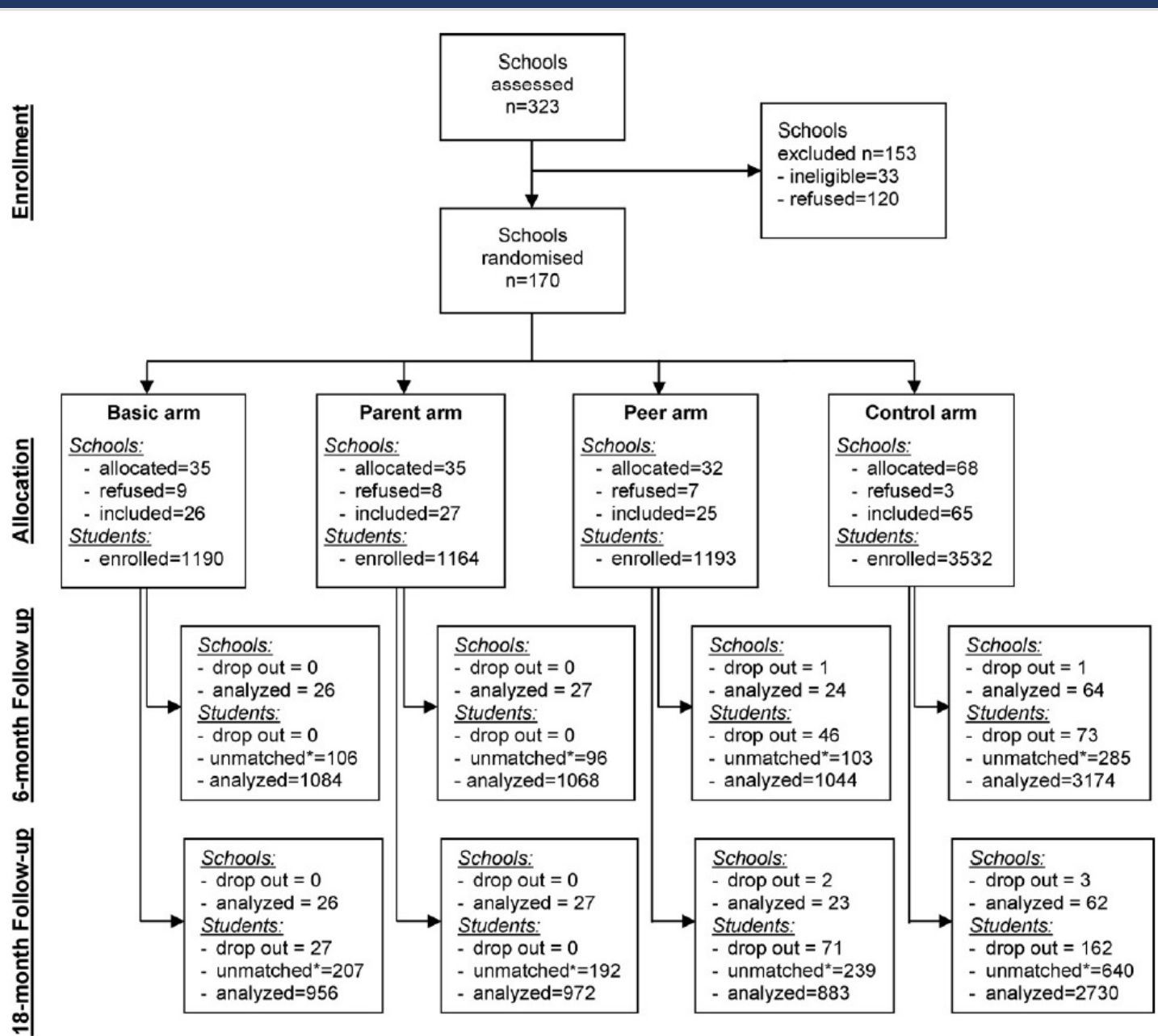
- The first step of EUDAP was the elaboration of a new program.
- Starting from the existing interventions (LST – Botvin, Lyons Quest), experience of practitioners, theory.
- And some innovation:
  - Teacher as provider
  - Manualisation to ensure standardisation
  - Very interactive units

# UNPLUGGED

- Universal school-based program for preventing **tobacco, substance use** and **alcohol abuse** among adolescents
- Based on **social influence approach**
- It includes the following components
  - Social skills
  - Personal skills
  - Knowledge
  - Normative 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



- It was tested through 9 centres in 7 European countries
- 4 arms
  - Unplugged
  - Unplugged + peer intervention
  - Unplugged + parent intervention
  - Controls





## SELF-GENERATION SHEET FOR THE ANONYMOUS CODE



- It was tested thro  
European countri
- Using an “anonym

Name

Surname

Birth date (dd/mm/yyyy)

/   /

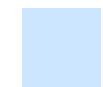
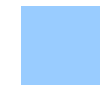
Mother's name

Father's name

Paternal Grandmother's name

Your eyes colour

**G** **B** **L** **U** **R**  
Green Brown Black Blue Grey





Available online at [www.sciencedirect.com](http://www.sciencedirect.com)



Preventive Medicine 44 (2007) 174–177

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Preventive  
Medicine

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[www.elsevier.com/locate/ypmed](http://www.elsevier.com/locate/ypmed)

## Testing anonymous link procedures for follow-up of adolescents in a school-based trial: The EU-DAP pilot study<sup>☆</sup>

M. Rosaria Galanti<sup>a,\*</sup>, Roberta Siliquini<sup>b</sup>, Luca Cuomo<sup>c</sup>, Juan Carlos Melero<sup>d</sup>,  
Massimiliano Panella<sup>e</sup>, Fabrizio Faggiano<sup>c,e</sup>  
The EU-DAP study group<sup>1</sup>

<sup>a</sup> *Stockholm Center for Public Health/Tobacco Prevention, Box 17533 118 91 Stockholm, Sweden*

<sup>b</sup> *Department of Hygiene and Community Medicine, University of Turin, Italy*

