Συννόσηση και νέες ελπιδοφόρες εξελίξεις για την αντιμετώπιση των αγχωδών διαταραχών:

Ο ρόλος της προληπτικής ψυχιατρικής.

Γεώργιος Μούκας
Ψυχίατρος
Σάμος 02/05/2019

ΕΠΙΔΗΜΙΟΛΟΓΙΑ ΑΓΧΩΔΩΝ ΔΙΑΤΑΡΑΧΩΝ

Anxiety disorders	ECA[39]		NCS-R[3] Ages 18–64		ESEMeD[25]		Wittchen et al[14]
Prevalence rate	12 months	Lifetime	12 months	Lifetime	12 months	Lifetime	12 months
Panic disorder	0.9	1.6	3.1	5.2	0.7	1.6	0.7–3.1
GAD	–	–	2.9	6.2	0.9	2.8	0.2–4.3
Agoraphobia	–	–	1.7	2.6	0.3	0.8	0.1–10.5
SAD	–	–	8.0	13.0	1.6	2.8	0.6–7.9
Specific phobia	8.8	12.6	10.1	13.8	5.4	8.3	0.8–11.1
All anxiety disorders*	10.1	14.6	21.3	33.7	8.4	14.5	11.1-13.0

*Note that before the introduction of *DSM-5*, obsessive-compulsive disorder and post-traumatic stress disorder were included in the anxiety disorders

Table II. Prevalence rates of anxiety disorders in epidemiological surveys. ECA, Epidemiologic Catchment Area Program; NCS-R, National Comorbidity Survey–Replication; ESEMeD, European Study of the Epidemiology of Mental Disorders

Bandelow et al ,Dialogues Clin Neurosci. 2015

ΚΛΗΡΟΝΟΜΙΚΟΤΗΤΑ ΑΓΧΩΔΩΝ ΔΙΑΤΑΡΑΧΩΝ

Table 9. Heritability of anxiety disorders, OCD and PTSD.

Disorder	Heritability estimates
Panic disorder	48% (Hettema et al. 2001)
Agoraphobia	67% (Kendler et al. 1999)
GAD	32–38% (Scherrer et al. 2000; Dellava et al. 2011)
SAD	39–56% (Kendler et al. 1999; Mosing et al. 2009; Isomura et al. 2015)
Specific phobia	25–59% (Kendler et al. 1999; Van Houtem et al. 2013); in children: 60% (Bolton et al. 2006)
SepAD	43–73% (Bolton et al. 2006; Scaini et al. 2012)
OCRDs	
OCD	27–47%; for adults while for early onset paediatric OCD: 45–65% (Van Grootheest et al. 2005)
Hoarding	51–71% (Mathews et al. 2007; Monzani et al. 2014)
Trichotillomania	32–78% (Novak et al. 2009; Monzani et al. 2014)
Skin Picking	40–44% (Monzani et al. 2012)
PTSD	13–70% (True et al. 1993; Koenen et al. 2002; Sartor et al. 2012)

Bandelow et al. The World Journal of Biological Psychiatry, 2016

GxE INTERACTION

- 5 genome-wide association studies (GWAS), χωρίς σημαντικά αποτελέσματα πλην μίας (transmembrane protein 16B, plakophilin 1)- δεύτερη μελέτη αρνητική.
- Επίδραση γονέων (υπερπροστατευτικότητα, υπερβολική επισήμανση κινδύνων και απειλών).
- Έλλειψη κοινωνικής στήριξης, διαπροσωπικών σχέσεων.
- Ταπεραμέντο (harm avoidance).

COMORBIDITY

- Ονομάζουμε συννόσηση την συνύπαρξη δύο η περισσότερων διαταραχών σε έναν ασθενή είτε προέκυψαν ταυτόχρονα, είτε προηγήθηκε η μία της άλλης. (de Graaf R et al. Am J Psychiatry 2002).

- 35% των ασθενών πάσχουν από περισσότερες από μία ψυχικές διαταραχές (Epidemiologic Catchment Area (ECA) Survey), 27,7% όσων απάντησαν, είχαν 2 ή περισσότερες διαταραχές στην διάρκεια της ζωής τους (National Comorbidity Survey Replication).

COMORBIDITY II

- Η συννόσηση σχετίζεται με πιο σοβαρά ψυχιατρικά συμπτώματα, μεγαλύτερη έκπτωση λειτουργικότητας, μεγαλύτερη διάρκεια ασθένειας, μικρότερη κοινωνική ικανότητα, συχνότερη χρήση υπηρεσιών υγείας. (Bakken K, et al. BMC Psychiatry 2007).

- Τα ποσοστά συννόσησης δημιουργούν

Συννόσηση αγχωδών δ/χων και κατάθλιψης

- Μοντέλο άμεσης συνέπειας: η μία διαταραχή προκαλεί ή αυξάνει την πιθανότητα εμφάνισης της άλλης (Avenevoli et al. 2001). Πιο πιθανό η αγχώδης διαταραχή να προηγείται και η MDD να έπεται.(Breslau et al. 2000; Merikangas et al. 2003).

- Μοντέλο κοινής αιτιολογίας: κοινοί παράγοντες κινδύνου(Neale & Kendler, 1995),

Συννόσηση αγχωδών δ/χων και κατάθλιψης

Frequencies and prevalence of comorbid anxiety disorders in the MD cases of the CONVERGE sample.

Comorbid disorder*	Number of individuals (out of 5,864 recurrent major depression cases)	Proportion of valid cases in category
No Anxiety Disorder	2,757	47.0%
GAD	1471	25.5%
Animal Phobia	1269	22.1%
Blood-injury Phobia	900	15.7%
Situational Phobia	846	14.7%
Agoraphobia	677	11.8%
Social Phobia	611	10.6%
Panic Disorder	387	6.7%

* All categories overlap partially except the first 'No Anxiety Disorder' category. Many individuals meet criteria for multiple comorbid anxiety disorders; as many as all 7 comorbid anxiety disorders.

China, Oxford and VCU Experimental Research on Genetic Epidemiology (CONVERGE) study

Journal of Affective Disorders 137 (2012) 106–112

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Journal of Affective Disorders

journal homepage: www.elsevier.com/locate/jad

Research report

Clinical relevance of comorbidity in anxiety disorders: A report from the Netherlands Study of Depression and Anxiety (NESDA)

Mieke Klein Hofmeijer-Sevink [a,b,*], Neeltje M. Batelaan [a], Harold J.G.M. van Megen [b], Brenda W. Penninx [a,c,d], Danielle C. Cath [e,f], Marcel A. van den Hout [e,f], Anton J.L.M. van Balkom [a]

