

VALUTARE L'EFFICACIA DEGLI INTERVENTI: IL CONTRIBUTO DEL  
COCHRANE DRUGS AND ALCOHOL GROUP

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**Uncertainties and gaps in  
knowledge about the  
effectiveness of interventions for  
addictions: research  
perspectives**

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# Objectives

- To try to answer to the mandate using different strategies:
  - from literature search
  - to personal (my) opinion

# 1. Litterature search

## Materials & methods

### MEDLINE Search

#### 1. Randomised Controlled Trials

"Substance-Related Disorders"[Mesh] AND Randomized Controlled Trial[ptyp]) AND (("1993"[EDAT] : "2007"[EDAT])

- “opioid related disorders”
- “cocaine-related disorders”
- “amphetamine-related disorders”
- “alcohol-related disorders”
- “marijuana abuse”

# 1. Literature search

## 2. Randomised Controlled Trials on Prevention

"Substance-Related Disorders/prevention and control"[Mesh] AND Randomized Controlled Trial[ptyp])  
AND (("1993"[EDAT] : "2007"[EDAT])

- “alcohol-related disorders/prevention and control”

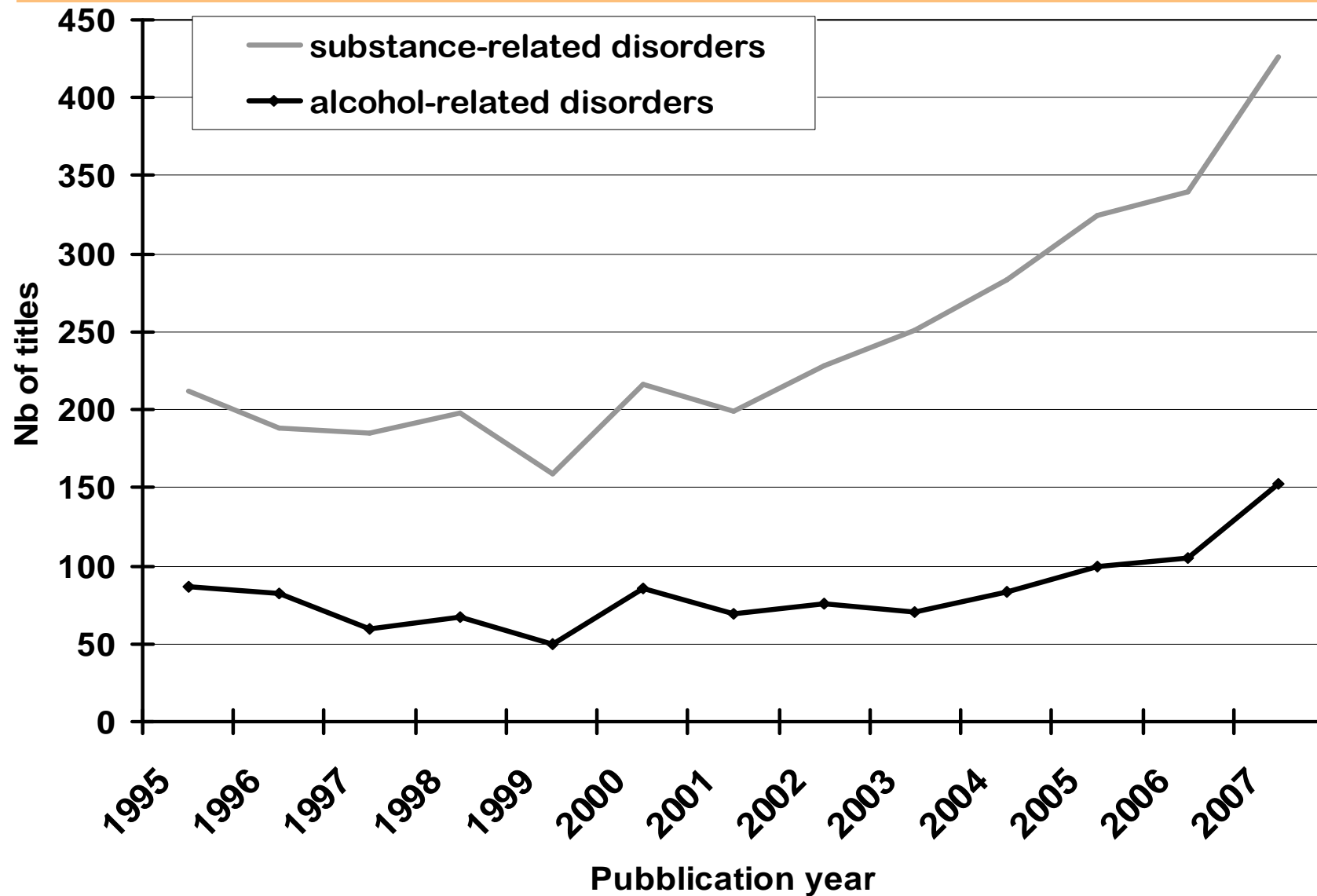
# 1. Literature search

## 3. Systematic reviews

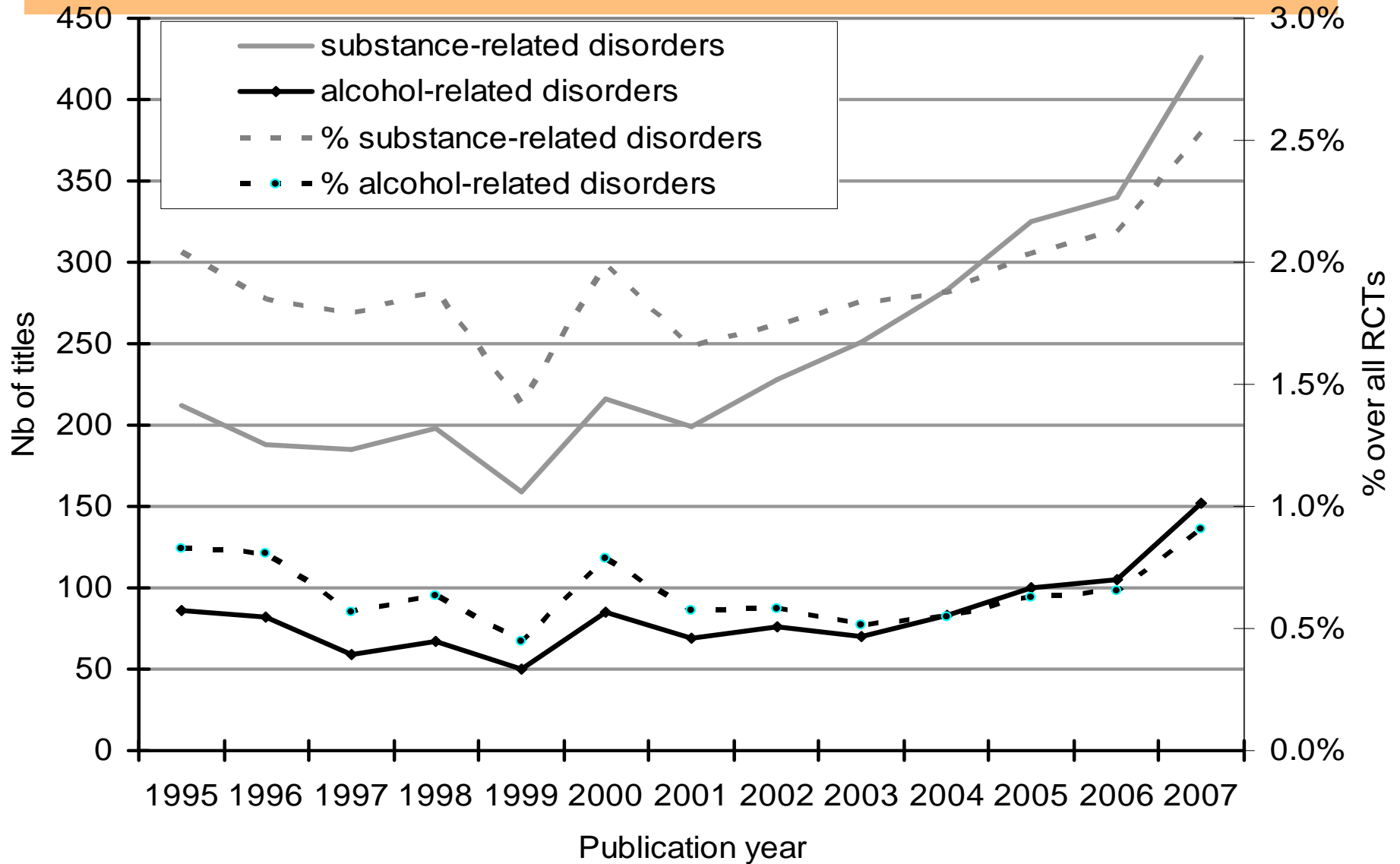
"Substance-Related Disorders[Mesh]" AND (Meta-Analysis[ptyp] OR Review[ptyp])) AND "Randomized Controlled Trials as Topic"[Mesh] AND (("1993"[EDAT] : "2007"[EDAT])