<sup>c</sup> *Piemonte Monitoring Center for Drug Abuse, Turin, Italy*

<sup>d</sup> *EDEX, Bilbao, Spain*

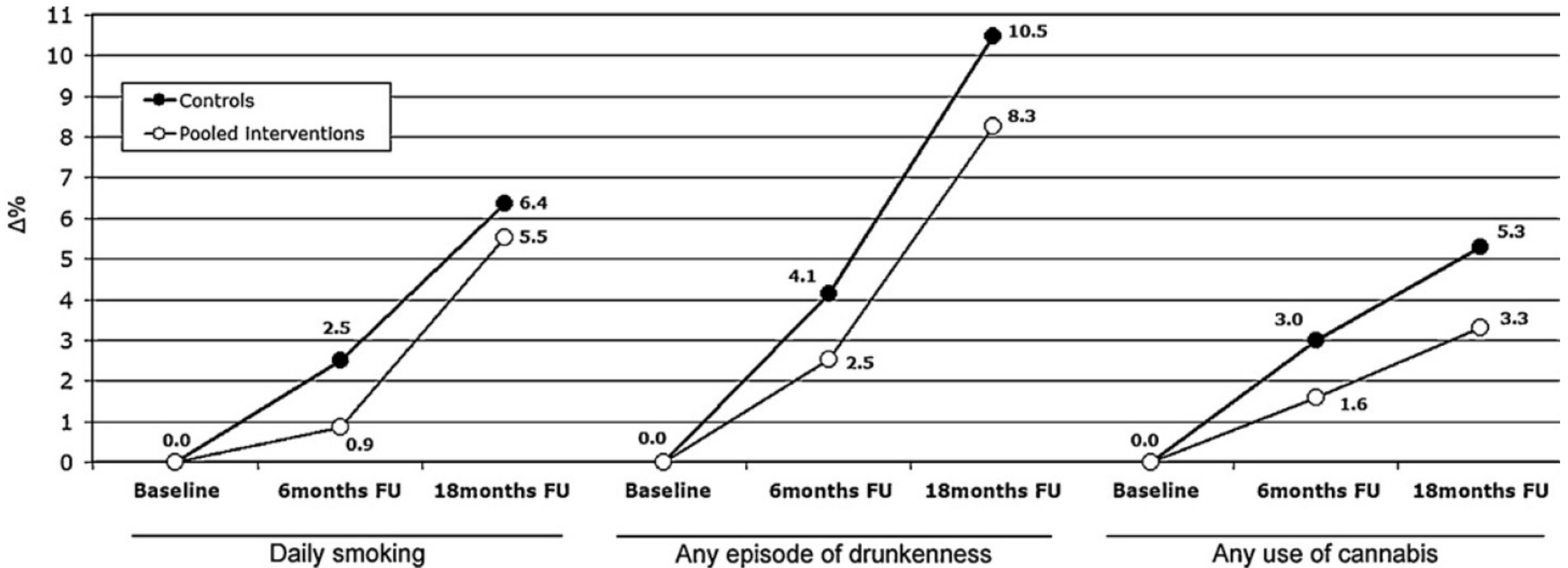
<sup>e</sup> *Department of Clinical and Experimental Medicine, Avogadro University, Novara, Italy*

Available online 18 September 2006

# Evaluation

- It was tested through a **randomized controlled trial** in 9 centres in 7 European countries in 2004-2007 school years
- Using an “anonymous code” to link questionnaires
- 3 age groups: 12, 13 and 14 years old
- 3 follow-ups
  - at least 3 months after the end of the program delivering
  - at the end of the following year (average of 15 months after the end of the program delivering)
  - the year after (excluded because of the high number of students lost to FU)

# Trial results



# Trial results

- 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 results

30 days prevalence

3 months after the end of the program

<b>BAS vs FUP1</b>	<b>Controls n/N</b>	<b>Interventions n/N</b>	<b>Adjusted POR (95%CI)</b>	<b>Reduction</b>
<b>ALO smoking</b>	605/2968	496/2979	0.88 (0.71-1.08)	-12%
<b>Regular smoking</b>	387/2968	297/2979	0.86 (0.67-1.10)	-14%
<b>Daily smoking</b>	277/2968	193/2979	<b>0.70 (0.52-0.94)</b>	<b>-30%</b>
<b>ALO drunkenness</b>	353/3054	253/3083	<b>0.72 (0.58-0.90)</b>	<b>-28%</b>
<b>Regular drunkenness</b>	120/3054	76/3083	<b>0.69 (0.48-0.99)</b>	<b>-31%</b>
<b>ALO cannabis</b>	225/3130	152/3150	<b>0.77 (0.60-1.00)</b>	<b>-23%</b>
<b>Regular cannabis</b>	137/3130	88/3150	0.76 (0.53-1.09)	-24%

**Faggiano 2008**

# Cost/effectiveness measure: NNT

**NNT: number needed to treat**

→ number of subjects to be treated to prevent **one event**

<b>BAS vs FUP1</b>	<b>Controls</b>	<b>Interventions</b>	<b>Adjusted POR (95%CI)</b>	<b>NNT</b>	<b>users</b>
<b>ALO smoking</b>	20.4%	16.6%	0.88 (0.71-1.08)	<b>26</b>	5/26
<b>Regular smoking</b>	13.0%	10.0%	0.86 (0.67-1.10)	<b>33</b>	4/33
<b>Daily smoking</b>	9.3%	6.5%	0.70 (0.52-0.94)	<b>36</b>	3/36
<b>ALO drunkenness</b>	11.5%	8.2%	0.72 (0.58-0.90)	<b>30</b>	3/30
<b>Regular drunkenness</b>	3.9%	2.5%	0.69 (0.48-0.99)	<b>71</b>	3/71
<b>ALO cannabis</b>	7.2%	4.8%	0.77 (0.60-1.00)	<b>42</b>	3/42
<b>Regular cannabis</b>	4.4%	2.8%	0.76 (0.53-1.09)	<b>62</b>	3/62
<b>ALO drugs</b>	9.3%	7.0%	0.89 (0.69-1.15)	<b>43</b>	4/43

## Short-term vs 15 months follow-up results

	<b>Post-test</b>	<b>15 months follow-up</b>
	<b>% reduction</b>	<b>% reduction</b>
<b>ALO smoking</b>	-12%	-6%
<b>Regular smoking</b>	-14%	-11%
<b>Daily smoking</b>	-30%	-8%
<b>ALO drunkenness</b>	-28%	-20%
<b>Regular drunkenness</b>	-31%	-38%
<b>ALO cannabis</b>	-23%	-17%
<b>Regular cannabis</b>	-24%	-26%





Contents lists available at ScienceDirect

## Drug and Alcohol Dependence

journal homepage: [www.elsevier.com/locate/drugaldep](http://www.elsevier.com/locate/drugaldep)

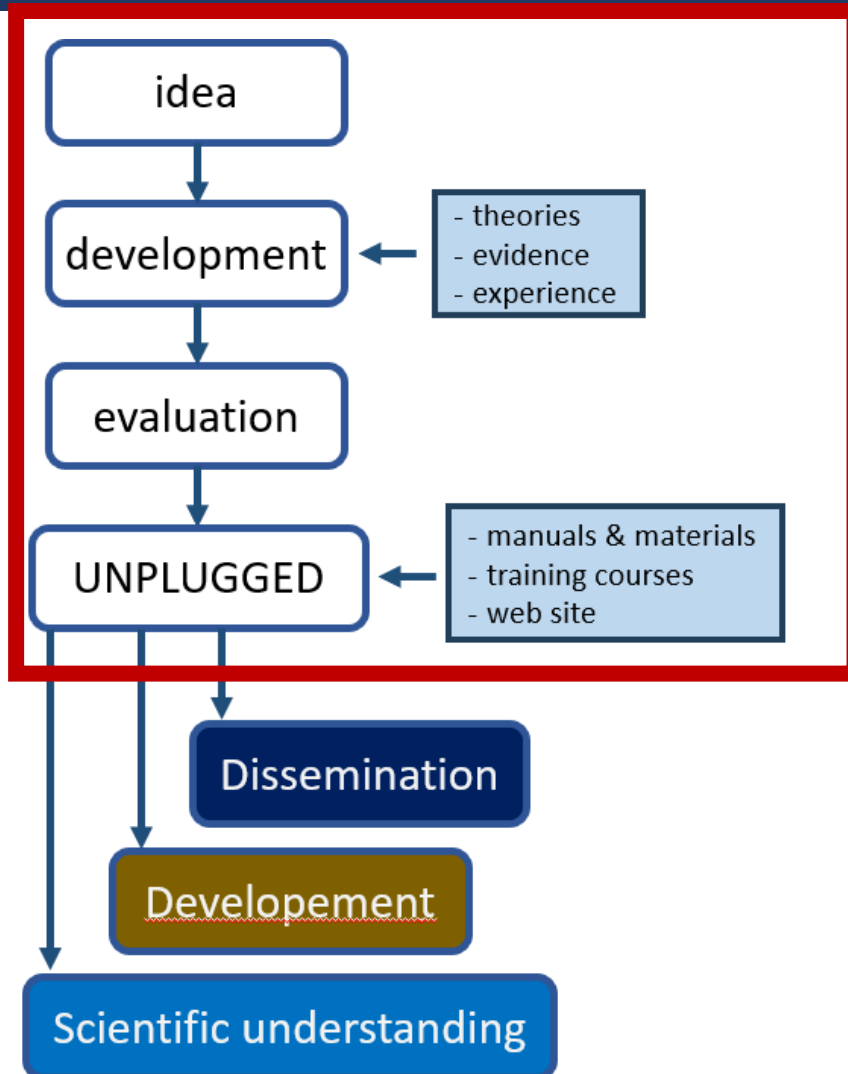


### The effectiveness of a school-based substance abuse prevention program: 18-Month follow-up of the EU-Dap cluster randomized controlled trial