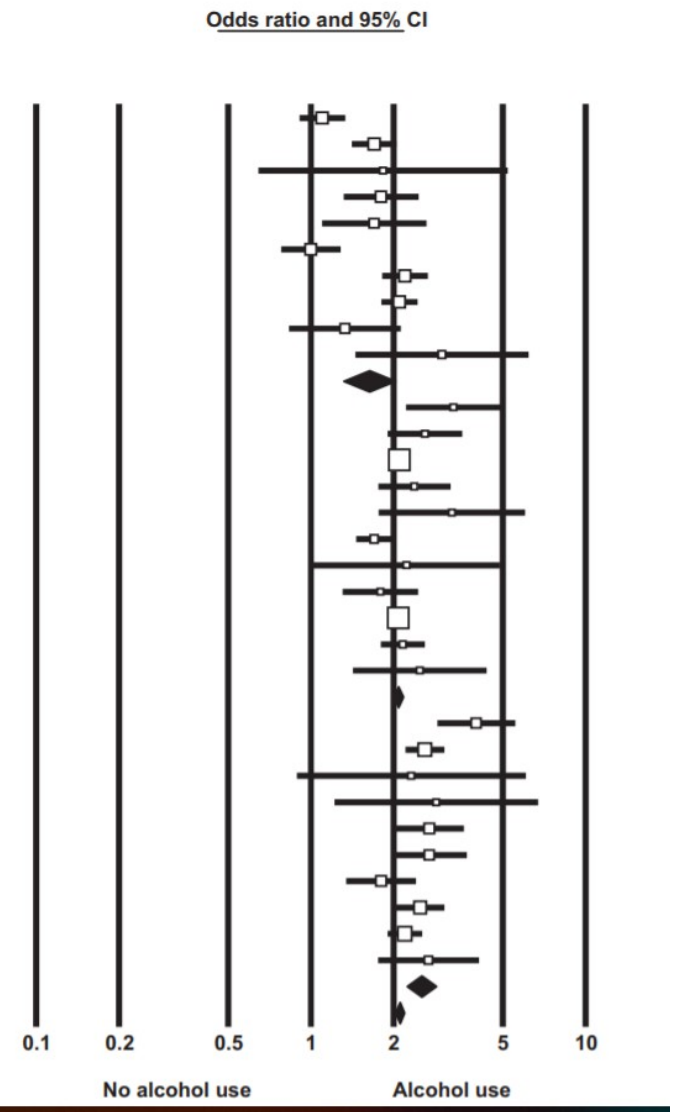
Clinical characteristics of anxiety–depressive comorbidity (n = 1004).

Group (total n = 1004)	1 Single anxiety disorder n = 295 (29.4%)	2 Anxiety–anxiety comorbidity n = 105 (10.5%)	3 Anxiety–depressive comorbidity n = 292 (29.1%)	4 Double comorbidity n = 312 (31.1%)	Comparison 1 vs 2 OR (95% CI)	2 vs 3 OR (95% CI)	2 vs 4 OR (95% CI)	3 vs 4 OR (95% CI)
Clinical characteristics								
Age of onset[a] (years, SD)	23.0 (12.8)	19.3 (11.5)	22.6 (12.3)	18.0 (11.3)	**0.73 (0.58–0.93)**	**1.33 (1.05–1.68)**	0.88 (0.67–1.12)	**0.66 (0.59–0.77)**
Chronicity (% with chronic anxiety or depressive symptoms, n)	32.2 (95)	53.3 (56)	41.4 (121)	58.7 (183)	**2.41 (1.53–3.97)**	**0.62 (0.40–0.99)**	1.24 (0.80–1.94)	**2.01 (1.45–2.77)**
Total IDS score[a] (mean, SD)	19.8 (9.0)	23.0 (9.6)	29.5 (10.8)	37.1 (11.8)	**1.52 (1.14–2.03)**	**2.09 (1.58–2.77)**	**4.52 (3.35–6.10)**	**2.16 (1.78–2.63)**
Total BAI score[a] (mean, SD)	12.9 (8.5)	16.0 (9.3)	16.8 (9.8)	23.8 (11.1)	**1.58 (1.20–2.07)**	1.09 (0.85–1.42)	**2.15 (1.66–2.78)**	**1.97 (1.65–2.35)**
Total FQ score[a] (mean, SD)	27.7 (18.3)	33.2 (17.5)	31.4 (18.1)	44.9 (20.4)	**1.42 (1.10–1.82)**	0.90 (0.70–1.15)	**1.80 (1.42–2.29)**	**2.01 (1.68–2.39)**
Treatment (% yes, n)	30.8 (91)	40.0 (42)	55.1 (161)	70.8 (221)	1.50 (0.94–2.37)	**1.84 (1.17–2.90)**	**3.64 (2.30–5.77)**	**1.98 (1.41–2.77)**
Cognitive disability[a] (mean, SD)	21.0 (18.3)	22.5 (17.5)	32.9 (19.1)	43.5 (19.2)	1.11 (0.85–1.46)	**1.88 (1.44–2.46)**	**3.28 (2.50–4.32)**	**1.74 (1.46–2.08)**
Physical disability[a] (mean, SD)	11.6 (16.6)	13.0 (18.4)	17.7 (20.6)	28.7 (24.3)	1.16 (0.86–1.55)	**1.34 (1.02–1.76)**	**2.11 (1.61–2.76)**	**1.58 (1.34–1.86)**
Social disability[a] (mean, SD)	21.5 (16.7)	27.3 (18.6)	33.5 (18.5)	44.9 (19.6)	**1.45 (1.16–1.98)**	**1.46 (1.13–1.89)**	**2.69 (2.07–3.50)**	**1.85 (1.54–2.10)**

IDS = Inventory of Depressive Symptomatology, BAI = Beck Anxiety Inventory, FQ = Fear Questionnaire.
OR; odds ratio, CI; confidence interval. P<0.05 indicates bold data.
[a] OR per SD increase using multinomial logistic regression analyses.

ΑΛΚΟΟΛ ΚΑΙ ΑΓΧΩΔΕΙΣ ΔΙΑΤΑΡΑΧΕΣ

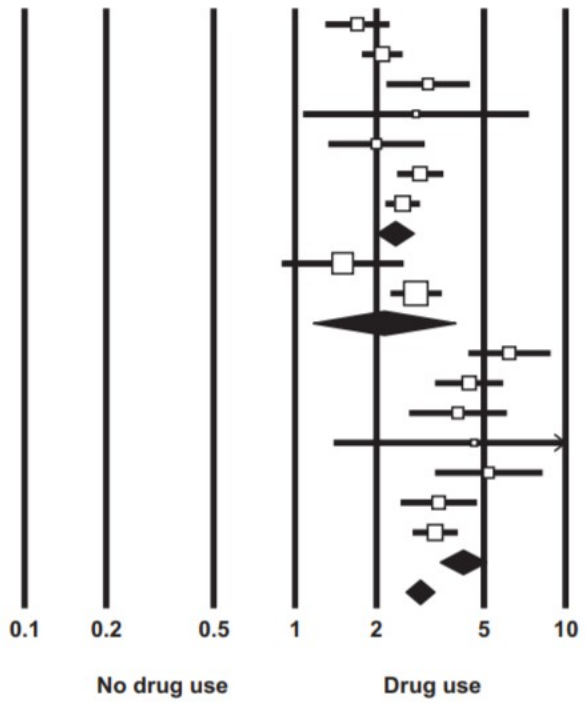
Group by use vs dependence	Study name	Statistics for each study: Odds ratio	Lower limit	Upper limit
Abuse	NESARC-Grant 2004a	1.100	0.915	1.322
Abuse	France-Leray 2001a	1.700	1.422	2.032
Abuse	Korea, KECA-Chou 2012a	1.830	0.650	5.156
Abuse	Fresno, MAPSS-Merikangas 1998b	1.800	1.325	2.446
Abuse	Mexico, EPM-Merikangas 1998b	1.700	1.106	2.614
Abuse	NEMESIS-Merikangas 1998b	1.000	0.784	1.275
Abuse	Ontario,-Merikangas 1998b	2.200	1.831	2.644
Abuse	NCS-Merikangas 1998b	2.100	1.819	2.425
Abuse	Germany, TACOS-Bott 2005b	1.330	0.839	2.108
Abuse	Australia-Teesson 2010e	3.000	1.464	6.148
Abuse		1.636	1.317	2.031
Abuse/dependence	Australia-Burns 2002c	3.300	2.238	4.866
Abuse/dependence	Australia-Teeson 2010c	2.600	1.916	3.529
Abuse/dependence	ECA-Swendsen 1998c	2.100	2.060	2.140
Abuse/dependence	NCS-Swendsen 1998c	2.380	1.773	3.195
Abuse/dependence	Puerto Rico-Swendsen 1998c	3.260	1.777	5.980
Abuse/dependence	NESARC-Grant 2004c	1.700	1.472	1.963
Abuse/dependence	Korea, KECA-Chou 2012c	2.230	1.029	4.834
Abuse/dependence	Thailand-Suttajit 2012c	1.790	1.314	2.438
Abuse/dependence	ECA-Swendsen 1998d	2.080	2.040	2.120
Abuse/dependence	NCS-Swendsen 1998d	2.160	1.809	2.579
Abuse/dependence	Puerto Rico-Swendsen 1998d	2.490	1.433	4.328
Abuse/dependence		2.088	2.007	2.172
Dependence	NHSDA-Kandel 2001e	4.000	2.905	5.509
Dependence	NESARC-Grant 2004e	2.600	2.227	3.036
Dependence	Korea-KECA-Chou 2012e	2.320	0.896	6.009
Dependence	Brazil-Almeida-Filho 2007e	2.860	1.229	6.655
Dependence	Fresno, MAPSS-Merikangas 1998f	2.700	2.041	3.572
Dependence	Mexico, EPM-Merikangas 1998f	2.700	1.989	3.665
Dependence	NEMESIS-Merikangas 1998f	1.800	1.353	2.394
Dependence	Ontario-Merikangas 1998f	2.500	2.058	3.037
Dependence	NCS-Merikangas 1998f	2.200	1.918	2.524
Dependence	Germany, TACOS-Bott 2005f	2.680	1.770	4.059
Dependence		2.532	2.243	2.859
Overall		2.111	2.034	2.190