- Alcohol-related disorders

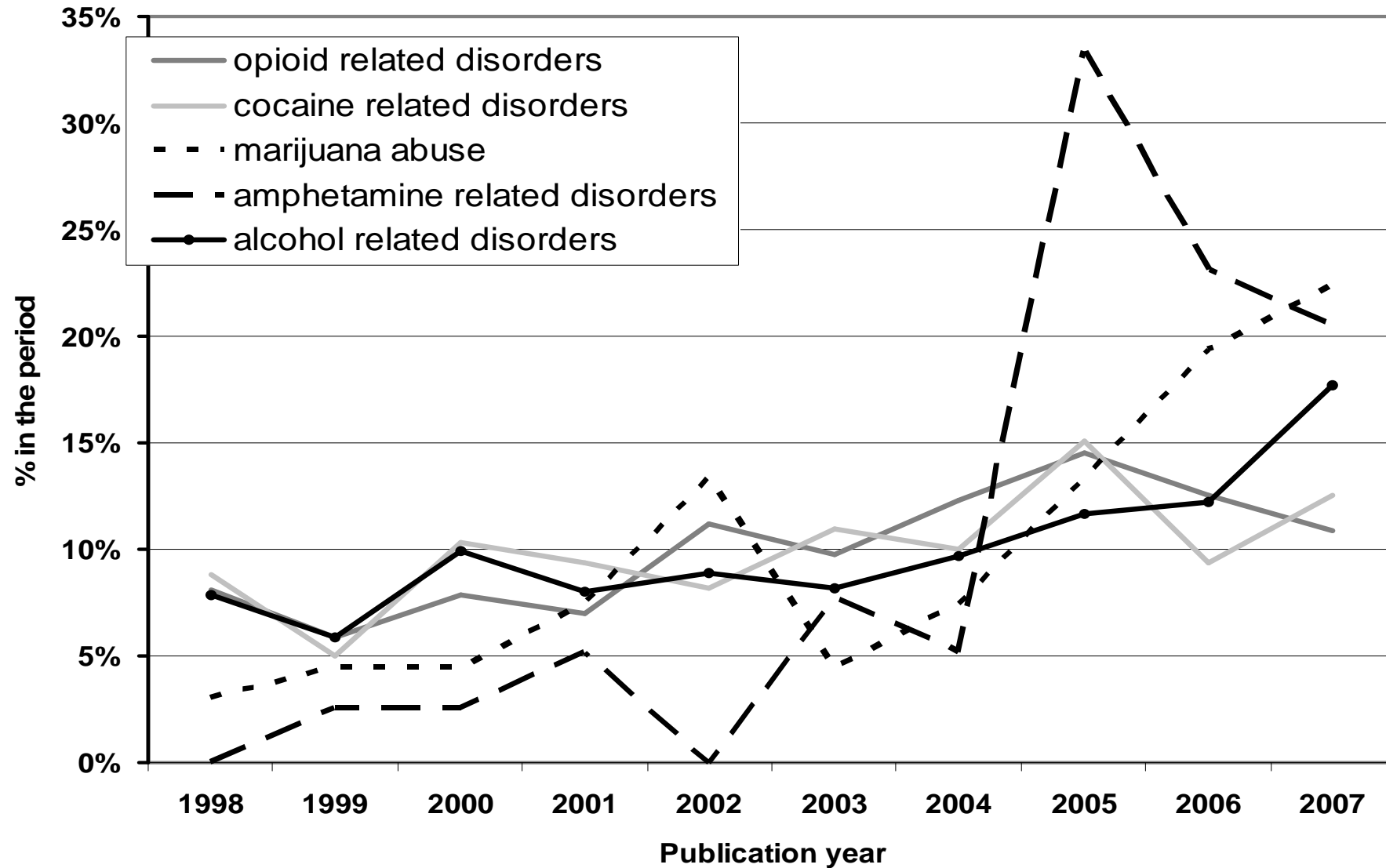
# Time trends in published RCTs



# Time trends in relation to all RCTs

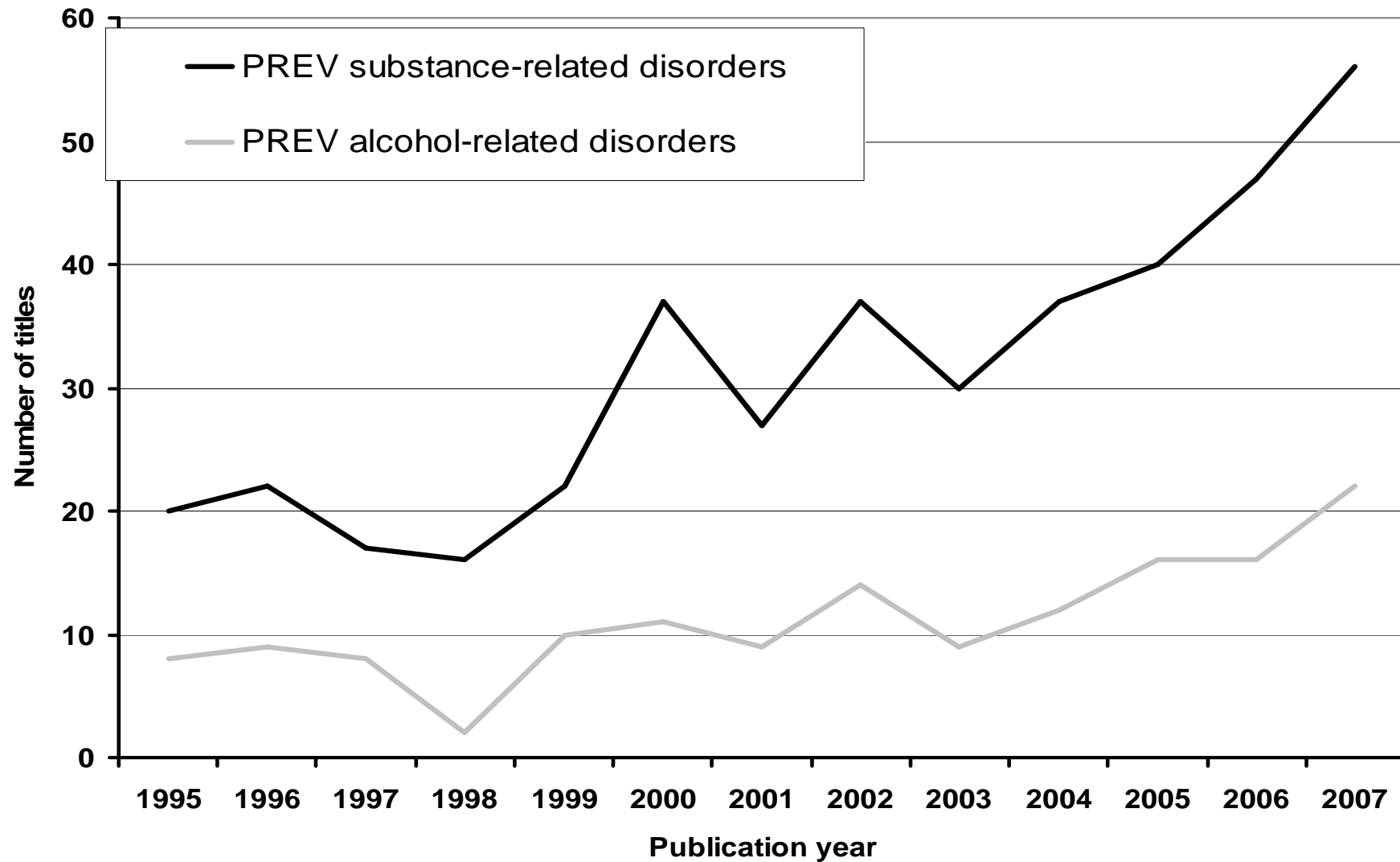