Fabrizio Faggiano<sup>a,b,\*</sup>, Federica Vigna-Taglianti<sup>a,b</sup>, Gregor Burkhardt<sup>c</sup>, Karl Bohrn<sup>d</sup>,  
Luca Cuomo<sup>b</sup>, Dario Gregori<sup>e</sup>, Massimiliano Panella<sup>a</sup>, Maria Scatigna<sup>f</sup>,  
Roberta Siliquini<sup>e,b</sup>, Laura Varona<sup>g</sup>, Peer van der Kreeft<sup>h</sup>, Maro Vassara<sup>i,j</sup>,  
Gudrun Wiborg<sup>k</sup>, Maria Rosaria Galanti<sup>l</sup>, the EU-Dap Study Group<sup>1</sup>

<sup>a</sup> Università del Piemonte Orientale, Via Sallustiana 17, 10100 Novara, Italy

# EUDAP 1



- Within the EUDAP project, the program was created, evaluated (at least the first FU)
- From this point the development took place along three axes
  1. Dissemination
  2. Program development
  3. Scientific understanding

# Soon the first problem... how to disseminate this new effective program?

- At the time of the publication of results, there wasn't any formal system for the dissemination of prevention interventions, nor any repository as well
- We decided to write a new project, aimed at developing a system for the dissemination of the intervention
- EUDAP 2 was approved by EU Commission in 2006
- One centre dropped out (Germany) and 2 were taken onboard (Poland, Czech Republic),

# UNPLUGGED as a public domain program

- We didn't have any business plan, in the beginning
- We decided that, since it was funded by EU, it should be of Public Domain

## UNPLUGGED

Handbook for the teacher

A programme of EU-DAP, European Drug Addiction Prevention

This Handbook is part of the UNPLUGGED programme, and goes together with the Workbook for pupils and a set of 47 cards. The material can be downloaded free of charge at [www.eudap.net](http://www.eudap.net) or can be obtained from the centre in your country.

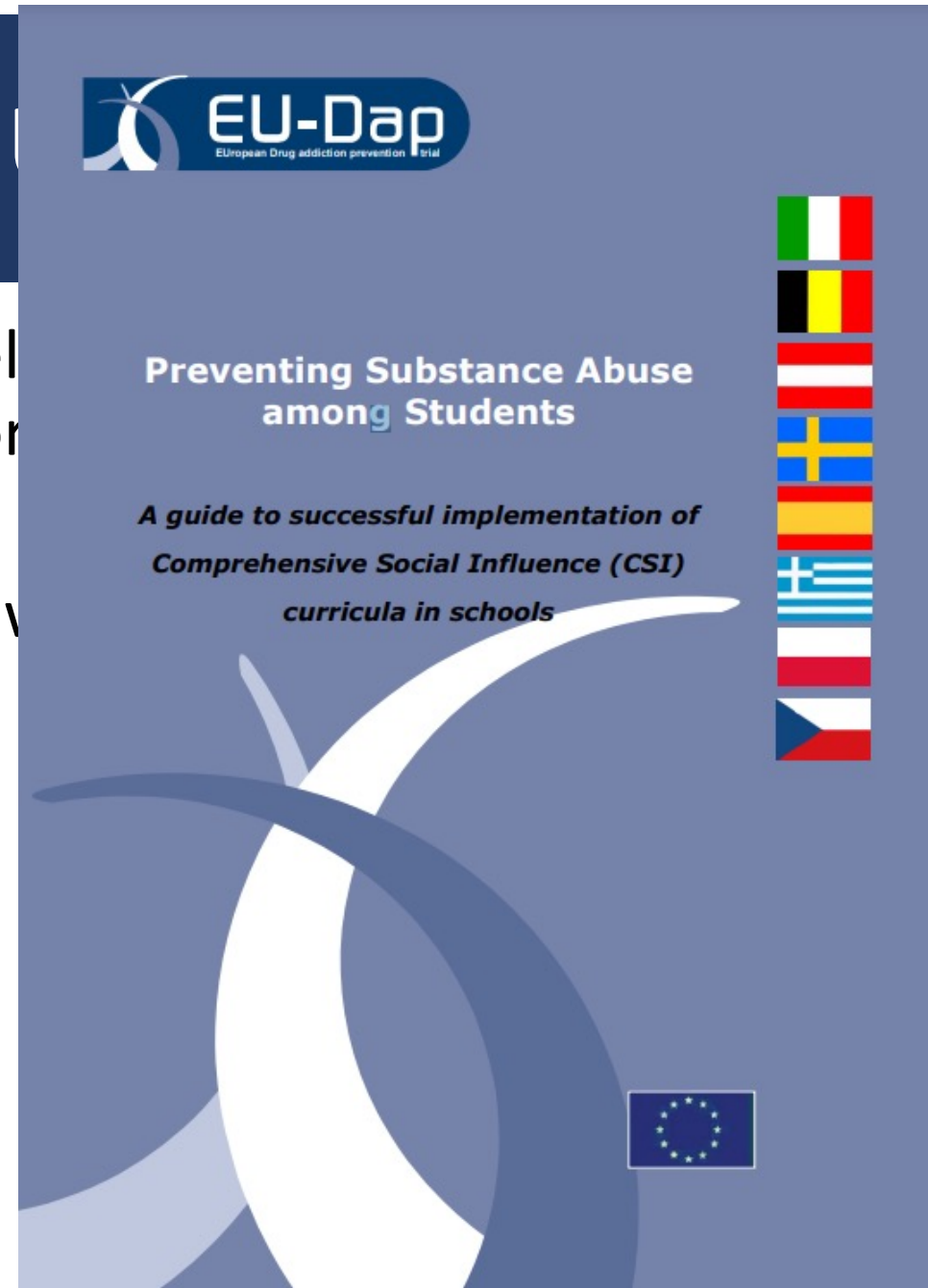
Unplugged materials can be translated and adapted in cooperation with EU-Dap implying the other language versions remaining copyright of the EU-Dap OED institute in Turin.

© 2007, Turin, EU-DAP trial

EU-Dap is a project funded by the European Commission (Community Public Health programme 2002.Grant # SPC 2002376 and Programme of Community Action in the field of Public Health 2003-2008 grant # SPC 2005312). The publication reflects the authors views and the Commission is not liable for any use that may be made of the information contained. The project has been also co-funded by local institutions stated in the local versions of this publication.

# 1. Dissemination: E

- After a very stressful series of meetings, Del groups.... the project produced a manual for prevention interventions...
- The impact of the dissemination in schools v post study, and.... no effect was found....



# EUDAP Faculty

- After the failure of our first attempt of tool for dissemination, a new model was elaborated:  
***the EUDAP Faculty (funded by JLS program 2009-2010)***
- with the aim of taking together developers, evaluators, trainers and providers already trained
- University of GENT was selected to host this EUDAP dissemination centre. Its role is to ensure training for national trainers, to monitor the dissemination and to conduct cultural adaptations.

