


Assessing the European impact of alcohol misuse and illicit drug dependence research: clinical practice guidelines and evidence-base policy

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Supplementary File

Table 1: The EUR31 and other leading countries and their ISO2 codes

ISO2 code	Country	ISO2 code	Country	ISO2 code	Country	ISO2 code	Country
AT	Austria*	DK	Denmark*	IS	Iceland**	PL	Poland*
AU	Australia	EE	Estonia*	IT	Italy*	PT	Portugal*
BE	Belgium*	ES	Spain*	JP	Japan	RO	Romania*
BG	Bulgaria*	FI	Finland*	KR	South Korea	SE	Sweden*
BR	Brazil	FR	France*	LT	Lithuania*	SI	Slovenia*
CA	Canada	GR	Greece*	LU	Luxembourg*	SK	Slovakia*
CH	Switzerland**	HR	Croatia*	LV	Latvia*	TR	Turkey
CN	China (P.R.)	HU	Hungary*	MT	Malta*	TW	Taiwan
CY	Cyprus*	IE	Ireland*	NL	Netherlands*	UK	United Kingdom*
CZ	Czech Republic*	IL	Israel	NZ	New Zealand	US	United States
DE	Germany*	IN	India	NO	Norway**		

Note. EUR31 = 28 European Union States* and 3 European Free Trade Association Countries**.

ISO2 = International Standards Organisation.

Table 2. A list of the health advisory committees and examined newspapers in each European country.

<i>ISO2 code</i>	<i>Country</i>	<i>CPG organisation</i>	<i>Health Advisory Committees</i>
<i>AT</i>	Austria	None on ALC/ADD	ÖÄK, Gesundheit GV AT, Österreichische Liga für Kinder, PHARMIG
<i>BE</i>	Belgium	Aanbeveling voor Goede Medische Praktijkvoering	None
<i>BG</i>	Bulgaria	None on ALC/ADD	Health Research
<i>CH</i>	Switzerland	None on ALC/ADD	GDK, FMH, Health promotion
<i>CY</i>	Cyprus	None on ALC/ADD	National Bioethics Committee for Biomedical Research, Cyprus Mental Health Commission, Cyprus Anti-Drugs Council
<i>CZ</i>	Czech Republic	Česká psychiatrická společnost o. s.	Metabolic Endocrinology, Cardiovascular, Oncology, Neuroscience Mental
<i>DE</i>	Germany	None on ALC/ADD	Sachverständigenrat, GBA, Commission "Evaluation of Performance in Research and Education", Commission Clinical Guidelines, BÄK - Scientific Advisory Board
<i>DK</i>	Denmark	None on ALC/ADD	Health Committee, Research Ethics Committee
<i>EE</i>	Estonia	Tervise Arengu Instituut	Public Health, Research and Development
<i>ES</i>	Spain	Sociedad Gallega de Medicina Interna; Servicio de Medicina Interna Hospital Lucus Augusti; Agència de Salut Pública de Catalunya; Hospital Universitario de A Coruña. Servizo Galego de Saúde; Grupo de Alcohol de la Asociación Galega de Medicina Familiar e Comunitaria	Public Health
<i>FI</i>	Finland	Suomalaisen Lääkäriseuran Duodecimin ja Suomen Päihdelääketieteen yhdistyksen asettama työryhmä	None
<i>FR</i>	France	None on ALC/ADD	HCSP Health inequalities, HCSP Eval, strat & forecast, HCSP Environmental risks
<i>GR</i>	Greece	None on ALC/ADD	None
<i>HR</i>	Croatia	Hrvatski liječnički zbor	None