# Internal time trends

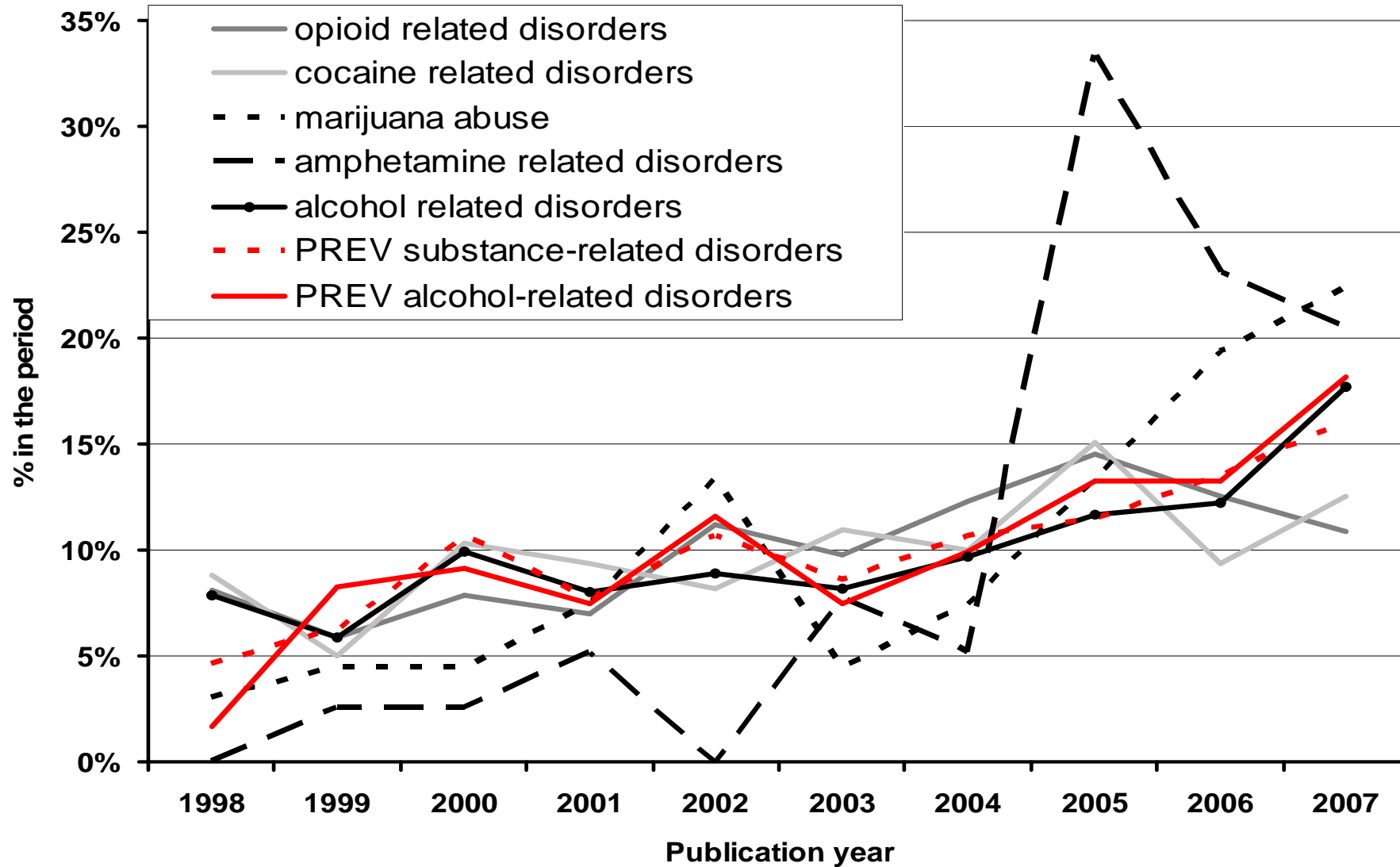




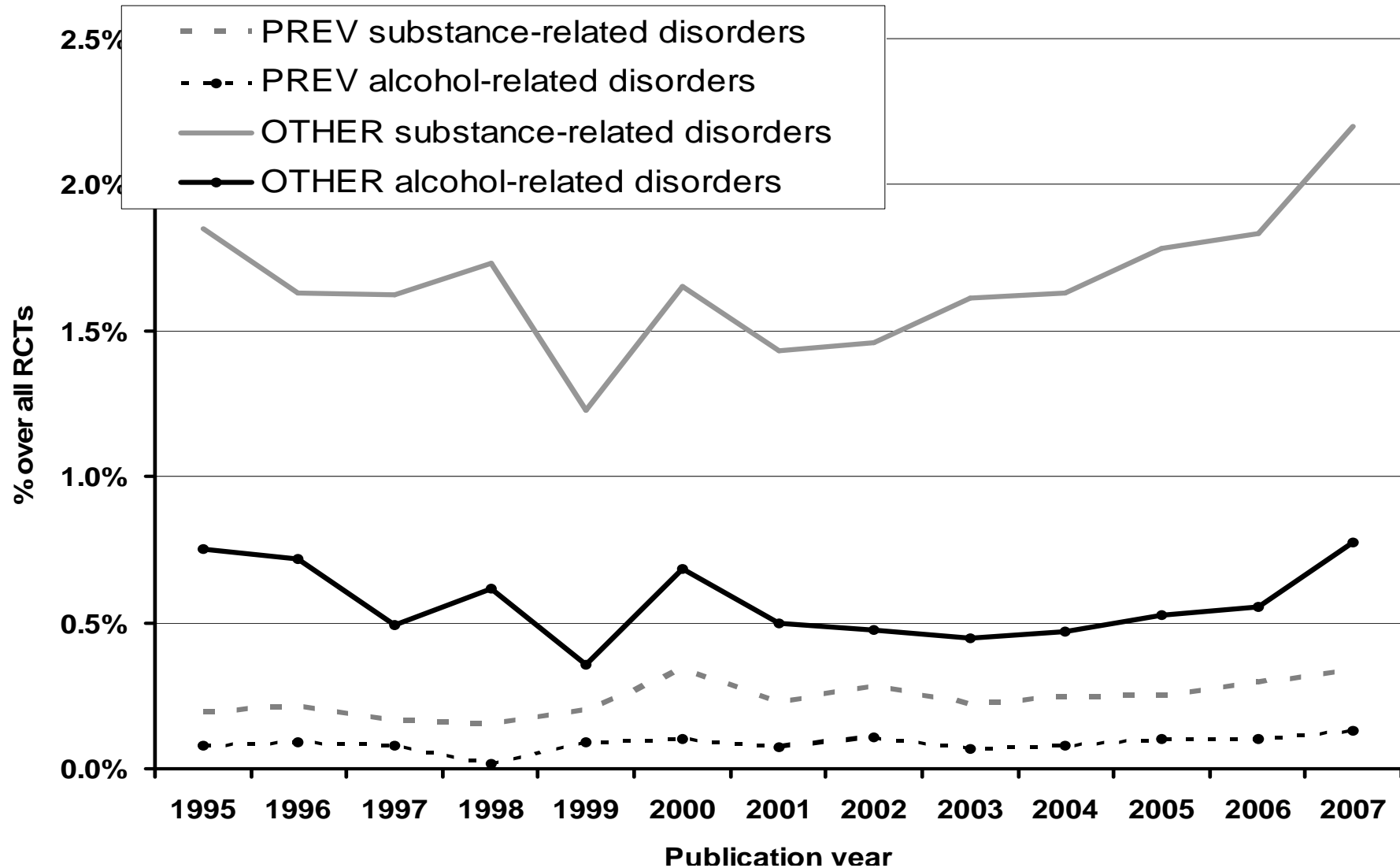
# RCTs of prevention interventions



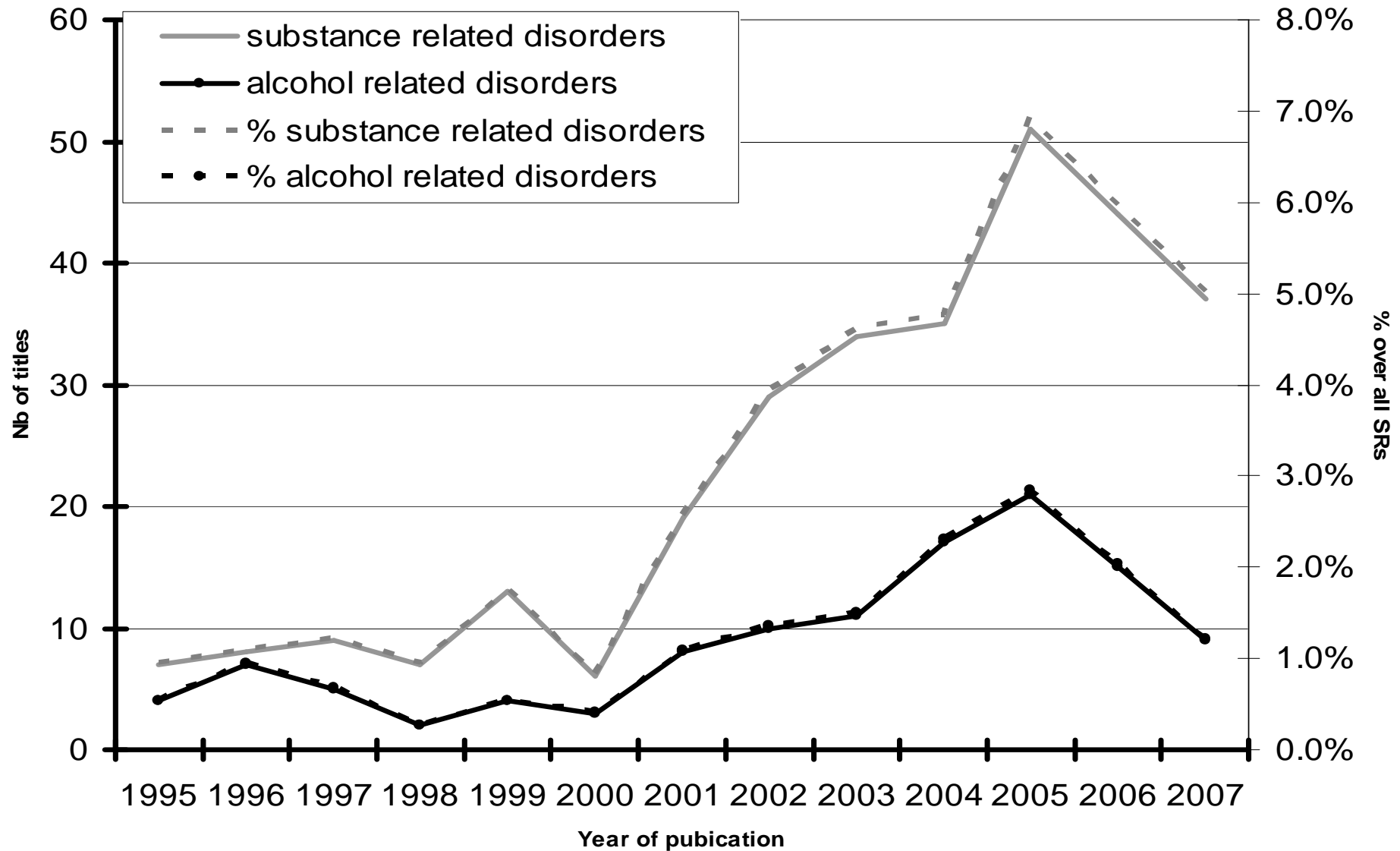
# RCTs of prevention interventions



# Prevention RCTs vs other



# Systematic reviews



# Preliminary conclusions - 1

- Evaluation of substance abuse treatments is increasing over time
  - both for primary research and systematic reviews
  - treatments more than prevention

