

Aus der Klinik für Psychiatrie und Psychotherapie
(Prof. Dr. J. Wiltfang)
der Medizinischen Fakultät der Universität Göttingen

Mean Age and Gender Distribution of Patients with Mental Disorders in Randomized Controlled Studies

INAUGURAL-DISSERTATION

zur Erlangung des Doktorgrades
der Medizinischen Fakultät der
Georg-August-Universität Göttingen

vorgelegt von
Katharina Schüller
aus
Bremen

Göttingen 2018

Dekan: Prof. Dr. rer. nat. H. K. Kroemer

Betreuungsausschuss

Betreuer/in: Prof. Dr. med. B. Bandelow

Ko-Betreuer/in: Prof. Dr. med. M. Weber

Prüfungskommission

Referent/in: Prof. Dr. B. Bandelow

Ko-Referent/in: Prof. Dr. M. Weber

Drittreferent/in: Prof. Dr. M. Schön

Datum der mündlichen Prüfung: 15. Mai 2019

Hiermit erkläre ich, die Dissertation mit dem Titel "Mean Age and Gender Distribution of Patients with Mental Disorders in Randomized Controlled Studies" eigenständig angefertigt und keine anderen als die von mir angegebenen Quellen und Hilfsmittel verwendet zu haben.

Göttingen, den 14. Mai 2018

.....

(Unterschrift)

Content

1. Introduction	- 1 -
1.1 Common mental disorders	- 1 -
1.2 Previous epidemiological research	- 5 -
1.2.1 WMH household surveys	- 5 -
1.3 Comparison of household surveys and clinical trials	- 8 -
1.3.1 Sample characteristics	- 10 -
1.3.2 Reliability of diagnoses	- 11 -
1.3.3 Assessment of disorder severity	- 14 -
1.4 Age-of-onset distribution of mental disorders	- 15 -
1.5 Gender distribution of mental disorders	- 17 -
1.6 Lifetime prevalence of mental disorders	- 18 -
1.7 Projected lifetime risk of mental disorders	- 19 -
1.8 Severity of mental illness	- 20 -
1.9 Mental health care use	- 23 -
1.10 Future prospects	- 24 -
1.11 Goal of the study	- 26 -
2. Design and methods	- 27 -
2.1 Selection of mental disorders	- 27 -
2.2 Search methods	- 28 -
2.3 Study selection	- 29 -
2.4 Analysis	- 31 -
3. Results	- 33 -
4. Discussion	- 36 -
4.1 Mean age distribution in detail	- 40 -
4.2 Gender distribution in detail	- 44 -
5. Limitations	- 49 -
6. Conclusion	- 51 -
7. Summary	- 53 -
8. Appendix	- 56 -
8.1 Abbreviations	- 56 -

8.2	Tabulation of the investigated studies	- 57 -
8.1	Index of the investigated studies	- 78 -
9.	Reference list	- 150 -

1. Introduction

Mental disorders are common and cause a high degree of disability and costs (Gustavsson et al. 2011; Wittchen 2004; Wittchen and Jacobi 2005; Wittchen et al. 2011). The treatment of mental disorders is a crucial public health problem. Mental disorders are among the most burdensome of all types of disease and represent some of the most impairing chronic diseases (Kessler et al. 2001b). For example, the World Health Organization (WHO) has ranked depression the fourth leading cause of disability worldwide (Murray and Lopez 1996) and the Global Burden of Disease (GBD) study found that major depressive disorder was the second leading cause of disability in 2010 (Vos et al. 2012). Thus, psychiatric epidemiologic research is increasingly clinically relevant.

1.1 Common mental disorders

Table 1 briefly summarizes the most common psychiatric disorders according to ICD-10 (International Classification of Diseases) and their treatment approach.

Table 1. Brief description and code of the most common psychiatric disorders according to ICD-10 and their treatment approach

Brief Description and Code of Psychiatric Disorders According to ICD-10	Treatment Approach
Alzheimer's Disease (F00)	
Dementia in Alzheimer's disease is a neurodegenerative disease with a decline of mental functioning. Impairments of cognitive function such as loss of memory and changes in language and behaviour occur. Subtypes are classified due to the age-of-onset.	Anti-dementia medication
Vascular Dementia (F01)	
Vascular dementia is caused by multiple infarcts of the brain due to cerebrovascular disease. The infarcts cumulate in effects over time and result in a decline of mental functioning.	Anti-dementia medication

Brief Description and Code of Psychiatric Disorders According to ICD-10	Treatment Approach
Alcohol Dependence Syndrome (F10.2)	
Alcohol dependence syndrome includes a persistent desire of alcohol use, difficulties in controlling consumption behaviour, continued use despite the knowledge of harmful consequences, increased tolerance, withdrawal symptoms, and reduced pursuits to other activities and obligations than alcohol use.	Relapse prevention, support groups, psychotherapy, different medications (e.g. naltrexone, nalmefene, acamprostate)
Schizophrenia (F20)	
The patient is suffering from a fundamental distortion of thinking, perception, and inappropriate affects. Positive symptoms such as a distorted self-experience, delusions, hallucinations, and thought disorders are typical features. Negative symptoms such as anhedonia, blunted affects, reduced speaking, and social isolation occur. Different subtypes can be classified.	Antipsychotics and other drugs
Schizoaffective Disorder (F25)	
Episodic disorder in which both affective and schizophrenic symptoms occur but which do not strictly meet diagnostic criteria for either schizophrenia or depressive/manic episodes. Different subtypes can be classified.	Antipsychotics, mood stabilizers, antidepressants
Manic Episode (F30)	
Mood and energy level is highly elevated, resulting in overactive behaviour, pressured speech, and a decreased need for sleep. The patient gets distracted easily and cannot sustain attention. Grandiose ideas, overconfidence, thought disturbances, and loss of social inhibitions occur. Psychotic symptoms such as delusions and hallucinations may or may not occur.	Mood stabilizers, antipsychotics
Bipolar Affective Disorder (F31)	
A major affective disorder characterized by manic and depressive episodes, repeatedly appearing in remission and recurrence, and followed by symptom-free intervals.	Mood stabilizers, antipsychotics, antidepressants
Major Depressive Disorder (F32-33)	
In a depressive episode, the patient suffers from low mood, decreased energy, and reduction of activity. Enjoyment, interest, and concentration is reduced. Fatigue and sleep disturbances are common. A lowered self-esteem or self-confidence, ideas of guilt or worthlessness, and suicidal ideation can be present. Somatic symptoms such as loss of interest, anhedonia, waking early in the morning, psychomotor retardation or agitation, loss of appetite, weight and libido can occur. Severe episodes may be accompanied by psychotic symptoms.	Antidepressants, other drugs, psychotherapy

Brief Description and Code of Psychiatric Disorders According to ICD-10	Treatment Approach
Dysthymia (F34.1)	
A chronic form of depression, lasting at least two years, which is not sufficiently severe or prolonged to meet diagnostic criteria of a depressive disorder.	Antidepressants, other drugs, psychotherapy
Panic Disorder with Agoraphobia (F40.0) or without Agoraphobia (F41.0)	
Recurrent attacks of anxiety that are not related to any circumstances and therefore seem unpredictable. Somatic symptoms such as palpitations, chest pain, dizziness, and feelings of unreality, “derealization” and “depersonalization”, arise. Often patients are afraid of dying, losing control, or going mad. Agoraphobia is characterized by avoiding phobic situations, e.g. leaving home and entering public places. Anxiety arises during confrontation and little or no symptoms are being experienced through avoidance.	Cognitive behavioural therapy, antidepressants and other medications
Social Phobia (F40.1)	
An anxiety disorder characterized by an intense fear of social interaction in which the individual believes to be scrutinized by others.	Cognitive behavioural therapy, antidepressants and other medications
Generalized Anxiety Disorder (F41.1)	
An anxiety disorder characterized by persistent free-floating fear and excessive worry, lasting at least six months, accompanied by somatic symptoms of anxiety and physiologic arousal.	Cognitive behavioural therapy, antidepressants and other medications
Obsessive-Compulsive Disorder (F42)	
Recurrent obsessional, stereotypical, and distressing thoughts or compulsive acts which do not lead to the completion of a useful task. The patient aims to prevent some unlikely incidence which he fears might otherwise occur. The most common compulsions include cleaning, repeating, and checking. The most common obsessions include contaminants and fear of harm to the self or to another. Repeated attempts to resist fail due to distressing anxiety. Thoughts are recognized as the patient’s own thoughts.	Cognitive behavioural therapy, antidepressants and other medications
Posttraumatic Stress Disorder (F43.1)	
A protracted response to exposure of a trauma, being defined as an situation of exceptionally threatening or catastrophic nature, that would cause distress in almost anyone. Typical symptoms include intrusive memories (“flashbacks”), nightmares, emotional numbness and blunting, detachment from the social environment, hyperarousal, insomnia, unresponsiveness to the surrounding, anhedonia, and avoidance of triggering situations. The onset of the syndrome occurs a few weeks or months after the traumatic event.	Cognitive behavioural therapy, antidepressants and other medications

Brief Description and Code of Psychiatric Disorders According to ICD-10	Treatment Approach
Somatoform Disorders (F45)	
Repeated preoccupation with physical symptoms and requests for medical investigations in spite of negative findings and reassurances by physicians that the symptoms are not related to any physical disorder. If a somatic disease is present, it does not explain the extent of the symptoms.	Psychotherapy, antidepressants
Anorexia Nervosa (F50.0)	
An eating disorder mostly occurring in young women, characterized by self-induced underweight, self-perception as overweight, and fear of gaining weight. Patients induce loss of weight by restricted diet, excessive training, vomiting and purgation, and use of medication, e.g. diuretics. Undernutrition is leading to endocrine and metabolic complications.	Psychotherapy, medications
Bulimia Nervosa (F50.2)	
An eating disorder characterized by a recurrent episodes of compulsive overeating followed by purging. Similar to anorexia nervosa, a constant worry about controlling the body weight occurs. Patients tend to be of average weight. Repeated vomiting is leading to physical complications, e.g. electrolyte derangements.	Psychotherapy, medications
Binge Eating Disorder (F50.81)	
Recurrent episodes of rapidly eating large amounts of food even without being physically hungry. A lack of control during the episodes and a feeling of guilt afterwards is common.	Cognitive behavioural therapy, anti-obesity medication, bariatric surgery
Nonorganic Insomnia (F51.0)	
A sleep disturbance including difficulty falling asleep, difficulty staying asleep, or early final wakening. Nonorganic insomnia is not related to any mental and physical disorder.	Sedatives
Emotionally Unstable (Borderline) Personality Disorder (F60.3)	
Personality disorder characterized by difficulties in regulating emotions. The impulsive type is characterized by emotional instability and lack of impulse control. The borderline type is characterized by a distorted self-image, a feeling of emptiness, intense and unstable relationships, and a tendency to self-harming behaviour. The patient can hardly consider consequences of emotional or behavioural outbreaks.	Dialectical behavioural therapy

1.2 Previous epidemiological research

Some informative research has been published over the last decades focusing on psychiatric epidemiology. Epidemiological surveys have been conducted worldwide, estimating prevalence, lifetime risk, and gender distribution of national representative population segments.

For example, the mental health module in the German Health Interview and Examination Survey (DEGS1-MH) has been carried out in Germany, assessing a nationally representative sample aged 18–79 years of more than 5000 respondents in order to estimate prevalence and risk factors of mental disorders, and more than 4000 respondents to estimate morbidity, comorbidity, treatment/health care, impairment/disability, quality of life, cognitive impairment, mental health, and functioning of persons (Jacobi et al. 2014a).

The WHO's World Mental Health (WMH) household surveys are being carried out in regions and countries all over the world. A remarkable sample size of more than 85,000 respondents have been investigated to estimate 12-month and lifetime prevalence, projected lifetime risk, severity, gender, and age-of-onset distributions of mental disorders (Kessler et al. 2007b).

For a complete clinical benefit of psychiatric epidemiology, community and clinical epidemiology need to be further integrated. The WMH surveys only started the process of integration by measuring severity of mental disorders.

1.2.1 WMH household surveys

In the following, it is referred to the WMH household surveys to exemplify content and methods of epidemiological household studies. A brief overview of the WMH survey methods is provided. Table 2 gives an overview of the sample characteristics of the WMH surveys.

Table 2. Sample characteristics of the WMH Surveys, adapted and reprinted with permission (The World Mental Health Survey Initiative 2005)

Country	Survey ¹	Field Dates	Response Rate ²	Age Range	Sample Size
Argentina	AMHES	2015	77.3 %		3927
Australia	SMHWB	2007	60.0 %		8841
Belgium	ESEMeD	2001–2002	50.6 %	18+	2419
Brazil	Sao Paulo Megacity	2005–2008	81.3 %		5037
Bulgaria	NSHS	2002–2006	72.0 %		5318
Colombia	NSMH	2003	87.7 %	18-65	4426
Colombia – Medellín	MMHHS	2011–2012	97.2 %		3261
France	ESEMeD	2001–2002	45.9 %	18+	2894
Germany	ESEMeD	2002–2003	57.8 %	18+	3555
Iraq	IMHS	2006–2007	95.2 %		4332
Israel	NHS	2003–2004	72.6 %	21+	4859
Italy	ESEMeD	2001–2002	71.3 %	18+	4712
Japan	WMHJ - Region 1	2002–2003	56.4 %	20+	1663
	WMHJ - Region 2	2003–2004	55.1 %		1323
	WMHJ - Regions 3- 5	2004–2006	42.6 %		1143
Lebanon	LEBANON	2002–2003	70.0 %	18+	2857
Mexico	M-NCS	2001–2002	76.6 %		5782
Netherlands	ESEMeD	2002–2003	56.4 %	18+	2372
New Zealand	NZMHS	2004–2005	73.3 %	16+	12992
Nigeria	NSMHW	2002–2004	79.3 %	18+	6752
Northern Ireland	NIMHS	2005–2008	68.4 %		4340
Peru	EMSMP	2004–2005	90.2 %		3930
Poland	EZOP	2010–2011	50.4 %		10081
Portugal	NMHS	2008–2009	57.3 %		3849
PRC ³ Beijing	B-WMH	2001–2003	74.8 %	18+	2633
PRC ³ Shanghai	S-WMH	2001–2003	74.6 %	18+	2568
PRC ³ Shenzhen	Shenzhen-WMH	2005–2007	80.0 %	18+	7134
Romania	RMHS	2005–2006	70.9 %		2357
South Africa	SASH	2002–2004	87.1 %	18+	4315
Spain	ESEMeD	2001–2002	78.6 %	18+	5473
Spain - Murcia	PEGASUS-Murcia	2010–2012	67.4 %		2621

Country	Survey ¹	Field Dates	Response Rate ²	Age Range	Sample Size
Ukraine	CMDPSD	2002	78.3 %	18+	4725
United States	NCS-R	2001–2003	70.9 %	18+	9282

1 AMHES (Argentina Mental Health Epidemiologic Survey); SMHWB (National Survey of Mental Health and Wellbeing); ESEMeD (European Study Of The Epidemiology Of Mental Disorders); NSHS (Bulgaria National Survey of Health and Stress); NSMH (Colombian National Study of Mental Health); MMHHS (Medellin Mental Health Household Study); IMHS (Iraq Mental Health Survey); NHS (Israel National Health Survey); WMHJ (World Mental Health Japan Survey); LEBANON (Lebanese Evaluation of the Burden of Ailments and Needs Of the Nation); M-NCS (Mexico National Comorbidity Survey); NZMHS (New Zealand Mental Health Survey); NSMHW (Nigerian Survey of Mental Health and Wellbeing); NIMHS (Northern Ireland Mental Health Survey); EMSMP (La Encuesta Mundial de Salud Mental en el Peru); EZOP (Epidemiology of Mental Health and Access to Care Survey); NMHS (Portugal National Mental Health Survey); B-WMH (Beijing World Mental Health Survey); S-WMH (Shanghai World Mental Health Survey); RMHS (Romania Mental Health Survey); SASH (South Africa Health Survey); PEGASUS-Murcia (Psychiatric Enquiry to General Population in Southeast Spain-Murcia); CMDPSD (Comorbid Mental Disorders during Periods of Social Disruption); NCS-R (US National Comorbidity Survey Replication).

2 The response rate is defined by the percentage of persons asked to answer a survey who finally participate.

3 PRC - People's Republic of China

The WHO's WMH household surveys represent regions from all over the world. The surveys were conducted in Africa (Nigeria, South Africa), the Americas (Colombia, Mexico, United States), Asia and the Pacific (Japan, New Zealand, Beijing and Shanghai in the People's Republic of China - described as Metropolitan PRC), Europe (Belgium, France, Germany, Italy, the Netherlands, Spain, Ukraine), and the Middle East (Israel, Lebanon). The surveys were nationally representative except for China, Japan, and Nigeria. A total of 85,052 interviews have already been completed, the total eventual sample size will include 151,773 respondents. The weighted average response rate was 71.1 %. Estimates of prevalence, projected lifetime risk, severity, distribution, social burden, and patterns of treatment of mental disorders are being assessed. Diagnoses cover anxiety disorders, mood disorders, impulse-control disorders, eating disorders, and substance use disorders. Not all disorders were assessed in all countries. Diagnoses were based on the Composite International Diagnostic Interview (CIDI), which is a fully structured interview generating ICD-10 and Diagnostic and Statistical Manual of Mental Disorders (DSM)- IV diagnoses. Organic exclusion criteria were formulated in determining diagnoses. The surveys were performed by lay interviewers

operating with a computer-assisted personal interview (CAPI). The interviewers were coached during a one-week training course conducted by certified trainers from the WHO (Alonso et al. 2004). A subsample of respondents was re-interviewed by experienced clinicians in order to analyze consistency with the diagnoses based on the CIDI (Kessler et al. 2006).

1.3 Comparison of household surveys and clinical trials

Regarding characteristics and methods of epidemiological household surveys and randomized clinical trials (RCTs), major differences should be highlighted. Table 3 presents a comparison of characteristics of the WHO surveys, stated as an example for epidemiological community surveys, and RCTs.

Table 3. Characteristics of the WHO epidemiological surveys and RCTs

WHO Epidemiological Surveys	Analysis of Randomized Controlled Studies
Sample <ul style="list-style-type: none"> national representative household surveys assessing population-segments age range: 18+ 	Sample <ul style="list-style-type: none"> RCTs assessing treatment-seeking patients with mental disorders age range: 18+
Sample Size <ul style="list-style-type: none"> number of surveys: 16 (eventual number of surveys: 28) total sample size N=85,052 (eventual sample size N=151,773) 	Sample Size <ul style="list-style-type: none"> number of primary studies: 832 total sample size N=151,336
Countries of Conduction <ul style="list-style-type: none"> worldwide 	Countries of Conduction <ul style="list-style-type: none"> worldwide
Core Diagnoses <ul style="list-style-type: none"> alcohol and drug abuse and dependence, nicotine mania, bipolar affective disorder, dysthymia, major depressive disorder agoraphobia, social phobia, specific phobia, panic disorder, generalized anxiety disorder, 	Core Diagnoses <ul style="list-style-type: none"> Alzheimer's disease, vascular dementia alcohol dependence syndrome schizoaffective disorder, schizophrenia mania, bipolar affective disorder, major depressive disorder, dysthymia

WHO Epidemiological Surveys	Analysis of Randomized Controlled Studies
<p>separation anxiety disorder, posttraumatic stress disorder, somatoform disorder, obsessive-compulsive disorder, neurasthenia</p> <ul style="list-style-type: none"> • anorexia nervosa, bulimia nervosa, binge eating disorder • intermittent explosive disorder, pathological gambling • conduct disorder, adult persistence of attention-deficit disorder, oppositional defiant disorder • premenstrual tension syndrome <p><i>Not all disorders were assessed in all countries.</i></p>	<ul style="list-style-type: none"> • panic disorder with or without agoraphobia, social phobia, generalized anxiety disorder, posttraumatic stress disorder, somatoform disorder, obsessive-compulsive disorder • anorexia nervosa, bulimia nervosa, binge eating disorder • nonorganic insomnia • emotionally unstable personality disorder <p><i>Not all disorders were assessed in all countries.</i></p>
<p>Diagnostic Assessment</p> <ul style="list-style-type: none"> • trained lay interviewers without medical background • according to DSM-IV and ICD-10 criteria 	<p>Diagnostic Assessment</p> <ul style="list-style-type: none"> • culturally competent and experienced psychiatrists • according to DSM-IV and ICD-10 criteria
<p>Common Exclusionary Criteria</p> <ul style="list-style-type: none"> • homeless people, hospitalized patients, and those in institutions; (2) severe comorbid physical illness <p><i>Information about further exclusionary criteria has not been provided.</i></p>	<p>Common Exclusionary Criteria</p> <ul style="list-style-type: none"> • (1) suicidal risk; (2) severe comorbid physical illness; (3) current co-occurring Axis I psychiatric disorder; (4) pregnant or lactating women and sexually active women of child-bearing potential who are not using contraception; (5) history of substance dependence; (6) unstable medical condition; (7) cognitive impairment; (8) additional treatment during the study

Information on the age of patients with mental disorders in scientific articles and textbooks is often heterogeneous. It is mostly derived from epidemiological studies which are performed by lay interviewers assessing a sample of non-clinical subjects. Some of these surveys determine an age range but cannot provide information on the age in which a disorder is most common or most severe. Household surveys usually do not determine the severity of disorders by using disorder-specific rating scales. Thus, it seems probable that subthreshold

and mild cases are included. Some published data on age and gender distribution of mental disorders may have been based on samples of clinical patients diagnosed by psychiatrists, but estimates deriving from single studies seem less representative, as data is obtained from patients recruited from a single treatment centre, from a single country, or from a single ethnical group only. Moreover, the results may be biased, as household surveys do not represent several population segments, for example hospitalized patients. People with mental illness have been described to participate less likely than others in surveys, because of sample frame exclusions, differential mortality, or greater reluctance to participate (Allgulander 1989).