<i>HU</i>	Hungary	Az Egészségügyi Minisztérium szakmai protokollja	Hungarian Diabetes Association, Hungarian Cancer Society, Hungarian Society of Cardiology, Hungarian Respiratory Society, Hungarian Psychiatric Association
<i>IE</i>	Ireland	None on ALC/ADD	Irish National Advisory Committee on Drugs, National Advisory Committee on Bioethics
<i>IT</i>	Italy	None on ALC/ADD	Public Health, National committee for diabetes, Scientific committee of the National Health Institute, Nazional center for prevention of diseases and monitoring activities
<i>LT</i>	Lithuania	Pasaulinės biologinės psichiatrijos draugijų federacijos	National Health board, Health Research, Public Health, Mental Health, Nutrition, Health and the Environment, Medicine, Genetics, Health Ethics and Health Law
<i>LU</i>	Luxembourg	None on ALC/ADD	Board of Experts of Luxembourg
<i>LV</i>	Latvia	None on ALC/ADD	None
<i>MT</i>	Malta	None on ALC/ADD	None
<i>NL</i>	Netherlands	Nederlandse Vereniging voor Psychiatrie	Health Research, Genetics, Health and the environment, Nutrition, Public Health
<i>NO</i>	Norway	None on ALC/ADD	None
<i>PL</i>	Poland	None on ALC/ADD	Scientific Council, Anti-cancer council MH, Medicine (various specialities)
<i>PT</i>	Portugal	None on ALC/ADD	Public Health
<i>RO</i>	Romania	None on ALC/ADD	None
<i>SE</i>	Sweden	Socialstyrelsen	None
<i>SI</i>	Slovenia	None on ALC/ADD	None
<i>SK</i>	Slovakia	None on ALC/ADD	None
<i>UK</i>	United Kingdom	Scottish Intercollegiate Guidelines Network; National Institute for health and Care Excellence	Obesity Review Group, End of Life

Table 3: Tally of clinical practice guidelines with the numbers of references used from 11 European Member States for alcohol and illicit drug dependence alongside the total number of cited references within the guidelines (provided in brackets), between 2002 and 2013.

Country (ISO2 code)	Alcohol dependence		Illicit drug dependence		Both	
	Guidelines (count)	References (count)	Guidelines (count)	References (count)	Guidelines (count)	References (count)
United Kingdom (UK)	2	685	3	502	5	1187
Sweden (SE)	0	0	1	271	1	271
Spain (ES)	4	153	1	124	5	277
Lithuania (LT)	1	141	2	398	3	539
Belgium (BE)	1	52	1	22	2	74
Netherlands (NL)	1	257	1	71	2	328
Croatia (HR)	1	16	0	0	1	16
Czech Republic (CZ)	1	21	1	15	2	36
Finland (FI)	1	148	1	226	2	374
Hungary (HU)	0	0	3	84	3	84
Estonia (EE)	1	11	1	4	2	15
Overall	13	1484	15	1717	28	3201

Note. ISO2 = International Standards Organisation.

Table 4. Fractional counts and percentages of cited references used by countries in the clinical practice guidelines related to alcohol and illicit drug addiction

ISO2 code	Alcohol dependency		Illicit drug dependence		ISO2 code	Alcohol dependency		Illicit drug dependence	
	%	Fractional count	%	Fractional count		%	Fractional count	%	Fractional count
US*	48.5	719	52.5	902	DK	1.1	15.7	0.7	11.2
UK	14.6	217	11.3	193	BE	0.8	11.9	0.7	12.4
AU*	3.8	55.9	6.6	113	NZ*	0.7	10.5	0.5	8.3
DE	4.7	70.3	4.0	68.4	JP*	1.0	14.7	0.2	3.8
IT	3.3	49.1	3.5	59.8	IN*	0.6	9.4	0.3	5.3
CA*	4.0	59.0	2.7	46.9	IE	0.2	2.4	0.3	5.5
SE	2.1	31.4	3.1	53.3	GR	0.3	4.1	0.2	3.4
ES	1.9	28.8	1.8	30.5	PL	0.5	7.0	0.0	0.4
FI	2.8	41.0	1.1	18.1	IL*	0.1	1.0	0.3	5.5
NL	1.3	19.1	2.2	37.2	KR*	0.4	5.5	0.0	0.8
FR	1.8	26.3	1.5	24.9	BR*	0.2	3.1	0.2	3.0
CH	0.9	12.9	1.5	25.8	CN*	0.1	1.4	0.2	4.1
AT	0.7	10.8	1.0	17.3	TW*	0.2	2.7	0.2	2.8
NO*	1.0	14.4	0.7	12.6	TR*	0.1	1.0	0.1	1.6