Lai, et al., Drug Alcohol Depend. (2015)

ΤΟΞΙΚΕΣ ΟΥΣΙΕΣ ΠΛΗΝ ΑΛΚΟΟΛ ΚΑΙ ΑΓΧΩΔΕΙΣ

Group by use vs dependence	Study name	Statistics for each study: Odds ratio	Lower limit	Upper limit
Abuse	NESARC-Grant 2004a	1.700	1.307	2.212
Abuse	France-Leray 2011a	2.100	1.782	2.475
Abuse	Frenso, MAPSS-Merikangas 1998b	3.100	2.192	4.384
Abuse	Mexico, EPM-Merikangas 1998b	2.800	1.080	7.262
Abuse	NEMESIS-Merikangas 1998b	2.000	1.339	2.987
Abuse	Ontario-Merikangas 1998b	2.900	2.401	3.502
Abuse	NCS-Merikangas 1998b	2.500	2.177	2.870
Abuse		2.355	2.016	2.752
Abuse/dependence	Australia,McEvoy 2011c	1.500	0.900	2.500
Abuse/dependence	NESARC-Grant 2004c	2.800	2.270	3.454
Abuse/dependence		2.144	1.171	3.927
Dependence	NESARC-Grant 2004e	6.200	4.409	8.718
Dependence	NHSDA-Kandel 2001e	4.400	3.319	5.833
Dependence	Fresno, MAPSS-Merikangas 1998f	4.000	2.661	6.012
Dependence	Mexico, EPM-Merikangas 1998f	4.600	1.401	15.107
Dependence	NEMESIS-Merikangas 1998f	5.200	3.319	8.147
Dependence	Ontario-Merikangas 1998f	3.400	2.480	4.662
Dependence	NCS-Merikangas 1998f	3.300	2.746	3.966
Dependence		4.194	3.447	5.104
Overall		2.907	2.580	3.277



Lai, et al., Drug Alcohol Depend. (2015)

frontiers in Psychiatry

SYSTEMATIC REVIEW
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doi: 10.3389/fpsyt.2018.00229

Prevalence and Associated Features of Anxiety Disorder Comorbidity in Bipolar Disorder: A Meta-Analysis and Meta-Regression Study

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Results: Lifetime any anxiety disorder comorbidity in BD was 40.5%; panic disorder (PD) 18.1%, generalized anxiety disorder (GAD) 13.3%, social anxiety disorder (SAD) 13.5% and obsessive compulsive disorder (OCD) 9.7%. Current any anxiety disorder comorbidity in BD is 38.2%; GAD is 15.2%, PD 13.3%, SAD 11.7%, and OCD 9.9%. When studies reporting data about comorbidities in BDI or BDII were analyzed separately, lifetime any anxiety disorder comorbidity in BDI and BDII were 38% and 34%, PD was 15% and 15%, GAD was 14% and 16.6%, SAD was 8% and 13%, OCD was 8% and 10%, respectively. Current any DSM anxiety disorder comorbidity in BDI or BDII were 31% and 37%, PD was 9% and 13%, GAD was 8% and 12%, SAD was 7% and 11%, and OCD was 8% and 7%, respectively. The percentage of manic patients and age of onset of BD tended to have a significant impact on anxiety disorders. Percentage of BD I patients significantly decreased the prevalence of panic disorder and social anxiety disorder. A higher rate of substance use disorder was associated with greater BD–SAD comorbidity. History of psychotic features significantly affected current PD and GAD.

Conclusions: Anxiety disorder comorbidity is high in BD with somewhat lower rates in BDI vs BDII. Age of onset, substance use disorders, and percentage of patients in a manic episode or with psychotic features influences anxiety disorder comorbidity.

