

**A Bibliometric Analysis of European versus USA
Research in the Field of Addiction
Research on Alcohol, Narcotics, Prescription Drug Abuse,
Tobacco and Steroids 2001–2011**

Eur Addict Res 2014;20:16–22

Jørgen G. Bramness, University Oslo (writing)

Beate Henriksen, Norwegian Institute of Alcohol and Drug Research (database search)

Olle Person, Umeå University (search strategy)

Karl Mann, University Heidelberg (writing)



Introduction I:

Why compare USA and Europe?

- NIDA budget > 1 billion USD
 - "finances 85 % of the worlds drug research"
- NIAAA > 0.5 billion USD
- EUFAS strategy to increase the financing of EU drug and alcohol research in Horizon 2020

- Special features in Sweden and Norway

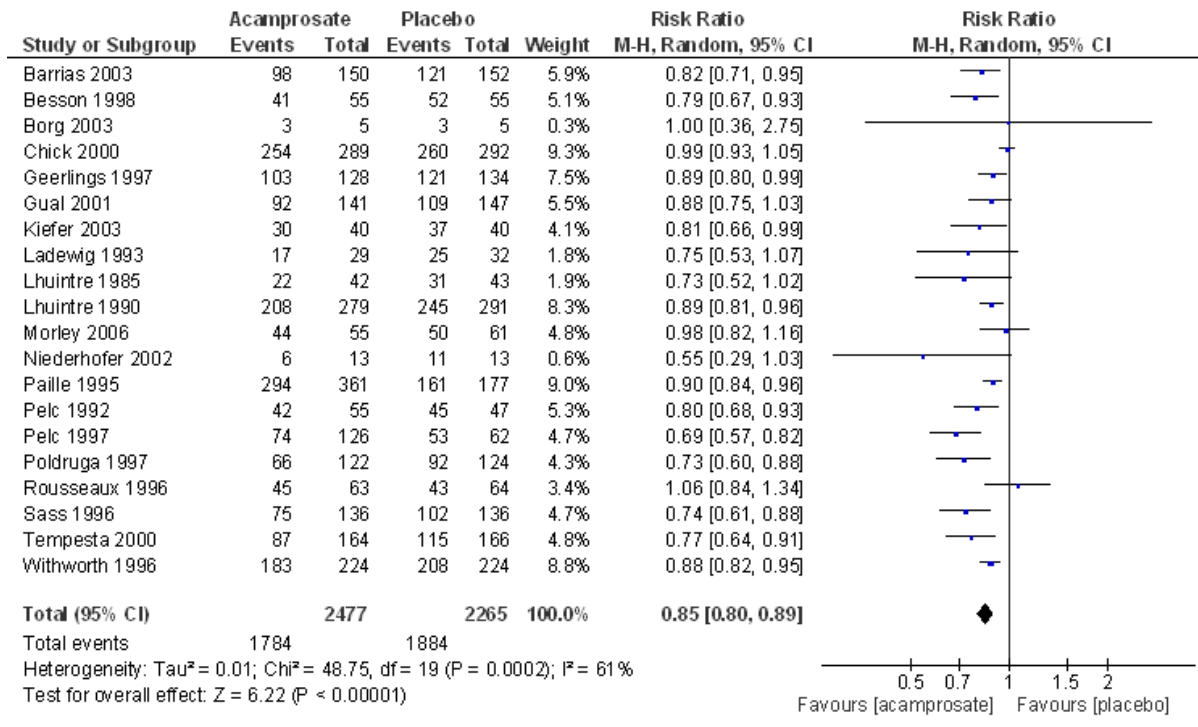
Introduction II:

Why drug and alcohol research in Europe?