Note. *Non-European countries. ISO2 = International Standards Organisation. For country codes, see Table 1.

Table 5. Expected and observed values of country over-citation ratio for clinical practice guidelines (CPGs) compared with the Web of Science papers in 2010 in areas of alcohol and drug addictions

Country (ISO2 code)	Alcohol dependence		Illicit drug dependence	
	Expected	Observed	Expected	Observed
	over-citation ratio	over-citation ratio	over-citation ratio	over-citation ratio
Spain (ES)	6.6	4.1	6.7	6.1
Finland (FI)			10.6	32.7
Netherlands (NL)	9.7	4.8	9.5	18.4
Sweden (SE)	13.8	69.1		
United Kingdom (UK)	3.9	10.3	5.2	16.3

Note. ISO2 = International Standards Organisation.

Table 6. Citation performance of the EUR31 countries in research related to **alcohol dependence** from 2002 to 2013 in terms of (a) arithmetic means for five-year citation scores, (b) geometric means, and (c) world-scale value (presence in the top 5% compared with the European norm of 100). *Note.* There were no papers related to alcohol dependence for Cyprus or Malta.

ISO2 code	Arithmetic mean	Geometric mean	World-scale values	ISO2 code	Arithmetic mean	Geometric mean	World-scale values	ISO2 code	Arithmetic mean	Geometric mean	World-scale values
NL	15.0	9.1	158	GR	10.2	6.0	96	SK	4.6	2.8	15
CH	14.4	8.7	156	AT	10.4	6.3	59	EE	6.0	4.7	0
IT	13.4	8.6	114	SE	10.3	6.9	45	CZ	6.6	4.2	0
BE	13.2	8.6	106	FI	9.6	6.5	54	RO	4.3	2.2	14
UK	11.5	7.4	95	ES	10.2	6.0	70	SI	4.0	2.5	0
DE	12.3	7.3	94	IE	8.7	6.3	38	HR	3.3	2.2	0
LU	14.8	11.6	0	PT	8.8	6.2	34	LT	2.6	1.7	0
NO	11.6	8.2	59	HU	8.5	6.1	0	LV	1.5	1.4	0
DK	10.7	6.6	101	IS	8.8	5.3	0	BG	3.2	1.4	0
FR	11.0	5.9	95	PL	6.5	4.4	15				

Table 7. Citation performance of the EUR31 countries in research related to illicit **drug dependence** from 2002 to 2013 in terms of (a) arithmetic means for five-year citation scores, (b) geometric means, and (c) world-scale value (presence in the top 5% compared with the European norm of 100)

ISO2 code	Arithmetic mean	Geometric mean	World-scale values	ISO2 code	Arithmetic mean	Geometric mean	World-scale values	ISO2 code	Arithmetic mean	Geometric mean	World-scale values
NL	13.7	8.7	120	PT	10.6	5.9	73	CZ	6.5	4.1	13
UK	12.9	6.8	123	FI	10.2	5.8	78	LU	7.3	3.1	0
DE	12.1	6.4	101	SE	10.0	6.1	58	LT	5.6	3.9	0
EE	10.5	7.6	102	BE	9.9	6.1	67	RO	4.1	1.8	31
IT	11.7	7.1	74	MT	7.8	4.9	234	HR	4.2	2.2	0
FR	11.7	6.4	97	NO	9.8	6.3	46	BG	4.0	2.1	0
AT	11.0	6.6	94	IS	9.4	6.4	10	SI	3.2	1.6	4
DK	11.3	7.1	56	HU	9.2	5.8	49	CY	3.3	2.2	0
ES	10.9	6.6	82	GR	8.7	5.0	40	SK	3.0	1.8	0
CH	11.0	6.2	87	PL	8.1	5.6	3	LV	0.0	0.0	0
IE	10.9	5.3	156								