ΑΓΧΩΔΕΙΣ Δ/ΧΕΣ ΚΑΙ ΣΧΙΖΟΦΡΕΝΕΙΑ

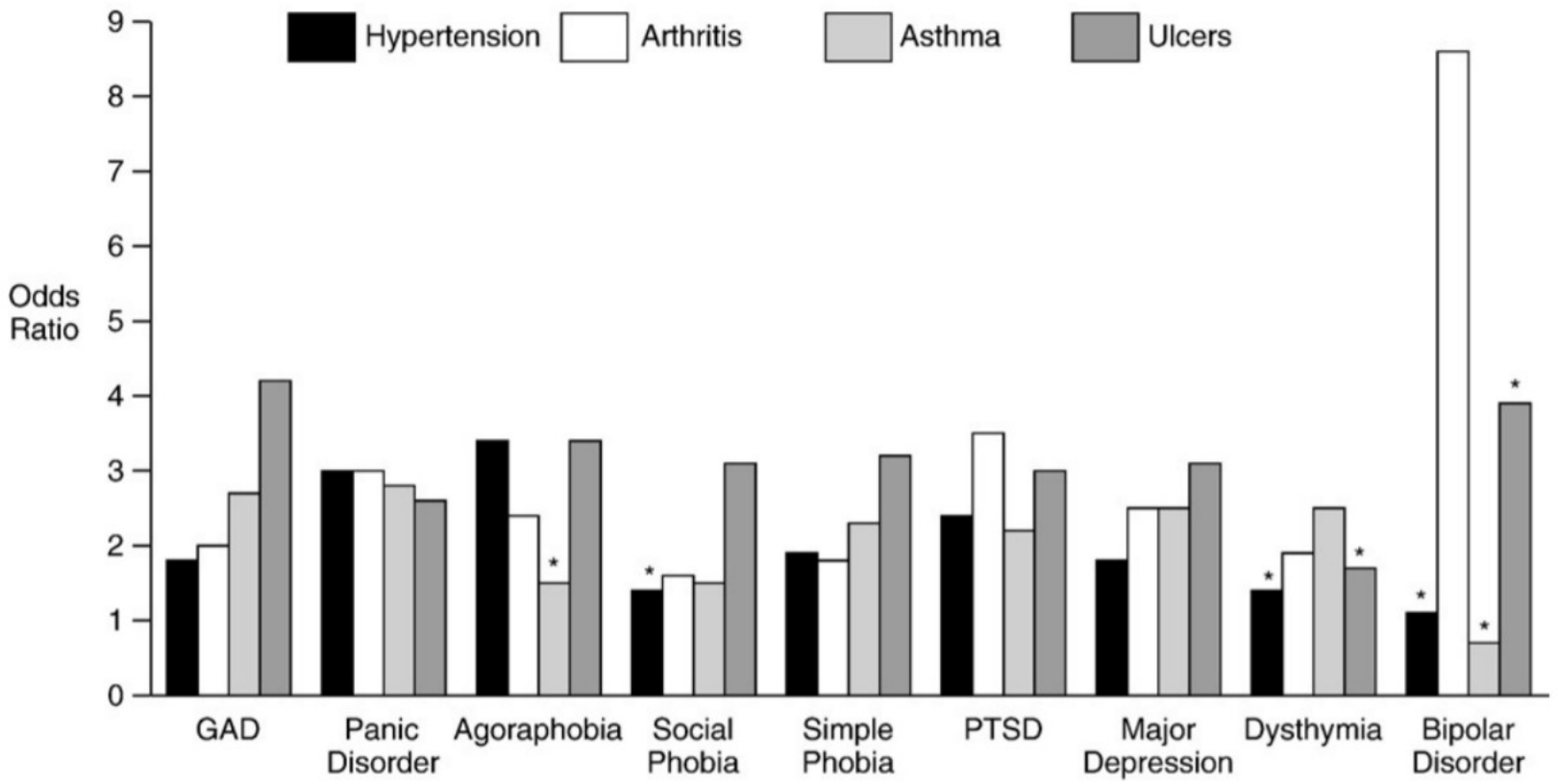
Table 1. Overall Prevalence Rates

	OCD	PD	AGO	PTSD	SP	SPP	GAD	ANY
No. of studies (*m*)	34	23	12	20	16	11	14	16
No. of patients (*n*)	3007	1393	862	1388	1259	925	939	958
Mean prevalence rate (%)	**12.1**	**9.8**	**5.4**	**12.4**	**14.9**	**7.9**	**10.9**	**38.3**
95% CI	7.0%–17.1%	4.3%–15.4%	0.2%–10.6%	4.0%–20.8%	8.1%–21.8%	1.9%–13.8%	2.9%–18.8%	26.3%–50.4%
Range	0.6%–55.0%	0.0%–35.0%	0.0%–27.5%	0.0%–51.4	3.6%–39.5%	0.0%–30.8%	0.0%–45%	10.4%–85.0%
Heterogeneity χ^2	317.98	162.79	83.52	294.09	127.37	80.78	142.52	146.23
Heterogeneity *P*	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001

Note: Bold values express main results. OCD, obsessive-compulsive disorder; PD, panic disorder; AGO, agrophobia; PTSD, post-traumatic stress disorder; SP, social phobia; SPP, simple phobia; GAD, generalized anxiety disorder; ANY, proportion of patients with at least one of the anxiety disorders assessed in the study; CI, confidence interval. Our strategy to report overall prevalence rates across all studies reflect our recognition that several factors influence these rates and that the traditional distinction between 1-y vs lifetime rates (reported in table 3) is only one among other factors.

Achim et al. Schizophrenia Bulletin 2011

ΣΥΝΝΟΣΗΣΗ ΑΓΧΟΥΣ ΜΕ ΑΛΛΕΣ ΠΑΘΗΣΕΙΣ

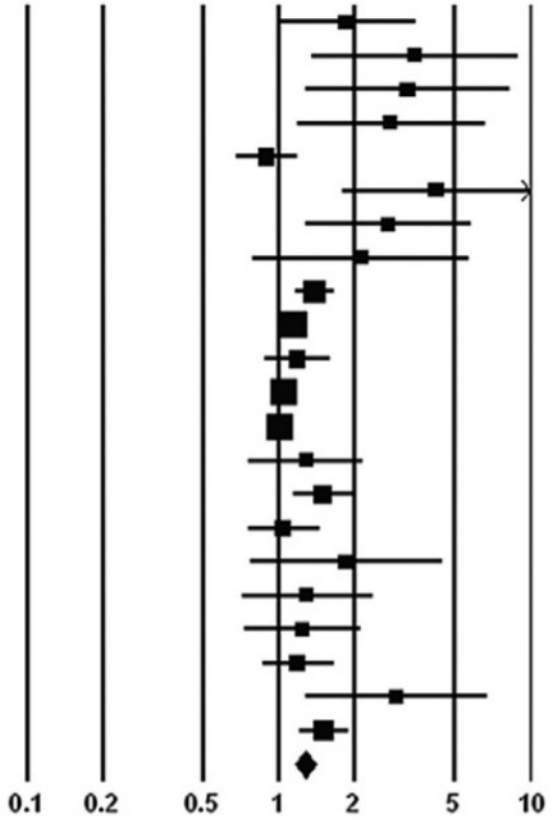


ΑΓΧΩΔΕΙΣ ΔΙΑΤΑΡΑΧΕΣ ΚΑΙ Σ.Ν

Study name	Hazard ratio	Lower limit	Upper limit	Z-Value	p-Value
Phillips, 2009	1.840	0.981	3.452	1.899	0.058
Kubzanksy, 2009	3.460	1.348	8.884	2.580	0.010
Einvik, 2009	3.230	1.261	8.275	2.443	0.015
Denollet, 2008	2.770	1.168	6.569	2.313	0.021
Mykletun, 2007	0.890	0.676	1.171	-0.832	0.405
Smoller, 2007	4.200	1.763	10.006	3.240	0.001
Gafarov, 2007	2.700	1.273	5.725	2.590	0.010
Kubzansky, 2006	2.110	0.784	5.681	1.478	0.140
Thurston, 2006	1.380	1.149	1.658	3.440	0.001
Boyle, 2006	1.150	1.054	1.255	3.142	0.002
Albert, 2005	1.180	0.881	1.581	1.109	0.268
Eaker, 2005 men	1.040	1.006	1.075	2.320	0.020
Eaker, 2005 women	0.998	0.951	1.047	-0.082	0.935
Nicholson, 2005	1.280	0.759	2.158	0.926	0.354
Weitoft, 2005 men	1.490	1.142	1.944	2.940	0.003
Weitoft, 2005 women	1.040	0.748	1.446	0.233	0.816
Yasuda, 2002	1.840	0.763	4.437	1.358	0.175
Haines, 2001	1.290	0.711	2.342	0.837	0.403
Kawachi 1994	1.240	0.729	2.108	0.794	0.427
Vogt, 1994	1.180	0.852	1.634	0.996	0.319
Eaker, 1992	2.900	1.268	6.633	2.522	0.012
Rosengren, 1991	1.500	1.192	1.887	3.459	0.001
	1.260	1.149	1.382	4.915	0.000