By pooling data from a large number of RCTs, more reliable information can be obtained. Only clinical patients fulfilling a minimum degree of severity are included in a RCT and diagnoses are reliable as they are assessed by specialist clinicians. Moreover, it can be assumed that the average patient tends to participate in a clinical trial when the degree of illness severity has reached its climax, because the patient is seeking help. Thus, the mean age of patients in RCTs is a good estimator for the age in which the disorder tends to show the highest degree of severity.

Relevant aspects of community epidemiology and clinical epidemiology will be discussed in detail hereafter.

1.3.1 Sample characteristics

National representative household surveys and clinical studies investigate different target populations.

In community surveys, population segments are being interviewed, in order to assess a representative sample. Household surveys do not represent several important population segments, e.g. homeless people, hospitalized patients, and those in institutions. Estimates of proportional treatment are likely to be downwardly biased due to the exclusion of hospitalized patients (Demyttenaere et al. 2004). Severe cases and certain disorders, such as depression, schizophrenia, or personality disorders, are likely to be downwardly biased because typical characteristics of these disorders, such as suicidal or hostile behaviour and social

isolation, require inpatient treatment and deductively might be underrepresented in household surveys. On the other hand, disorders such as anxiety disorders rarely require inpatient treatment and might be overrepresented in household surveys.

People with mental illness are less likely than others to participate in household surveys because of sample frame exclusions named above, differential mortality, or greater reluctance to participate (Allgulander 1989). The weighted average response rate of the WMH surveys was approximately 71 %. Deductively, nearly 30 % of the population segments are not represented in the sample. Previous research reported about selection bias in population-based surveys, resulting from selective participation of healthier persons (Allgulander 1989; Criqui et al. 1978; Eaton et al. 1992; Kessler et al. 1995a). People who did not participate in these surveys were found to have significantly higher rates and severity of mental illness than respondents (Allgulander 1989; Eaton et al. 1992; Kessler et al. 1994b). Deductively, prevalence and severity estimates of household surveys are most likely not reliable.

In comparison, RCTs investigate samples of treatment-seeking patients with a diagnosis of mental illness. Clinical trials recruiting inpatients and/or outpatients have been considered in this work. Respondents can be expected to be serious and engaged in the process of the trial, and they are more likely to provide accurate responses because they are seeking professional help (Kessler 2007).

Altogether, estimates derived from data of clinical trials are most likely to be accurate and reliable. The sample of RCTs consists of clinical subjects, whereas in household surveys people with mental illness are likely to be underrepresented.

1.3.2 Reliability of diagnoses

Reliability of diagnoses can be expected to differ between household surveys and clinical trials due to various factors, for example methods of data collection, the background of the interviewer, and motivation of the respondents.

Representative population surveys show considerable variations in prevalence rates and diagnoses seem less reliable. This may be attributed to several aspects. Sample bias due to the selection of population segments has been described before. Furthermore, the fieldwork of

household trials usually is conducted by interviewers without medical background. Concerning the WHO surveys, lay interviewers were coached during a one-week training course for psychiatric interviews only (Alonso et al. 2004). Due to high costs and the difficulty of recruiting enough qualified specialists for the assessment of the large sample size of population surveys, only lay interviewers were hired. It is a disadvantage that in community surveys diagnoses are not assessed by experienced psychiatrists. Even for trained lay interviewers, it seems difficult to distinguish between subthreshold cases and more severe cases of mental disease on the basis of the CIDI. Additionally, some of the DSM and ICD criteria did not derive from field studies but were decided by committees and do not allow to identify clinical cases precisely. Even for qualified psychiatrists it may be challenging to distinguish between mild forms of social anxiety disorder and shyness or modesty, namely to distinguish between pathological and well-founded fear in general. For example, a lay interviewer could possibly diagnose generalized anxiety disorder of a healthy mother that would report to worry constantly about the physical well-being of her children. It has been criticized that the prevalence rates for some mental disorders obtained in community surveys seem to be exaggerated. For instance, according to the NCS (National Comorbidity Survey) study, every third woman suffers from an anxiety disorder once in her life. At the same time, interviewer error might have led to under-reporting of other mental disorders.

Discrepancies in the application of the diagnostic interview tools could have also lead to inaccurate estimates. Analysis of the CIDI diagnoses has shown acceptable reliability and validity (Kessler et al. 2003; Wittchen et al. 1991; Wittchen 1994), but considering the limitations named above, it is not surprising that diagnoses have shown variance compared to diagnoses that were assessed by clinicians (Haro et al. 2006).

The fully structured diagnostic interviews, such as the CIDI, use diagnostic criteria and operationalize them into questions that the average respondent will understand. It is a disadvantage that cultural aspects in conveying psychiatric symptoms have not been considered. Language differences or translating problems might occur. The terms and phrases to describe mental symptoms could be less consistent with cultural concepts of less developed countries compared to those of Western countries. It has been described that absence of free speech and public opinion surveying results in greater reluctance to admit emotional or substance-abuse problems in less developed countries than in developed Western countries. Therefore,

accuracy of diagnoses might vary across countries (Demyttenaere et al. 2004).

Interviewer error might also lead to inaccurate estimates. Clinical interviews to compare the CIDI diagnoses obtained by the lay interviewer with those obtained by the reappraisal clinician administering the axis I Structured Clinical Interview for DSM-IV (SCID) were carried out, but the clinical re-interviews took place mostly in Western countries, where cultural understanding of psychiatric disorders might be more consonant anyways, and have been conducted in total only 264 times for the ESEMeD surveys.

It is a disadvantage that some data of household surveys are based on recall (Wittchen et al. 1989). Epidemiologic research proposed that age-of-onset reports were a mean of approximately ten years before the interview regardless of the respondent's age (Simon and VonKorff 1995; Simon et al. 2005). Data might have been recalled incorrectly even though the WMH surveys used strategies to reduce bias. The age-of-onset of mental disorders was determined by syndrome onset and did not consider any prodromes at an earlier age. For example, estimates of the age-of-onset of psychosis were based on incident treatment. Epidemiological analysis of early indicators of incipient disorders would almost certainly lead to much earlier estimates of age-of-onset than those reported (Kessler et al. 2007a).

In comparison to the fieldwork of household surveys, the fieldwork of clinical studies is conducted by experienced clinicians and diagnoses are reliable and multiple confirmed by considering accurate documentary. Diagnoses of clinical trials assess mental disorders using the Structured Clinical Interview for the DSM-IV Axis I Disorders (Lobbestael et al. 2011). The criteria of the DSM and ICD classifications only represent on the surface of what psychiatrists presume to be the underlying disease construct, and usually categorize mental disorders by reducing the dimension of symptoms (Andrews 2000). Therefore, next to the classification scheme it seems important that diagnoses are assessed by experienced clinicians. For example, a psychiatrist who is seeing patients with generalized anxiety disorder on a regular base is able to take other signs and symptoms into account to distinguish between normal worries and pathological fear. However, studies conducted in psychiatric outpatient services or in primary care settings may also provide valuable information. Research indicated that if interviews are conducted by psychiatrists (Wittchen et al. 1992) or the study uses a general psychiatric outpatient sample (Lepine et al. 1989), clinical cases will probably

be identified more reliably.

Altogether, in clinical trials interviewer error appears less probable and diagnoses are likely to be highly accurate and reliable, whereas methods of population surveys do not allow to identify accurate diagnoses.

1.3.3 Assessment of disorder severity

Population surveys and RCTs use different methods and scales to measure severity of mental disorders. Definitions of disorder severity vary according to different criteria such as diagnosis, disability, and duration of mental illness. Also, accuracy of responses need to be considered and might vary between respondents of household surveys and RCTs.

The results of household surveys are limited by the possibility that people with a history of mental illness might under-report their disorders (Kessler et al. 2005b). One crucial factor is the well-known bias against reporting embarrassing behaviours (Cannell et al. 1977). Additionally, respondents in community epidemiological surveys can be expected to be less engaged in the process and more likely to provide inaccurate responses because they often do not rate their participation in the survey as something serious (Kessler 2007). Some studies showed the CIDI diagnoses of epidemiological surveys to have poor agreement with diagnoses based on the Schedules for Clinical Assessment in Neuropsychiatry (SCAN) clinical interview (Wing et al. 1990) in a community sample (Brugha et al. 2001), and others showing agreement to be good in a patient or primary care provider sample (Andrews et al. 1995; Jordanova et al. 2004). The variation in results, with much higher concordance in patient samples than community samples, raises the possibility that respondent motivation is more of an issue than problems with question wording (Kessler 2007). Selection bias resulting from selective participation of healthier persons in population-based surveys has been mentioned before (Allgulander 1989; Criqui et al. 1978; Eaton et al. 1992; Kessler et al. 1995a).

A detailed description of the severity classification, incorporating criteria such as suicidality, work disability, and specific diagnoses of mental disorders, is described elsewhere. WMH measures of disorder severity were applied to 12-month cases only, and results propose that the majority of cases were mild (Demyttenaere et al. 2004). Severity of lifetime cases have

not been estimated. Caution is needed in interpreting the results, as severity of some disorders might be underestimated due to a crude severity classification scheme in some of the WMH surveys. For example, the Western European surveys, which were fielded first, had much more item-missing data than later surveys, which led to underestimation of severity of some disorders because the Sheehan Disability Scales (SDS) were sometimes mistakenly skipped (Demyttenaere et al. 2004).

The majority of clinical surveys operate with fully structured versions of standard clinical severity measures for the specific mental disorders. The frequently used scales are listed elsewhere. Multiple studies proved that disorder severity is strongly related to treatment in all countries (Bijl et al. 2003; Demyttenaere et al. 2004; Kessler et al. 1997). It has been described that severe disorders will more typically come to clinical attention than less severe disorders (Kessler et al. 2007b). Responses of participants of clinical studies can be considered more accurate because respondents are more serious due to the fact that they are seeking professional help (Kessler 2007).

The method applied in this study was to analyze the mean age of patients being enrolled in RCTs in order to estimate the age in which the disorder tends to show the highest degree of severity.

To sum up, it can be expected that more severe cases will be represented in clinical studies and estimates of severity will be more reliable, whereas mild cases will be represented in population surveys as respondents will either underreport severity of their symptoms or not even participate in the process.

1.4 Age-of-onset distribution of mental disorders

Generally, many mental disorders are known to have onsets in childhood, adolescence, or early adulthood. Later onsets appear as secondary conditions in most cases. Early age-of-onset has been described to be associated with greater disorder severity (Kessler et al.

2001c), persistence (Clark et al. 2006), and lack of treatment response (Nierenberg et al. 2004). Unfortunately, little is known about treatment of cases with first-onset disorders during childhood and adolescence.

A brief overview about the age-of-onset distributions of major mental disorder is provided hereafter.

Age-of-onset distributions of anxiety disorders vary. Anxiety disorders start in childhood, adolescence, or early adulthood until they reach a peak in middle age (Bandelow and Michaelis 2015). The median age-of-onset for anxiety disorders is 11 years (Kessler et al. 2005a). Specific phobias and separation anxiety disorder start earliest, with a median age-of-onset ranging from age 7–14 (Kessler et al. 2007b; Sheehan et al. 1998), followed by agoraphobia without panic attacks (Jacobi et al. 2014b), and panic disorder (Sartorius et al. 1996). Generalized anxiety disorder and posttraumatic stress disorder have later age-of-onset distributions (median age 24–50) and have been described to vary widely between nations (Kessler et al. 2007b). Generalized anxiety disorder has the latest median age at onset (31 years). Age-of-onset distributions of posttraumatic stress disorder are expected to vary according to the trauma exposure occurring throughout the life course.

Obsessive-compulsive disorder often starts in childhood and adolescence. It is unusual for symptoms to begin after the early thirties. Age-of-onset curves vary according to gender. Males make up the majority of very early onset cases during childhood, whereas more females develop obsessive-compulsive disorder during adolescence (Ruscio et al. 2010).

The median age-of-onset of mood disorders ranges between 29–43 years, varying widely between countries (Kessler et al. 2007b). Results are quite similar to those for the later-onset anxiety disorders. Age-of-onset distributions of mood disorders increase through late middle age and decrease thereafter.

The majority of psychoses occur in the thirties with a median in the early twenties. Onset of psychotic disorders during childhood is not common. A marked increase in prevalence is shown among adolescents aged 15–17 (Thomsen 1996). Schizophrenic spectrum disorders make up the majority of psychotic disorders. Median age-of-onset for schizophrenia usually is described to be in the early twenties (Jones et al. 1994; Lauronen et al. 2007). It should be

mentioned that the distributions of median age-of-onset of schizophrenia vary according to gender. Both males and females are described to have age-of-onset distributions with peaks at the early twenties and mid or end thirties. Females have an additional peak at the early sixties (Castle et al. 1998). Schizoaffective disorders appears to have a broad age-of-onset in adults (del Rio Vega and Ayuso-Gutierrez 1990), patients develop the condition from prior to mid twenties until after mid thirties (Marneros et al. 1990).

Most of the substance use disorders begin in adolescence and early adulthood. Findings of the median range of age-of-onset distributions varies widely between countries (Kessler et al. 2007b).

Altogether, considerable consistency exists in findings of age-of-onset distributions in epidemiological surveys (Christie et al. 1988; Kessler et al. 2007b). Also, the WMH surveys did not detect a strong consistency in between-country differences in age-of-onset distributions across disorders. Between-country differences were not related to economic development, region of the world, or to other structural correlates (Kessler et al. 2007b).

Nevertheless, difficulties arise in measuring the age-of-onset of mental disorders and limitations should be considered. As mentioned before, in most community surveys estimates of age-of-onset distributions of mental disorders are based on retrospective reports. Therefore, data might have been recalled incorrectly. For example, age-of-onset results ignored any prodrome at earlier age, but focused on syndrome onset. In other cases, estimates were based on incident treatment. Epidemiologic research proposed that age-at-onset reports were a mean of approximately ten years before the interview regardless of the respondent's age (Simon and VonKorff 1995; Simon et al.). Epidemiological analysis of early indicators of incipient disorders would almost certainly lead to much earlier estimates of age-of-onset than those reported (Kessler et al. 2007a).

1.5 Gender distribution of mental disorders

Sex and gender differences in mental disorders belong to the most stable findings in psychiatry. A brief overview is presented hereafter.

Epidemiological surveys have consistently documented significantly higher rates of anxiety

and mood disorders among women than men (Kuehner 2003; Pigott 1999). Generally, an increased risk is proposed for women concerning affective disorders (Bebbington 1998; Gater et al. 1998; Jacobi et al. 2004; Kessler et al. 1994a; Weissman et al. 1993; Wittchen et al. 1998), anxiety disorders (Gater et al. 1998; Lewinsohn et al. 1998; Merikangas et al. 2002; Weissman et al. 1997; Wittchen et al. 1999; Yonkers et al. 1998), and somatoform disorders (Lieb et al. 2000; Piccinelli and Simon 1997; Smith et al. 2001). In contrast, significantly higher rates of externalizing, substance use disorders, and antisocial disorders have been documented among men (Arnold 1996; Bijl et al. 1998; Brady and Randall 1999; Gili et al. 1998; Keenan et al. 1999; Kessler et al. 1993; Nelson and Wittchen 1998; Spauwen et al. 2003). Males and females are about equally affected from obsessive-compulsive disorder (Kiejna et al. 2002).

Findings of gender differences in mental disorders are relatively consistent across cultures. Deductively, an association with biological or psychosocial factors that have similar effects across cultures seems plausible (Gater et al. 1998). Biological differences across races and ethnic groups and culturally determined psychosocial differences would be expected to vary between different societies (Gater et al. 1998).

Gender differences in mental disorders can be observed in prevalence rates of disorders, the timing of onset and diagnosis, course, and treatment of disease. Sociodemographic correlates of patterns of the female predominance in most mental disorders are still not being fully understood (Klose and Jacobi 2004). Risks are multiple and interconnected. For example, it is well known that the social gradient in health correlates with gender. More women than men are exposed to poverty, discrimination, and socioeconomic disadvantage. Gender is associated with mental health. Gender-based violence, social status, exposure to mental health risks, and access to resources and treatment need to be considered.

1.6 Lifetime prevalence of mental disorders

The lifetime prevalence is defined as the proportion of the population with a disorder at some point of life up to the age at which the assessment takes place.

The WMH survey estimates of lifetime prevalence of individuals suffering from one or more

mental disorder vary between the countries that have been investigated, namely from 47.4 % in the United States to 12.0 % in Nigeria (Kessler et al. 2007b). More than 30 % of respondents in Colombia, France, New Zealand, Ukraine, and the United States reported at least one lifetime mental disorder. Prevalence rates were more than 25 % in Belgium, Germany, Lebanon, Mexico, the Netherlands, and South Africa, and more than 16 % in Israel, Italy, Japan, and Spain. Metropolitan PRC and Nigeria had prevalence estimates of less than 14 %. Anxiety disorders and mood disorders were the most prevalent in most countries. Estimates vary between 4.8–31.0 % for anxiety disorders and 3.3–21.4 % for mood disorders. Impulse control disorders were the least prevalent in most countries (0.3–25.0 %), and substance use disorders were the least prevalent among all countries that have been investigated (1.3–15.0 %) (Kessler et al. 2007b).

The results show that lifetime disorder co-occurrence appears commonly. The sum of prevalence across anxiety disorders, mood disorders, impulse control disorders, and substance use disorders was even 30–50 % higher than the prevalence of any single disorder. Within-class co-occurrence can be observed more commonly than between-class co-occurrence (Kessler et al. 2007b).

1.7 Projected lifetime risk of mental disorders

The projected lifetime is defined as the estimated proportion of the population who will have the disorder by the end of their life, which is defined as the age of 75.

WHO estimates suggest that the projected lifetime risk varies among countries. According to the findings of WHO, 47–55 % of the population will eventually suffer from a mental disorder in Colombia, France, New Zealand, South Africa, Ukraine, and the United States; the projected lifetime risk is supposed to be as high as 30–43 % in Belgium, Germany, Israel, Lebanon, Mexico and the Netherlands, 24–29 % in Italy, Japan and Spain, and 18–19 % in Metropolitan PRC and Nigeria (Kessler et al. 2007b).