# Dissemination

- The EUDAP Faculty is working, without specific funding
  - ensuring standardisation of training
  - supporting translations and adaptations
  - but not monitoring of dissemination
- In Europe there is no systems for the dissemination, monitoring, supporting of prevention activities
- The only exception is the BBP and the [Xchange](#) prevention registry of EMCDDA, for the field of drug use

# Dissemination: other actors

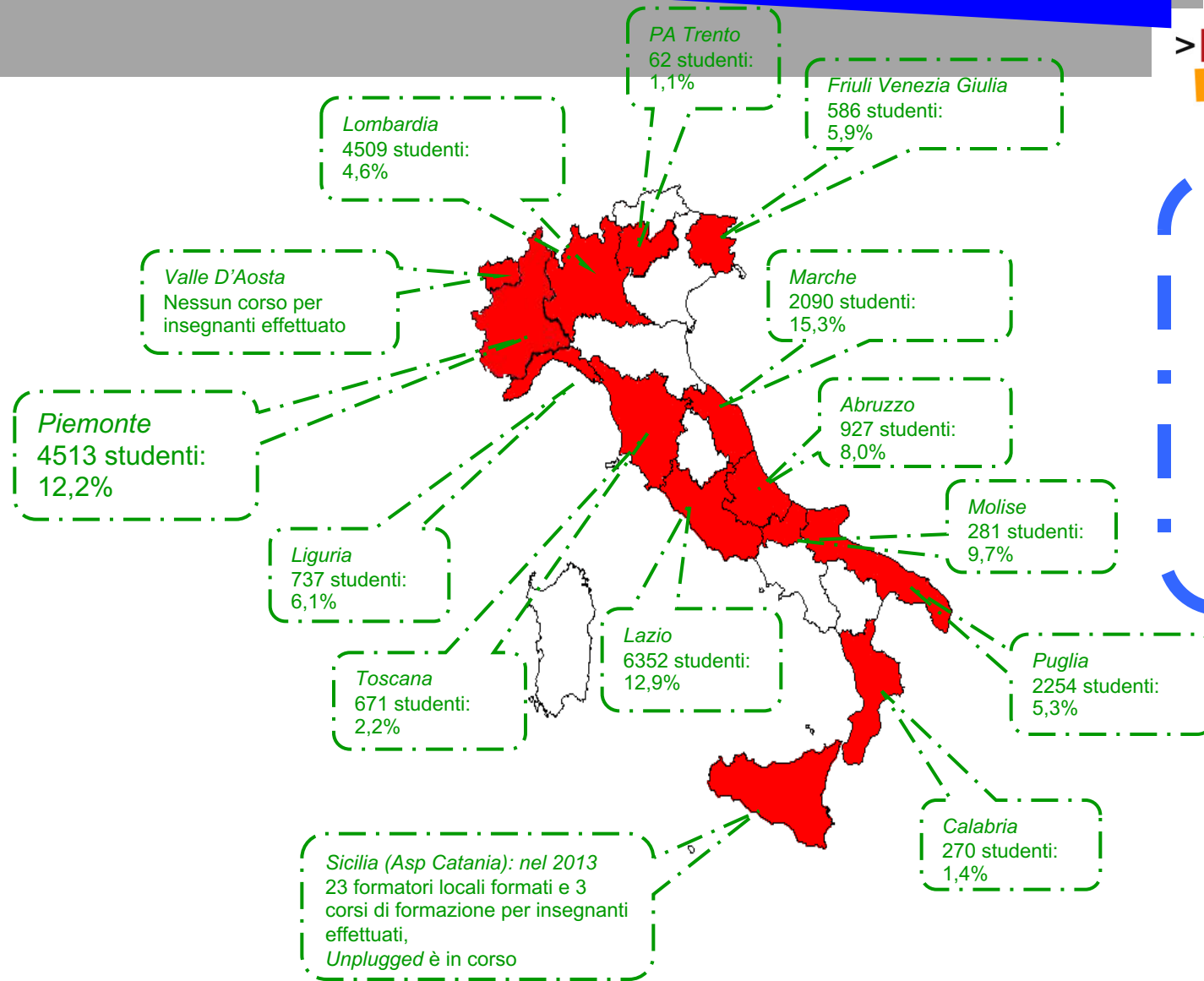
- The NGO Mentor (UK) gave a strong support in the translation, adaptation and dissemination of UNPLUGGED in many European extra EU countries
  - Russia
  - Romania
  - Croatia
  - Lithuania
  - Kirghizstan
- Mentor Arabia supported the transfer in some Arab countries (interrupted by the Arabic Spring)
  - Egypt
  - Morocco
  - Lebanon
- UNODC gave a strong support for countries like
  - Vietnam
  - Brazil
  - Chile
  - Nigeria



## In Italy

After the evaluation and the publication of results of the EU-Dap trial, The Ministry of Health (which was NOT involved in the study at the beginning) **launched a program for the adoption of effective prevention programs**, named “Gaining Health in Adolescence”.

Several evidence-based interventions were adopted in this program, and Italian regional authorities applied for the implementation of programs. Unplugged was adopted in 14 out of 20 regions.

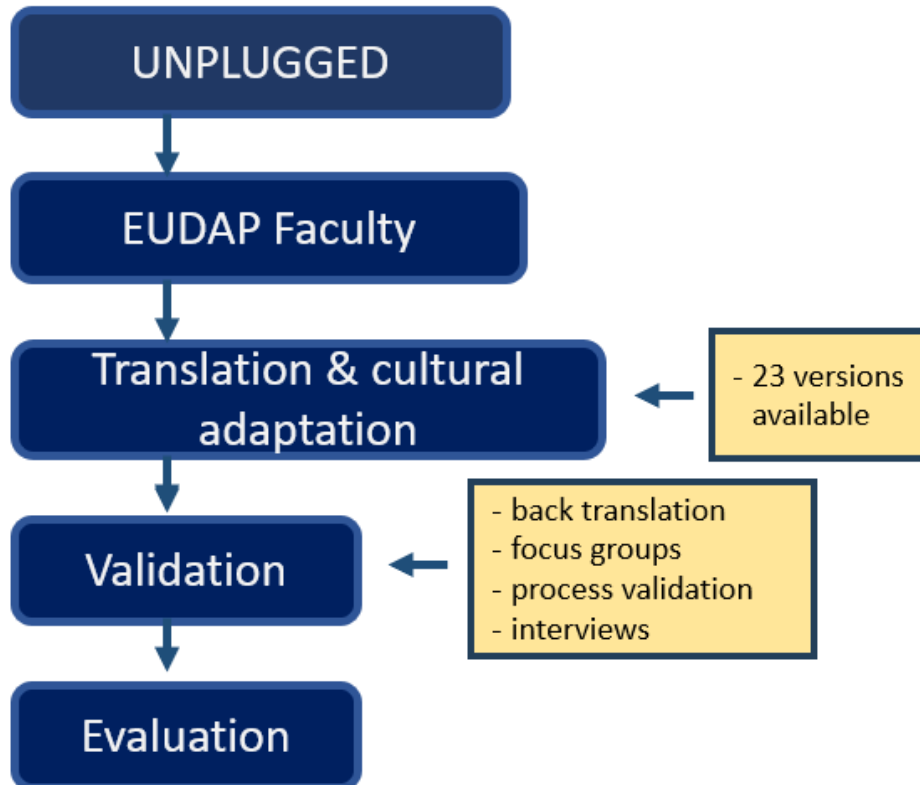


22.802 studenti hanno ricevuto *Unplugged* nel 2011-12, pari al 7% dei tredicenni residenti nelle regioni attive al Censimento Istat 2011