Statistics for each study

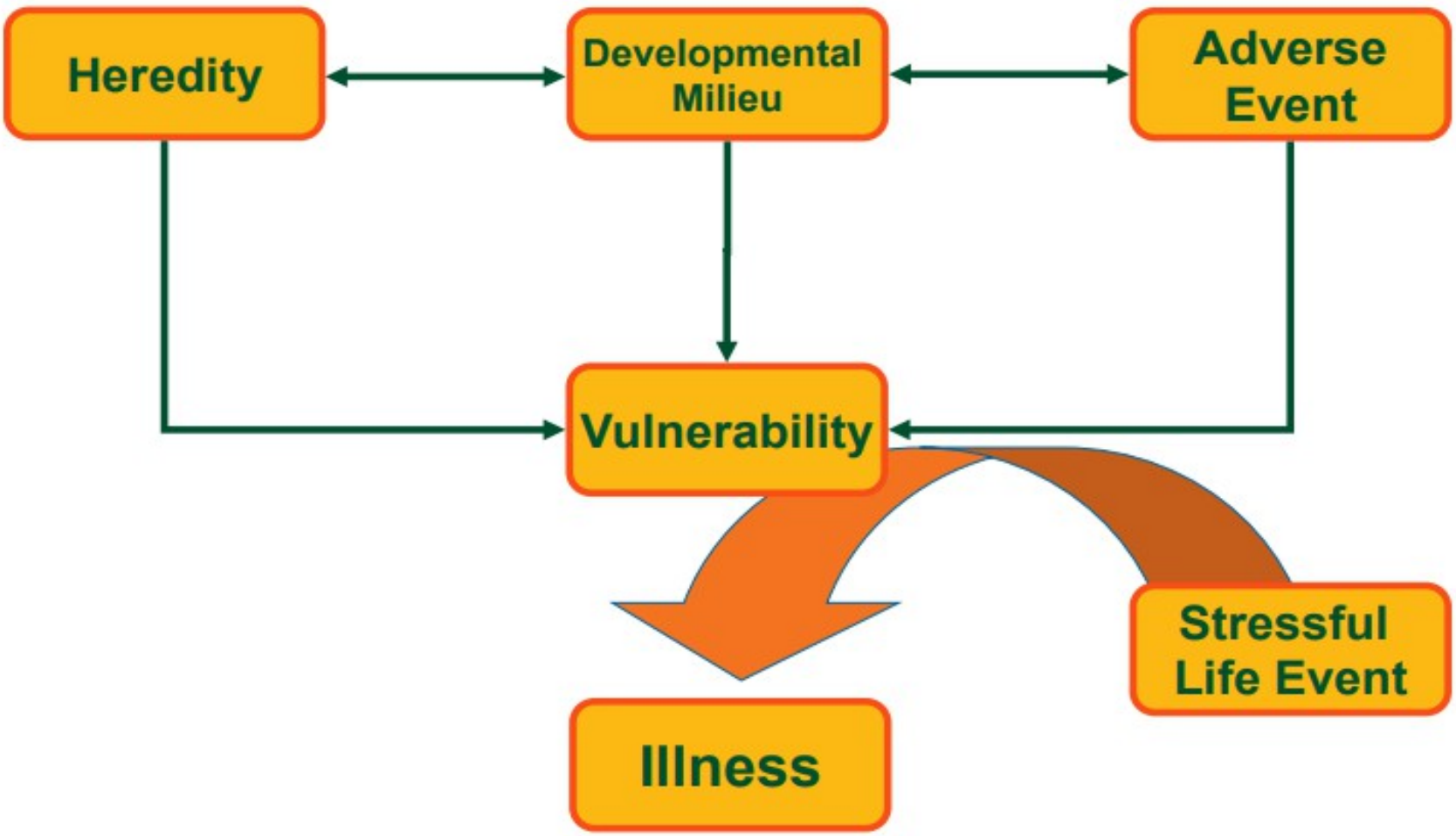
Hazard ratio and 95% CI



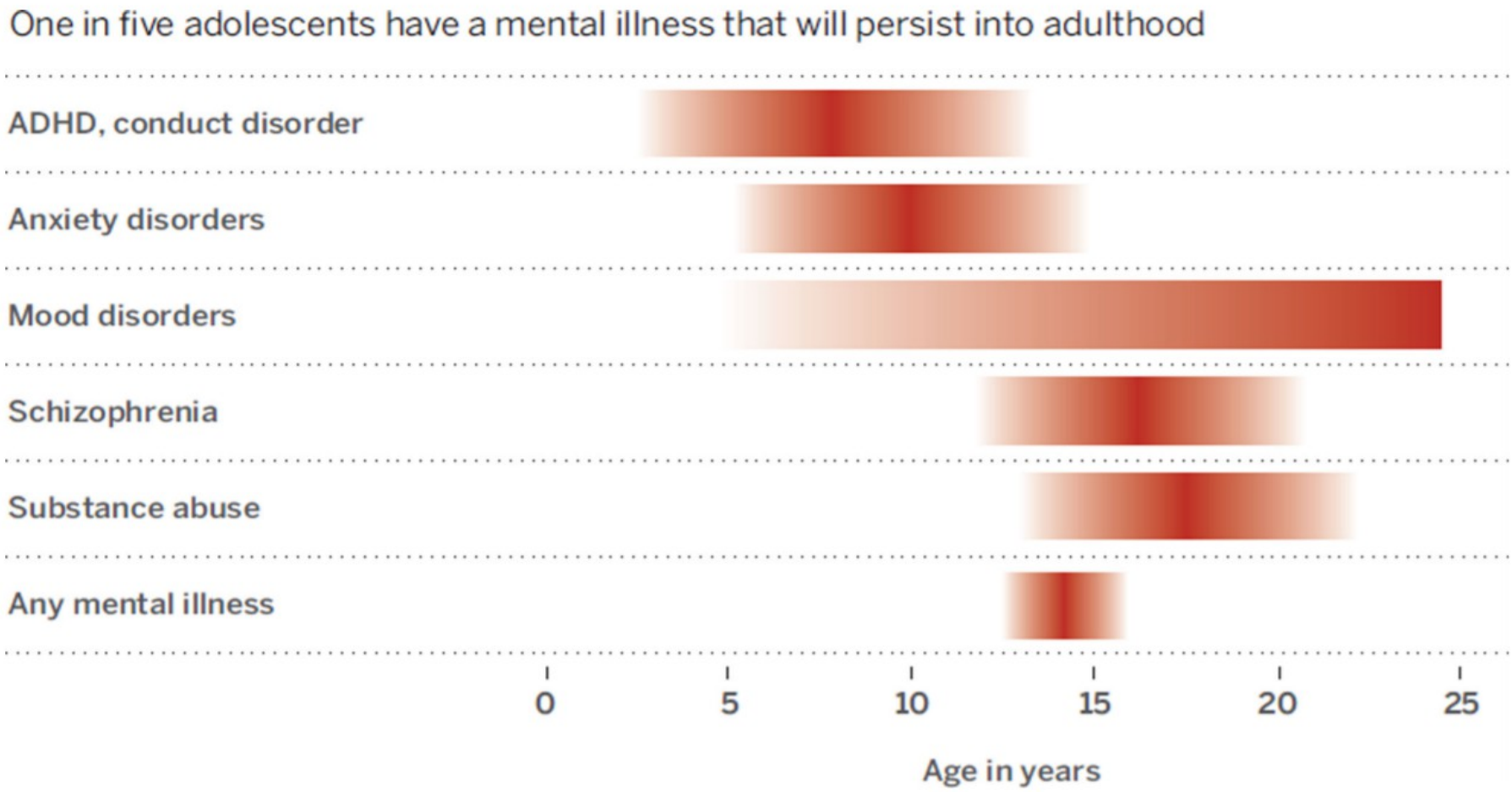
Heterogeneity Q= 81.23; p<0.0001; I^2= 74.15