The projected lifetime risk of any disorder appeared higher than the estimated lifetime prevalence. For example, the WHO found the projected lifetime risk to be 17 % higher in the United States and 69 % higher in Israel than the estimated lifetime prevalence. There was a

high risk-to-prevalence ratio of 57–69 % in Israel, Nigeria, and South Africa. No strong difference between the risk and the prevalence ratio was described between developed and less developed countries. The highest class-specific proportional increase in projected lifetime risk was reported for mood disorders (45–70 %), and the lowest for impulse control disorders (0–14 %). These findings are compatible with the late age-of-onset distribution of mood disorders and an early age-of-onset distribution of impulse control disorders (Kessler et al. 2007b).

1.8 Severity of mental illness

There is no internationally standardized definition of severe mental illness (Ruggeri et al. 2000). Definitions are inconsistent and comprise various criteria such as diagnosis, disability, and duration of mental illness.

This is reflected in inconsistent estimates of the severity of mental illness. In a US study, estimates of diagnoses of patients with serious mental illness varied between 4–88 % according to different definition of severity and persistence of mental illness (Schinnar et al. 1990).

A brief overview about definitions of severity of mental illness and frequently used scales is presented hereafter.

The US National Institute of Mental Health presents a definition of wide consensus, defining serious mental illness if individuals meet all of the following criteria:

- a diagnosis of non-organic psychosis or personality disorder
- a duration of prolonged illness (≥ 2 years) and long-term treatment (≥ 2 years)
- disability, defined as fulfilling criteria such as working abilities, reliance on public financial assistance, limited personal support system, basic living skills, and inappropriate social behaviour leading to intervention by the mental or judicial system (National Institute of Mental Health 1987)

Epidemiological studies such as the NCS-R (US National Comorbidity Survey Replication) surveys investigated serious mental illness of 12-month cases.

They were classified serious if fulfilling any of the following criteria:

- a serious suicide attempt within the past 12 months
- work disability or considerable impairment due to a mental disorder
- a diagnosis of non-affective psychosis, bipolar affective disorders, substance dependence with serious role impairment, or an impulse-control disorder with repeated serious violence
- a long duration of impairment, being defined as not being able to carry out normal daily activities in more than 30 days in the year due to a mental disorder.

Cases were defined moderate if fulfilling any of the following criteria:

- suicide gesture, plan or ideation
- substance dependence without serious role impairment
- at least moderate work limitation due to a mental disorder
- any disorder with at least moderate role impairment in the domains of the SDS, which is a self-report tool assessing disability in work, family life or home responsibilities, and social life (Leon et al. 1997)

The remaining cases were classified as mild.

The NCS-R results propose that many mental disorders are mild. Indeed, 40.4 % of the investigated NCS-R cases are being described as mild, whereas only 22.3 % are being described as serious (Kessler et al. 2005b). Analysis of CIDI surveys in Canada, Chile, Germany, the Netherlands, and the United States found similar rates of mild cases (Bijl et al. 2003). Further research indicated a correlation of treatment with severity and found serious cases generally to receive between three and five times more likely treatment than mild cases (Bijl et al. 2003). Still, between 30–60 % of serious cases in these surveys did not receive any treatment at all. Interestingly, in Germany the treatment rate of mild cases was the highest among the countries that have been investigated.

The majority of clinical surveys embed fully structured versions of standard clinical severity measures into the assessments of mental disorders. Some of the frequently used scales are listed below:

- the Clinical Global Impression-Severity Scale (CGI-S) is a 7-point scale rating the severity of the patient's illness in relation to patients with the same diagnosis (Guy 1976)
- the Quick Inventory of Depressive Symptoms Self-Report (QIDS-SR) (Rush et al. 2003) and Hamilton Rating Scale for Depression (HRSD) (Hamilton 1960), Montgomery-Asberg Depression Rating Scale (MADRS) (Montgomery and Asberg 1979) and Beck Depression Inventory (BDI) (Beck et al. 1996) are being used to assess the severity of major depressive episodes
- a fully-structured version of the Young Mania Rating Scale (YMRS) is being used to measure the severity of manic episodes (Young et al. 1978)
- the Panic Disorder Severity Scale (PDSS) (Shear et al. 2001) and Panic and Agoraphobia Scale (PAS) (Bandelow 1995) are being used to assess the severity of panic disorder
- the Mini Mental State Examination (MMSE) is being used to measure cognitive impairment, it is commonly used to screen for dementia (Folstein et al. 1975)
- the Positive and Negative Symptoms Scale (PANSS) is a scale used for measuring symptom severity of patients with schizophrenia (Kay et al. 1987)
- the Yale Brown Obsessive Scale (Y-BOCS) is being used to assess the severity of obsessive compulsive disorder (Goodman et al. 1989)
- the Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised (CIWA-Ar) objectifies alcohol withdrawal severity of individuals with alcohol dependence (Sullivan et al. 1989)
- the Hamilton Anxiety Rating Scale (HAM-A) is a questionnaire rating the severity of patient's anxiety (Hamilton 1959)

Altogether, measuring severity of mental disorders seems difficult and different approaches are being used. It has been previously described that treatment-seeking is related to severity. This approach will be the method applied in this study.

1.9 Mental health care use

Many individuals affected by psychiatric disorders remain untreated although there are effective treatment methods. A Dutch study found that only 33.9 % of those with a psychiatric disorder used primary or mental health care in a 12-month period (Bijl and Ravelli 2000). Studies reported about several variables associated with patterns of mental health care use.

Significant predisposing sociodemographic factors which determine the use of mental health care include female gender (Bland et al. 1997; Kessler et al. 2005b; Parslow and Jorm 2000; Wang et al. 2005), younger age (Kessler et al. 1998; Lewis et al. 2005), Caucasian race (Kessler et al. 2005b; Lewis et al. 2005; Wang et al. 2005), and higher education (Lewis et al. 2005; Parslow and Jorm 2000). Furthermore, persons who live alone, single parents, unemployed persons, and disabled persons are more likely to use mental health care (Bijl and Ravelli 2000; Bland et al. 1997; Crow et al. 1994; Lin et al. 1996; Olfson et al. 1998).

Mental health disability correlates with seeking care (Katz et al. 1997). Significant enabling factors for accessing health care use include urban residence (Wang et al. 2005), and health insurance coverage (Bruce et al. 2002). Significant illness variables for accessing mental health care include mood disorders (Lewis et al. 2005; Parslow and Jorm 2000), substance use disorders (Lewis et al. 2005; Parslow and Jorm 2000), and anxiety disorders (Greenberg et al. 1999; Lewis et al. 2005; Parslow and Jorm 2000). It has been described that patients with mood disorders are the most likely to seek professional care, whereas patients with alcohol- and drug-related disorders are less likely to do so (Bijl and Ravelli 2000). Patients affected by generalized anxiety disorder have been found to be frequent utilizers of primary care resources and have been associated with over-utilization of general health care resources (Maier et al. 2000; Roy-Byrne and Katon 1997; Wittchen et al. 2000; Wittchen et al. 2002).

Gender difference exists in patterns of seeking help. For example, women are more likely to reach out for primary health care while men are more likely to seek specialist mental health care and represent principal users of inpatient care.

Studies of initial contact with the treatment system show that individuals affected by early-onset disorders often need more than ten years until they manage to seek treatment, and

finally have developed seriously impairing disorders that might have had a better treatment outcome if they had received treatment at the beginning of their illness (Christiana et al. 2000; Olfson et al. 1998; Wang et al. 2007). Regardless of race or ethnicity, adults with serious mental illness were more likely than adults with any mental illness to report mental health service use in a 12-month period (Substance Abuse and Mental Health Services Administration 2015). Especially in developing countries, where there are financial and structural barriers to access mental health services, many lifetime cases sought treatment for their disorders (Saxena et al. 2003).

Further research proposed that the perceived need for treatment has stronger effects in treatment seeking than sociodemographic and access variables (Bland et al. 1997; Kessler et al. 2001a; Leaf et al. 1988; Rayburn et al. 2005). Research assessing respondents with serious mental illness participating in the NCS household surveys reported that next to situational barriers, financial barriers, and a perceived lack of effectiveness, the most commonly reported reason for failing to seek treatment and for treatment dropout was wanting to figure out the problem by themselves (Kessler et al. 2001a).

A change of financing mental health service is clearly needed. Moreover, the importance of patient-centered care and patient's acknowledgement of need for treatment becomes apparent (Kessler et al. 2001a).

1.10 Future prospects

Despite encouraging advances, much work still needs to be done until psychiatric epidemiology can unfold its full potential to improve the mental health of populations. In contrast to other branches of epidemiology, difficulties arise in psychiatric epidemiology to conceptualize and measure mental disorders. Findings report about a high lifetime prevalence of mental disorders, as high as 50 % in some countries (Kessler 2007), but little is known about disorder severity. The course of the majority of mental disorders is often chronic-recurrent and patients require lifelong treatment. Accordingly, clinical interest in research on the course of illness is inevitably increasing. Research up to now fails to provide an adequate picture about severity and the course of mental disorders.

Therefore, I used the approach to extract data of the mean age and gender distribution from a large number of RCTs in order to obtain reliable results. The mean age of patients participating in RCTs is a good estimator for the age in which the disorder tends to show the highest degree of severity.

Data which provide information about the age-related severity of mental disease lead to a further understanding of the course and prognosis of mental illness. These results can be used in scientific publications or educational materials and can help health care providers or researchers to plan treatment programs. Data might be relevant for the formulation of upcoming DSM and ICD diagnostic criteria. Patients can be informed about the natural course of the disorder. Gender differences and the mean age of patients with mental disorders who participate in a clinical trial are potentially relevant because they may guide clinicians in assessment and treatment. The age when participating in a clinical trial may suggest a specific disease entity and accordingly, management could be directed. Medical intervention could be optimized and adjusted to the age of patients, for example by considering medical interaction and somatic comorbidities, and finally target precise interventions. Clinical data of this sort can be helpful for learnings of medical students and physicians, and in a final step for policy planning. Furthermore, the data is helpful for an optimized planning of clinical trials and medical wards. For example, the age of patients might be established as a criterion for stating a trial as representative, detect outliers, and presume an accurate psychiatric diagnose and its prognosis of course due to its specific age.

Further investigations about the course and severity of psychiatric disorders are sorely needed. Data on the impact of previous treatment needs to be assessed. Also, the aetiology of mental disorders may be elucidated further by investigating the reasons why some disorders occur predominantly at a certain age or have an unbalanced gender distribution. For example, when a disorder has a highly-unbalanced gender distribution, sexual hormones or genetic causes may be involved. Underlying biological settings, for instance modulation of receptors and changes of neurotransmitters, might influence the course of a disease at a certain age, and have similar effects across cultures, either interacting or working alone.

1.11 Goal of the study

In the present work, I aimed to investigate the mean age and gender distribution of patients with the most common mental disorders who participated in randomized controlled studies. The goal of the study was to provide a table with the mean age and gender distributions of all major mental disorders.

Because these data are based on a large number of RCTs in which help-seeking individuals with a minimum severity score were diagnosed by experienced clinicians, they may be more reliable than other sources based on a non-systematic selection of studies. As treatment-seeking is related to severity of mental illness, it can be assumed that the average patient is included in an RCT when the degree of severity has reached a climax. Thus, the mean age of patients in RCTs is a good estimator for the age in which the disorder tends to show the highest degree of severity.

With this data, further conclusions about the course of psychiatric disorders can be drawn.

2. Design and methods

2.1 Selection of mental disorders

The following mental disorders diagnosed according to the criteria of the ICD-10 classification of mental and behavioural disorders have been investigated:

- **Organic, including symptomatic, mental disorders:**
 - Dementia in Alzheimer's Disease (F00)
 - Vascular Dementia (F01)
- **Mental and behavioural disorders due to psychoactive substance use:**
 - Alcohol Dependence Syndrome (F10.2)
- **Schizophrenia, schizotypal and delusional disorders:**
 - Schizophrenia (F20)
(including paranoid, hebephrenic, catatonic, undifferentiated, residual, and unspecified schizophrenia; schizophreniform disorder)
 - Schizoaffective Disorders (F25)
(including bipolar type, depressive type, mixed type, and unspecified schizoaffective disorder)
- **Mood (affective) disorders:**
 - Manic Episode (F30)
 - Bipolar Affective Disorder (F31)
 - Major Depressive Disorder (F32-F33)
 - Dysthymia (F34.1)
- **Neurotic, stress related and somatoform disorders:**
 - Panic Disorder with Agoraphobia (F.40.0) or without Agoraphobia (F41.0)
 - Social Phobia (F40.1)
 - Generalized Anxiety Disorder (F41.1)
 - Obsessive-Compulsive Disorder (F42)
 - Posttraumatic Stress Disorder (F43.1)

- Somatoform Disorders (F45)
(including somatization disorder; undifferentiated, other, and unspecified somatoform disorder; hypochondriacal disorders; somatoform autonomic dysfunction; persistent somatoform pain disorder)
- **Eating disorders:**
 - Anorexia Nervosa (F50.0)
 - Bulimia Nervosa (F50.2)
 - Binge Eating Disorder (F50.81)
- **Nonorganic sleep disorders:**
 - Nonorganic Insomnia (F51.0)
- **Disorders of adult personality and behaviour:**
 - Emotionally Unstable (Borderline) Personality Disorder (F60.3)

The selection is representing the most common thus clinically most relevant mental disorders. These were the disorders most often investigated in clinical trials. Due to insufficient eligible data, clinical trials assessing patients with dissocial personality disorder and paedophilia have not been investigated.

2.2 Search methods

To identify relevant randomized clinical trials concerning the most relevant psychiatric disorders, a databased-driven literature research was performed using PubMed. Electronic databases of ResearchGate and Google Scholar were used to complement handsearch for literature research and to retrieve full-texts. The reference lists of reviews, meta-analyses, and guidelines were inspected for further relevant studies. Relevant randomized trials were identified by searching the electronic databases named above using the following terms: “randomized” [all fields] and the ICD name of the mental disorder, e.g. “alcohol dependence” [title]. Searching terms for “dysthymia” [title] have been complemented by using the terms “dysthymic disorder” [title] and “minor depression” [title]. Searching terms for “somatoform disorder” [title] have been complemented by using the term “somatization” [title]. The selection of mental disorder is stated above. I aimed to consider articles published in English.

Studies have been extracted according to the search algorithm of the PRISMA-Statement

(Preferred Reporting Items for Systematic Reviews and Meta-Analyses). Table 4 provides detailed information. The first 50 consecutive studies for each of the mental disorders have been considered. The first 60 consecutive studies have been considered for anorexia nervosa, as the sample was subdivided into a sample of adults and adolescents. Due to insufficient eligible data, clinical trials assessing patients with dissocial personality disorder and paedophilia could not be investigated.

The electronic searches retrieved an original pool of 10.465 results and ended on the 20th of August 2017. A number of 1896 full-text articles were eligible and 375 additional records were identified through handsearch. After applying inclusion and exclusion criteria, a total of 1439 studies were excluded, leaving a total of 832 relevant randomized controlled trials.

Table 4. Search algorithm according to the PRISMA-Statement (Moher et al. 2009)

Timespan	1950–2017 (Database closed: August 20 th , 2017)	
Identification	10.465 records identified in PUB MED	Search algorithm, exemplified: (“alcohol dependence” [Title] and “randomized” [All fields]). No language restrictions
	Total: 10.465 records	
Screening	2.654 records screened by title and abstract	
Eligibility	1896 full-text articles assessed for eligibility	1.439 excluded (double publications, eligibility or quality criteria not fulfilled) 375 additional records identified through hand search
Included	832 studies were included in qualitative synthesis	

2.3 Study selection

To be considered for inclusion studies had to fulfil the following criteria:

- published in English
- conducted in a randomized design
- report of treatment for a major mental disorder
- used DSM or ICD diagnoses assessed by using a standardized clinical interview; due to the lack of sufficient eligible studies, a minority of studies recruiting patients diagnosed with somatoform disorders were included though not assessing diagnoses according to DSM or ICD; patients diagnosed with probable or possible dementia diagnosed according to the NINCDS-ADRDA criteria (National Institute of Neurological and Communicative Disorders and Stroke and the Alzheimer's Disease and Related Disorders Association) have been included
- provided mean age, standard deviation (SD), and gender distribution of the sample; due to the lack of sufficient eligible studies, a minority of studies have been included though not providing gender distribution or standard deviation of the sample
- included consecutively enrolled patients
- 1. recruited a sample without any age restrictions; *and*
 2. among the studies that recruited samples with age restrictions, those studies that (a) have a minimum age of not more than 18 years, and (b) either do not have a maximum age or the maximum age is not less than 60 years; the majority of studies assessed patients aged 18–65 years; *and*
 3. in addition, considering the age-related prevalence of specific mental disorders and the diversity of age restrictions of clinical trials, studies using other age restrictions than those referred to under 2 above, including: (a) for patients diagnosed with anorexia nervosa and bulimia nervosa, studies with a minimum age of 16 years and a maximum age of 35 years; (b) for patients diagnosed with borderline personality disorder, studies with a maximum age of 40 years; (c) for patients diagnosed with schizophrenic spectrum disorders and panic disorder, studies with a maximum age of 50 years; (d) for patients diagnosed with binge eating disorder, studies with a maximum age of 55 years; (e) for patients diagnosed with dementia, studies with a minimum age of 60 years and a maximum age of 75 years; (f) due to the lack of sufficient eligible studies assessing primary insomnia and dysthymia, patients with a minimum age of 25 years; *and*

4. for adolescent patients, only patients diagnosed with anorexia nervosa were investigated; only studies with a minimum age of not less than 11 years and a maximum age of not more than 21 years were included; the majority of studies assessed patients aged 12–18 years
- assessed a sample of patients of both genders; however, considering the female predominance of eating disorders and borderline personality disorder, studies assessing female cohorts of these mental disorders have been included; studies assessing patients diagnosed with posttraumatic stress disorder have been included irrespective of gender restrictions

Criteria for exclusion of studies were:

- no indication of mean age and sample size
- restricted cohorts that would possibly influence the mean age or gender distribution of the sample; e.g. first onset of the disorder, patients with comorbidities only, treatment refractory patients, medically resistance of the disease, sample in a mild phase of the disorder, or women only; however, for eating disorders and borderline personality disorder clinical trials excluding male participants have been considered; for subgroup analysis in posttraumatic stress disorder, subgroups of samples, e.g. female sample, veterans, have been taken into account
- age restrictions other than named above
- no randomized design

There were no limitations with regard to the state of illness (acute or chronic), the intake of medication (stable, without any or taking specific medication), the method of recruitment, and the status of the patients (inpatient or outpatient). The clinical trials have been selected randomly, worldwide clinical trials have been assessed.

2.4 Analysis

I aimed to include 50 studies for each of the most common mental disorders, in order to base calculations on a robust number of studies to obtain reliable results. A total of 60 studies has been included assessing a sample of patients diagnosed with anorexia nervosa because the

sample was subdivided into adults and adolescents. For some disorders, however, it was not possible to retrieve 50 eligible studies, restricting the generalizability of findings. Due to insufficient eligible data, clinical trials assessing patients with dissociative personality disorder and paedophilia could not be investigated. If data of secondary analyses was provided, I aimed to retrieve the original full-text of the studies.

I aimed to retrieve studies recruiting a sample without age restrictions or aged 18–65 years. Due to the age-related prevalence of specific mental disorders and the diversity of age restrictions of clinical trials, some age restrictions have been adapted. To analyze gender distributions, studies recruiting a sample of both genders have been included. Exceptionally, considering the female predominance of eating disorders and borderline personality disorder, studies assessing female cohorts of these mental disorders have been included; studies assessing patients diagnosed with posttraumatic stress disorder have been included irrespective of gender restrictions.

Of the eligible studies, data of the sample size, mean age, SD, and gender distribution, specified as female (%), was extracted. Age restrictions and standard clinical severity measures were listed in detail. Some of the studies did not contain information about the standard deviation or gender distribution, this was considered in statistical evaluation. It was aimed to analyze the age range and distribution of inpatients and outpatients of the samples that have been recruited for the studies. However, it was not possible to retrieve sufficient data to obtain reliable results. Furthermore, it was not possible to retrieve sufficient data to analyze the date since trauma of posttraumatic stress disorder happened.

The majority of the trials consisted of several study arms, the weighted mean of the provided data of each of the study has then been calculated. The standard deviation of each of the eligible studies has been pooled. The standard error (SE) has been generated by the SD.