- Research has sought after side effects
 - best treatment (how to view evidence)
 - scientific knowledge
 - status of the field
- Preclinical results, but not clinical results may be exported
 - differences between countries, regions, systems, traditions, genetics

Acamprosate: US vs. Europe results of clinical trials (Rösner et al 2011)

European studies



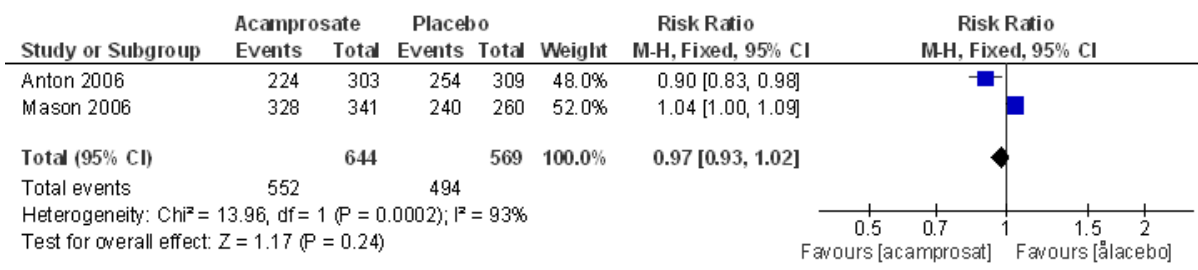
A result of RCT meta-analysis phenomena:

- Newer vs. older studies
- Smaller vs. larger studies
- Heterogeneity of studies

A result of real transatlantic differences:

- Inclusion
- Drop out
- System specific differences

US studies



Introduction III:

Bibliometric analysis as a tool

- Number of papers
 - surrogate/proxy quantity of research
- Number of citations
 - surrogate/proxy quality of research
- Shortcomings
 - low sensitivity
 - questionable specificity
 - OK for comparisons over time and between locations

RESEARCH REPORT

European Union scientific production on alcohol and drug misuse (1976–2000)

Addiction, 100, 1166–1174

Xavier Sánchez-Carbonell¹, Elena Guardiola^{1,2}, Ana Bellés¹ & Marta Beranuy¹

Facultat de Psicologia, Ciències de l'Educació i de l'Esport Blanquerna, Universitat Ramon Llull, Barcelona, Spain¹ and Unit of Medical Information and Documentation, R&D Department, Química Farmacèutica Bayer, Barcelona, Spain²

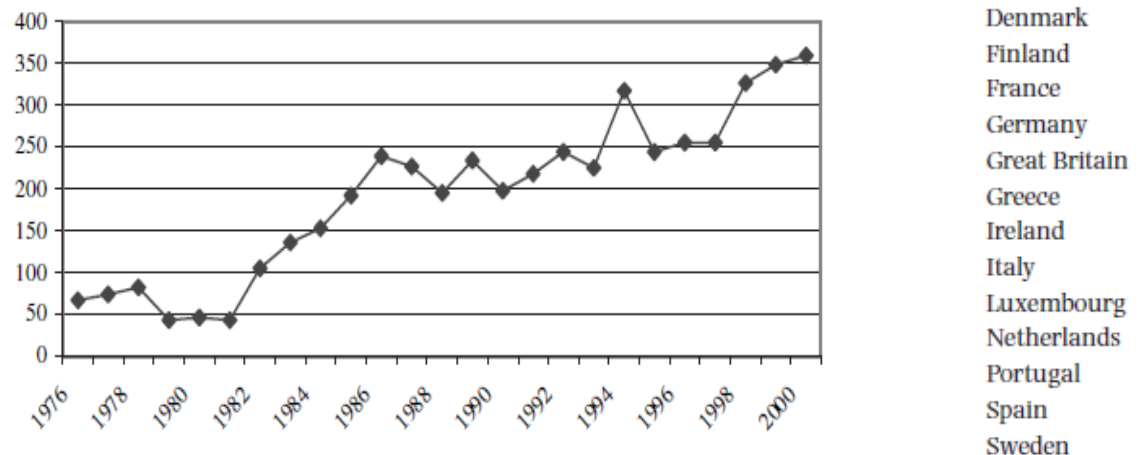


Figure 2 European Union articles on drug and alcohol misuse indexed in PsycINFO 1976–2000