Roest et al. Journal of the American College of Cardiology Vol. 56, No. 1, 2010

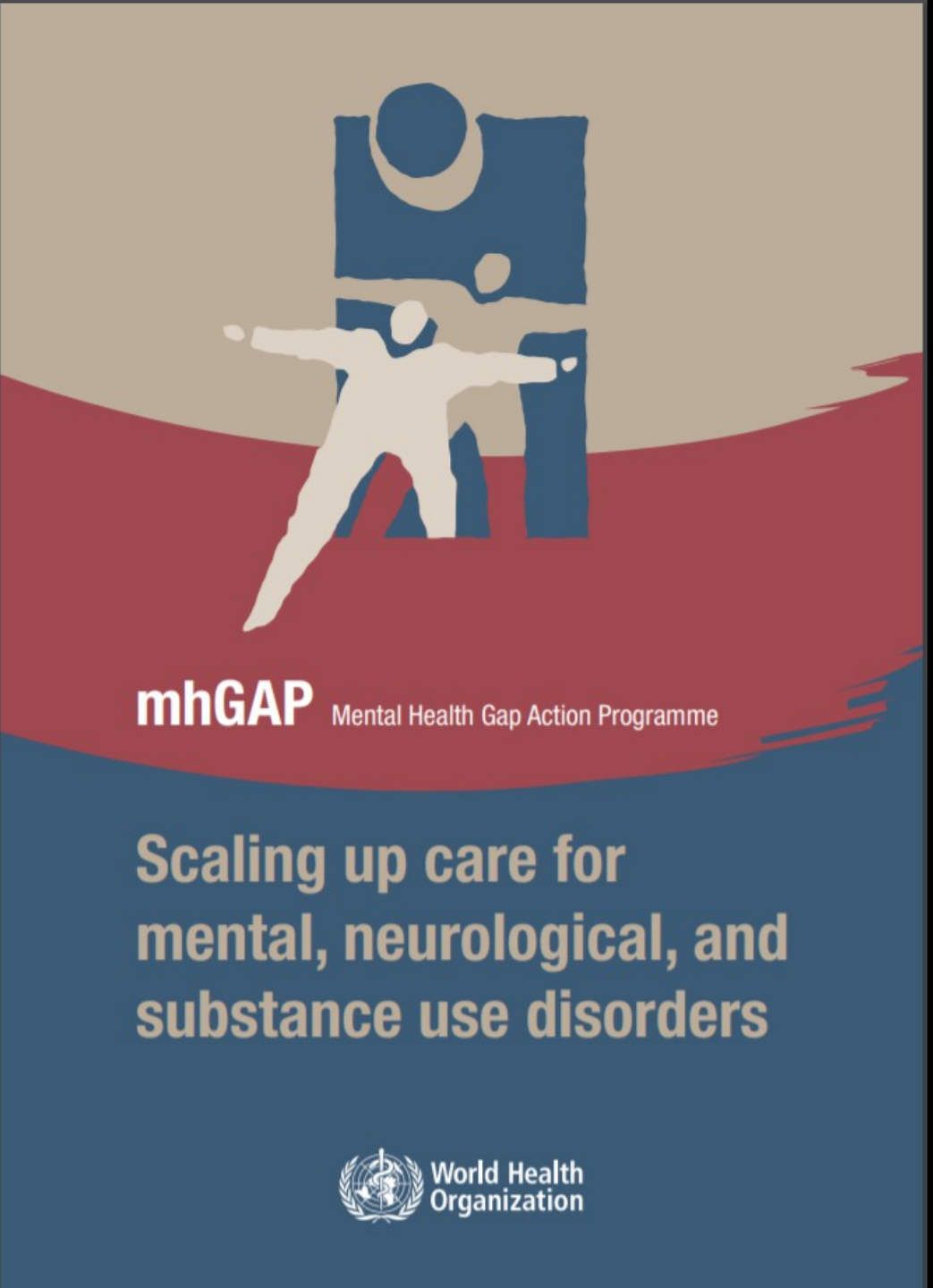
ΤΟ ΜΟΝΤΕΛΟ ΠΡΟΔΙΑΘΕΣΗΣ-ΣΤΡΕΣ



EARLY ONSET ANXIETY



Lee et al. Science 2014 Oct 31;346(6209):547-9



- Οι προσπάθειες πρόληψης των αγχωδών διαταραχών θεωρούνται προτεραιότητα δημόσιας υγείας.

WHO 2008

ΠΡΟΛΗΨΗ

- Πρόληψη ονομάζεται κάθε παρέμβαση που λαμβάνει χώρα προ της ενάρξεως μιας κλινικής ψυχικής δ/χης.
- Όταν ο πληθυσμός στόχος είναι το σύνολο η παρέμβαση ονομάζεται καθολική (‘‘universal’’).
- Όταν ο πληθυσμός στόχος είναι μία υποομάδα σε κίνδυνο σημαντικά υψηλότερο για την εμφάνιση της δ/χης η παρέμβαση

Subgroup analyses	N	SMD[a]	95% CI	*P*[b]	I^2	[c]Between group heterogeneity
Type of prevention						
Indicated	17	-0.268	-0.429 to -0.108	.001	63.8	Q=4.218; d.f.(Q)=2;
Selective	11	-0.509	-0.758 to -0.260	<.001	60.4	p=.121
Universal	8	-0.219	-0.342 to -0.096	<.001	54.9	
Outcome measure						
Symptom scale	17	-0.407	-0.548 to -0.266	<.001	73.0	Q=5.815; d.f.(Q)=1;
Standardized diagnostic interview	19	-0.180	-0.299 to -0.061	.003	32.6	p=.016
Type of anxiety						
Non-specific anxiety	23	-0.310	-0.430 to -0.191	<.001	70.10	Q=5.175; d.f.(Q)=4;
GAD*	8	-0.235	-0.409 to -0.060	.008	21.55	p=.270
SAD	2	-0.239	-0.673 to 0.194	.279	31.93	
Panic	2	-1.115	-2.073 to -0.157	.023	0.00	
Obsessive compulsive	1	-0.624	-1.101 to -0.146	.010	n.a.	
Country						
USA/Canada	8	-0.564	-0.843 to -0.285	<.001	50.74	Q=7.412; d.f.(Q)=3;
Europe	15	-0.337	-0.492 to -0.182	<.001	70.70	p=.060
Australia	10	-0.204	-0.312 to -0.096	<.000	00.00	
Other countries	3	-0.142	-0.389 to 0.106	.261	60.40	
Age						
Adults	14	-0.319	-0.475 to- 0.163	<.001	36.8	Q=4.178; d.f.(Q)=3;
Elderly	4	-0.128	-0.307 to 0.052	.164	00.0	p=.243
Children and adolescents	9	-0.288	-0.473 to -0.104	.002	63.6	
Mixed ages	9	-0.404	-0.627 to -0.180	<.001	80.59	
Setting						
Community	10	-0.425	-0.680 to -0.169	.001	72.49	Q=6.372; d.f.(Q)=4;
School and college	13	-0.350	-0.507 to -0.194	<.001	57.26	p=.173
Primary care	4	-0.201	-0.458 to 0.056	.125	65.94	
Medical clinic	5	-0.200	-0.333 to -0.066	.003	4.19	
Other settings	4	-0.083	-0.298 to 0.131	.447	00.00	

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Subgroup analyses	N	SMD[a]	95% CI	P[b]	I^2	[c]Between group heterogeneity
Comparator						
CAU/No intervention	19	-0.169	-0.245 to -0.093	<.001	26.16	Q=30.295; d.f.(Q)=2;
Active comparator	8	-0.303	-0.545 to -0.060	.014	56.9	p=<.001
Waiting list	9	-0.699	-0.872 to -0.526	<.001	11.1	
Provider						
Computer	7	-0.217	-0.380 to -0.054	.009	14.38	Q=11.001; d.f.(Q)=3;
Family physician	2	-0.413	-1.011 to 0.186	.177	85.17	p=.012
Mental health specialists	25	-0.379	-0.512 to -0.245	<.001	63.24	
Teacher	2	-0.078	-0.200 to 0.045	.217	00.0	
Type of intervention						
Psychological	29	-0.310	-0.422 to -0.199	<.001	63.01	Q=0.026; d.f.(Q)=1;
Psychoeducational	7	-0.290	-0.502 to -0.079	.007	55.65	p=.871
Intervention orientation						
Cognitive-behavior	31	-0.253	-0.345 to -0.161	<.001	46.76	Q=1.478; d.f.(Q)=1;
Other orientations	5	-0.520	-0.941 to -0.100	.015	87.02	p=.224
Intervention format						
Individual	21	-0.313	-0.452 to -0.173	<.001	67.44	Q=0.071; d.f.(Q)=1;
Group	15	-0.287	-0.420 to -0.154	<.001	50.67	p=.790
Number of sessions						
1-6	15	-0.347	-0.505 to -0.189	<.001	55.73	Q=0.381; d.f.(Q)=1;
>6	21	-0.283	-0.410 to -0.157	<.001	65.77	p=.537
Sample size						
≤200	20	-0.449	-0.623 to -0.276	<.001	51.51	Q=11.734; d.f.(Q)=2;
201-671	13	-0.250	-0.394 to -0.106	.001	66.48	p=.003
>1000	3	-0.121	-0.206 to -0.036	.005	0.00	
Risk of bias						
Low	13	-0.150	-0.227 to -0.072	<.001	0.00	Q=8.475; d.f.(Q)=2;
Moderate	11	-0.478	-0.732 to -0.223	<.001	73.71	p=.014
High	12	-0.320	-0.475 to -0.164	<.001	54.59	
Follow up						
<6	7	-0.611	-0.814 to -0.409	<.001	40.79	Q=13.958; d.f.(Q)=3;
6-<12	7	-0.257	-0.567 to 0.053	.104	56.40	p=.003
12	14	-0.259	-0.383 to -0.135	<.001	41.80	
>12	8	-0.149	-0.285 to -0.013	.032	36.07	