The weighted mean age and weighted gender distribution of the studies has been calculated. The weighted mean age and pooled SD was specified as “26.9 ±7.6” years. The age range of the studies with the lowest mean age and the highest mean age has been mentioned.

3. Results

Table 5 provides data on the mean age and gender distribution of patients with major mental disorders who participated in RCTs. A detailed list of the primary studies can be found in the appendix.

Table 5. Results of the data on mean age and gender distribution of patients with common mental disorders participating in randomized controlled studies.

Mental Disorder	Mean Age ¹	min ²	max ²	SE	Pooled SD	Female (%) ¹	min ³	max ³	Sample Size (N)	Number of Studies
Alzheimer's Disease	74.8	64.5	87.9	0.8	8.2	56.5	38.8	84.0	6252	33
Vascular Dementia	72.7	64.3	81.0	0.6	6.5	43.5	12.5	73.2	6578	23
Alcohol Dependence Syndrome	44.3	39.7	52.4	0.9	9.9	26.3	3.0	47.0	11190	50
Schizophrenia and Related Disorders	38.3	21.6	46.3	0.9	10.7	36.2	18.2	59.0	17838	50
• schizophrenia only	38.9	21.6	42.7	0.9	10.9	35.2	18.2	59.0	11927	29
Mania	38.3	24.0	46.3	1.4	9.0	49.8	30.4	77.8	8590	50
Bipolar Disorder	39.6	30.0	47.5	1.2	11.1	57.4	28.2	75.0	9014	50
Major Depressive Disorder	42.7	33.5	50.2	0.9	12.1	63.3	46.4	82.9	22278	50
Dysthymia	45.3	31.1	55.2	0.9	13.3	64.6	41.5	73.0	2308	13
Panic Disorder	37.2	30.7	42.8	1.3	9.6	65.7	40.0	90.5	6933	50
Social Anxiety Disorder	35.2	24.4	41.4	1.3	10.3	50.5	29.0	85.0	5842	50
Generalized Anxiety Disorder	40.7	31.0	53.4	1.2	11.5	63.0	50.8	83.5	11118	50
Obsessive-Compulsive Disorder	35.6	19.9	42.1	1.6	9.9	55.1	34.8	80.0	4336	50
Posttraumatic Stress Disorder	38.3	28.0	57.5	1.6	10.1	56.7	n.e.	n.e.	3972	50
• all genders	38.2	29.8	44.4	1.7	11.9	66.9	31.3	96.4	2102	29
• women	33.2	28.0	44.4	1.4	9.2	100.0	n.e.	n.e.	582	8
• veterans	42.6	36.4	57.5	1.6	7.2	4.9	n.e.	n.e.	677	9
Somatoform Disorder	45.4	37.1	53.6	1.3	12.7	70.9	49.5	93.5	3227	22

Mental Disorder	Mean Age ¹	min ²	max ²	SE	Pooled SD	Female (%) ¹	min ³	max ³	Sample Size (N)	Number of Studies
Anorexia Nervosa, adolescents	15.1	14.1	16.7	0.2	1.5	93.3	n.e.	n.e.	2162	22
• all gender	14.8	14.1	15.7	0.2	1.5	90.7	85.7	95.1	1541	14
• girls	15.8	15.1	16.7	0.2	1.4	100.0	n.e.	n.e.	621	8
Anorexia Nervosa, adults	25.3	21.7	34.0	1.1	7.1	97.5	n.e.	n.e.	2052	38
• all genders	26.3	22.7	34.0	1.4	8.1	93.9	89.0	98.0	392	8
• women	25.0	21.7	33.3	1.0	6.7	100.0	n.e.	n.e.	1520	26
Bulimia Nervosa	26.9	21.0	34.0	0.8	7.6	94.8	n.e.	n.e.	4925	50
• all genders	27.1	25.8	29.3	0.8	8.5	88.1	57.5	98.6	1181	12
• women	26.8	21.0	34.0	0.8	7.1	100.0	n.e.	n.e.	1542	25
Binge Eating Disorder	45.4	30.2	52.2	1.2	9.5	83.9	n.e.	n.e.	10069	50
• all genders	45.7	35.9	52.2	1.0	9.4	83.0	56.0	96.6	9062	39
• women	42.0	30.2	50.0	1.4	10.5	100.0	n.e.	n.e.	520	9
Primary Insomnia	45.3	34.6	63.8	1.2	10.9	62.5	12.5	76.7	8310	31
Borderline Personality Disorder	30.7	24.3	38.6	1.1	8.6	83.9	n.e.	n.e.	4342	50
• all genders	31.1	25.1	38.6	1.1	8.8	78.5	52.4	93.4	3255	31
• women	29.2	24.3	36.8	1.1	7.6	100.0	n.e.	n.e.	1087	19
Total number									151336	832

1 weighted

2 min – study with the lowest mean age; max – study with the highest mean age

3 min – study with the lowest percentage of female respondents; max – study with the highest percentage of female respondents

4. Discussion

To my knowledge, the summarized data illustrate the first comprehensive and most recent overview of epidemiological information on mental disorders from a representative number of RCTs. The mean age and gender distribution of patients with mental disorders participating in more than 800 RCTs has been analyzed.

It can be assumed that the average patient is recruited for a RCT when the degree of severity of the mental illness has reached a peak level. Therefore, analyzing the mean age of patients being enrolled in RCTs is a good estimator for the age at which the disorder tends to show the highest degree of severity.

In contrast to previous findings of household surveys, several advantages of clinical trials can be observed. First, estimates and diagnoses are likely to be highly accurate and reliable. Diagnoses are assessed by psychiatrists and highly formalized diagnostic procedures and inclusion criteria are being used. Furthermore, a sample of treatment-seeking patients of in-patients and/or outpatients with a history of mental illness are being represented. RCTs identify patients with clinically relevant disorders fulfilling a minimum severity score of fully structured versions of standard clinical severity measures. Reporting bias of respondents does not seem probable. Data is not based on retrospective recall and it can be assumed that participants responses are more accurate due to the fact that they are seeking professional help (Kessler 2007). It has been previously mentioned that respondent motivation is more of an issue than problems with question wording (Kessler 2007). Moreover, large RCTs are often performed on an international basis. A sample of respondents from many different countries and ethnic groups improves the generalizability of the results. Large sample size allows powerful analyses.

The implicit assumption of this approach, that mentally ill patients eventually come to clinical attention and participate in a clinical trial when the degree of severity of the mental illness has reached a peak level, has not been proven but makes clinical sense. The assumption is supported by findings of studies proving that disorder severity is strongly related to treatment (Bijl et al. 2003; Demyttenaere et al. 2004; Kessler et al. 1997).

Some patients though may have been recruited for a clinical trial at a less severe phase of their illness. For example, some symptoms of mental disorders may remit without treatment and patients may already show spontaneous remission when they had to wait to participate in the study. The influence of previous treatment to the course of symptoms has not been investigated.

Some mental disorders show a fluctuation in the persistence and stability of the diagnostic status and severity, in terms of remission and shifts from one syndrome and disorder to another. For instance, mental disorders such as panic disorder or depression are known to have a strong tendency to wax and wane over time. These patients can be expected to participate in a study when they are in a severe episode of their mental disease. Studies of panic disorder or obsessive-compulsive disorder found low probabilities of remission and high rates of relapse among those who remit (Eisen et al. 1999; Faravelli et al. 1995). In other disorders, severity is increasing during the course of the disease, for example the chronic progressive course of dementia.

It is important to bear in mind that the probability of participating in a clinical trial might depend on the diagnostic category. It has been reported that patients with mood disorders, substance use disorders, and anxiety disorders are more likely to seek help (Greenberg et al. 1999; Lewis et al. 2005; Parslow and Jorm 2000). Admission for a clinical trial depends on insight of the disease, psychological strain, and treatment adherence.

Unmet need for treatment among patients with the severe forms of mental illness is a major concern for researchers in psychiatric epidemiology. The most commonly reported reason both for failing to seek treatment and for treatment dropout was that patients wanted to deal with their problems on their own. Other findings suggest that a majority of those who received no treatment did not agree that their problems require any treatment (Kessler et al. 2001a). This seems probable e.g. for patients in a manic episode, with dissocial personality disorder, or being affected by anorexia nervosa. Certainly, the lack of demand for appropriate help when mental health services are available is relevant and requires further study. When the individual does not agree on the necessity for treatment though, symptoms of psychiatric disorders may bring the patient to the attention of others. For example, symptoms of

psychosis will most likely lead to inpatient treatment. When the patient does perceive a necessity for treatment, these factors become less important as the individual requires less external motivation to seek care. Of those patients recognizing the need for appropriate help, the most commonly reported reasons for not seeking treatment were situational barriers, financial barriers, and a perceived lack of effectiveness. A perceived lack of effectiveness of conventional therapy may contribute to a higher motivation for participation in a clinical trial.

It seems probable that the utilization of mental health service varies not only according to the presence of disorder but also according to availability of mental health service, i.e. by country. Further investigations on demographic barriers are needed. Nevertheless, previous research found that the perceived need for treatment has stronger effects in treatment seeking than sociodemographic and access variables.

Further research on the course of mental disorders, for example the impact of previous treatment, such as psychological treatment and the use of maintenance medication, is sorely needed. Sociodemographic and underlying biological settings, which might lead to a climax of a mental disease at a certain age, need to be further analyzed.

However, statistically, it seems probable that the average patient will participate in a clinical trial at the most severe stage of the mental disorder. Altogether, there is no possible bias that could affect the data in a way that the patients included in a study are not the worst cases. Therefore, it can be assumed that the age of highest severity of a mental disorder can be determined by the method applied in this study.

Altogether, results confirm that patients are being recruited for a clinical study at a similar age for each of the investigated mental disorders. The mean age at which patients were enrolled for a clinical trial varied among the specific mental disorders. The range between the study with the lowest and the one with the highest mean age differed among the mental disorders. A narrow range of the age ranges and gender distributions across various studies demonstrates that results are very homogenous across all countries with different cultures and ethnic groups. Deductively, a natural cause of disease, for example related to genetic factors, seems more probable than psychosocial causes.

Patients diagnosed with anorexia nervosa and bulimia nervosa had the lowest mean age among all respondents of RCTs. The mean age of patients diagnosed with bulimia nervosa and borderline personality disorder was similar. Patients suffering from anxiety disorders ranged in the mean age from 35–41 years. Among those, patients suffering from generalized anxiety disorder had the highest mean age. Patients diagnosed with schizophrenic spectrum disorder, mania and bipolar disorder had a similar mean age of 38–40 years. No significant age-related difference between patients diagnosed with schizophrenia only or any schizoaffective disorder could be found. The mean age of patients being recruited for a clinical trial and diagnosed with an affective disorder ranked from 38–45 years. Patients affected from depression and dysthymia were significantly older than patients suffering from mania or bipolar disorder. The mean age of Alzheimer's disease and vascular dementia, representing the highest mean age among all mental disorders, was similar.

Gender differences in rates and patterns of mental disorders belong to the most stable findings in psychiatry. For some mental disorders, distribution of rates of psychiatric disorder were almost balanced for men and women but remarkable gender differences have been found in the patterns of the diseases. For example, marked gender differences occur in age-of-onset of symptoms, frequency of symptoms, course of disease, social adjustment, and long term outcome. Psychosocial, genetic, and biological components have been discussed as possible determinants for the higher prevalence of mental disorders among women. Different treatment utilization and social behaviours could result in a sampling bias of gender distribution of patients with mental disorders participating in RCTs. More research on gender disparities in mental health is clearly needed.

Overall, most of the results of the gender distribution reconfirm previous findings of epidemiological psychiatry. Therefore it seems probable that the data is representative. Some disorders are known to have a highly unbalanced gender distribution of prevalence estimates in populations which seems to be reflected in the gender-related participation rate of RCTs. Eating disorders, including binge eating disorder, and borderline personality disorder are predominantly diagnosed in women and depict the majority of respondents of RCTs. Furthermore, findings of gender differences in respondents of RCTs occurred particularly in the

rates of depression and dysthymia, anxiety and somatic complaints, except for social anxiety disorder, alcohol dependence, schizophrenia and related disorders, and primary insomnia. There were no marked gender differences in the rates of mania and social anxiety disorder.

Results of the mean age and gender distribution of patients being recruited into the investigated studies will be discussed in detail hereafter.

4.1 Mean age distribution in detail

Among the respondents with mental disorders that have been investigated, patients with the lowest mean age were those affected by anorexia nervosa (25.3 ± 7.1 , weighted mean age and pooled SD in years), and bulimia nervosa (26.9 ± 7.6 yrs). The sample of adolescents diagnosed with anorexia nervosa were on average 15.1 ± 1.5 years old. The sample of anorectic patients was subdivided into adults and adolescents, deductively the sample size of subgroups appeared relatively small. However, results still seem reliable, as the range between the study with the lowest and the one with the highest mean age was found to be quite narrow. No significant difference of mean age could be found according to gender of either anorexia nervosa or bulimia nervosa. The results make clinical sense, as it is well known that rates of anorexia nervosa and bulimia nervosa are highest among young women. By trend, patients affected by anorexia nervosa are younger than those affected by bulimia nervosa, which might be reflected in a higher mean age of patients with bulimia nervosa. A substantial degree of crossover from anorexia nervosa to bulimia nervosa has been described within the first years of the disease (Bulik et al. 1997; Eckert et al. 1995; Eddy et al. 2002; Strober et al. 1997; Tozzi et al. 2005).

The proximity of the mean age of patients diagnosed with bulimia nervosa and borderline personality disorder (30.7 ± 8.6 yrs) supports the assumption of a nosological proximity of these disorders. Women diagnosed with borderline personality disorder had a lower mean age (29.2 ± 7.6 yrs) than the cohort of both genders (31.1 ± 8.8 yrs).

Among the eating disorders that have been investigated, respondents of RCTs who were diagnosed with binge eating disorder were on average approximately 20 years older than patients with anorexia nervosa (45.4 ± 9.5 yrs). Women diagnosed with binge eating disorder

had a lower mean age (42.0 ± 10.5 yrs) than the cohort of both genders (45.7 ± 9.4 yrs). In clinical settings, patients with binge eating disorder frequently report a long history of their disease, presenting for treatment decades after onset of the syndrome (Mussell et al. 1995). The course of binge eating disorder is marked by spontaneous remission and resurgence of symptoms, possibly being reflected in a broader range between the study with the lowest and the one with the highest mean age.

Patients diagnosed with dementia who participated in clinical studies had the highest mean age among the mental disorders that have been investigated. Patients suffering from Alzheimer's disease were on average 74.8 ± 8.2 years old, the mean age of patients with vascular dementia was 72.7 ± 6.5 years. Alzheimer's disease and vascular dementia are the two most common causes of dementia in older people. Mixed dementia, in which both pathologies coexist in a patient, is rarely diagnosed in the clinic and often biased towards a diagnosis of Alzheimer's disease, though possibly comprising the majority of cases (Kalaria 2002). The majority of clinical studies did not exclude cases with mixed dementia, possibly due to a pressure to recruit. The proximity of the mean age of the two forms of dementia allows the assumption that mixed dementia might represent most of the cases in clinical studies. Though less than 50 studies were eligible for either studies assessing patients diagnosed with Alzheimer's disease or vascular dementia, analysis still seems powerful due to a large total sample size. The range between the study with the lowest and the one with the highest mean age was found to be relatively broad for Alzheimer's disease. Further research regarding this is needed. Inclusionary criteria for age restrictions of studies accessing patients with dementia were quite inhomogenous, possibly restricting generalizability of findings. Nevertheless, the age range for vascular dementia was found to be relatively narrow, supporting the assumption that results are reliable.

The mean age of patients suffering from anxiety disorders ranged from 35–41 years. Thereof, patients suffering from generalized anxiety disorder had the highest mean age (40.7 ± 11.5 yrs). It has been previously described that generalized anxiety disorder has a later age-of-onset than other anxiety disorders, which will possibly be reflected in a later peak of severity and participation in clinical trials. The mean age of patients diagnosed with social phobia was 35.2 ± 10.3 years, patients with panic disorder had a mean age of 37.2 ± 9.6 years. The range between the study with the lowest and the one with the highest mean age

was found to be relatively narrow for panic disorder, for generalized anxiety disorder it was found to be relatively broad. Further research on this is needed. Anxiety disorders are known to follow a chronic course. It has been previously described that anxiety disorders start in childhood, adolescence, or early adulthood and reach a peak in middle age (Bandelow and Michaelis 2015), decreasing in prevalence rates with older age (Jacobi et al. 2014b), which might be reflected in participation of RCTs. Clinical reports suggest that it will take up to ten years until patients will be diagnosed and receive treatment (Ballenger et al. 2001; Kessler et al. 2001c; Rogers et al. 1999). Clinical studies found that generalized anxiety disorder often is seen in comorbid presentation with major depression. The mean age of major depressive disorder and generalized anxiety disorder are very similar, perhaps reflecting the high diagnostic overlap between these disorders.

Results of the mean age of patients diagnosed with posttraumatic stress disorder (38.3 ± 10.1 yrs) need to be interpreted with caution due to a possible sample bias. The majority of studies investigated trauma-related subgroups, restricting generalizability of findings. However, analysis of cohorts in which gender bias was less probable, resulted in a similar mean age of 38.2 ± 11.9 years. Overall, mean age seems to be strongly associated with gender and the type and date of trauma. For instance, the mean age of the cohort of veterans (42.6 ± 7.2 yrs), being traumatized during adulthood and consisting of a predominantly male sample, was approximately 10 years older than the cohort of sexually assaulted women (33.2 ± 9.2 yrs), where trauma happened predominantly during childhood. Findings of these cohorts are limited by a small number of eligible studies and a small sample size, restricting generalizability of findings. The range between the study with the lowest and the one with the highest mean age was found to be quite broad.

Generally, clinical studies found that traumatized patients have been exposed to several traumatic events during lifetime (Carey et al. 2003). Studies suggest that the use of care by people who experienced trauma is a feasible approach to assess the severity of their disorder (Andrews et al. 2001), confirming the clinical sense of the method applied in this study. The course and severity of posttraumatic stress disorder is known to depend upon multiple factors, for example the traumatic event, perceived trauma intensity, gender, sociodemographic variables, and comorbidities. It has been suggested that some traumatic events, for example sexual abuse, cause posttraumatic stress disorder more often than others, and that perceived

trauma intensity could be an important factor influencing the development of posttraumatic stress disorder (Breslau et al. 1997). Still, correlates of posttraumatic stress disorder are not fully understood yet. Disorder symptoms occur with a latency of months or years after the experienced trauma. I aimed to analyze data on the latency of onset on the disease, but unfortunately information was not provided in most of the studies.

The mean age of patients being recruited for a clinical trial and diagnosed with an affective disorder ranked from 38–45 years. Patients diagnosed with mania (38.3 ± 9.0 yrs) and bipolar disorder (39.6 ± 11.1 yrs) had a similar mean age, probably because the majority of manic patients had a diagnosis of bipolar disorder. Patients with bipolar disorder have been recruited in a depressive, manic or mixed episode. The mean age of those patients was more similar to the mean age of patients diagnosed with depressive disorder. Patients affected from major depressive disorder (42.7 ± 12.1 yrs) and dysthymia (45.3 ± 13.3 yrs) were on average three to seven years older. Depressed patients might possibly wait longer for seeking treatment due to low impulsivity and a tendency to socially withdraw, whereas symptoms of psychosis or risky behaviour of patients in a manic episode may bring the patient to the attention of others, resulting in more immediate access to mental health care and clinical studies, even though treatment-seeking might require external motivation.

Results of studies assessing patients with dysthymia need to be regarded with caution due to a small sample size and few eligible studies. The range between the study with the lowest and the one with the highest mean age was found to be narrower for bipolar disorder than for mania. Further research on this is needed. The majority of RCTs investigating mania included patients with a score of YMRS ≥ 20 , therefore, it is confirmed that severe cases have been represented.

Patients diagnosed with schizophrenic spectrum disorder, mania, and bipolar disorder had a similar mean age of 38–40 years. No significant age-related difference between patients diagnosed with schizophrenia (38.9 ± 10.9 yrs) or any schizoaffective disorder (38.3 ± 10.7 yrs) could be found. The range between the study with the lowest and the one with the highest mean age was found to be relatively broad for schizophrenic and related disorders. Generally, psychosis is substantial under-represented in community epidemiological studies (Perala et al. 2007), therefore analysis of treated cases in RCTs is a good approach for further

research.