## 2. Litterature debates

Materials & methods

MEDLINE Search

"Ethics, Research"[Mesh] OR ("Research"[Mesh]  
OR "Health Services Research"[Mesh] OR  
"Research Support as Topic"[Mesh])

AND

"Substance-Related Disorders"[Mesh]

limits

past 10 years, Reviews, editorials etc

## 2. Litterature debates

### Results

- 377 titles
- 5 relevants
- 1 on Regression to the mean
  - “in particular, the tendency for later studies of a particular intervention to have smaller treatment effect sizes relative to earlier studies”
- 4 on publication bias in primary prevention

## Preliminary conclusions - 2

- Evaluation of substance abuse treatments is increasing over time
  - both for primary research and systematic reviews
  - treatments more than prevention
- The scientific debate about priorities of research is very poor



# 3. Survey on priorities

## Materials & methods

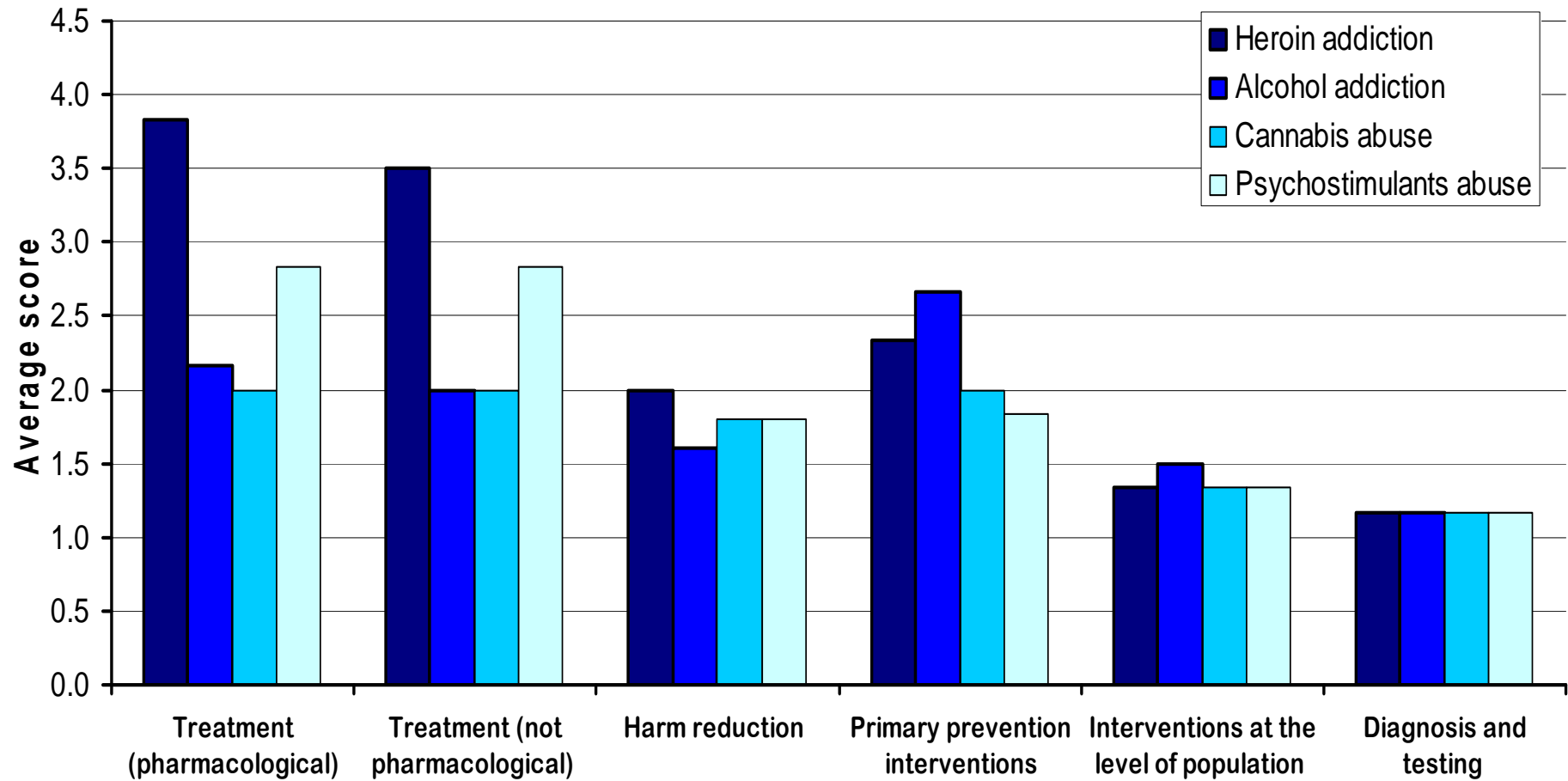
- A questionnaire circulated in past weeks among a restricted group of international opinion leaders
- $n=?$  (hidden population!)
- respondents= 50%

# 3. Survey on priorities

## Questions of the questionnaire

1. Areas adequately covered by CDAG
  - agreement on a list of 30 statements
2. Priority subjects for primary research
  - a list of various subjects
  - to be ordered by priority