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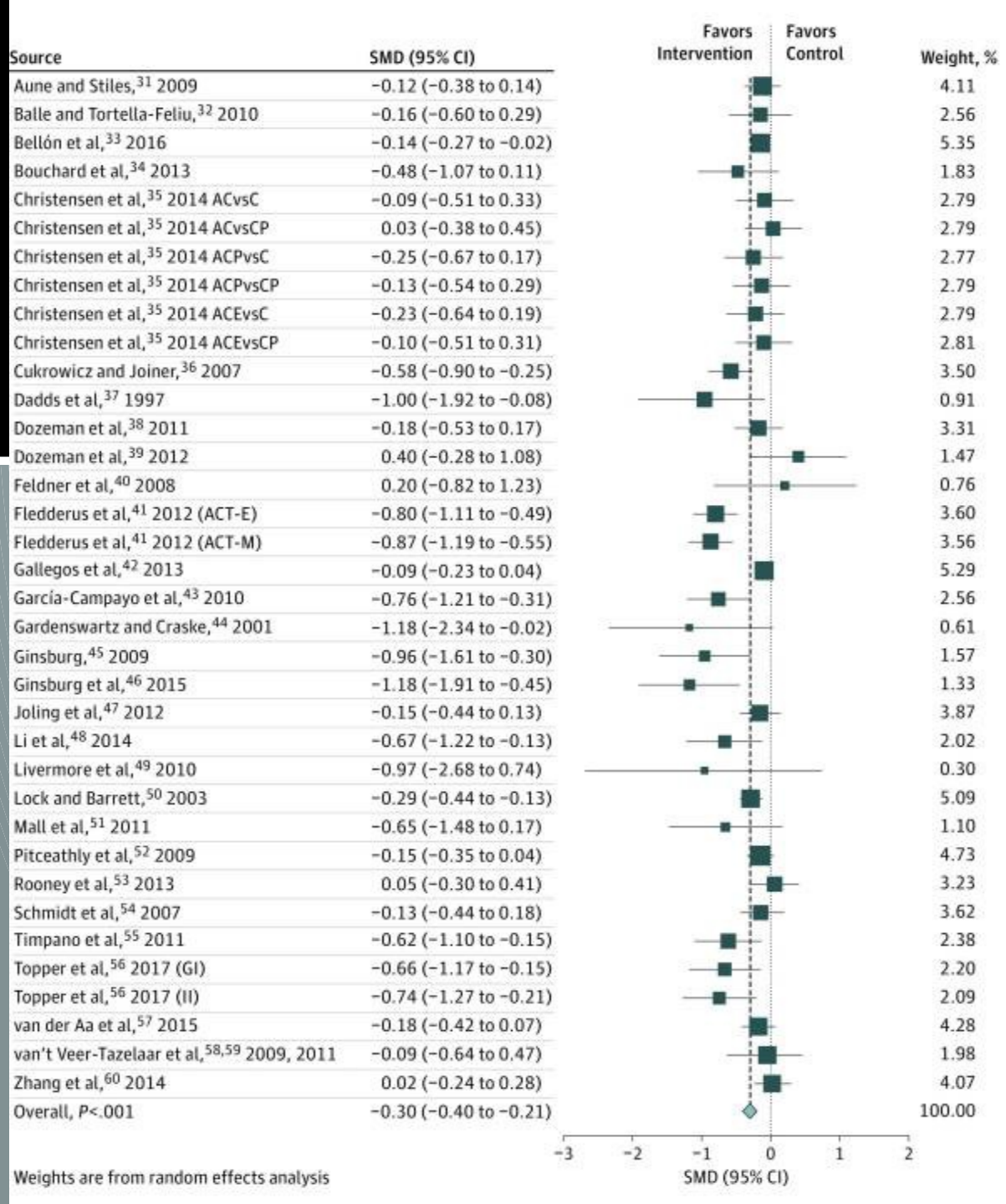


Equivalent pooled odds ratio (OR) was 0.57 (95% CI, 0.48 to 0.68; $P < .001$)—a 43% reduction in the incidence of anxiety—with substantial heterogeneity ($I2$ = 61.1%; $Q35 = 90.13$; $P < .001$).

Moreno-Peral P, et al. *JAMA Psychiatry*. 2017

BIOLOGICAL MARKERS FOR ANXIETY

Neurochemistry

Neurotransmitters (Serotonin, Dopamine, Noradrenaline, GABA), Neuropeptides (CCK), Neurokinines (Substance P), atrial natriuretic peptide, oxytocin, HPA axis (cortisol, ACTH, CRF), Neurotrophic factors (BDNF, NGF), immunological markers (interleukins, interferons, TNF, CRF, antibodies).

Neurocognition

Executive function, long-term memory, visuospatial or perceptual abilities, working memory, planning, goal directed system, cognitive flexibility, response inhibition.

Bandelow et al. The World Journal of Biological Psychiatry 2015, 2017

BIOLOGICAL MARKERS FOR ANXIETY

Neurophysiology

EEG, Polysomnography, heart rate variability

Neuroimaging

MRI, DTI, MRS, fMRI, PET, SPECT

Genetic markers

Linkage studies, association studies, G-WAS, GxE interaction, Pharmacogenetics, Epigenetics