Results of the mean age of patients diagnosed with somatoform disorders (45.4 ± 12.7 yrs) might be less representative due to a small total sample size and few eligible studies. One probable reason for the paucity of studies assessing patients diagnosed with somatoform disorder might be that patients do not accept their diagnosis and therefore are reluctant to take part in a clinical study. One prominent feature of the disorder is that patients do often not agree that they have a mental disorder.

Still, the range between the study with the lowest and the one with the highest mean age was found to be relatively narrow.

4.2 Gender distribution in detail

Results of gender distribution reconfirm a female predominance of the majority of affective disorders (female respondents with major depressive disorder 63.3 %, dysthymia 64.6 %, bipolar disorder 57.4 %). There were no notable gender differences in the distribution rates of mania (49.8 % female).

Previous research suggested that women are more likely to evidence affective disorders (Bebbington 1998; Gater et al. 1998; Jacobi et al. 2004; Kessler et al. 1994a; Weissman et al. 1993; Wittchen et al. 1998). Depression has mostly been reported to appear twice as common in women compared with men across different cultures and social contexts. The gender difference in depressive symptoms has been described to emerge in early adolescence and remain throughout adulthood (Nolen-Hoeksema and Girgus 1994). Depression may be more persistent in women (Bracke 2000) and female gender has been described to be a significant predictor of relapse (Kuehner 1999). Traditional female gender role with components of submission and dependence, unpaid domestic work, and low status in society, increases susceptibility of depression. Conversely, improving the status of women should likely improve the mental health of women.

It has been suggested that prevalence rates of bipolar disorder are balanced between women and men, though studies suggested that mixed mania may occur more commonly in women than in men. Gender differences in the course of bipolar disorders have been described.

Women have a greater chance to develop the rapid cycling form of the illness, exhibit more comorbidity (Leibenluft 1997), and are more likely to receive inpatient treatment during the manic phase of the disorder (Hendrick et al. 2000). Women diagnosed with bipolar mania presented with specific patterns of psychotic symptoms that appeared to be associated with greater severity of the acute episode, more mixed states, and a more severe course of illness (Braunig et al. 2009).

Findings of this investigation corroborate a female predominance in generalized anxiety disorder (63.0 %) and panic disorder (65.7 %). No marked gender differences occurred in patients diagnosed with social phobia (50.5 %). An increased risk for women to develop anxiety disorders has been previously described (Gater et al. 1998; Lewinsohn et al. 1998; Merikangas et al. 2002; Weissman et al. 1997; Wittchen et al. 1999; Yonkers et al. 1998). Women had higher rates of lifetime diagnosis for anxiety disorders except for social anxiety disorder, where no gender difference in prevalence rates could be found (McLean et al. 2011). Findings might possibly be associated with evolutionary origins and functions of physiological anxiety. For example, physiological anxiety raises attention and functions as an evolutionary advantage for women in taking care of their offspring.

Results reconfirm that more women than men have posttraumatic stress disorder. Analysis of cohorts in which gender bias appeared less probable, resulted in a gender distribution of 66.9 % of female respondents. Results of all eligible studies (56.7 % female) need to be interpreted with caution due to a sample bias. For example, some studies recruited only female sexual assault victims, and most of the studies recruiting veterans included only male participants. It has been reported that combat experience is most commonly related to posttraumatic stress disorder in men, whereas in women sexual assaults appears as a stronger risk factor (Kessler et al. 1995b).

In general, several studies found that although men are more likely to experience trauma (Breslau and Anthony 2007; Tolin and Foa 2006), more women than men develop posttraumatic stress disorder (Breslau 2002; Breslau 2009; Darves-Bornoz et al. 2008; Frans et al. 2005; Freedman et al. 2002; Wittchen et al. 2009). Previous research suggested that females have an approximately twofold higher prevalence for developing posttraumatic stress disorder compared to males (Ditlevsen and Elklit 2010; Laufer and Solomon 2009; Stallard et al.

2004; Walker et al. 2004). Gender disparity persists in severity of symptoms of posttraumatic stress disorder (Ditlevsen and Elklit 2010; Irish et al. 2011). However, caution is required in drawing conclusions on the consequences of trauma in men because men tend to express their distress more often through behavioural than through affective disorders (Choquet et al. 1997; Darves-Bornoz et al. 1998). A predisposing factor for gender disparity in posttraumatic stress disorder might be the increased ratio of psychiatric disorders before the trauma, such as pre-existing affective or anxiety disorders, which are more common in women (Acierno et al. 1999; Breslau et al. 1991a; Breslau et al. 1997; Mayou et al. 2001; McFarlane 1989; Perkonigg et al. 2000). This may explain why posttraumatic stress disorder shows an age and gender distribution which is similar to the distributions found in major depressive disorder and generalized anxiety disorder. Also, a family history of psychiatric disorders seems to be a predisposing factor (Breslau et al. 1991b; Bromet et al. 1998; Koenen 2006).

Among the respondents diagnosed with somatoform disorders, 71.9 % of the participants were female. It is even mentioned in the classification of DSM that women are predominantly affected by somatoform disorders. Previous research proposed an increased risk for women to develop somatoform disorders (Lieb et al. 2000; Piccinelli and Simon 1997; Smith et al. 2001).

Among the eating disorders that have been investigated, the majority of studies assessed a female sample, therefore results need to be regarded with caution.

Among the studies recruiting both genders, 93.9 % of the respondents diagnosed with anorexia nervosa, 88.1 % of the bulimic participants, and 83.0 % of the sample diagnosed with binge eating disorder were female. It is well known that anorexia and bulimia nervosa are more likely to occur among females than males (Hoek 2006; Striegel-Moore and Bulik 2007). Bulimia nervosa is described to occur about nine times more likely in women than in men, anorexia nervosa is estimated to occur about ten times more commonly in females (Smink et al. 2012). Previous research found the pronounced gender bias typically not as large in binge eating disorder (Hudson et al. 2007; Striegel et al. 2012), varying from approximately a 2:1 to a 6:1 ratio (Agh et al. 2015). The female predominance may be explained by sociocultural and biologically-based factors. For instance, binge eating disorder occurred two to six times more often in female rats compared to male rats (Klump et al.

2013). The authors concluded that gonadal hormones may lead to an increased reward responsiveness to food in females, tending to override homeostatic mechanisms.

Results of this investigation show that only 26.3 % of the respondents diagnosed with alcohol dependence were female. It is well known that significantly higher rates of alcohol dependence can be found among men (Brady and Randall 1999). Population based studies reported that the lifetime prevalence rate for alcohol dependence is more than twice as high in men than women. Generally, men tend to express their distress through behavioural disorders. However, depression and anxiety appear as frequent co-occurring diagnoses, illustrating the need for gender awareness to reduce gender stereotypes and assess accurate diagnosis of both affective disorders and alcohol dependence in men and women, if they are present. In comparison to mood disorders, rates of alcohol dependence among women are quite low. It does not seem probable that these disorders correlate directly with each other, because in that case prevalence rates of alcohol abuse should be higher among women and not the other way around.

A male predominance of respondents diagnosed with schizophrenia spectrum disorder could be observed (36.2 % female). No significant difference to patients diagnosed with schizophrenia only (35.2 %) was found. Estimates of gender distribution of schizophrenia related disorders are not stable in psychiatric epidemiology. It is though generally accepted that schizophrenia typically appears earlier, anywhere between 3–10 years, in men than in women (Hafner et al. 1992; Hafner et al. 1994; Hafner and an der Heiden 1999; Hambrecht et al. 1992; Hambrecht et al. 1994). Assuming that a greater severity of illness is associated with an early age-of-onset of the illness, men would develop relatively severe episodes of the disorder early and milder forms at older ages (Hafner 2003). In contrast, young women present milder cases (Hafner 2003), and show a post-menopausal peak with a higher incidence and more severe episodes of the disease. Theories that may explain this gender difference include the protective effect of estrogen until menopause, as estradiol has been found to be effective in treating schizophrenia when added to antipsychotic therapy (Kulkarni et al. 2001). Despite later outbreak of the disease, some studies report that women experience hallucinations more frequently and generally show more positive psychotic symptoms than men (Lindamer et al. 1999). However, sex differences in illness behaviour presumably influence the social course and outcome of the disorder (Hafner 2003). Men show socially

unfavorable illness behaviour more likely than women, which might contribute to their poorer social course and outcome (Hafner 2003), and bring them to the attention of others. Women tend to show prosocial behaviour, for example cooperating and showing a better therapy compliance, possibly leading to a better outcome of the disease.

More women than men diagnosed with Alzheimer's disease participated in RCTs (56.5 %), whereas a male predominance of patients diagnosed with vascular dementia could be observed (43.5 % female). Previous research of the age-specific incidence of Alzheimer's disease (Bachman et al. 1993; Barnes et al. 2003; Evans et al. 2003; Hebert et al. 2001; Kukull et al. 2002; Miech et al. 2002; Rocca et al. 1998) or any form of dementia (Bachman et al. 1993; Fillenbaum et al. 1998; Fitzpatrick et al. 2004; Kukull et al. 2002; Rocca et al. 1998) found no significant difference by gender. On average women live longer than men, accordingly, more women will be diagnosed with any form of dementia (Hebert et al. 2001; Seshadri et al. 1997).

Results depicting a predominance of 78.5 % female participants of RCTs diagnosed with borderline personality disorder reconfirm an unbalanced gender proportion that has been described in previous studies and DSM. Some studies though reported about equal prevalence among men and women, and assume that gender bias affects gender distribution in diagnosing mental disease (Bjorklund 2006; Grant et al. 2008). Certainly, there appear to be notable gender differences with regard to personality traits, comorbidity, and treatment utilization, leading to an overrepresentation of women in mental health service (Sansone and Sansone 2011). In contrast, men with borderline personality disorder tend to show substance abuse and would be overrepresented in substance abuse treatment programs (Sansone and Sansone 2011).

5. Limitations

The findings need to be interpreted within the context of the study limitations.

The assumption that the average patient participates in a clinical trial when psychiatric symptoms have reached a high degree of severity, is difficult to prove. The design of the present investigation cannot resolve this issue and further analyses should elaborate in greater detail about access and patterns of participation in clinical trials and the use of mental health care in general. Various factors might influence the admission for a clinical trial at certain age. For instance, participation in a clinical trial might depend on the diagnostic category and according to variables such as insight of the disease, psychological strain, and treatment adherence.

One is also to analyze the impact of previous treatment to the course of mental illness, e.g. psychological treatment and the use of maintenance medication. Monetary motives can be regarded as insignificant because few trials offer allowance to participants due to ethical and scientific considerations.

Not all different severity levels of disorders are being represented in the clinical trials because of sample frame exclusions. Sample frame exclusions such as age restrictions further restrict generalizability of research findings. Those who do not seek help cannot be represented. It needs to be questioned whether the cross-national data can be regarded as representative, as demographic correlates have not been investigated. Further and more detailed analyses that would allow us to evaluate the reporting bias are not possible with the present data set. Further research regarding this is clearly needed.

Due to the large sample size and a high number of included studies, the results can be regarded as highly reliable. Every effort was taken to exclude studies which assessed a sample that could lead to a possible bias (e.g. studies including only young patients, patients in a mild phase of their disease, or only women). Age-restricted cohorts were included but restrictions attributed to these conditions did not affect the mean age of the sample.

I am not aware of any reasonable systematic bias that could lead to a distortion in the way that that the mean age of patients at a severe phase of their disease significantly differs from

the average age determined in randomized controlled studies, with one possible exception. An important potential limitation might be the fact that certain high-risk groups might not be appropriately covered, such as patients with a poor physical health status, severe comorbidities, or suicidal intention. Sample selection bias could be caused by early mortality or sufficient morbidity related to a history of mental disorders, which makes it impossible to participate in a survey or leads to an exclusion from the sample. Especially elderly patients tend to show high rates of somatic comorbidities and are therefore more likely to be excluded from participation in a clinical trial.

Admission for a RCT may be less representative for gender distribution of certain disorders. For example, obesity may be more problematic for women than for men, thus, more women than men could seek help for treatment, explaining a female predominance of participation rates in studies for binge eating disorder.

The study investigated the most common and thus most relevant mental disorders. A standard limitation of studies of that sort is that not all randomized clinical trials could be included due to missing data and limited access to full-texts. Despite systematic and thoroughly research, not enough eligible study material could be found for studies assessing individuals diagnosed with antisocial personality disorder and paedophilia. Some of the available studies were excluded, e.g. investigation of patients diagnosed with comorbid substance abuse. Analyses of subgroups and some mental disorders, e.g. dementia, dysthymia, and somatoform disorders, might be less representative because less than 50 eligible studies were found. Partly, data was not indicated for the drop out sample.

Considering the limitations named above, the data set provided represents a good estimator for analyzing the mean age and gender distribution.

6. Conclusion

Based on the assumption that patients are most probably enrolled in a clinical trial when they suffer the most from their disease, the data of the mean age and gender distribution of respondents of more than 800 clinical trials provide information of the age-related severity of mental disease. Results confirm that patients have been recruited for a clinical study at a similar age for each of the investigated mental disorders. The specific mental disorders varied for the mean age at which individuals were enrolled for a clinical trial. Results of gender distribution predominantly reconfirm findings of previous epidemiological investigations.

These results lead to important conclusions. A better understanding of the course and prognosis of mental illness may help to explore the nature and impact of mental disorders in general. Patients can be provided with information about the prognosis of the natural course of their disorder, as the mean age at which symptoms of a mental disorder reach a climax and decrease afterwards might be predicted. Moreover, data of this sort can be helpful for further investigations, learning and teaching of medical students and physicians, and in a final step for policy planning. The results can be used in articles or textbooks and can help health care providers or researchers to plan treatment programs. Information about the particular age of the most severe phase of the mental disease might be relevant for the formulation of DSM and ICD diagnostic criteria.

Data might help to presume accurate diagnoses and direct management accordingly. For instance, a patient with 55 years of age will unlikely suffer from a severe phase of borderline personality disorder, or, if difficulties in distinguishing panic disorder and depression in a patient with 65 years of age arise, it would be helpful to know that panic disorder is more common among younger patients, thus, major depression is the more likely diagnosis.

Medical intervention could be optimized, allowing to target precise interventions adjusted to the age of patients.

The data could contribute to an optimized planning and management of clinical trials, medical wards and rest homes, and in a final step for policy planning. For example, the average age of patients derived from many studies might be established as anchor point to state a trial as representative and detect outliers. Moreover, due to the shifting age structure of the

population and the age-related course of mental illness, it might be predicted that certain mental disorders will demand more attention in future times, whereas other mental disorders appear less frequent.

Further scientific research should elucidate the aetiology of the age-related course and gender distribution of major mental disorders. By determining the correlations of a peak of severity and unbalanced gender distribution of some mental disorders, conclusions regarding underlying factors of mental disorders can be drawn. For example, severity of symptoms of panic disorder peak at around 37 years of age and then tend to decrease. Thus, it can be presumed that the disorder is not based on a neurodegenerative process but rather on some kind hyperactivity of neuronal systems that tends to wane with increasing age.

Also, the data illustrate a narrow range of the age ranges and gender distributions across the investigated studies, demonstrating that the results are very homogenous across all countries with different cultures and ethnical groups. For instance, despite diverse cultural roles of women in society, the majority of studies investigating panic disorder found that approximately 66 % of the participants were women, irrespective of the country of conduction of the study. Thus, natural causes, e.g. genetic or hormonal factors, seem more plausible than psychosocial causes of the mental disorders, as the latter would be expected to vary between cultures and different countries.

7. Summary

The mean age and gender distribution of a total sample size of 151,336 consecutively enrolled respondents with mental disorders participating in 832 RCTs has been analyzed. It was assumed that the average patient is recruited for a randomized clinical study when the degree of severity of the mental illness has reached a peak level. Therefore, by extracting the mean age of patients from a large number of RCTs, reliable data for estimates of the age in which the disorder tends to show the highest degree of severity are being obtained. Results depict a major step in the investigation of course and severity of mental disorders. The results can be used in scientific articles or educational materials and can help health care providers or researchers to plan treatment programs. Patients can be informed about the prognosis of the course of their disorder. Information might be relevant for the formulation of coming-up versions of DSM and ICD diagnostic criteria and help to presume accurate diagnoses. By investigating the correlation of age-related severity and unbalanced gender distribution of some mental disorders, the aetiology of these disorders may be elucidated further.

Altogether, results confirm that patients are being recruited for a clinical study at a similar age for each of the investigated mental disorders. The age at which patients were enrolled for a clinical trial varied among the specific mental disorders. Patients with the lowest mean age were respondents of RCTs diagnosed with anorexia nervosa and bulimia nervosa. The mean age of patients diagnosed with bulimia nervosa and borderline personality disorder was similar, supporting the assumption of a nosological proximity of these disorders. Patients suffering from anxiety disorders ranged in the mean age from 35–41 years. Among those, patients suffering from generalized anxiety disorder had the highest mean age, possibly reflecting the later age-of-onset of the disease. Results of the mean age of PTSD need to be interpreted with caution because of a possible sample bias, still mean age seemed to be strongly associated with gender and the type of trauma. Patients diagnosed with schizophrenic spectrum disorder, mania, and bipolar disorder had a similar mean age of 38–40 years. No significant age-related difference could be found between patients diagnosed with schizophrenia or any schizoaffective disorder. The mean age of patients diagnosed with an affective disorder ranked from 38–45 years. Patients affected by depression and dysthymia

were significantly older than patients suffering from mania or bipolar disorder. The proximity of the mean age of Alzheimer's and vascular dementia, representing the highest mean age among all mental disorders, allows the assumption that mixed dementia might represent most of the cases.

Results show that the range between the study with the lowest and the one with the highest mean age varied among the mental disorders. A narrow range of the age ranges and gender distributions across various studies demonstrates that results are very homogenous across all countries with different cultures and ethnical groups.

Overall, results of gender distribution predominantly reconfirm findings of epidemiological psychiatry. In most of the cases, a female predominance could be found. Eating disorders, including binge eating disorder, and borderline personality disorder are predominantly diagnosed in women and depict the majority of respondents of RCTs. Further gender differences with a female predominance occurred in the participation rates of depression and dysthymia, anxiety and somatic complaints (except for social anxiety disorder), obsessive-compulsive disorder, posttraumatic stress disorder, and primary insomnia. More women with bipolar disorder than with mania were recruited. In contrast, the majority of patients diagnosed with schizophrenic spectrum disorders and alcohol dependence syndrome were male. More men than women diagnosed with vascular dementia were recruited, whereas patients with Alzheimer's disease showed a female predominance. There were no marked gender differences in the rates of mania and social anxiety disorder.

An important potential limitation of this study might be the fact that certain high-risk groups might not be appropriately covered, such as patients with a poor physical health status, severe comorbidities, or suicidal intentions. Also, the assumption that the age at which the average patient gets enrolled for a clinical trial is related to a high degree of severity of psychiatric symptoms cannot be proven. Various factors might influence the admission for a clinical trial at a certain age. Health care utilization and participation in a study might depend on the diagnostic category and according to gender. However, statistically, it seems probable that the average patient registers for a clinical trial at the most severe stage of the mental disorder. Altogether, there is no possible bias that could affect the data in a way that the patients included in a study are not the worst cases.