Table 8. The citation rate within clinical guidelines over time relating to alcohol and illicit drug dependence

Period	Alcohol dependence		Illicit drug dependence		Both	
	Total	%	Total	%	Total	%
< 1990	196	13.32	99	6.07	295	9.51
1990-99	461	31.32	391	23.99	852	27.47
2000-04	414	28.13	455	27.91	869	28.01
2005-09	373	25.34	520	31.90	893	28.79
2010-13	28	1.90	165	10.12	193	6.22

Table 9. Ranking of European countries in **alcohol dependence research** between 2002 and 2013, on five different indicators: (a) papers relative to Gross Domestic Product (GDP), (b) annual average percentage growth, (c) citations in Web of Science, (d) references on clinical practice guidelines (incl. the over-citation ratio), and (e) references in news stories (incl. the over-citation ratio)

ISO2 code	Papers / GDP	ISO2 code	Annual average percentage growth	ISO2 code	Citations in Web of Science			ISO2 code	Clinical Guidelines		ISO2 code	News stories	
					Arithmetic mean	Geometric mean	World-scale values		%	Over-citation ratio		%	Over-citation ratio
FI	1.87	IE	26.0	NL	15.0	9.1	158	AT	0.7	2.5	DK	3.1	4.1
SE	1.30	NO	14.5	CH	14.4	8.7	156	NO	1.0	1.9	UK	14	3.5
DK	0.82	PT	10.4	IT	13.4	8.6	114	IT	3.4	1.7	NO	1.4	2.7
CH	0.59	NL	10.3	BE	13.2	8.6	106	UK	5.8	1.4	FR	4.5	2.2
NL	0.59	CH	6.7	UK	11.5	7.4	95	DK	1.1	1.4	SE	3.2	1.6
BE	0.49	BE	6.7	DE	12.3	7.3	94	DE	5.0	1.3	DE	4.7	1.2
ES	0.46	UK	6.3	LU	14.8	11.6	0	GR	0.3	1.2	CH	0.8	0.9
NO	0.44	DK	4.8	NO	11.6	8.2	59	SE	2.2	1.1	NL	1.4	0.8

Note. ISO2 = International Standards Organisation. For country codes, see Table 1. GDP = Gross Domestic Product.

Table 10. Ranking of European countries in **illicit drug dependence research** between 2002 and 2013, on five different indicators: (a) papers relative to Gross Domestic Product (GDP), (b) annual average percentage growth, (c) citations in Web of Science, (d) references on clinical practice guidelines (incl. the over-citation ratio), and (e) references in news stories (incl. the over-citation ratio)

ISO2 code	Papers/ GDP	ISO2 code	Annual average percentage growth	ISO2 code	Citations in Web of Science			ISO2 code	Clinical Guidelines		ISO2 code	News stories	
					Arithmetic mean	Geometric mean	World-scale values		%	Over-citation ratio		%	Over-citation ratio
CH	1.27	DK	18.5	NL	13.7	8.7	120	IT	3.6	1.7	UK	11.7	2.0
SE	1.22	PT	17.2	UK	12.9	6.8	123	FR	1.5	1.6	FI	0.9	1.6
IS	1.22	NO	15.6	DE	12.1	6.4	101	DE	4.1	1.5	DE	4.1	1.5
NO	1.14	IE	13.5	EE	10.5	7.6	102	CH	1.5	1.4	SE	1.2	1.1
FI	1.12	ES	10.2	IT	11.7	7.1	74	NL	2.0	1.2	NO	0.8	1.0
UK	1.08	GR	8.7	FR	11.7	6.4	97	UK	4.9	0.8	FR	2.0	1.0
EE	1.02	SE	7.5	AT	11.0	6.6	94	ES	1.6	0.7	DK	0.4	0.9
NL	1.00	FI	6.8	DK	11.3	7.1	56	AT	1.0	0.7	NL	1.6	0.9