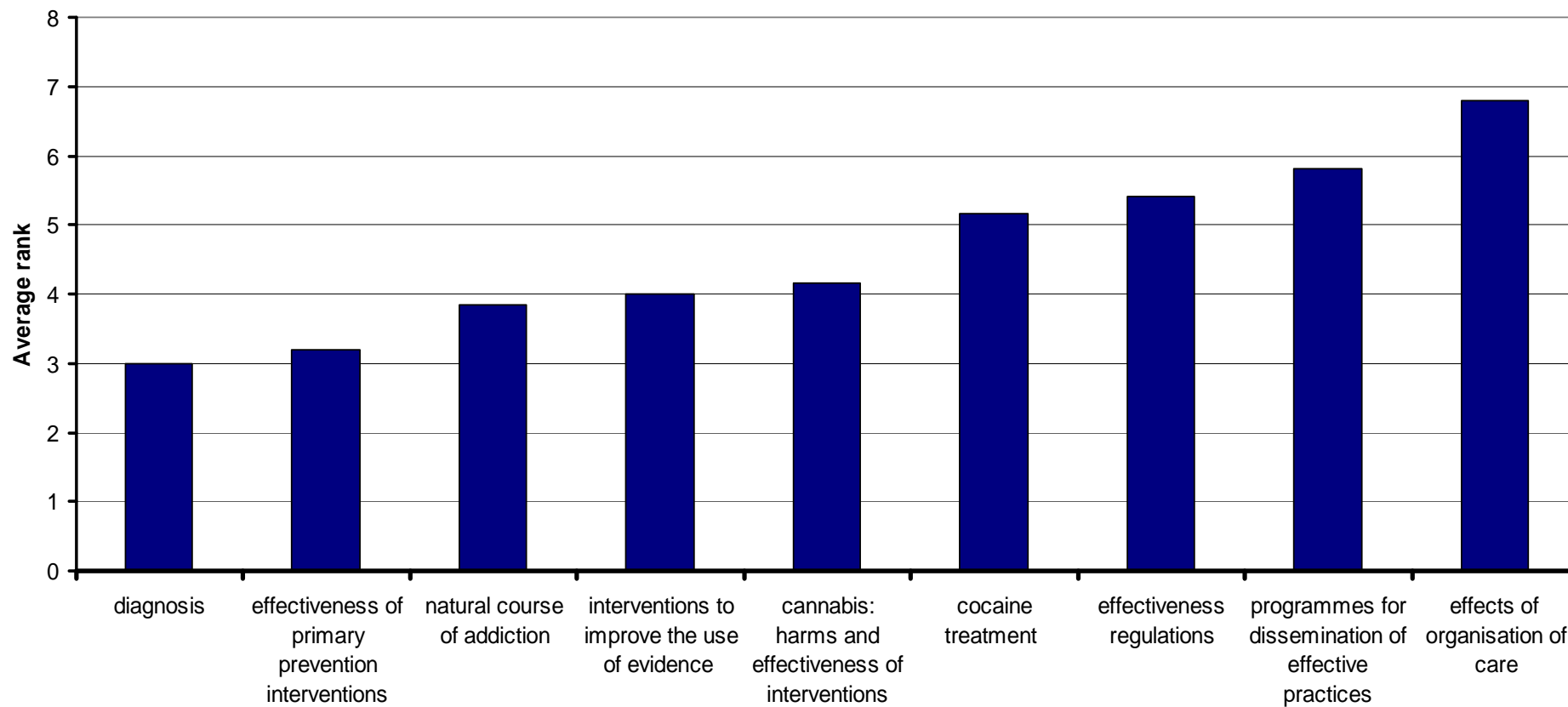
# Areas adequately covered by CDAG



# List of subjects for primary research

- diagnosis: reliability of tests and diagnostic criteria...
- natural course of addiction: factors affecting use, addiction, recovery...
- effectiveness of national/international regulations
- effects of choice of different organisation of care
- programmes for the dissemination of effective practices
- cocaine treatment effectiveness
- harms of cannabis use, effectiveness of interventions
- effectiveness of primary prevention interventions
- interventions to improve the use of evidence at the national/international level

# Results



## Preliminary conclusions - 3

- Evaluation of substance abuse treatments is increasing over time
  - both for primary research and systematic reviews
  - treatments more than prevention
- The scientific debate about priorities of research is very poor
- Diagnoses and testing, together with prevention, are main areas uncovered by CDAG
- Diagnoses, primary prevention and natural course are the priorities for research

## 4. Personal view

### Treatment:

- Evidence is satisfactory
- Primary research is needed, yet, but it is drawn by the industry

### Prevention

- evidence is poor
  - interventions on adolescent showed RR~0.70
    - but results are flawed because
      - mainly from USA
      - studies need complex design and large sample size
      - no sponsors!



Contents lists available at ScienceDirect

## Preventive Medicine

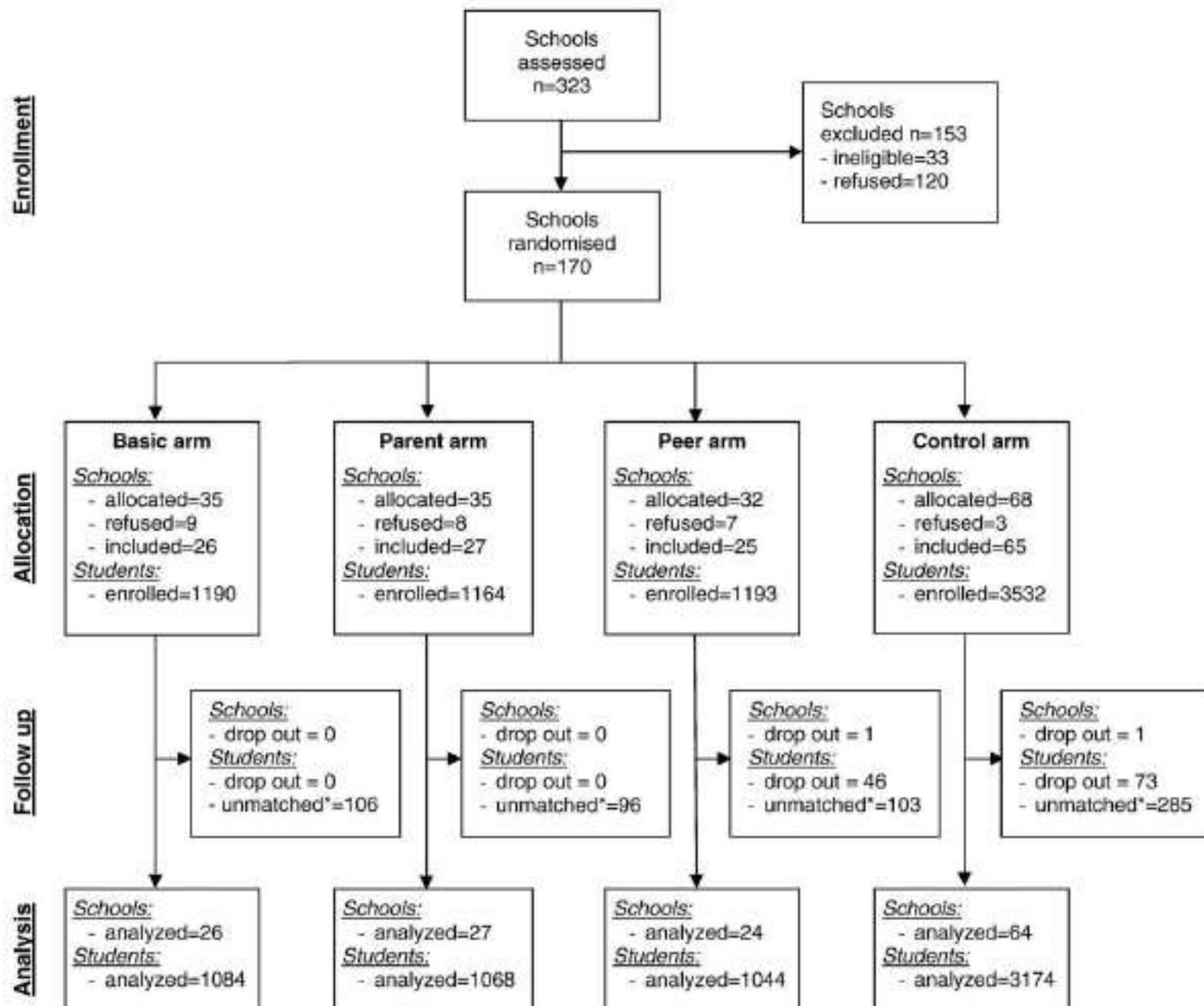
journal homepage: [www.elsevier.com/locate/ypmed](http://www.elsevier.com/locate/ypmed)