# Dissemination: conclusions

- Without an European or National system for the dissemination of effective prevention interventions, the coverage of the target population would remain very low

# Translations, adaptations and National Trainers available today



- English
- Italian
- German - Austrian
- Belgian
- Swedish
- Greek
- Spanish
- Basque
- Czeck
- Polish
- French
- Croatian
- Romanian
- Lithuanian
- Russian
- Kyrgyzstani
- Arabic
- Nigerian
- Pakistani
- Vietnamese
- Brazilian
- Chilean
- Peruvian

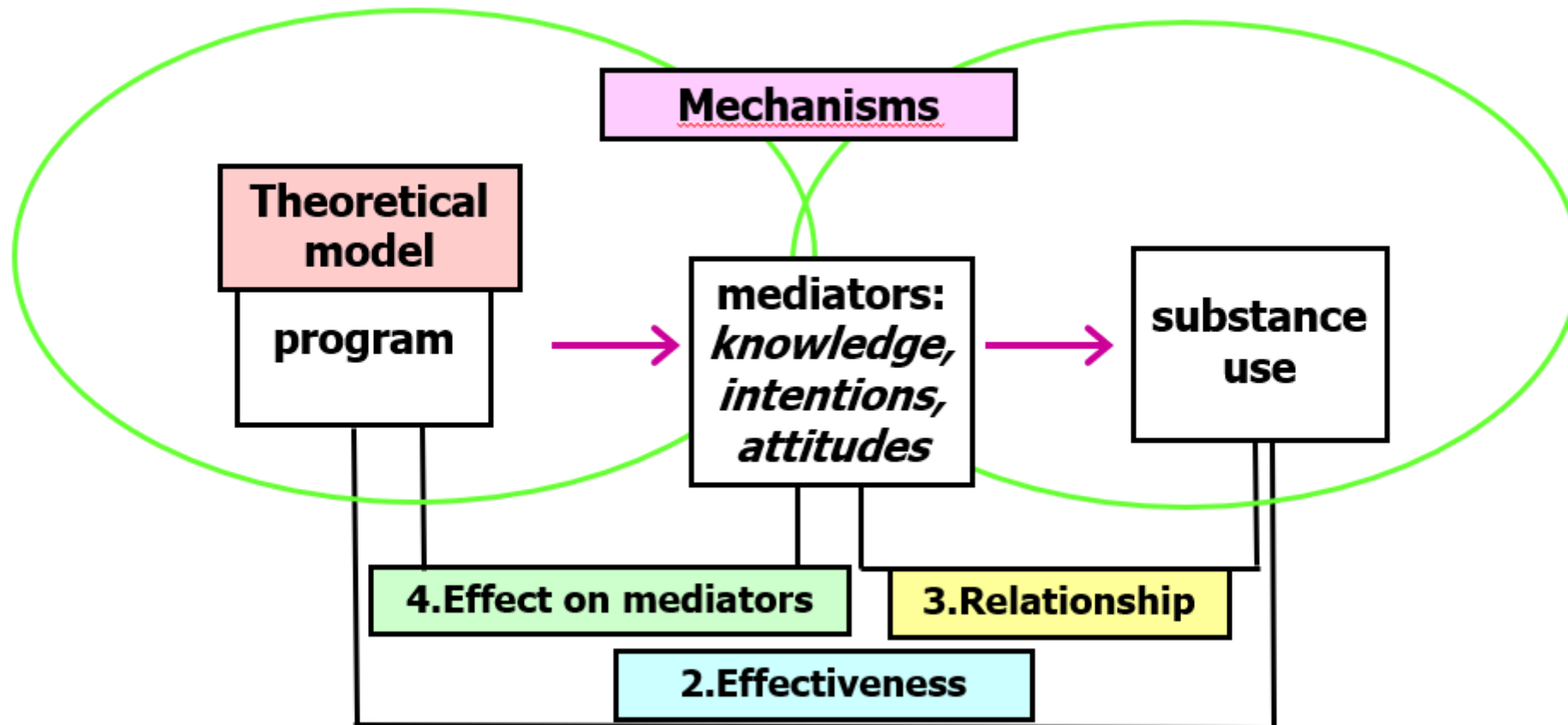
## 2. New developments

- Some developments are ongoing:
  - elaboration of a unit for the prevention of gambling and pathological gambling
  - a version of the program adapted to the gym's saloons
- But sometime a question is raised:
  - is there a need of a periodic update in prevention programs? and of a re-evaluation?

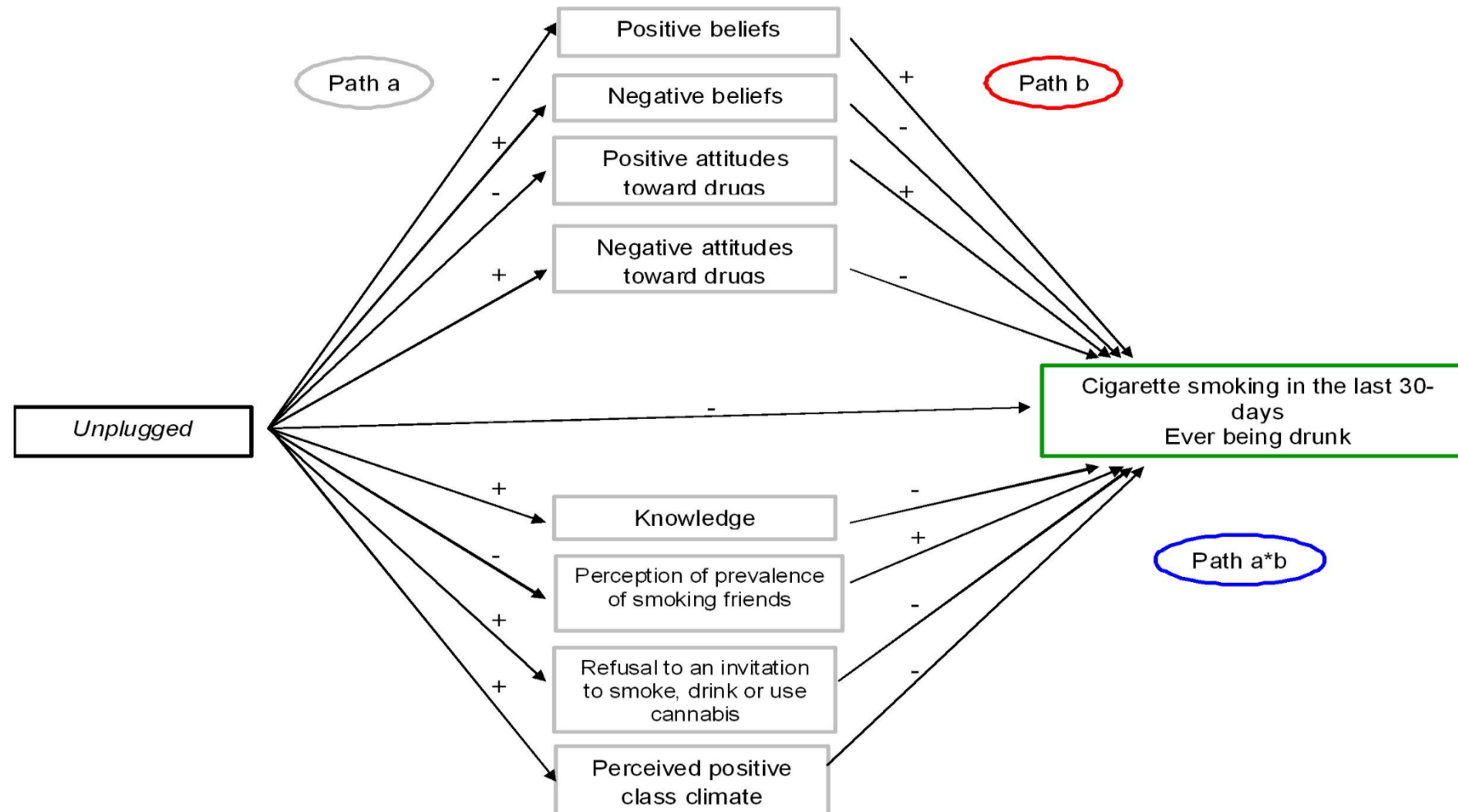
## 3. Scientific understanding

- The positive results of Unplugged raised several scientific questions:
  - mechanisms, mediators
  - factors affecting effectiveness
  - theoretical model
  - role of context