Material and methods

- January 2001 - December 2011
- *Thomson Reuters (formerly ISI) Web of Knowledge*
- Denmark, England, Finland, France, Germany, Italy, the Netherlands, Norway, Spain, Sweden, and the USA
- Substances
 - *alcohol*: alcohol, beer, drink, ethanol, liquor, wine
 - *illicit drugs*: buprenorphine, amphetamine, cannabinal, cannabis, cocaine, codeine, heroin, LSD, mescaline, methadone, methamphetamine, morphine, narco, opiate, opioid, PCP, THC
 - *medicinal drugs*: amphetamine, barbiturates, benzodiazepines, buprenorphine, codeine, methadone, morphine, opiate, opioid, prescri, tramadol;
 - *steroids*: steroid
 - *tobacco*: nicotine, smok, snuff, tobac.
- Outcomes
 - Number of papers
 - Relative number of papers
 - Number of citations

Table 1. Absolute number of papers and relative number of papers per million inhabitants in 10 European countries and the USA in the field of addiction research 2001–2011

	Absolute number of papers		Relative number of papers	
	total number of papers	average increase in number of papers per year (95% CI)	total number of papers per million inhabitants	average increase in relative number of papers per year (95% CI)
Denmark	450	6.2 (4.5–8.1)	81.8	1.14 (0.82–1.47)
England	3,368	26.7 (20.5–32.9)	67.4	0.53 (0.41–0.66)
Finland	769	2.5 (0.2–4.9)	142.4	0.47 (0.03–0.90)
France	1,055	8.4 (4.6–12.2)	16.7	0.13 (0.07–0.19)
Germany	2,273	14.5 (10.3–18.7)	27.7	0.18 (0.13–0.23)
Italy	903	7.8 (5.0–10.6)	15.1	0.13 (0.08–0.18)
Netherlands	1,407	15.2 (10.6–19.8)	82.8	0.89 (0.63–1.16)
Norway	542	6.7 (4.0–9.3)	110.6	1.37 (0.83–1.91)
Spain	1,245	17.6 (12.1–23.1)	27.1	0.38 (0.26–0.50)
Sweden	1,097	7.0 (4.1–9.9)	115.5	0.74 (0.43–1.05)
10 European countries sum	13,109	112.8 (85.8–139.8)	38.2	0.33 (0.25–0.41)
USA	28,211	141.0 (123.4–158.5)	95.3	0.48 (0.42–0.54)