### The effectiveness of a school-based substance abuse prevention program: EU-Dap cluster randomised controlled trial<sup>☆</sup>

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





## 4. Personal view

### Prevention

- evidence is poor
  - interventions on adolescent showed RR~0.70
    - but results of evaluations are weak because
      - mainly from USA
      - studies need complex design and large sample size
      - no sponsors!
  - evidence on the role of social influence is growing

# Role of movies on smoking onset

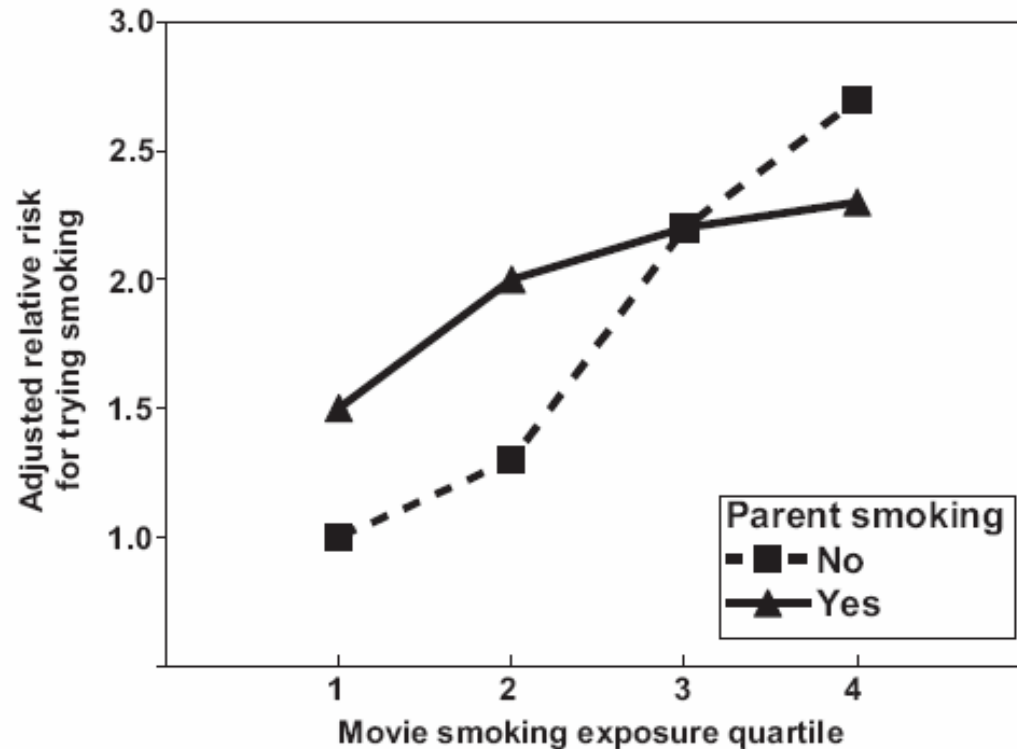


FIGURE 1

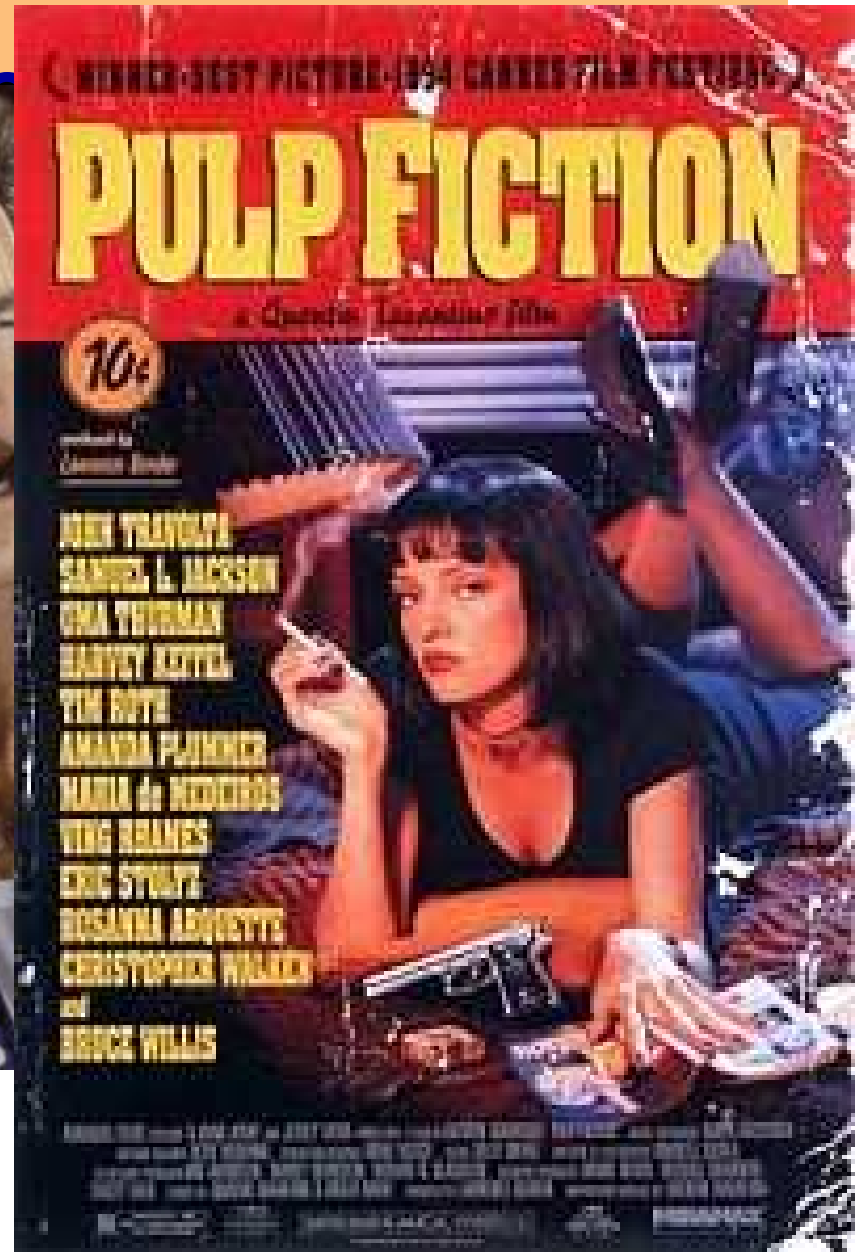
Effect modification, with response to movie smoking being significantly greater ( $P < .01$ ) for adolescents whose parents do not smoke. The reference category in the multivariate interaction model is adolescents who were in quartile 1 for movie smoking exposure and whose parents did not smoke; the model also controlled for all covariates mentioned in Table 2.