Note. ISO2 = International Standards Organisation. For country codes, see Table 1. GDP = Gross Domestic Product

Figures

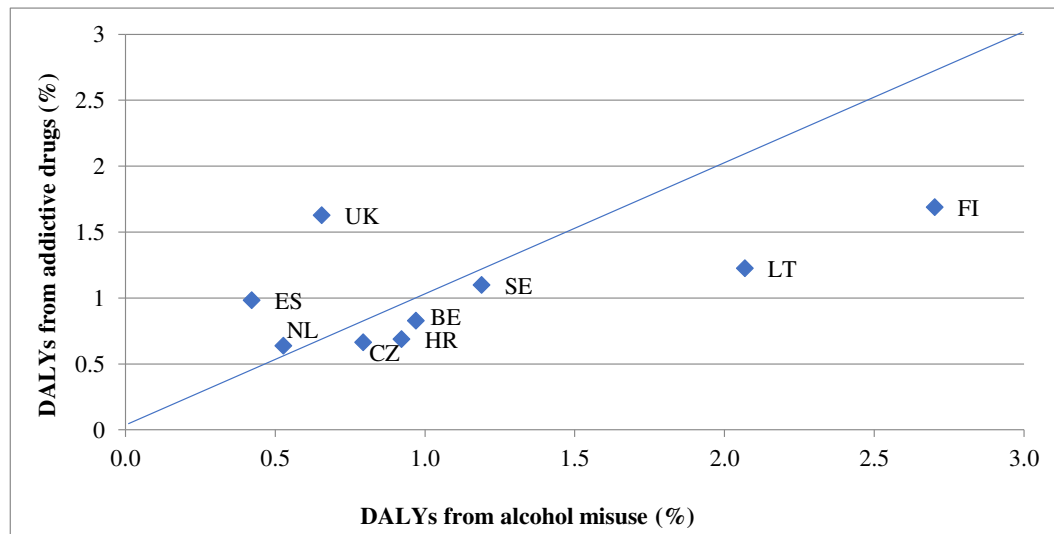


Figure S1. The population disease pattern for each country between illicit drug and alcohol misuse.