# Mechanisms of efficacy



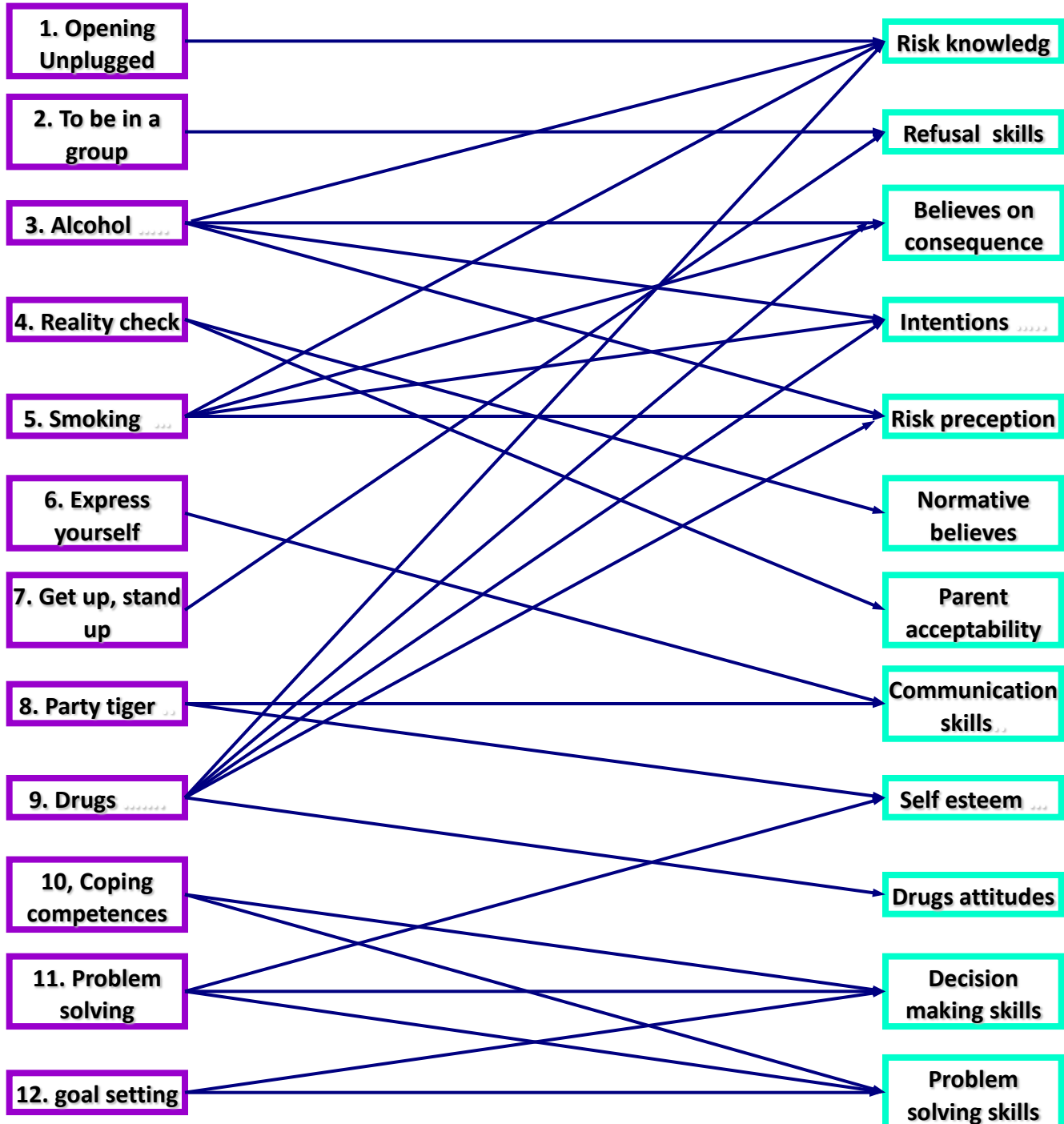
# The conceptual framework





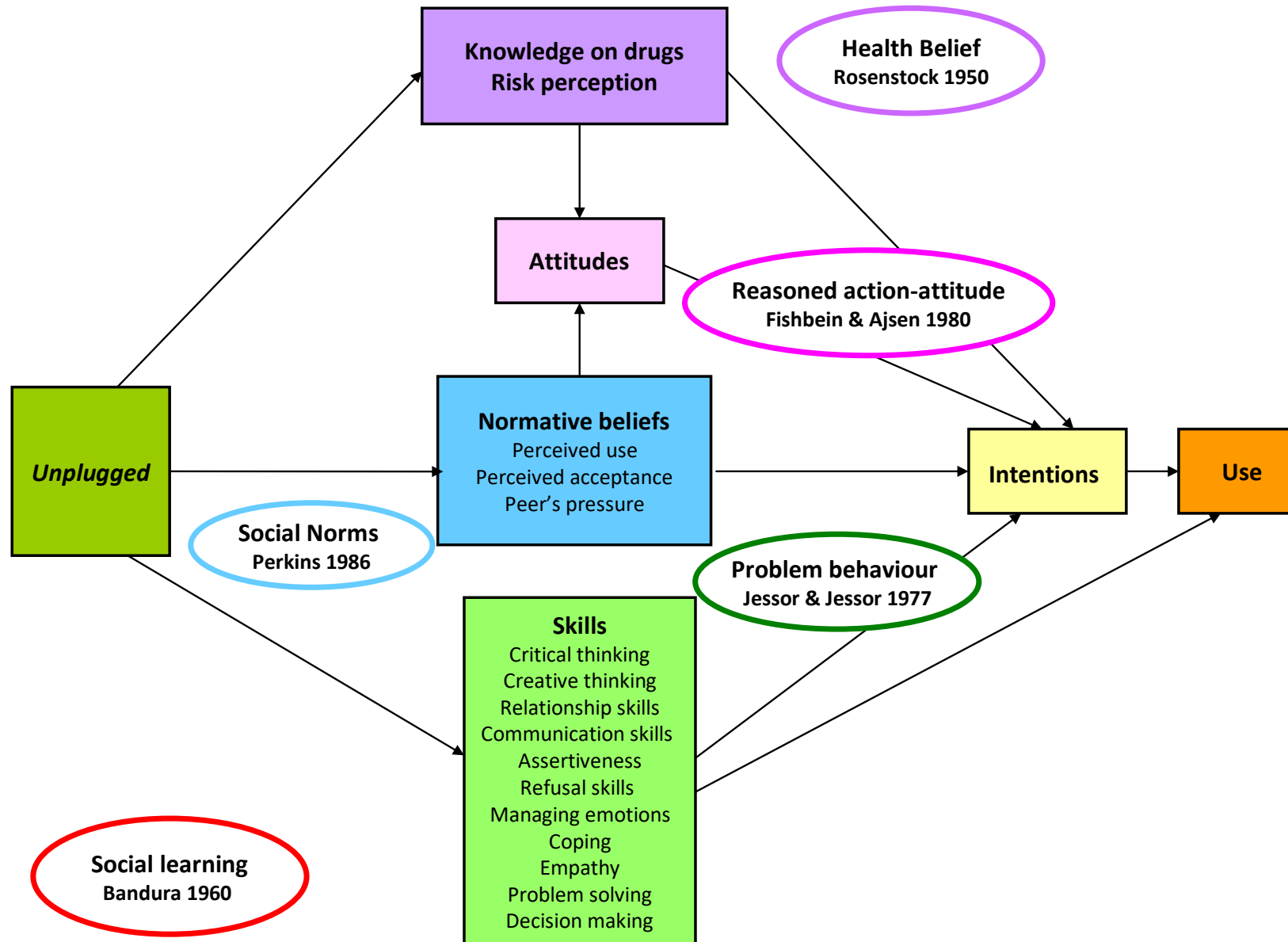
# The conceptual framework

## Components



## Mediators

# The theoretical model of Unplugged





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JOURNAL OF  
**ADOLESCENT  
HEALTH**

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[www.jahonline.org](http://www.jahonline.org)

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Original article

## Short-Term Mediating Factors of a School-Based Intervention to Prevent Youth Substance Use in Europe

Fabrizia Giannotta, Ph.D. <sup>a,\*</sup>, Federica Vigna-Taglianti, Ph.D. <sup>b,c</sup>, Maria Rosaria Galanti, M.D., Ph.D. <sup>d,e</sup>,  
Maria Scatigna, Ph.D. <sup>f</sup>, and Fabrizio Faggiano, M.D., Ph.D. <sup>c,g</sup>

## Original Article

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# The theoretical model of the school-based prevention programme *Unplugged*

Serena Vadrucci<sup>1</sup>, Federica D. Vigna-Taglianti<sup>1,2</sup>, Peer van der Kreeft<sup>3</sup>, Maro Vassara<sup>4</sup>, Maria Scatigna<sup>5</sup>, Fabrizio Faggiano<sup>6</sup>, Gregor Burkhardt<sup>7</sup> and the EU-Dap Study Group\*

# Factors affecting efficacy

## Age

- Unplugged was not effective

## Gender

- Unplugged is more effective

	12 years		13 years		14 years	
	n/N*	%	n/N*	%	n/N*	%
<b>ALO smoking</b>	153/2202	<b>6.9</b>	156/2082	<b>8.5</b>	719/2497	<b>28.8</b>
<b>Regular smoking</b>	85/2202	<b>3.9</b>	85/2082	<b>4.1</b>	477/2497	<b>19.1</b>
<b>Daily smoking</b>	48/2202	<b>2.2</b>	53/2082	<b>2.5</b>	331/2497	<b>13.3</b>
<b>ALO drunkenness</b>	88/2254	<b>3.9</b>	81/2132	<b>3.8</b>	295/2536	<b>11.6</b>
<b>Regular drunkenness</b>	30/2254	<b>1.3</b>	24/2132	<b>1.1</b>	93/2536	<b>3.7</b>