8. Appendix

8.1 Abbreviations

Table 6 Abbreviations

CIDI	Composite International Diagnostic Interview
DSM	Diagnostic and Statistical Manual of Mental Disorders
ESEMeD	European Study of the Epidemiology of Mental Disorders
ICD	International Classification of Diseases
NCS	National Comorbidity Survey
NCS-R	US National Comorbidity Survey Replication
PRC	People's Republic of China
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
RCT	randomized clinical trial
SD	standard deviation
SDS	Sheehan Disability Scales
SE	standard error
WHO	World Health Organization
WMH	World Mental Health
YMRS	Young Mania Rating Scale

8.2 Tabulation of the investigated studies

Alcohol Dependence Syndrome	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Addolorato et al. 2002)	45.8	10.6	1.7	?	39	18-70
(Addolorato et al. 2011)	43.9	13.0	2.0	24.0	42	18-60
(Aguiar et al. 2012)	41.0	?	?	16.0	209	?
(Anton et al. 2006)	44.5	10.2	0.3	30.9	1383	?
(Anton et al. 2009)	46.3	10.5	1.3	24.5	60	18-70
(Anton et al. 2011)	44.7	9.6	0.8	18.3	147	?
(Arias et al. 2010)	49.1	10.5	1.7	42.5	40	18-65
(Blondell et al. 2011)	45.3	11.0	0.9	34.7	150	>18
(Brown et al. 2014)	44.4	10.8	1.5	45.0	49	18-65
(Chick et al. 2000)	43.5	9.0	0.7	25.1	175	18-65
(De Sousa et al. 2008)	43.3	?	?	?	100	18-65
(Doyle and Donovan 2009)	40.3	11.0	0.3	25.0	1666	?
(Drummond et al. 2017)	43.0	9.6	1.0	39	94	>18
(Dundon et al. 2008)	43.7	10.9	0.8	25.8	194	>18
(Eberl et al. 2013)	46.0	9.0	0.4	?	509	?
(Farren et al. 2009)	43.2	9.6	0.9	18.0	111	?
(Garbutt et al. 2010)	48.9	7.4	0.8	45.0	80	18-60
(Garland et al. 2010)	40.3	9.4	1.3	20.8	53	>18
(Gual and Leher 2001)	41.0	9.2	0.5	20.5	288	18-65
(Heffner et al. 2010)	47.4	8.7	0.8	37.3	121	21-65
(Higuchi and Japanese Acamprosate Study 2015)	52.4	12.3	0.7	12.5	327	?
(Johnson et al. 2007)	47.3	9.0	0.5	26.9	364	18-65
(Jung et al. 2011)	48.0	6.9	1.1	26.8	41	?
(Kampman et al. 2009)	48.2	10.6	1.2	18.0	74	18-70
(Kiefer et al. 2011)	44.9	8.6	0.4	?	374	?
(Kiritze-Topor et al. 2004)	47.1	11.3	0.6	27.0	422	>18
(Klauss et al. 2014)	43.3	8.4	1.5	3.0	33	18-75
(Kranzler et al. 2000)	40.9	8.5	0.6	22.4	183	18-60
(Kranzler et al. 2011)	47.5	9.8	0.8	19.4	134	18-65
(Kwako et al. 2015)	43.6	9.4	1.3	10.9	55	21-65
(Laaksonen et al. 2008)	43.1	8.6	0.6	29.2	243	?
(Latt et al. 2002)	44.8	?	?	30.8	107	18-70
(Litt et al. 2009)	48.8	12.3	1.2	42.0	110	>18
(Litt et al. 2015)	45.0	11.4	0.8	41.9	210	>18
(Litten et al. 2013)	45.5	11.7	0.8	29.3	198	>18
(Manzardo et al. 2013)	47.5	7.9	0.7	19.0	120	18-60
(Mason et al. 2009)	39.7	11.9	2.1	21.2	33	?
(Mason et al. 2014)	44.5	10.9	0.9	46.2	150	>18
(McKay et al. 2011)	43.0	7.4	0.5	35.7	252	18-65

Alcohol Dependence Syndrome	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Morley et al. 2014)	46.9	?	?	36.0	42	18-60
(Neto et al. 2008)	41.6	8.2	0.6	16.0	209	?
(Pelc et al. 2005)	43.3	8.0	0.8	12.0	100	18-65
(Penzlin et al. 2015)	42.0	7.5	1.1	29.2	48	>18
(Plebani et al. 2010)	43.7	10.7	0.7	27.1	212	?
(Rose et al. 2015)	48.7	10.0	0.8	47.0	158	>18
(Schacht et al. 2011)	46.3	10.4	1.3	23.3	60	18-70
(Soyka et al. 2008)	44.8	8.8	0.5	19.4	258	18-65
(Tempesta et al. 2000)	45.9	11.2	0.6	11.3	330	18-65
(van den Brink et al. 2014)	44.3	11.4	0.4	23.0	675	>18
(Van Horn et al. 2014)	43.0	7.4	0.5	35.7	252	18-65

Alzheimer's Disease	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Aisen et al. 2008)	76.3	8.0	0.4	56.0	409	>50
(Black et al. 2010)	72.7	8.4	1.5	46.7	30	50-85
(Brodaty et al. 2009)	73.8	7.5	0.6	43.9	155	?
(Butchart et al. 2015)	72.5	2.2	0.3	38.8	41	>55
(Chatellier and Lacomblez 1990)	66.0	7.3	0.9	64.2	67	?
(Filip and Kolibas 1999)	83.0	?	?	?	173	>60
(Fleisher et al. 2008)	69.4	9.2	1.3	49.1	51	>50
(Fleisher et al. 2011)	74.6	8.5	0.9	50.6	89	>55
(Galasko et al. 2012)	72.8	9.0	1.0	46.0	78	50-85
(Galasko et al. 2014)	72.9	9.1	0.5	57.0	399	>50
(Gehrman et al. 2009)	82.9	7.0	1.1	68.3	41	?
(Guo et al. 2013b)	74.7	8.1	0.8	43.1	109	?
(Hussey et al. 2012)	77.5	6.3	1.6	60.0	15	?
(Ihl et al. 2012)	64.5	9.1	0.5	66.1	333	>50
(Li et al. 2013)	75.0	7.8	1.1	60.0	50	?
(Logue et al. 2011)	74.2	8.7	0.3	62.0	655	?
(Mishima et al. 1998)	78.0	?	?	60.0	10	?
(Nordberg et al. 2009)	74.9	7.9	1.0	69.9	63	50-85
(Palmer et al. 2013)	74.8	9.8	1.1	49.4	77	?
(Porsteinsson et al. 2014)	78.0	8.0	0.6	46.0	186	?
(Portelius et al. 2010)	70.4	8.6	1.5	54.3	35	>50
(Quinn et al. 2010)	76.0	8.7	0.4	52.2	402	?
(Raman et al. 2009)	76.0	8.3	0.3	55.2	715	?
(Roach et al. 2011)	87.9	6.1	0.6	?	105	?
(Rubright et al. 2010)	75.5	8.1	0.9	50.5	80	?
(Sabbagh et al. 2011)	75.4	8.3	1.0	61.2	67	>50
(Sano et al. 2011a)	74.6	9.3	0.5	59.4	406	>50
(Sano et al. 2011b)	73.8	8.0	0.8	56.0	111	?

Alzheimer's Disease	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Street et al. 2000)	82.8	6.6	0.5	61.2	206	?
(Tappen et al. 2000)	86.7	?	?	84.0	65	?
(Turner et al. 2015)	71.3	7.9	0.7	57.1	119	>49
(van Dyck et al. 2000)	72.9	8.1	0.3	54.7	850	>45
(Xu et al. 1999)	71.5	8.0	1.0	61.7	60	50-80

Anorexia Nervosa, Adolescents	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Accurso et al. 2014)	14.4	1.6	0.1	90.9	121	12-18
(Accurso et al. 2015b)	14.9	1.8	0.3	87.8	32	12-18
(Agras et al. 2014)	15.3	1.8	0.3	89.2	158	12-18
(Brownstone et al. 2012)	14.4	1.6	0.3	91.7	121	12-18
(Byrne et al. 2015)	14.5	1.6	0.2	89.3	108	?
(DiVasta et al. 2017)	16.3	1.9	0.3	100.0	41	13-21
(Eisler et al. 2016)	15.7	1.7	0.1	91.0	169	13-20
(Faje et al. 2013)	16.7	0.2	0.0	100.0	44	13-18
(Godart et al. 2012)	16.6	1.6	0.2	100.0	60	13-21
(Gowers et al. 2007)	14.1	?	?	92.0	167	12-18
(Hagman et al. 2011)	16.0	2.4	0.5	100.0	40	12-21
(Herpertz-Dahlmann et al. 2014)	15.3	1.5	0.1	100.0	172	11-18
(Le Grange et al. 2011)	15.2	1.6	0.2	89.9	79	12-18
(Le Grange et al. 2012)	14.4	1.6	0.1	91.0	121	12-18
(Le Grange et al. 2016)	15.5	1.5	0.1	87.7	106	12-18
(Lock et al. 2010)	14.4	1.6	0.1	91.0	121	12-18
(Lock et al. 2015)	14.6	1.4	0.2	85.7	35	12-18
(Madden et al. 2015)	14.9	1.5	0.2	95.1	82	12-18
(Misra et al. 2011)	16.5	0.2	0.0	100.0	110	12-18
(Rienecke et al. 2016)	14.4	1.6	0.1	91.8	121	12-18
(Rosling et al. 2016)	15.1	2.0	0.1	100.0	31	<18
(Strokosch et al. 2006)	15.2	1.3	0.1	100.0	123	?

Anorexia Nervosa, Adults	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Andony et al. 2015)	26.7	10.2	1.3	?	64	>18
(Andries et al. 2015)	33.3	12.7	2.6	100.0	24	>18
(Attia et al. 1998)	26.0	?	?	100.0	31	?
(Attia et al. 2011)	27.7	9.1	1.9	95.7	23	>16
(Barbarich et al. 2004)	23.0	6.3	1.2	?	26	?
(Bissada et al. 2008)	26.8	?	?	100.0	34	>18
(Brambilla et al. 2007a)	25.0	6.7	1.2	100.0	30	>18
(Brambilla et al. 2007b)	23.0	4.8	1.1	100.0	20	?
(Channon et al. 1989)	23.8	6.3	1.3	100.0	24	?

Anorexia Nervosa, Adults	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Conceicao et al. 2013)	25.4	8.4	0.7	100.0	137	18-58
(Crisp et al. 1991)	21.7	4.3	0.5	100.0	90	?
(Dare et al. 2001)	26.3	6.7	0.7	98.0	84	>18
(Fassino et al. 2002)	24.8	7.0	1.0	100.0	52	16-35
(Fazeli et al. 2010)	28.6	2.4	0.5	100.0	21	18-45
(Fichter et al. 2013)	24.1	6.1	0.4	100.0	210	>16
(Kaplan et al. 2009)	23.3	4.6	0.5	100.0	93	16-45
(Kaye et al. 2001)	22.5	7.4	1.2	100.0	35	?
(Kim et al. 2014)	23.1	9.4	1.7	100.0	31	>18
(Klein et al. 2010)	25.2	1.1	0.2	100.0	24	16-40
(Lock et al. 2013)	22.7	5.9	0.9	89.0	46	>16
(Marzola et al. 2015)	25.4	9.4	1.1	90.7	75	?
(McClelland et al. 2016)	26.7	8.6	1.2	100.0	49	>18
(Miller et al. 2011)	26.1	6.7	0.8	100.0	77	?
(Mondraty et al. 2005)	25.3	7.4	1.9	?	15	>18
(Nakahara et al. 2006)	26.2	8.5	1.3	100.0	41	?
(Parling et al. 2016)	25.7	7.5	1.1	97.7	43	>18
(Powers et al. 2012)	34.0	13.5	2.9	95.2	21	18-65
(Ruggiero et al. 2001)	24.1	5.1	0.9	?	35	>17
(Schmidt et al. 2012)	26.6	7.9	0.9	92.9	70	>18
(Stacher et al. 1986)	23.1	1.2	0.2	100.0	30	?
(Stacher et al. 1991)	22.0	?	?	100.0	13	18-39
(Steinglass et al. 2007)	27.0	7.4	2.2	100.0	11	18-45
(Steinglass et al. 2014)	28.0	8.0	1.5	93.0	30	16-45
(Trombetti et al. 2016)	22.5	0.5	0.1	100.0	62	18-40
(Vandereycken 1984)	23.5	?	?	100.0	18	?
(Walsh et al. 2006a)	23.3	4.5	0.5	100.0	93	16-45
(Wildes et al. 2012)	32.4	11.4	2.2	100.0	28	>18
(Zipfel et al. 2014)	26.8	8.2	0.5	100.0	242	>18

Binge Eating Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Agras et al. 1995)	47.6	10.1	1.4	86.0	50	?
(Alfonsson et al. 2015)	44.3	10.7	1.1	93.8	96	?
(Appolinario et al. 2003)	35.9	9.6	1.2	88.5	60	18-60
(Balodis et al. 2013)	41.0	10.1	1.6	63.2	38	19-64
(Brambilla et al. 2009)	46.0	9.0	1.6	100.0	30	?
(Brownley et al. 2013)	36.6	10.6	2.2	83.3	24	18-60
(Cambridge et al. 2013)	41.5	10.0	1.3	56.0	63	18-60
(Carter and Fairburn 1998)	39.7	10.0	1.2	100.0	72	18-65
(Cassin et al. 2008)	42.5	12.7	1.2	100.0	108	?
(Castelnuovo et al. 2011)	46.1	10.5	1.4	100.0	60	18-65

Binge Eating Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Claudino et al. 2007)	38.3	10.3	1.2	95.9	73	18-60
(Conceicao et al. 2013)	46.9	10.2	0.6	96.6	259	>18
(Devlin et al. 2005)	43.3	11.9	1.1	78.0	116	18-70
(Dingemans et al. 2009)	39.0	9.6	1.2	100.0	66	18-60
(Eldredge et al. 1997)	45.2	9.8	1.4	95.7	46	?
(Franko et al. 2012)	46.2	10.7	0.3	84.8	1325	?
(Geliebter et al. 2005)	30.2	8.6	1.4	100.0	37	?
(Golay et al. 2005)	40.9	6.2	0.7	91.0	89	18-65
(Grilo et al. 2011)	44.8	9.4	0.8	67.0	125	18-60
(Grilo et al. 2012)	44.0	8.6	0.8	78.0	108	18-60
(Grilo et al. 2013)	45.8	11.0	1.6	79.0	48	18-65
(Grilo et al. 2014)	43.9	11.2	1.1	70.2	104	18-65
(Hilbert et al. 2012)	44.9	10.2	1.1	78.9	90	?
(Hudson et al. 1998)	42.6	9.7	1.1	90.5	85	18-60
(Hudson et al. 2017)	38.7	10.0	0.6	87.6	267	18-55
(Jacobs-Pilipski et al. 2007)	41.8	9.6	0.5	90.3	451	18-65
(Leombruni et al. 2008)	39.6	8.5	1.3	100.0	42	18-65
(Linde et al. 2004)	50.7	?	?	71.8	1632	>18
(Masheb and Grilo 2008)	46.0	9.1	1.1	81.0	75	18-60
(Masheb et al. 2011)	45.8	7.6	1.1	76.0	50	?
(McElroy et al. 2003)	40.8	8.7	1.1	86.9	61	18-60
(McElroy et al. 2013)	45.2	11.3	1.4	90.0	62	>18
(McElroy et al. 2015)	41.3	12.0	1.5	85.0	60	18-65
(McElroy et al. 2016)	38.0	10.2	0.4	85.9	745	18-55
(Mitchell et al. 2003)	42.0	10.9	4.1	85.7	7	>18
(Peterson et al. 2009)	47.1	10.4	0.7	87.6	227	>18
(Peterson et al. 2013)	46.9	10.3	0.6	87.6	259	>18
(Puhl et al. 2011)	45.7	8.2	1.3	?	40	21-65
(Robinson and Safer 2012)	52.2	10.6	1.1	85.0	101	>18
(Robinson et al. 2015)	47.0	15.3	2.3	86.0	43	>18
(Safer et al. 2010)	52.2	10.6	1.1	85.0	101	>18
(Shingleton et al. 2015)	46.6	10.8	0.3	84.3	1325	?
(Sysko et al. 2010a)	48.5	12.0	0.8	85.3	205	?
(Telch et al. 2001)	50.0	9.1	1.4	100.0	44	18-65
(Utzinger et al. 2015)	46.7	10.2	0.7	90.0	189	?
(White and Grilo 2013)	44.1	12.5	1.6	100.0	61	18-65
(Wilfley et al. 2002)	45.3	9.6	0.8	82.7	162	18-65
(Wilfley et al. 2008)	42.0	9.8	0.6	90.0	304	18-65
(Wilson et al. 2010)	48.4	11.9	0.8	85.3	205	>18
(Zunker et al. 2010)	46.5	10.2	0.8	?	179	>18

Bipolar Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Amsterdam and Shults 2005)	38.0	14.2	4.1	75.0	12	>18
(Ball et al. 2006)	42.1	14.6	2.0	57.7	52	>18
(Bauer et al. 2016)	45.5	12.0	2.4	48.0	25	18-65
(Bobo et al. 2011)	40.5	9.5	1.3	67.0	50	18-64
(Bobo et al. 2014)	38.9	12.1	0.6	58.7	482	18-68
(Bowden et al. 2000)	39.2	11.8	0.6	51.0	369	18-75
(Bowden et al. 2008)	43.6	12.5	0.7	54.0	298	18-75
(Brown et al. 2009a)	37.0	11.1	0.5	60.0	410	18-60
(Calabrese et al. 2005)	36.8	9.7	0.5	61.6	314	>18
(Costa et al. 2011)	40.2	11.2	1.8	61.5	39	18-60
(de la Cruz et al. 2013)	42.0	11.3	0.6	66.7	384	>18
(Depp et al. 2015)	47.5	12.8	1.4	58.5	82	>18
(Durgam et al. 2015b)	38.4	10.7	0.7	33.5	236	18-65
(Frank et al. 2008)	35.4	10.5	0.9	59.2	125	18-60
(Ghanizadeh et al. 2014)	30.0	9.5	1.3	52.0	50	>18
(Hammersley et al. 2003)	40.5	10.4	1.1	66.6	96	>16
(Husain et al. 2017)	34.5	?	?	61.8	34	18-65
(Jones et al. 2015)	39.1	11.6	1.4	70.2	67	18-65
(Lam et al. 2003)	43.9	11.4	1.1	56.3	103	18-70
(Lam et al. 2005)	44.0	11.5	1.1	53.8	103	?
(Lee et al. 2013)	31.6	11.2	1.0	47.4	135	?
(Lee et al. 2014)	31.8	11.6	0.8	49.1	232	?
(Macfadden et al. 2009)	38.9	11.9	1.1	28.2	124	18-70
(Meyer and Hautzinger 2012)	44.0	11.9	1.4	50.0	76	18-65
(Miklowitz et al. 2003)	35.6	10.2	1.0	63.0	101	18-65
(Miller et al. 2008)	39.5	11.3	1.2	42.9	91	18-75
(Muzina et al. 2008)	38.2	12.2	2.3	67.9	28	?
(Nugent et al. 2014)	46.0	12.0	2.6	71.4	21	18-65
(Perlick et al. 2010)	34.7	15.0	2.4	62.5	40	18-65
(Perry et al. 1999)	44.5	12.0	1.4	68.0	69	18-75
(Peters et al. 2014)	40.0	11.8	0.8	60.0	205	?
(Prien et al. 1984)	38.1	12.4	0.8	58.0	216	21-60
(Quiroz et al. 2010)	39.0	12.1	0.7	48.5	303	18-65
(Quitkin et al. 1981)	36.8	13.1	1.5	52.0	75	?
(Simon et al. 2005)	44.2	12.9	0.6	68.5	441	>18
(Simon and Rutter 2008)	44.0	?	?	68.0	441	?
(Stange et al. 2013)	39.9	11.8	1.1	61.0	105	>18
(Sylvia et al. 2014a)	39.1	12.3	0.7	57.0	283	?
(Sylvia et al. 2014b)	39.9	12.1	0.9	59.0	200	>18
(Szegedi et al. 2012)	39.3	11.9	0.7	42.3	324	>18
(Thomas et al. 2008)	43.5	12.6	1.2	59.2	120	18-65
(Tohen et al. 2009)	39.2	11.9	0.4	57.7	731	>18
(van der Voort et al. 2015)	45.6	10.7	0.9	64.1	138	18-65

Bipolar Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Vieta et al. 2008)	43.5	11.9	1.6	65.5	55	>18
(Vieta et al. 2012)	35.6	11.0	0.6	52.4	398	18-65
(Vieta et al. 2007)	35.5	?	?	62.1	108	18-65
(Waxmonsky et al. 2014)	42.0	?	?	67.0	384	?
(Weisler et al. 2008)	37.0	11.3	1.1	62.2	111	>18
(Yatham et al. 2007a)	40.9	12.8	1.8	51.2	49	18-65
(Zaretsky et al. 2008)	40.7	12.0	1.4	?	79	18-60