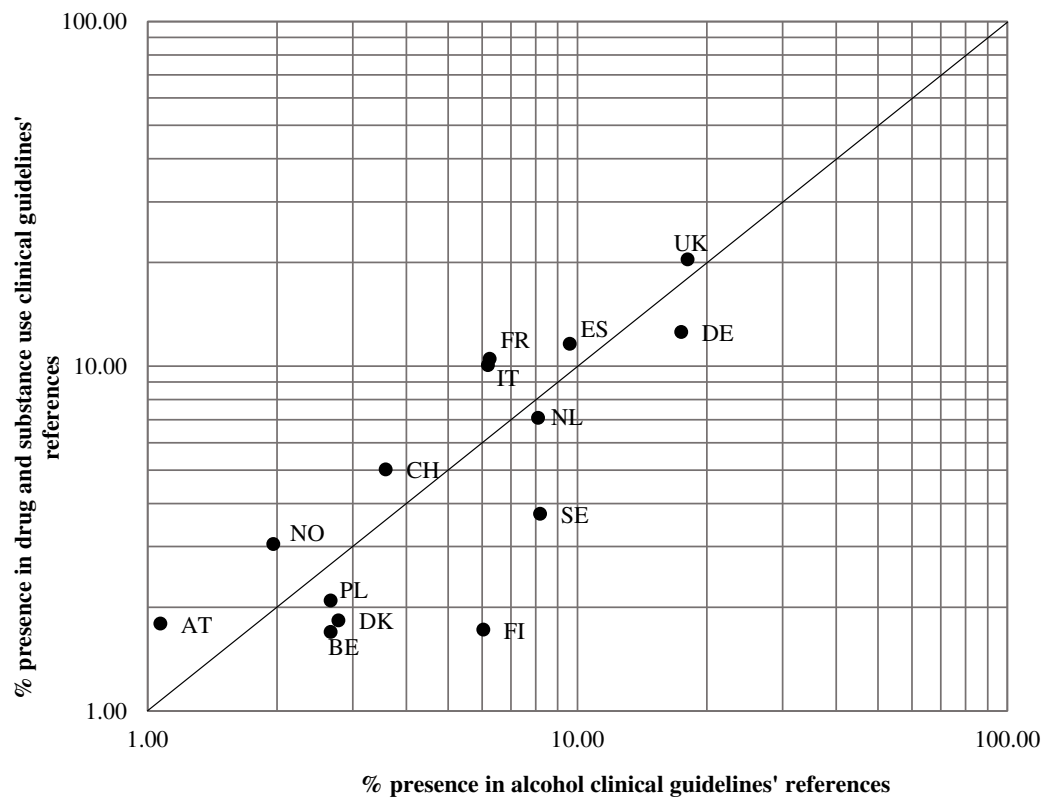


Figure S2. The country contribution in research as evident in the clinical practice guidelines on the drug dependence against alcohol misuse (on a \log_{10} scale), $p < 0.05$ (country codes are in Table 1).

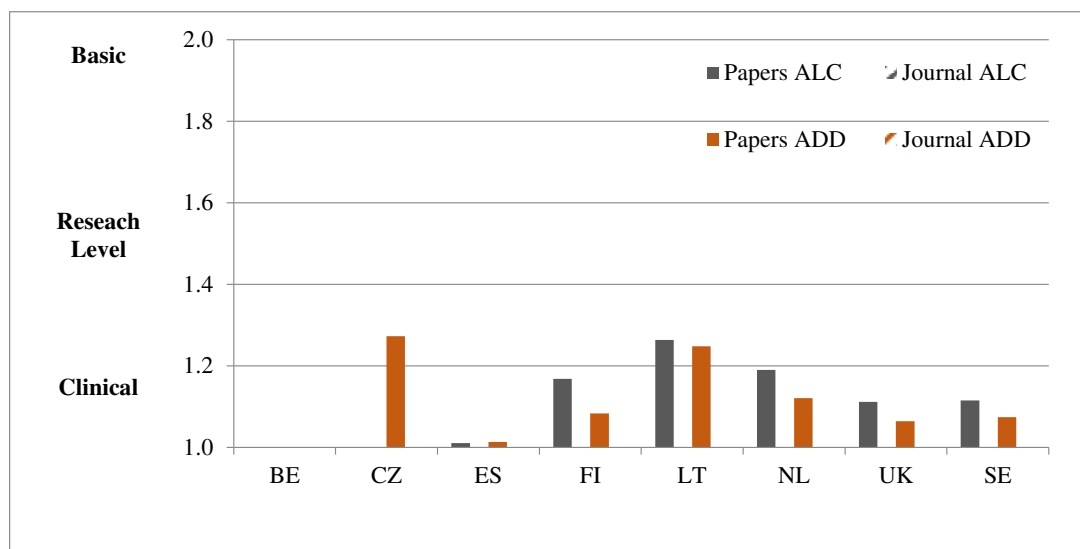


Figure S3. The research level (basic, clinical or both) of the cited papers for clinical practice guidelines related to alcohol dependence