# Role of movies on alcohol use



**Figure 3** Lowess smoothed curve showing the association between exposure to movie alcohol use and alcohol use without parental knowledge and binge drinking

Just look at the



Sylvester Stallone

3

April 28, 1983

Mr. Bob Kovoloff  
ASSOCIATED FILM PROMOTION  
10100 Santa Monica Blvd.  
Los Angeles, CA 90067

Dear Bob:

As discussed, I guarantee that I will use Brown & Williamson tobacco products in no less than five feature films.

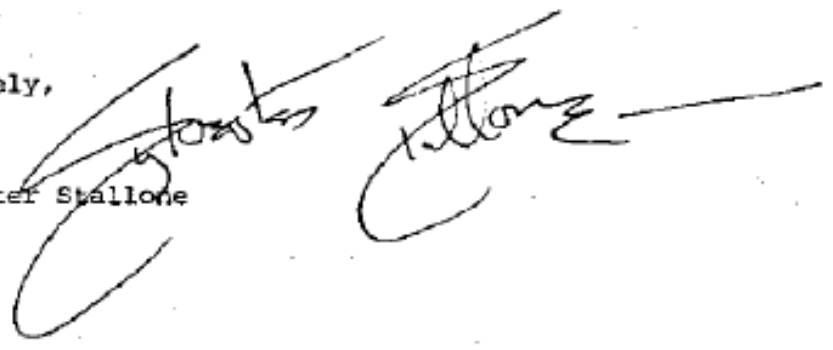
It is my understanding that Brown & Williamson will pay a fee of \$500,000.00.

Hoping to hear from you soon;

Sincerely,

Sylvester Stallone

SS/sp



## 4. Personal view

### Prevention

- evidence is poor
  - interventions on adolescent showed RR~0.70
    - but results of evaluations are weak because
      - mainly from USA
      - studies need complex design and large sample size
      - no sponsors!
  - evidence on the role of social influence is growing
    - research on most promising intervention is lacking
    - EBM rules are inadequate for interventions at the level of population
    - and subsequently: publication bias

# American National Youth Anti-drug Media Campaign

- planned by the National Drug Control Policy (ONDCP)
- funded in 1997 by the United States Congress with \$1.5 billion dollars
- main objective: “to educate and enable America’s youth to reject illegal drugs as well as alcohol and tobacco”
- alcohol and tobacco were omitted from the main focus of the campaign
- televised antidrug public service announcements (PSAs) broadcasted 1998-2004



# American National Youth Anti-drug Media Campaign

- Evaluation (published in 2004) providing **evidence of positive effect in relation to marijuana use**, and shows some indications of a negative effect.

- Some intermediate outcomes (parents talking with children about drugs and doing fun activities with their children) showed positive results.

- **12 month use of marijuana appeared significantly increased by 2.5% among 14-18 years** (Orwin 2006).

- post-2002 results: statistically significant **increase** in rates of **marijuana use initiation** among youth who were prior nonusers (2000 to 2004 change 2.1%)

Number of titles in Medline=1 (2000)

# Final conclusions


- Different points of view pointed out that the main priorities for primary research are:
  - diagnosis and testing
  - primary prevention

# Main topics of reviews published by CDAG

	Treatments main	Treatments other	Prevention
Heroin	14+3	4	2
Cocaine	5+3	1	2
Amphetamine	2+3	1	2
Cannabis	1+3	0	2
Other drugs	1+3	0	2
All drugs	26	6	2
Alcohol	6	1	1
All SR	32	7	3


# Final conclusions

- Different point of views pointed out that the main priorities for primary research are:
  - diagnosis and testing
  - primary prevention
- Priorities for systematic reviews appears to be
  - prevention
  - associated treatments
  - alcohol treatment

- 
- any field of scientific inquiry is defined first by a process of initial discovery and then by increasing specificity (McLellan)

- *3.8.1 Need for further primary research*
- Cochrane reviews include a section on implication for research in which the Authors provide their suggestions on how to improve the quality or respond to gaps in primary research. In an effort to summarize these implications a scale developed by Clarke 2007 was used (Clarke et al, 2007) and the results show that of the published reviews 74% report about specific type of interventions and outcomes that should be prioritized in future studies., 5% concluded that no more research was needed, 21% did not make any recommendation regarding future research.
- *3.8.1 Need for further systematic reviews*
- Ten years after commencing the Cochrane Drugs and Alcohol Group, about one third of all known RCTs and CCTs have been considered for inclusion in the published systematic reviews, and eventually only 10% have actually been included. There is substantial material available for conducting further systematic reviews. A list of topics was analysed that have not been covered by the published reviews and were matched with an estimate of available studies identified through the Group's search strategy. The rank ordered list of top ten priority reviews is available at the web site of the Group ([www.cdag.cochrane.org](http://www.cdag.cochrane.org)). (see Appendix 2). These top priority reviews should consider, amongst other things, the effectiveness of pharmacological interventions for cocaine, psychostimulants and poly drug dependence

<b>Substance of abuse</b>	<b># reviews</b>	<b>Total studies considered</b>	<b>% of Included studies</b>	<b>AC** A</b>	<b>AC** B</b>	<b>AC** C</b>	<b>AC** D</b>
<b>Opioid*</b>	<b>18</b>	<b>709</b>	<b>32%</b>	<b>31</b>	<b>121*</b>	<b>23*</b>	<b>53</b>
<b>Alcohol</b>	<b>7</b>	<b>365</b>	<b>42%</b>	<b>26</b>	<b>109</b>	<b>20</b>	<b>0</b>
<b>Cocaine*</b>	<b>6</b>	<b>185</b>	<b>47%</b>	<b>21</b>	<b>63</b>	<b>3</b>	<b>0</b>
<b>Amphetamines</b>	<b>3</b>	<b>14</b>	<b>50%</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>0</b>
<b>Other</b>	<b>3</b>	<b>74</b>	<b>19%</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Poly drugs*</b>	<b>4</b>	<b>146</b>	<b>30%</b>	<b>3</b>	<b>37</b>	<b>4</b>	<b>0</b>
<b>Prevention</b>	<b>3</b>	<b>220</b>	<b>41%</b>	<b>1</b>	<b>71</b>	<b>0</b>	<b>19</b>
<b>Total*</b>	<b>44</b>	<b>1708</b>	<b>36%</b>	<b>97</b>	<b>403</b>	<b>49</b>	<b>72</b>

- 
- The 44 reviews published by the Group, considered 1708 trials for inclusion, of which 621 (36%) satisfied quality criteria for inclusion (Table 1). The main reasons for exclusion were: study design (42%), type of intervention (28%), outcomes considered or reported (16 %) and type of participants (9%).