Borderline Personality Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Bateman and Fonagy 2013)	31.1	7.7	0.7	80.0	134	18-65
(Bedics et al. 2012)	29.3	7.5	0.7	100.0	101	?
(Berking et al. 2009)	28.9	7.5	0.8	100.0	81	?
(Black et al. 2014)	29.5	8.3	0.8	70.9	95	18-45
(Black et al. 2016)	31.7	8.4	1.2	88.0	49	>18
(Blum et al. 2008)	31.5	9.5	0.9	83.0	124	>18
(Bogenschutz and George Nurnberg 2004)	32.6	10.3	1.6	62.5	40	?
(Borschmann et al. 2013)	35.8	11.6	1.2	80.7	88	>18
(Bos et al. 2010)	32.4	?	?	86.1	79	?
(Brown et al. 2009b)	30.0	7.3	0.8	100.0	77	18-45
(Brune et al. 2015)	27.5	7.3	1.9	66.7	15	?
(Carter et al. 2010)	24.5	6.1	0.7	100.0	70	18-65
(Clarkin et al. 2007)	30.9	7.9	0.8	92.2	90	18-50
(Cottraux et al. 2009)	33.5	9.3	1.1	76.9	65	18-60
(Davidson et al. 2006)	31.0	9.1	0.9	84.0	106	18-65
(Davidson et al. 2010)	32.0	?	?	84.0	106	?
(de la Fuente and Lotstra 1994)	32.7	?	?	70.0	20	?
(Doering et al. 2010)	27.3	7.2	0.7	100.0	104	18-45
(Farrell et al. 2009)	35.6	8.7	1.5	100.0	32	18-65
(Fertuck et al. 2012)	29.5	8.3	1.5	87.1	31	?
(Fleischer et al. 2015)	24.8	5.8	1.0	100.0	37	18-65
(Giesen-Bloo et al. 2006)	30.6	7.7	0.8	93.0	86	18-60
(Gratz et al. 2014b)	33.2	11.0	1.4	100.0	61	18-60
(Gratz et al. 2014a)	32.5	10.9	1.5	100.0	51	18-60
(Hollander et al. 2001)	38.6	10.4	2.3	52.4	21	?
(Kramer et al. 2011)	30.8	10.1	2.0	71.0	25	18-60
(Linehan et al. 2008)	36.8	9.0	1.8	100.0	24	18-60
(Loew et al. 2006)	25.3	5.5	0.7	100.0	56	?
(McMain et al. 2009)	30.4	9.9	0.7	86.1	180	18-60
(Neacsiu et al. 2010)	31.4	7.4	0.7	100.0	108	?
(Neacsiu et al. 2014)	29.3	7.5	0.7	100.0	101	18-45
(Nurnberg 2011)	33.0	10.8	0.5	73.6	451	18-65

Borderline Personality Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Pascual et al. 2008)	29.2	?	?	81.7	60	?
(Pascual et al. 2015)	32.6	7.4	0.9	74.3	70	18-45
(Pfohl et al. 2009)	29.0	7.5	0.6	85.0	164	>18
(Reich et al. 2009)	31.2	?	?	88.9	27	?
(Rinne et al. 2002)	29.2	7.6	1.2	100.0	38	18-50
(Salzman et al. 1995)	36.4	?	?	63.6	22	?
(Sauer and Baer 2012)	27.0	?	?	90.0	40	>18
(Schmahl et al. 2012)	28.8	8.5	1.7	100.0	25	18-50
(Schulz et al. 2008)	31.8	9.6	0.5	71.0	314	18-65
(Simpson et al. 2004a)	36.1	10.3	2.1	100.0	25	?
(Soler et al. 2005)	27.0	5.9	0.8	86.7	60	18-45
(Soler et al. 2016)	32.4	7.5	1.7	93.4	44	18-45
(Soloff et al. 1989)	25.1	?	?	75.6	90	?
(Soloff et al. 1993)	26.7	7.2	0.7	75.9	108	?
(Wingenfeld et al. 2014)	24.3	5.7	0.9	100.0	38	?
(Zanarini and Frankenburg 2001)	27.0	6.7	1.3	100.0	28	?
(Zanarini and Frankenburg 2003)	26.3	6.2	1.1	100.0	30	18-40
(Zanarini et al. 2011)	33.0	10.8	0.5	73.6	451	?

Bulimia Nervosa	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Accurso et al. 2015a)	27.3	9.6	1.1	72.9	80	>18
(Agras et al. 2000)	28.1	7.2	0.5	?	220	?
(Bachar et al. 1999)	24.1	3.3	0.7	100.0	25	?
(Bailer et al. 2004)	23.8	4.5	0.5	?	81	>17
(Bello et al. 2010)	23.8	4.6	1.5	100.0	10	18-42
(Blouin et al. 1988)	25.4	6.2	1.3	100.0	22	?
(Blouin et al. 1993)	26.0	1.9	0.4	100.0	19	?
(Burton and Stice 2006)	21.0	5.3	0.6	100.0	85	18-55
(Carter et al. 2003)	27.0	8.0	0.9	100.0	85	>17
(Conceicao et al. 2013)	26.1	8.3	0.5	96.6	255	18-61
(Crow et al. 2009)	29.0	10.7	0.9	100.0	128	?
(Crow et al. 2013)	29.7	8.9	0.5	100.0	293	>18
(Daniel et al. 2016)	25.8	4.9	0.6	98.6	70	>18
(Devlin et al. 2012)	24.0	3.0	0.5	100.0	32	18-45
(Durand and King 2003)	26.4	5.9	0.7	100.0	68	>18
(Ellison et al. 2016)	27.3	9.6	1.1	90.0	80	>18
(Ertelt et al. 2011)	29.3	11.0	1.0	57.5	116	>18
(Esplen et al. 1998)	26.6	6.0	0.9	?	50	?
(Fairburn et al. 1986)	22.9	4.4	0.9	?	24	>17
(Fassino et al. 2004)	27.1	6.7	1.3	100.0	28	?
(Freeman et al. 1988)	24.2	5.6	0.5	100.0	112	>18

Bulimia Nervosa	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Garner et al. 1993)	24.2	4.2	0.6	100.0	50	18-35
(Grob et al. 2012)	25.2	3.5	0.8	100.0	19	?
(Hsu et al. 1991)	25.4	7.0	0.8	100.0	68	?
(Katzman et al. 2010)	29.3	7.5	0.5	?	225	?
(Klein et al. 2009)	24.5	1.6	0.5	100.0	11	18-40
(Lavender et al. 2012)	27.7	7.5	0.9	92.7	70	18-60
(Lavender et al. 2014)	27.3	9.6	1.1	90.0	80	?
(Mitchell et al. 2008)	29.0	10.7	0.9	98.5	128	>18
(Mitchell et al. 2011)	29.7	8.9	0.5	?	293	>18
(Nickel et al. 2005)	21.3	2.9	0.4	100.0	60	>18
(Poulsen et al. 2014)	25.8	4.9	0.6	98.6	70	>18
(Robinson et al. 1985)	25.0	?	?	100.0	15	?
(Sabine et al. 1983)	24.0	?	?	100.0	50	16-65
(Safer et al. 2001)	34.0	11.0	2.0	100.0	31	18-65
(Schmidt et al. 2006)	28.9	8.4	1.1	?	60	?
(Schmidt et al. 2008)	27.1	7.6	0.8	96.9	97	?
(Schutzmann et al. 2010)	23.8	3.6	0.5	100.0	47	?
(Smitka et al. 2011)	24.3	1.4	0.5	100.0	8	>18
(Steele and Wade 2008)	26.0	5.8	0.8	97.9	48	>16
(Steele et al. 2011)	26.0	6.3	0.7	97.7	87	>16
(Stice et al. 2008)	21.0	5.3	0.6	?	85	18-55
(Sysko et al. 2010b)	28.0	7.8	0.3	?	785	>18
(Thiels et al. 1998)	28.1	8.0	1.0	?	62	>15
(Treasure et al. 1994)	25.9	6.2	0.7	?	81	?
(Treasure et al. 1996)	25.8	5.9	0.6	?	110	?
(von Wietersheim et al. 2008)	30.5	8.6	0.9	100.0	93	>18
(Wagner et al. 2013)	24.6	4.2	0.4	?	126	16-35
(Walsh et al. 1997)	26.7	4.9	0.5	100.0	92	18-45
(Walsh et al. 2004)	30.6	7.8	0.8	100.0	91	18-60

Dysthymia	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Amore et al. 2001)	47.1	13.8	0.8	67.9	324	18-75
(Ebrahimi et al. 2013)	31.1	9.7	1.2	55.0	62	20-65
(Hegerl et al. 2010)	46.4	14.6	0.8	68.2	368	>18
(Hellerstein et al. 2001)	45.1	9.8	1.5	50.0	40	21-65
(Helmreich et al. 2012)	46.5	15.3	0.9	67.2	287	>18
(Hermens et al. 2007)	46.0	16.0	1.2	73.0	181	>18
(Judd et al. 2004)	43.5	11.7	0.9	59.3	162	>18
(Oxman et al. 2008)	55.2	16.0	1.3	58.2	141	>18
(Posner et al. 2013)	37.8	9.0	1.4	41.5	41	?
(Rapaport et al. 2011)	49.1	14.6	1.9	50.7	59	?

Dysthymia	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Ravindran et al. 2013)	41.5	11.5	1.8	47.5	40	18-60
(Shelton et al. 1997)	41.7	9.1	0.4	64.9	410	25-65
(Zanardi and Smeraldi 2006)	45.0	12.0	0.9	68.4	193	18-60

Generalized Anxiety Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Amsterdam et al. 2009)	45.7	12.7	1.7	59.6	57	>18
(Andersson et al. 2012c)	40.1	12.1	1.3	76.5	81	>18
(Andreatini et al. 2002)	53.4	8.4	1.4	52.8	36	?
(Arntz 2003)	35.9	?	?	66.7	45	18-69
(Ball et al. 2013)	38.4	12.0	0.9	51.8	168	>18
(Bose et al. 2008)	37.0	13.0	1.1	61.0	143	>18
(Coric et al. 2010)	38.9	?	?	?	260	18-65
(Crits-Christoph et al. 2011)	46.3	16.5	1.5	67.6	117	>18
(Czobor et al. 2010)	44.8	10.4	1.3	65.1	60	18-60
(Dahl et al. 2005)	41.4	11.3	0.6	55.0	373	>18
(Dahlin et al. 2016)	39.5	10.7	1.1	83.5	103	>18
(Davidson et al. 2004a)	39.5	12.6	0.7	52.7	315	18-80
(Dear et al. 2015)	43.8	11.3	0.6	76.0	338	18-64
(Dugas et al. 2010)	38.5	12.0	1.5	66.1	65	18-64
(Dunayevich et al. 2008)	46.2	15.9	2.4	61.4	44	>18
(Durgam et al. 2016)	40.0	13.1	0.7	65.4	404	18-70
(Durham et al. 1997)	39.0	?	?	67.0	110	18-65
(Eagleson et al. 2016)	31.0	11.3	1.4	?	70	18-65
(Feltner et al. 2003)	37.8	11.1	0.7	52.7	271	>18
(Feltner et al. 2008)	37.2	?	?	58.0	624	>18
(Feltner et al. 2009)	38.8	12.1	0.6	62.6	422	18-65
(Fluckiger et al. 2016)	43.9	12.1	1.6	75.4	57	>18
(Gelenberg et al. 2000)	39.5	11.5	0.7	59.0	238	>18
(Gommoll et al. 2015b)	40.3	13.1	0.7	69.4	398	18-70
(Gommoll et al. 2015a)	40.2	13.6	0.5	64.5	673	18-70
(Goodman et al. 2005)	40.5	13.5	0.9	61.5	252	>18
(Hartford et al. 2007)	40.8	13.7	0.6	62.6	487	>18
(Hayes-Skelton et al. 2013)	32.9	12.2	1.4	65.4	81	>18
(Hoge et al. 2013)	39.2	8.2	0.9	50.8	89	>18
(Holzel et al. 2013)	37.9	12.2	2.4	53.8	26	?
(Hoyer et al. 2009)	45.4	12.5	2.1	52.7	36	18-70
(Jonsson and Kjellgren 2016)	43.0	13.4	1.9	70.0	50	18-65
(Kasper et al. 2009)	40.8	11.9	0.6	61.0	374	18-65
(Katzman et al. 2011)	42.4	12.2	0.3	63.8	1224	18-65
(Kim et al. 2006)	44.4	8.5	1.3	60.9	46	18-65
(Koponen et al. 2007)	43.8	13.0	0.6	67.8	513	>18

Generalized Anxiety Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Koszycki et al. 2010)	43.5	13.8	2.9	59.1	22	?
(Koszycki et al. 2014)	42.4	16.7	3.5	65.3	23	>18
(Millstein et al. 2015)	32.9	?	?	65.4	81	>18
(Newman et al. 2011)	37.0	?	?	75.0	83	18-65
(Nicolini et al. 2009)	42.8	?	?	57.1	581	>18
(Paxling et al. 2011)	39.3	10.8	1.1	79.8	89	>18
(Power et al. 1990)	40.4	?	?	71.3	101	18-65
(Rapaport et al. 2006)	41.8	12.4	1.1	71.3	129	>18
(Rickels et al. 2005)	39.2	11.6	0.5	63.8	454	>18
(Rickels et al. 2010)	46.3	16.4	0.9	62.9	334	>18
(Robinson et al. 2010)	47.0	12.7	1.1	68.3	145	>18
(Roemer et al. 2008)	33.6	11.7	2.1	71.0	31	>18
(Rynn et al. 2008)	41.6	14.1	0.8	61.8	327	>18
(Sherman et al. 2010)	43.0	11.3	1.4	76.1	68	18-70

Mania	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Allen et al. 2006b)	39.2	11.6	0.6	45.4	374	?
(Amrollahi et al. 2011)	30.7	9.2	1.4	37.5	40	?
(Bahk et al. 2005)	37.6	?	?	49.9	74	18-65
(Baker et al. 2002)	38.6	9.7	0.9	50.4	115	18-70
(Baldessarini et al. 2003)	39.1	10.7	0.7	49.2	254	18-70
(Barbini et al. 1997)	36.6	10.0	1.9	63.0	27	?
(Behzadi et al. 2009)	35.0	8.4	0.9	?	88	?
(Berk et al. 1999)	30.7	?	?	76.0	30	18-65
(Bersudsky et al. 2010)	43.3	11.6	1.8	48.8	41	18-65
(Berwaerts et al. 2011)	40.0	11.0	0.6	36.0	300	18-65
(Bourin et al. 2014)	38.3	12.4	0.7	37.6	356	18-65
(Bowden et al. 2005a)	39.2	11.8	0.6	51.3	369	18-75
(Bowden et al. 2005b)	39.3	?	?	42.3	300	>18
(Bowden et al. 2010)	38.5	12.6	0.8	58.8	257	18-75
(Cazorla et al. 2013)	38.9	11.7	0.4	44.7	960	18-65
(Chen et al. 2013)	34.2	13.4	2.5	40.0	30	18-65
(Chengappa et al. 2010)	39.7	10.1	1.5	71.0	48	>18
(Dauphinais et al. 2011)	41.2	10.9	1.1	53.0	100	18-65
(El Mallakh et al. 2010)	40.5	1.0	0.0	51.7	401	>18
(Feifel et al. 2011)	39.5	?	?	42.9	28	18-65
(Gaudiano et al. 2007)	39.0	11.0	1.3	61.0	74	18-75
(Henriksen et al. 2016)	46.3	12.3	2.6	30.4	23	18-70
(Ichim et al. 2000)	32.8	?	?	46.7	30	18-65
(Jahangard et al. 2014)	34.4	11.5	1.5	38.6	57	?
(Janicak et al. 1988)	35.0	13.4	2.5	51.7	29	>18

Mania	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Janicak et al. 1989)	32.0	11.0	2.4	76.2	21	?
(Janicak et al. 1998)	36.2	10.6	1.9	40.6	32	?
(Jeong et al. 2012)	36.8	14.1	2.2	64.3	42	>18
(Kanba et al. 2014)	37.7	12.6	3.4	58.7	14	18-64
(Keck et al. 2003a)	40.5	12.2	3.3	56.0	14	>18
(Keck et al. 2003b)	38.3	10.5	0.7	39.0	197	>18
(Keck et al. 2009)	39.7	10.8	1.7	48.0	42	18-65
(Khanna et al. 2005)	34.8	?	?	33.1	160	>18
(Lipkovich et al. 2008)	41.2	12.0	0.8	58.2	222	?
(Machado-Vieira et al. 2008)	28.5	8.9	0.7	57.3	141	18-65
(Mirsepassi et al. 2013)	38.0	8.1	1.2	47.8	46	18-65
(Mokhber et al. 2008)	28.5	9.2	1.3	54.9	51	?
(Moreno et al. 2007)	38.9	13.0	3.7	75.0	12	?
(Sachs et al. 2006)	38.8	?	?	51.0	272	>18
(Sachs et al. 2015)	36.2	11.6	0.7	35.9	312	18-65
(Scarna et al. 2003)	40.8	12.4	2.5	40.0	25	?
(Segal et al. 1998)	33.6	?	?	77.8	45	?
(Sekhar et al. 2010)	24.5	2.5	0.5	36.7	30	18-60
(Thomas et al. 2008)	43.6	12.7	1.2	59.2	120	18-65
(Tohen et al. 2003)	40.5	13.0	0.6	58.7	453	>18
(Vieta et al. 2005)	41.8	0.6	0.6	62.0	347	18-65
(Vieta et al. 2011)	24.0	8.8	0.4	?	401	>18
(Yatham et al. 2007b)	39.5	?	?	50.0	200	>18
(Young et al. 2009)	40.8	?	?	55.9	970	>18
(Zarate et al. 2007)	35.4	7.8	2.0	87.5	16	18-65

Major Depressive Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Alam et al. 2014)	45.5	12.8	0.4	63.0	836	?
(Alvarez et al. 2012)	43.3	11.4	0.6	62.7	426	18-65
(Asnis et al. 2013)	41.1	12.3	0.5	62.7	713	18-65
(Bakish et al. 2014)	42.8	13.1	0.6	63.5	562	18-75
(Berk et al. 2014)	50.2	12.7	0.8	63.1	252	>18
(Boulenger et al. 2014)	46.8	13.7	0.6	65.6	607	18-75
(Brunoni et al. 2013)	42.3	12.6	1.2	68.3	120	18-65
(Chan et al. 2013)	46.5	8.1	1.1	80.0	50	?
(Citrome et al. 2015)	40.1	13.0	0.6	53.9	505	18-70
(Corruble et al. 2013)	43.2	12.4	0.7	71.0	324	18-70
(Croft et al. 2014)	40.2	13.0	0.6	53.7	518	18-70
(David et al. 2008)	37.0	8.3	0.6	66.5	170	?
(DeRubeis et al. 2005)	40.0	12.0	0.8	59.0	240	18-70
(Dimidjian et al. 2006)	39.9	11.0	0.7	66.0	241	18-60

Major Depressive Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Garlow et al. 2012)	42.4	11.0	0.9	62.1	153	18-60
(Gommoll et al. 2014)	43.3	13.1	0.7	60.2	357	18-80
(Hegerl et al. 2010)	46.4	14.6	0.8	68.2	368	>18
(Henigsberg et al. 2012)	46.4	12.1	0.5	62.7	560	18-75
(Hosenfeld et al. 2015)	43.4	11.5	0.9	68.0	178	?
(IsHak et al. 2015)	42.6	13.0	0.3	62.8	2280	18-75
(Jacobsen et al. 2015)	42.8	12.2	0.6	72.5	462	18-75
(Jain et al. 2013)	42.5	12.9	0.5	57.4	600	18-75
(Kato et al. 2015)	46.3	14.8	1.1	46.4	168	?
(Korgaonkar et al. 2014)	33.8	13.1	1.5	50.0	80	18-65
(Koshino et al. 2013)	37.1	10.8	0.5	54.0	564	18-65
(Lee et al. 2015)	40.2	15.2	2.4	82.9	41	?
(Leykin et al. 2007)	40.0	11.6	0.9	58.3	180	18-70
(Liebowitz et al. 2013)	42.0	13.7	0.5	60.7	673	>18
(Mahableshwarkar et al. 2015a)	45.1	12.4	0.6	70.2	469	18-75
(Mahableshwarkar et al. 2015b)	45.0	11.9	0.5	65.1	602	18-65
(Mathews et al. 2015)	41.8	12.9	0.4	57.4	1138	18-70
(McCall 2015)	42.1	12.4	1.6	67.0	58	18-70
(McIntyre et al. 2014)	45.7	12.0	0.5	66.2	598	18-65
(Montgomery et al. 2013)	44.5	?	?	66.5	553	18-70
(Mynors-Wallis et al. 2000)	35.0	?	?	76.2	151	18-65
(Papakostas et al. 2015)	44.5	12.9	1.1	70.5	139	18-65
(Rapaport et al. 2016)	46.1	12.6	1.0	58.7	148	18-80
(Sahraian et al. 2015)	33.5	9.4	1.4	74.4	43	18-65
(Sambunaris et al. 2014)	45.0	?	?	65.0	442	18-80
(Shachar-Malach et al. 2015)	43.3	16.1	4.6	75.0	12	18-80
(Shallcross et al. 2015)	34.9	11.2	1.2	76.0	92	18-65
(Shams Alizadeh et al. 2015)	34.7	11.5	1.8	69.0	42	18-65
(Sheehan et al. 2016)	43.6	12.2	0.3	67.6	2193	?
(Shiovitz et al. 2014)	43.3	12.2	0.7	58.0	345	18-65
(Thase et al. 2006)	37.3	11.9	0.6	60.1	342	>18
(Trivedi et al. 2013)	41.2	11.7	0.3	62.0	1752	18-65
(Vittengl et al. 2015)	42.7	11.8	0.8	67.0	241	18-70
(Wang et al. 2014)	40.0	11.7	0.5	71.5	459	18-65
(Zhu et al. 2013)	41.9	12.2	1.4	69.5	75	18-65
(Zilcha-Mano and Barber 2014)	37.5	12.2	1.0	59.0	156	?