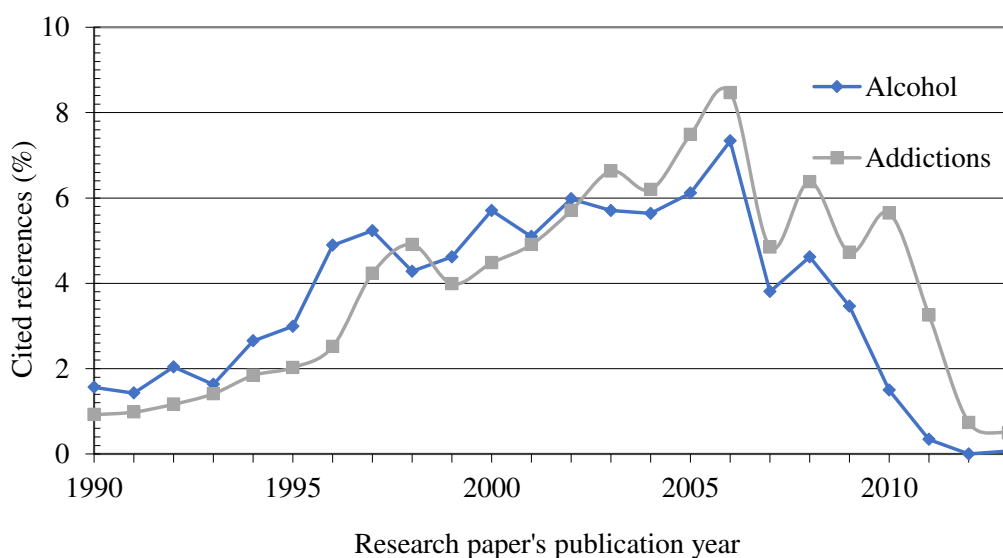


Figure S4. The percentage of cited research papers published per year from 1990 to 2013 as reported in the alcohol and drug addictions clinical practice guidelines (published between 2011-2014 for ESMO, 2009-2013 for NICE and 2013 for SIGN) with the difference between the two showing statistical significance, $p < 0.05$.

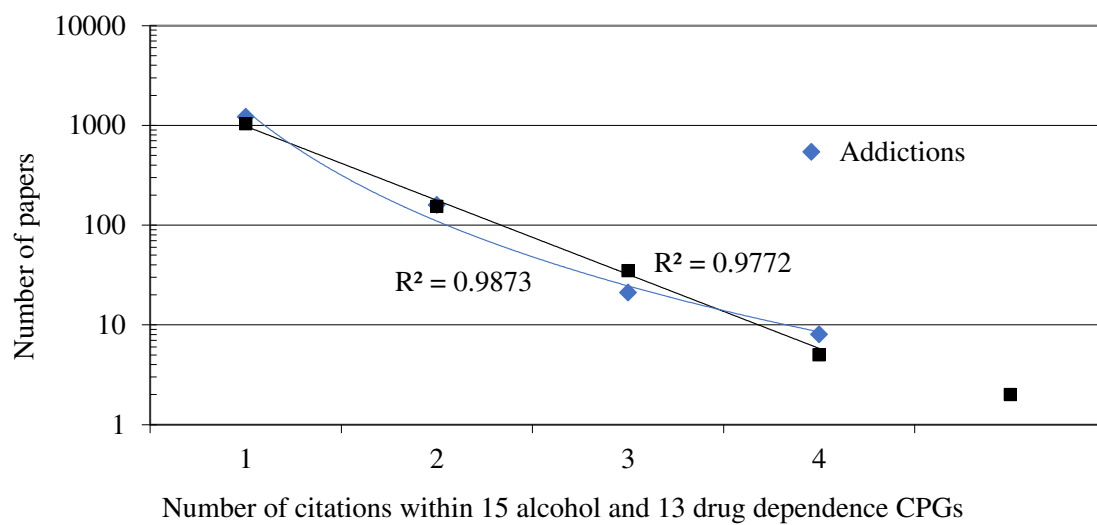


Figure S5. The relationship between the number of research papers and number of citations within the clinical practice guidelines (on a log₁₀ scale).