<b>ALO cannabis</b>	30/2273	<b>1.3</b>	21/2154	<b>1.0</b>	217/2576	<b>8.4</b>
<b>Regular cannabis</b>	16/2273	<b>0.7</b>	9/2154	<b>0.4</b>	136/2576	<b>5.3</b>
<b>ALO drugs</b>	76/2289	<b>3.3</b>	39/2170	<b>1.8</b>	267/2594	<b>10.3</b>

# Factors affecting efficacy

Age

- Unplugged was not effective

Gender

- Unplugged is more effective

BAS vs FUP1	Males		Females	
	Adjusted POR (95%CI)	Change	Adjusted POR (95%CI)	Change
ALO smoking	0.88 (0.66-1.18)	-12%	0.86 (0.65-1.15)	-14%
Regular smoking	<b>0.68 (0.50-0.93)</b>	<b>-32%</b>	1.07 (0.74-1.55)	+7%
Daily smoking	<b>0.49 (0.34-0.71)</b>	<b>-51%</b>	0.99 (0.64-1.52)	-1%
ALO drunkenness	<b>0.64 (0.49-0.85)</b>	<b>-36%</b>	0.86 (0.63-1.18)	-14%
Regular drunkenness	0.68 (0.45-1.04)	-32%	0.66 (0.37-1.18)	-34%
ALO cannabis	<b>0.62 (0.45-0.85)</b>	<b>-38%</b>	1.05 (0.70-1.58)	+5%
Regular cannabis	<b>0.60 (0.40-0.91)</b>	<b>-40%</b>	1.17 (0.59-2.33)	+17%

# Factors affecting efficacy

## Age

- Unplugged was not effective at 12 years

## Gender

- Unplugged is more effective among males

## Socio economic status

- Unplugged seems to be more effective among low SES strata

# Role of context

- The EUDAP study included 7 countries, but the statistical power did not allow for centre analysis
- Nevertheless, there were differences in results:
  - Nordic centres (Swedish, Germany) showed lower effects
  - Southern countries (Spain, Italy, Greece and Austria) showed stronger effects
- The explanation is that in Nordic centres the control schools were involved in many other programs possibly E-B



# Role of context

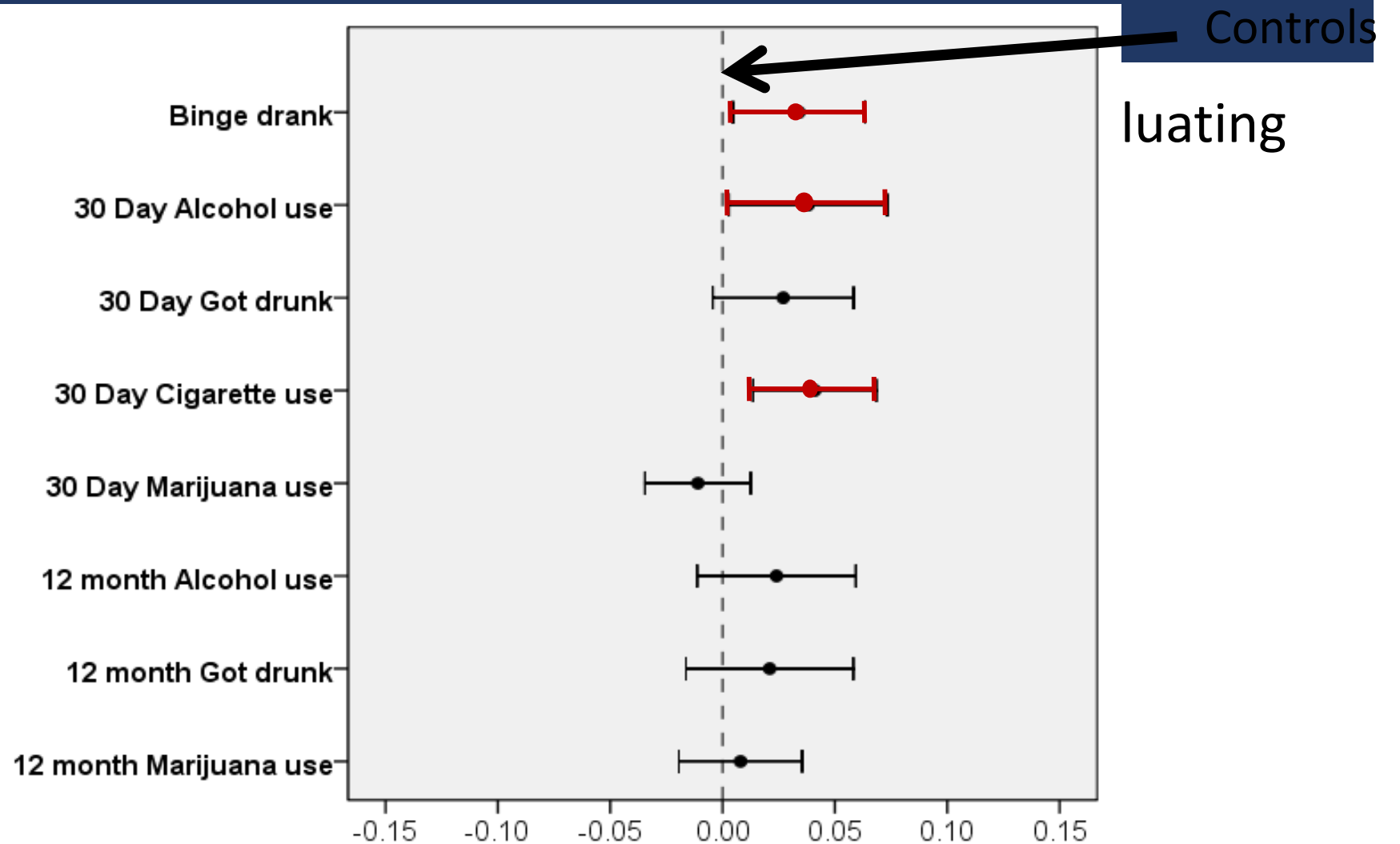
- Several replications of the evaluation have been conducted
- They could help in defining the role of context. But the quality of the experimental design was not always strong and would need a Cochrane approach to summarise data