Bandelow et al. The World Journal of Biological Psychiatry 2015, 2017

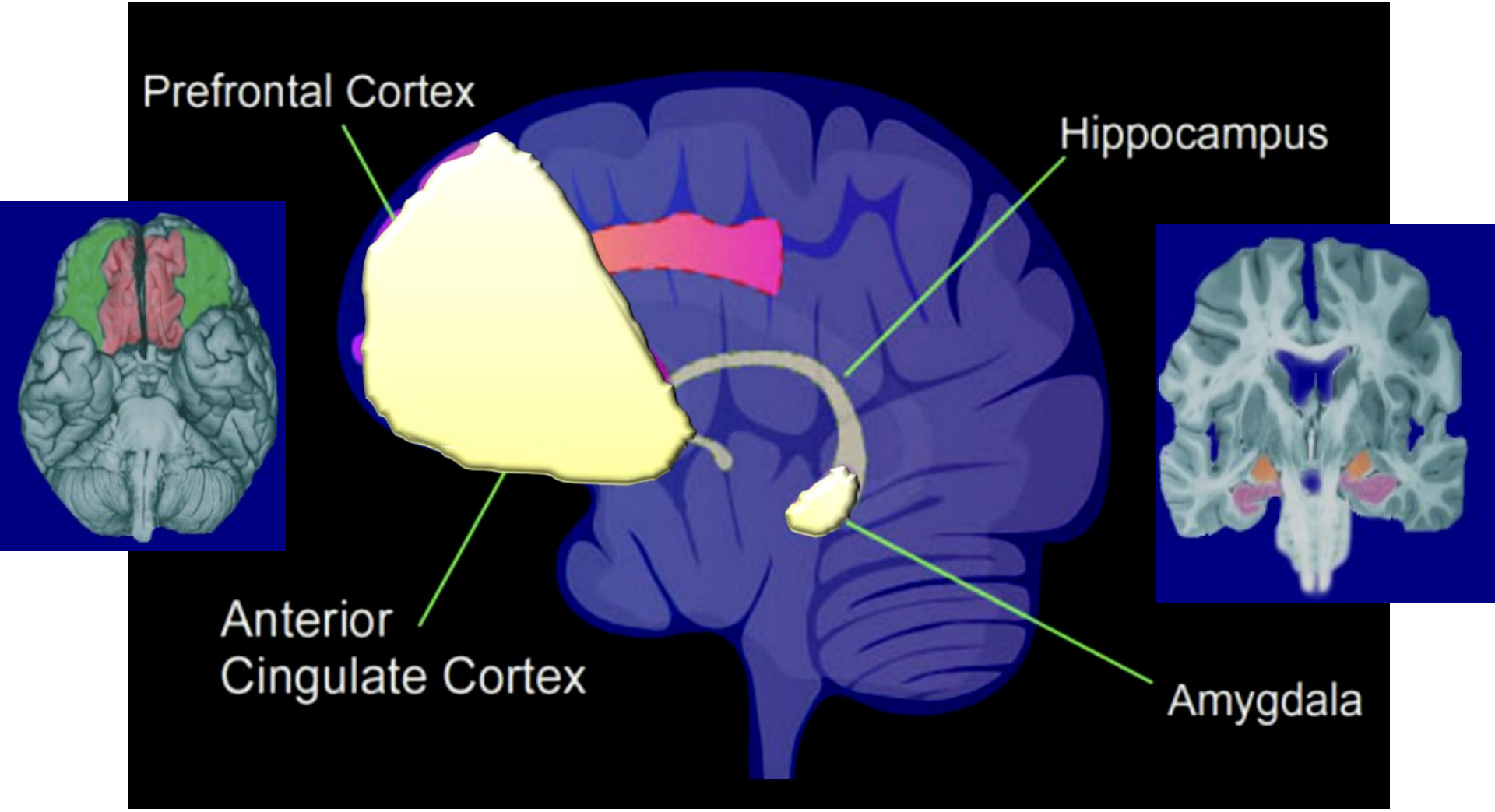
BIOLOGICAL MARKERS FOR ANXIETY

Resting, suppression(DST), activation (real time panic attacks, CO_2 inhalation, chemically induced panic attacks)

Diagnostic, treatment

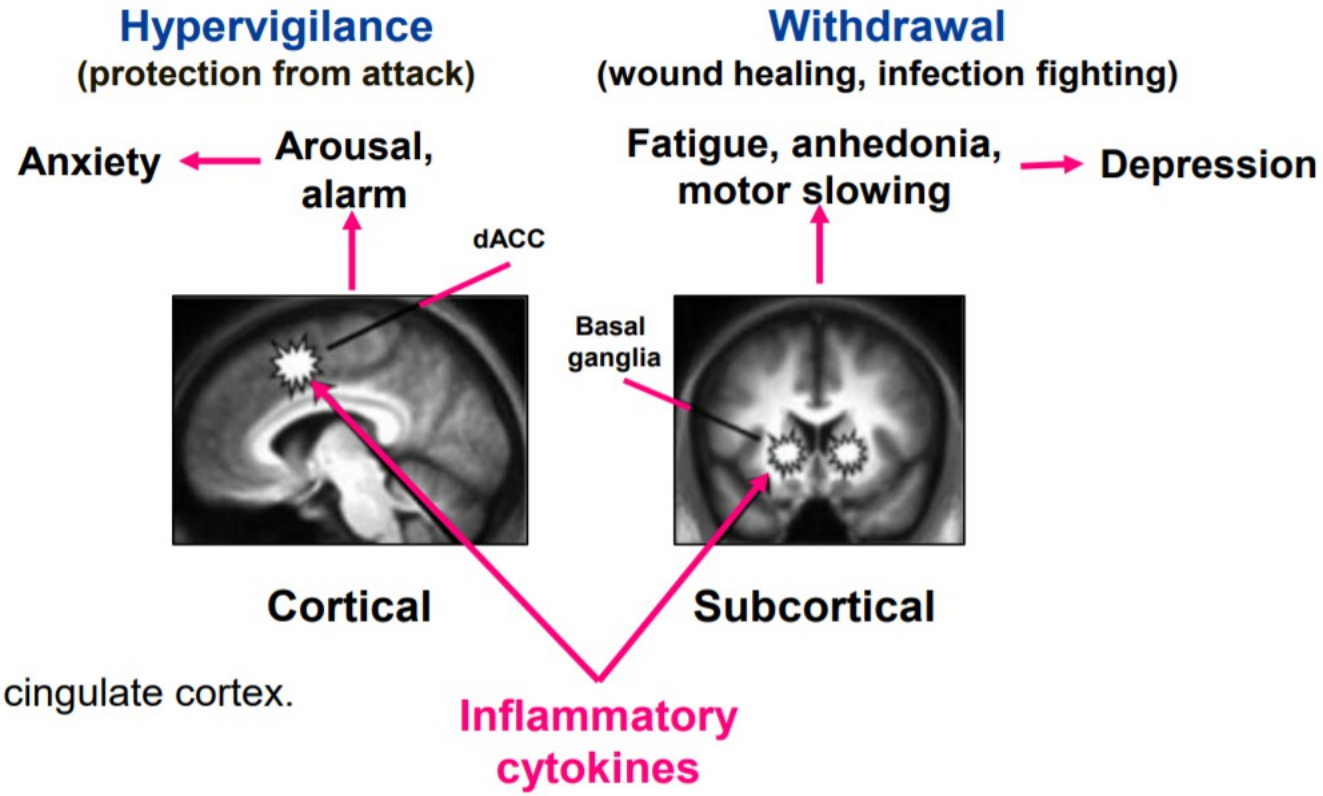
Bandelow et al. The World Journal of Biological Psychiatry 2015, 2017

Fear regulation/Fear extinction



Ο ΡΟΛΟΣ ΤΟΥ ΧΡΟΝΙΟΥ ΣΤΡΕΣ ΚΑΙ ΤΗΣ ΦΛΕΓΜΟΝΗΣ

Impact of Inflammatory Cytokines on Brain Circuitry



dACC = dorsal anterior cingulate cortex.

Miller AH, et al. Depress Anxiety. 2013;30(4):297-306.

ΠΙΘΑΝΟΙ ΜΕΛΛΟΝΤΙΚΟΙ ΣΤΟΧΟΙ

- Από το γονίδιο στην πρωτεΐνη: μεθυλίωση του DNA, οι κώδικες των ιστονών, κοντρόλ των miRNA στην μετάφραση του mRNA.

- Λεπτός έλεγχος της νευροδιαβίβασης: αντίστροφοι αγωνιστές, αλλοστερικοί σύνδεσμοι, G-protein-independent signalling (b-arrestin), GPCR-interacting proteins.

ΣΥΜΠΕΡΑΣΜΑΤΑ

- Η συννόσηση είναι ο κανόνας και όχι η εξαίρεση για τις αγχώδεις διαταραχές.
- Πολλές (ψυχιατρικές και μη) παθήσεις, συνυπάρχουν ή ενδεχομένως αποτελούν επακόλουθα των αγχωδών δ/χων.
- Η πρόληψη των αγχωδών διαταραχών είναι εφικτή και πέραν της αυταπόδεικτης σημασίας της, ίσως θα μείωνε και την συχνότητα άλλων παθήσεων.

Σας ευχαριστώ για την προσοχή σας.