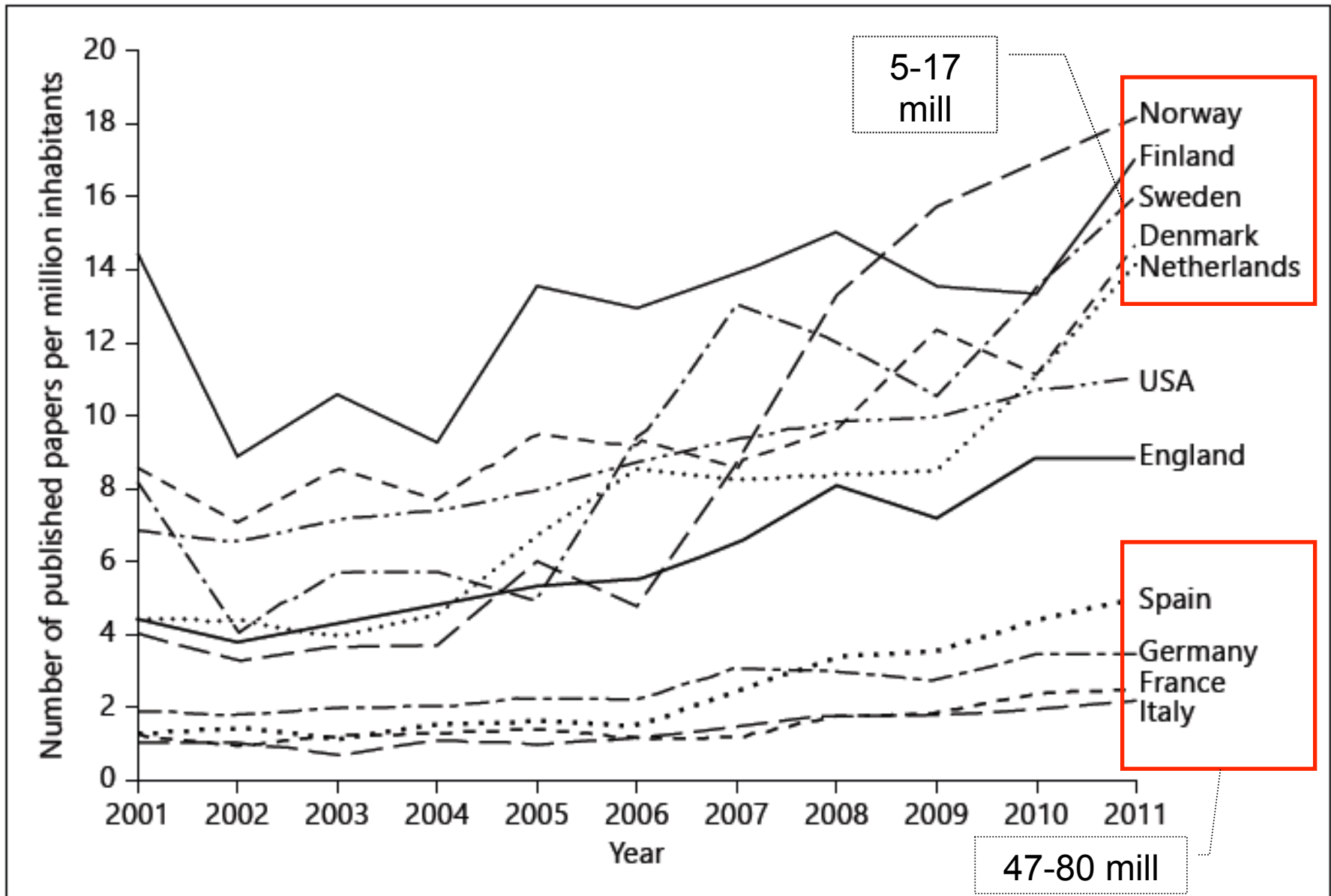


Table 2. Number of scientific papers from each country studied (2001–2011) divided into subject fields

	Alcohol	Illicit drugs	Medicinal drugs	Steroids	Tobacco
Denmark	248 (55.1)	80 (17.8)	68 (15.1)	60 (13.3)	130 (28.9)
England	1,611 (47.8)	702 (20.8)	530 (15.7)	484 (14.4)	1,045 (31.0)
Finland	455 (59.2)	77 (10.0)	72 (9.4)	66 (8.6)	171 (22.2)
France	517 (49.0)	222 (21.0)	171 (16.2)	150 (14.2)	312 (29.6)
Germany	1,276 (56.1)	434 (19.1)	359 (15.8)	340 (15.0)	671 (29.5)
Italy	438 (48.5)	204 (22.6)	158 (17.5)	132 (14.6)	245 (27.1)
Netherlands	682 (48.5)	372 (26.4)	271 (19.3)	263 (18.7)	513 (36.5)
Norway	266 (49.1)	116 (21.4)	94 (17.3)	88 (16.2)	169 (31.2)
Spain	593 (47.6)	292 (23.5)	204 (16.4)	194 (15.6)	355 (28.5)
Sweden	621 (56.6)	137 (12.5)	135 (12.3)	126 (11.5)	276 (25.2)
USA	16,042 (56.9)	6,713 (23.8)	5,264 (18.7)	5,064 (18.0)	8,490 (30.1)

The percentage of papers covering this specific area within each country is shown in parentheses. The total of the percentages is more than 100 as many papers are about more than one substance.