# Evaluations and replications

Year	Country	Mean age	Baseline participants	Study design	Reference
2004-07	EUROPE	13	7079	cluster RCT	Faggiano 2008 Faggiano 2010
2007-08	Czech Republic	12	1874	cluster RCT	Gabrhelik 2012
2009-12	EAST EUROPE	12,5	7494	cluster RCT	unpublished
2010-11	MIDDLE EAST AND NORTH AFRICA		849 Lebanon	cluster RCT	
2014-16	Brasil	12.5	6658	cluster RCT	Sanchez 2017 Valente 2020
2015-16	Nigeria	14	4078	cluster RCT	Vigna-Taglianti 2021 Vigna-Taglianti 2023
2019	Brasil	13	5208	cluster RCT	Sanchez 2020

# Role of context

- In 2010 the N  
the effectiveness



# Role of context

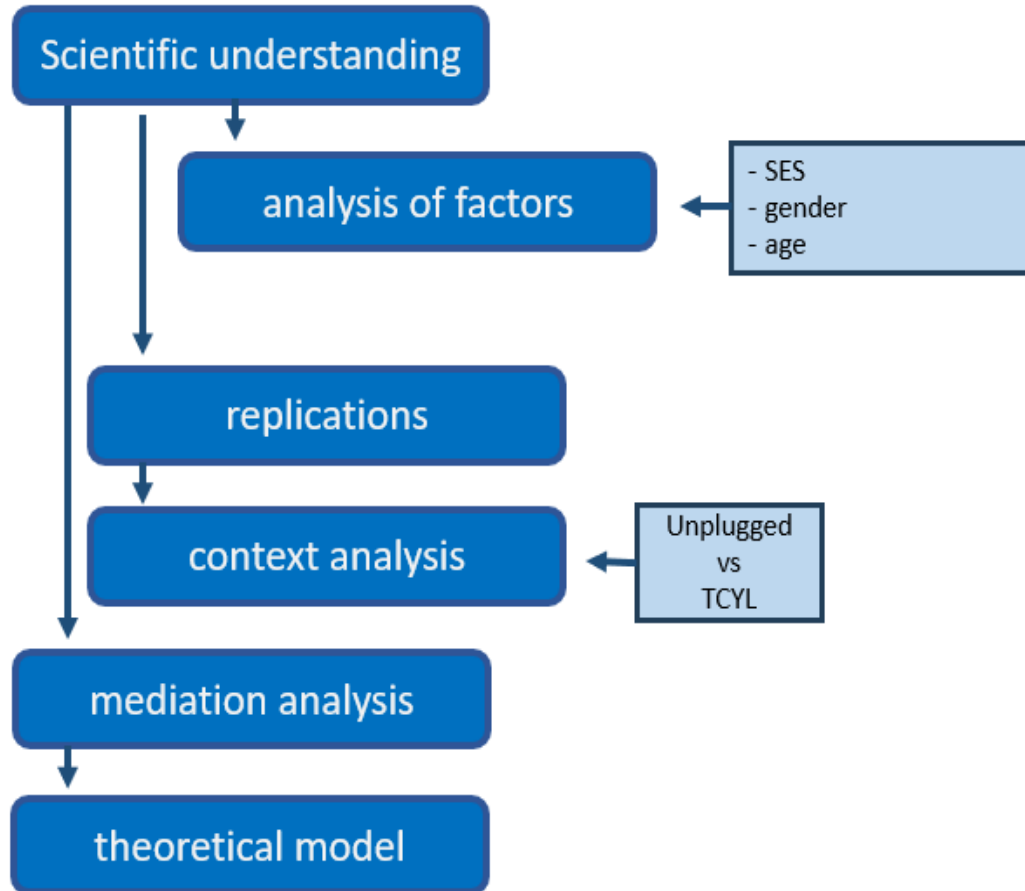
- With the support of NIDA and EMCDDA, the two teams wrote a project to search the reasons for the differences between Unplugged and TCYL

Table 1. Differences in Program Characteristics: Assessments of Unplugged and TCYL

Indicator	Unplugged	TCYL
Deliverers	Teachers	External educators (police officers)
Program delivering setting	Integrated in regular curriculum	Ad hoc lessons during school time
Booster sessions	No	Yes
Interactivity (% of hours clearly devoted to interactive work in the handbook divided by the total amount of work)	77.50	62.59
Main components (% of time clearly devoted to cited skills in the handbook divided by the total amount of work)		
Knowledge about substances and related harms (% of hours)	15.56	15.22
Refusal skills (% of hours)	7.38	8.72
Intentions (% of hours)	4.58	5.80
Risk Perception (% of hours)	9.32	9.27
Normative Beliefs (% of hours)	8.03	8.43
Expectations (% of hours)	6.04	8.04
Communications skills (% of hours)	10.04	7.75
Self-esteem and Self-efficacy (% of hours)	6.56	1.95
Drug Attitudes (% of hours)	4.77	6.27
Assertiveness (% of hours)	8.64	8.64
Problem solving (% of hours)	7.86	10.63
Decision Making (% of hours)	7.50	8.45
Total of main components (%)	96.25	99.18

- The main r

# Scientific understanding: conclusions



EUDAP gave some contributions to the prevention science (mechanisms and mediators, effect of different factors, role of context) but there are many other elements to be discovered in the functioning of prevention interventions

At least 30 scientific papers have been published from 2006 to 2023

# Lessons learnt

1. The lack of a system for the selection, dissemination and monitoring of prevention intervention is the biggest structural problem
2. School programs can have a role in reducing the burden of the exposure to risk factors, but this requires a strong attention in selection and implementation of programs
3. The role of context is probably overestimated, but requires more evidence
4. The evaluation research in prevention is highly complex and would require large investments in funding and humans