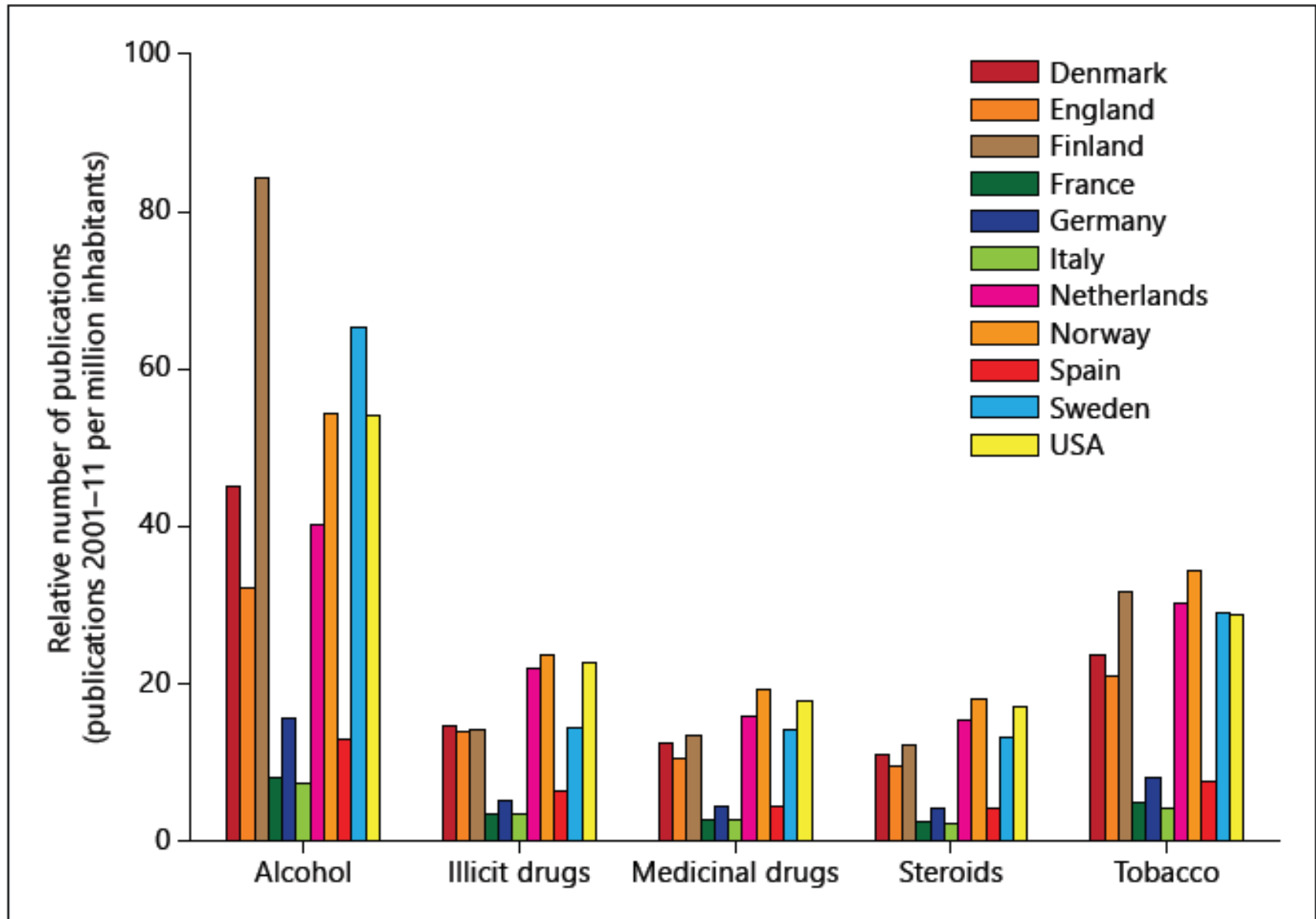
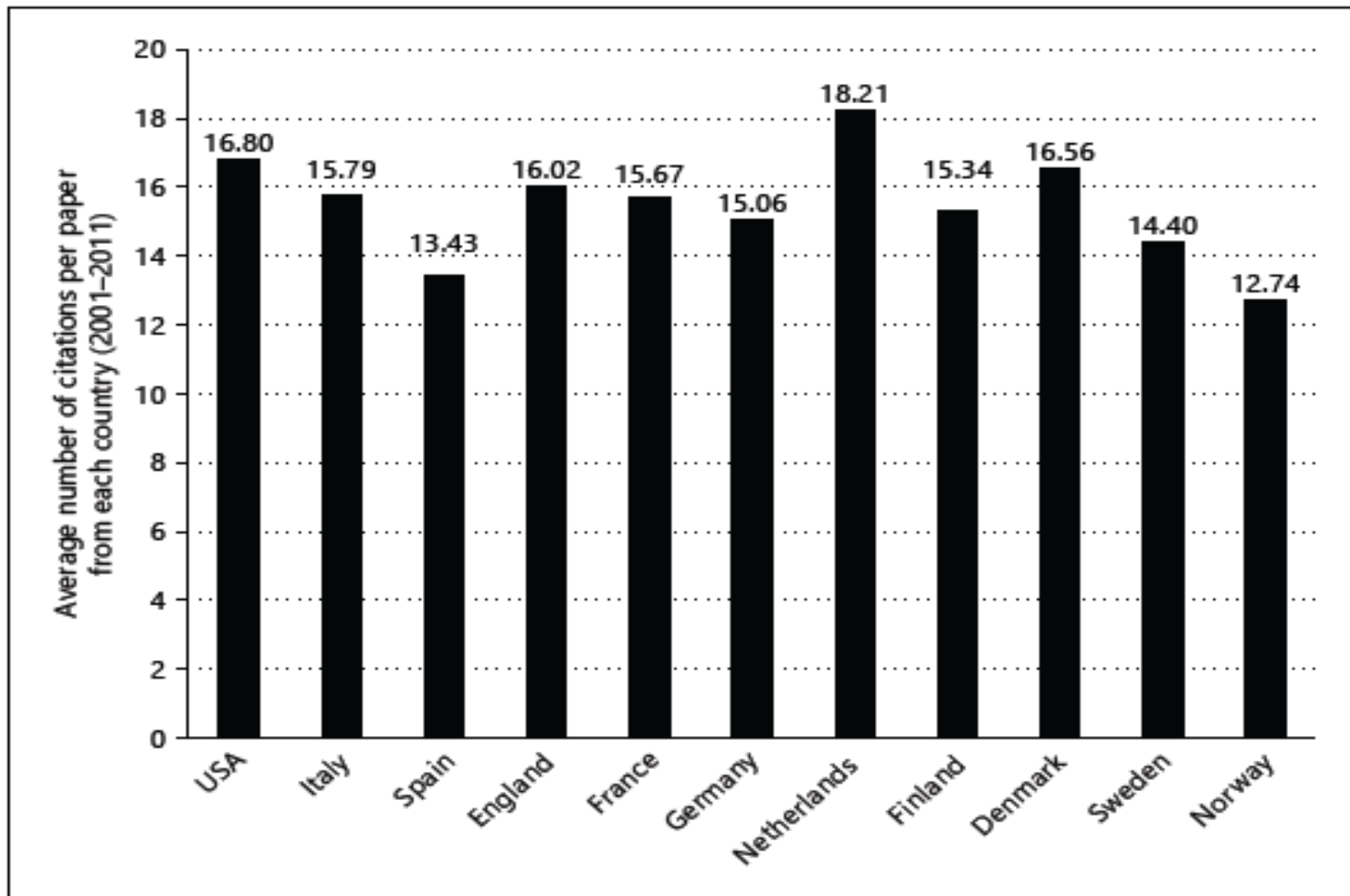


Fig. 3. Average number of citations per year in the years 2001–2011 for papers published 2001–2011 by country.



Strengths and limitations

- Strengths
 - Fast and doable way of monitoring publication
 - Follows up on previous research
- Limitations
 - Poor sensitivity
 - Poor specificity
 - Only some countries

Conclusions and implications

- 85 % of the worlds drug abuse research is not financed by NIDA!
- European research is increasing but lagging further behind USA
- Increased funding and research in Europe would help and should be sought