Obsessive-Compulsive Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Albert et al. 2002)	29.7	8.3	1.0	52.1	73	>18
(Alonso et al. 2001)	35.2	11.4	2.7	66.7	18	?
(Anderson and Rees 2007)	33.8	11.6	1.6	?	51	18-75

Obsessive-Compulsive Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Andersson et al. 2012a)	34.0	13.0	1.3	66.0	101	>18
(Andersson et al. 2015)	34.8	12.3	1.1	58.0	128	>18
(Cottraux et al. 2001)	35.8	10.6	1.3	74.2	62	18-65
(Delorme et al. 2004)	19.9	11.4	2.6	36.8	19	?
(Denys et al. 2003)	35.0	11.5	0.9	62.0	150	18-65
(Emamzadehfard et al. 2016)	34.9	10.3	1.4	70.0	50	18-60
(Foa et al. 2005)	34.8	10.9	1.0	48.0	122	>18
(Freeston et al. 1997)	35.8	?	?	44.8	29	?
(Fux et al. 1999)	30.3	9.0	2.8	80.0	10	?
(Gomes et al. 2012)	36.4	6.8	1.5	59.1	22	18-60
(Greist et al. 1995a)	38.7	12.8	0.7	52.2	325	>18
(Greist et al. 1995b)	38.6	?	?	41.2	325	>18
(Hawken et al. 2016)	33.5	12.0	2.6	50.0	22	18-65
(Hiss et al. 1994)	31.0	?	?	40.0	20	?
(Hoexter et al. 2012)	31.5	10.2	1.7	60.5	38	18-65
(Humble et al. 2001)	42.1	13.4	2.0	46.8	47	18-75
(Huppert et al. 2009)	37.9	10.2	1.4	53.0	51	>18
(Jaurrieta et al. 2008)	31.1	8.7	1.4	36.8	38	?
(Jenike et al. 1997)	35.1	12.0	1.5	43.8	64	>18
(Kobak et al. 2005a)	33.7	11.2	1.4	45.0	60	18-65
(Koprivova et al. 2011)	29.2	5.0	0.7	60.0	50	?
(Landeros-Weisenberger et al. 2010)	35.9	11.0	0.9	58.2	165	>18
(Lindsay et al. 1997)	32.8	9.1	2.1	66.7	18	>18
(Lopez-lbor et al. 1996)	34.0	11.9	1.6	61.8	55	>18
(Lovell et al. 2017)	32.7	?	?	60.3	473	>18
(Ma et al. 2014b)	28.3	9.2	1.4	34.8	46	18-60
(McLean et al. 2001)	35.0	?	?	47.6	63	18-65
(Montgomery et al. 2001)	37.5	11.5	0.6	61.5	401	18-65
(Nakatani et al. 2005)	33.7	8.5	1.6	67.9	28	18-65
(O'Connor et al. 2006)	37.7	11.8	1.8	65.1	43	?
(Olbrich et al. 2013)	34.6	11.9	2.2	56.7	30	?
(Prasko et al. 2006)	30.5	7.8	1.3	38.2	34	?
(Rodriguez et al. 2013)	34.2	9.0	2.3	44.0	15	18-55
(Rufer et al. 2005)	32.4	9.2	1.7	60.0	30	?
(Sarris et al. 2015)	37.0	12.1	1.8	45.5	44	18-70
(Simpson et al. 2004b)	33.4	11.0	1.6	56.5	46	18-70
(Simpson et al. 2008)	39.2	13.9	1.3	43.0	108	18-70
(Simpson et al. 2010)	39.9	13.4	2.4	47.0	30	18-70
(Simpson et al. 2013)	33.9	11.4	1.1	48.0	100	18-70
(Stein et al. 2007)	37.8	11.8	0.6	57.0	458	18-65
(Thompson-Hollands et al. 2015)	35.4	8.2	1.9	67.0	18	>18
(Twohig et al. 2010)	37.0	?	?	66.0	79	>18

Obsessive-Compulsive Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Vallejo et al. 1992)	32.0	11.0	2.2	53.8	26	18-65
(van Oppen et al. 1995)	34.7	10.4	1.4	53.0	57	18-65
(Volavka et al. 1985)	29.9	?	?	64.6	23	18-65
(Voon et al. 2017)	41.8	7.9	2.3	66.7	12	?
(Whittal et al. 2005)	35.0	?	?	62.7	59	18-65

Panic Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Andersch et al. 1991)	31.0	9.3	0.8	61.0	123	?
(Azhar 2000)	31.5	7.9	1.1	?	51	18-50
(Barlow et al. 2000)	36.1	10.7	0.6	62.5	312	?
(Bergstrom et al. 2010)	34.2	9.7	1.0	61.4	104	>18
(Bradwejn et al. 2005)	38.9	12.3	0.7	60.5	328	>18
(Broocks et al. 2002)	32.6	13.4	2.1	65.5	39	18-50
(Chavira et al. 2009)	41.2	?	?	?	232	18-70
(de Beurs et al. 1995)	38.8	9.8	1.0	75.0	96	18-65
(El Alaoui et al. 2013)	34.2	9.4	0.9	62.0	104	>18
(Gallagher et al. 2013)	37.1	11.7	0.6	64.7	361	?
(Hovland et al. 2013)	37.9	8.6	1.4	80.6	36	18-50
(Ito et al. 2001)	37.0	11.0	1.3	64.0	70	18-65
(Jacobs et al. 1997)	37.2	11.4	0.6	?	359	?
(Katzelnick et al. 2006)	39.1	12.2	0.8	79.6	245	>18
(Kenardy et al. 2003)	36.8	10.0	1.0	75.5	93	18-60
(King et al. 2011)	39.1	11.2	1.6	78.0	50	>18
(Klass et al. 2009)	33.0	9.1	1.3	69.0	49	18-55
(Marchand et al. 2008)	36.5	8.8	0.8	66.0	137	18-55
(Marks et al. 1993)	35.0	?	?	81.0	144	18-65
(Martinez et al. 2015)	39.4	12.9	3.3	40.0	15	?
(Meuret et al. 2008)	41.0	8.9	1.5	64.9	37	?
(Meuret et al. 2010)	33.2	9.8	1.5	82.9	41	>18
(Michelson et al. 1998)	37.1	10.7	0.7	69.5	243	?
(Michelson et al. 2001)	35.7	10.1	0.7	55.5	180	>18
(Otto et al. 2010)	35.0	11.0	2.1	50.0	28	18-65
(Pohl et al. 1989)	30.7	2.2	0.3	47.0	60	>18
(Pollack et al. 2007)	37.3	11.0	0.4	67.3	634	>18
(Ribeiro et al. 2001)	36.2	10.5	2.0	77.1	27	>18
(Richards et al. 2003)	42.8	14.9	3.3	90.5	21	?
(Roy-Byrne et al. 2005)	41.2	?	?	67.0	232	18-70
(Sandmann et al. 1998)	34.0	8.0	1.2	65.2	46	18-65
(Schmidt et al. 2000)	37.8	11.1	1.3	69.0	77	?
(Schweizer et al. 1988)	34.5	?	?	60.0	67	?
(Schweizer et al. 1993)	35.0	8.4	0.8	60.0	104	18-65

Panic Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Sharp et al. 1997)	37.6	?	?	77.2	149	18-70
(Sharp et al. 2000)	38.3	?	?	?	91	18-70
(Sheehan et al. 1993)	36.7	9.7	1.0	73.7	92	>18
(Sheehan et al. 2005)	37.7	10.4	0.3	60.0	889	18-65
(Simon et al. 2009)	37.7	11.2	1.7	57.1	42	18-65
(Stahl et al. 2003)	37.7	?	?	58.1	351	18-80
(Swinson et al. 1995)	40.5	10.8	1.7	88.1	42	?
(Telch et al. 1993)	34.6	10.3	1.3	73.1	67	18-65
(Uhlenhuth et al. 1989)	31.5	7.1	1.1	58.0	41	?
(Valenca et al. 2000)	37.0	6.9	1.4	58.3	24	18-55
(Valenca et al. 2002)	36.9	8.7	2.3	64.3	14	18-55
(Valenca et al. 2003)	36.9	8.8	1.5	55.9	34	18-55
(Van Dyck and Spinhoven 1997)	34.3	?	?	76.0	64	18-65
(Wardle et al. 1994)	42.5	13.0	1.4	82.5	91	?
(White et al. 2013)	37.8	11.9	0.9	66.8	157	>18
(Wiborg and Dahl 1996)	31.7	7.3	1.1	57.5	40	18-50

Posttraumatic Stress Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Baker et al. 2014)	40.8	13.3	2.1	63.0	40	>18
(Beck et al. 2009)	43.3	12.8	1.9	81.8	44	?
(Bomyea et al. 2015) ¹	28.0	5.9	0.9	100.0	42	18-65
(Brom et al. 1989)	42.0	14.3	1.4	78.6	112	?
(Bryant et al. 2003)	35.2	10.4	1.4	51.7	58	17-60
(Bryant et al. 2011)	43.0	8.7	1.6	96.4	28	17-70
(Carlson et al. 1998) ²	48.0	5.1	0.9	0.0	35	?
(Chard 2005) ¹	32.8	8.9	1.1	100.0	71	?
(Cloitre et al. 2010) ¹	36.4	?	?	100.0	104	18-65
(Deville and Spence 1999)	38.0	12.8	2.7	65.2	23	>18
(Dunne et al. 2012)	32.5	7.1	1.4	50.0	26	?
(Ehlers et al. 2005)	34.4	12.8	2.9	50.0	20	?
(Ehlers et al. 2014)	39.0	11.1	1.0	58.7	121	18-65
(Engel et al. 2015) ²	36.4	8.7	1.6	19.0	80	?
(Forbes et al. 2012) ²	53.4	13.7	1.8	3.4	59	?
(Galovski et al. 2012)	39.8	11.7	1.2	69.0	100	>18
(Gersons et al. 2000)	36.4	6.5	1.0	11.9	42	?
(Golier et al. 2012) ²	48.9	12.7	4.5	0.0	8	?
(Hollifield et al. 2007)	42.2	13.1	1.4	67.9	84	?
(Jiang et al. 2014)	29.8	13.5	1.9	68.7	49	>18
(Jun et al. 2013)	37.4	11.3	0.8	75.5	200	18-65
(Kearney et al. 2013) ²	52.0	12.6	1.8	21.3	47	?
(Lang et al. 2012)	44.4	13.6	1.0	76.8	181	?
(Le et al. 2013)	37.5	11.3	0.8	76.0	200	18-65

Posttraumatic Stress Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Lee et al. 2002)	35.3	?	?	45.8	24	?
(Lindauer et al. 2005)	39.0	9.6	2.8	54.2	12	?
(Macdonald et al. 2016)	37.1	11.3	1.8	75.0	40	?
(Maercker et al. 2006)	40.3	11.1	1.7	76.2	42	?
(Markowitz et al. 2015)	40.1	11.6	1.1	70.0	110	18-65
(Martin et al. 2015) ¹	44.4	12.4	2.0	100.0	38	18-65
(McDonagh et al. 2005) ¹	40.4	9.8	1.1	100.0	74	?
(Monson et al. 2006) ²	54.0	6.3	0.8	10.0	60	?
(Monson et al. 2012)	37.1	10.9	1.7	75.0	40	18-70
(Neuner et al. 2004)	33.2	7.2	1.1	60.6	43	?
(Neuner et al. 2008)	35.0	12.8	0.8	51.3	277	?
(Neuner et al. 2010)	31.4	7.8	1.4	31.3	32	?
(Nijdam et al. 2012)	37.8	11.4	1.0	56.4	140	18-65
(Pacella et al. 2014)	36.2	11.2	2.1	72.4	29	18-65
(Powers et al. 2015)	34.0	11.8	3.9	88.9	9	18-65
(Ready et al. 2010) ²	57.5	3.0	0.9	0.0	11	?
(Reist et al. 2001) ²	50.5	8.0	1.9	0.0	17	?
(Resick et al. 2002) ¹	32.0	9.9	0.8	100.0	171	?
(Rothbaum 1997) ¹	34.2	10.4	2.4	100.0	18	>18
(Schneier et al. 2015)	40.0	12.5	2.1	63.9	36	18-75
(Schnurr et al. 2003) ²	37.5	3.7	0.2	0.0	360	?
(Schnurr et al. 2013)	45.2	?	?	8.7	195	?
(Stecker et al. 2014)	29.4	6.2	0.4	51.0	274	?
(Taylor et al. 2003)	37.5	10.0	1.3	75.0	60	>18
(Zalta et al. 2014) ¹	39.1	12.6	1.6	100.0	64	?
(Zang et al. 2013)	37.5	11.9	2.5	77.3	22	>18

¹ female, ² combats

Primary Insomnia	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Almeida Montes et al. 2003)	50.0	12.7	4.0	40.0	10	?
(Connor et al. 2016)	46.9	10.9	0.4	62.6	633	18-65
(Cortooos et al. 2010)	42.6	?	?	35.3	17	18-60
(Deacon et al. 2007)	34.6	10.8	2.1	73.0	26	18-65
(Drake et al. 2000)	40.1	10.2	1.1	45.8	83	21-60
(Edinger et al. 2009)	56.0	16.1	2.5	12.5	40	>18
(Erman et al. 2008)	40.6	?	?	?	63	21-61
(Gross et al. 2011)	49.2	?	?	73.3	30	18-65
(Guo et al. 2013a)	48.9	13.6	1.8	67.8	60	25-75
(Hajak et al. 1996)	41.3	9.5	3.0	30.0	10	?
(Huang et al. 2011)	39.9	11.3	1.6	69.0	48	20-65
(Krystal et al. 2008)	45.7	11.0	0.3	61.2	1018	18-64
(Krystal et al. 2011)	44.5	11.3	0.8	73.0	221	18-64

Primary Insomnia	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Lankford et al. 2008)	43.9	11.0	0.5	66.2	458	18-64
(Ma et al. 2014a)	45.0	?	?	59.0	229	?
(Mayer et al. 2009)	46.2	14.8	0.7	63.2	451	>18
(Ratti et al. 2013)	45.0	?	?	55.0	161	18-64
(Riemann et al. 2002)	47.0	10.9	1.5	41.8	55	18-70
(Roehrs et al. 2011)	49.5	?	?	58.8	95	21-70
(Rosenberg et al. 2008)	45.1	11.8	0.9	61.3	173	18-64
(Roth et al. 2006)	44.3	3.0	0.2	58.0	212	18-64
(Roth et al. 2007)	42.4	12.0	1.5	70.0	66	18-64
(Roth et al. 2010)	43.9	11.7	0.3	62.1	1532	18-65
(Scharf et al. 2007)	45.9	11.7	0.4	61.0	702	21-64
(Tsutsui and Zolpidem Study 2001)	42.2	12.7	0.6	65.0	428	?
(Wade et al. 2010)	63.8	9.3	0.7	74.4	172	18-80
(Walsh et al. 2000)	44.1	0.9	0.1	70.6	163	21-65
(Walsh et al. 2006b)	44.3	?	?	69.0	232	18-64
(Walsh et al. 2007)	45.6	11.8	0.4	61.0	828	21-64
(Yeung et al. 2009)	48.0	9.0	1.2	76.7	60	18-65
(Zick et al. 2011)	41.5	14.4	2.5	74.0	34	18-65

Schizophrenia and Related Disorders	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Ascher-Svanum et al. 2014) ¹	40.9	10.9	0.5	32.8	524	18-65
(Chien et al. 2016)	28.7	9.6	0.8	47.0	134	18-64
(Citrome et al. 2016) ¹	36.9	10.5	0.3	30.9	1466	18-60
(Daniel et al. 1999)	36.6	?	?	28.9	302	>18
(Del-Monte et al. 2014) ¹	34.4	10.6	1.6	35.6	45	?
(Downing et al. 2014) ¹	40.0	11.5	0.4	35.9	1009	18-65
(Durgam et al. 2015a) ¹	38.5	10.8	0.4	36.8	617	18-60
(Fu et al. 2015)	38.6	?	?	49.4	334	>18
(Gaebel et al. 2010)	41.6	12.8	0.7	42.0	666	>18
(Gomar et al. 2015)	46.1	10.0	0.9	31.5	130	18-65
(Hasan et al. 2015)	40.8	8.2	0.7	30.6	121	>18
(Hong et al. 2011)	42.8	?	?	34.4	64	18-60
(Ji et al. 2016) ¹	36.5	8.5	1.9	40.0	20	?
(Kane et al. 2014) ¹	42.4	11.0	0.6	21.0	340	18-65
(Keefe et al. 2008)	40.3	9.4	0.6	29.5	245	18-55
(Keefe et al. 2015)	38.5	10.0	0.6	32.2	317	18-55
(Keks et al. 2007)	35.2	11.9	0.5	42.9	547	>18
(Kimhy et al. 2015) ¹	36.9	10.1	1.8	36.0	33	18-55
(Kindler et al. 2015)	37.6	7.6	1.7	36.8	19	>18
(Kumari et al. 2015) ¹	40.2	14.2	2.3	39.5	38	18-61
(Laties et al. 2015)	40.4	10.8	0.3	41.2	1098	18-65
(Loh et al. 2015) ¹	21.6	10.2	1.0	28.8	104	18-65

Schizophrenia and Related Disorders	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Martin et al. 2016)	39.8	10.2	1.2	47.0	68	14-65
(McEvoy et al. 2013)	43.9	10.9	0.7	35.0	240	>18
(Meltzer et al. 2015) ¹	39.7	11.0	0.4	32.1	623	18-70
(Minzenberg et al. 2014) ¹	23.9	9.5	2.0	22.0	23	18-50
(Mueller et al. 2015)	34.2	8.6	0.7	30.8	156	18-50
(Nasrallah et al. 2015) ¹	38.3	10.8	0.3	27.5	1330	18-75
(Nasrallah et al. 2016) ¹	39.7	11.0	0.4	32.1	623	18-70
(Nikbakhat et al. 2016) ¹	34.1	5.9	0.7	32.8	64	18-50
(Peters-Strickland et al. 2015) ¹	41.2	10.6	0.3	40.6	1081	18-65
(Popova et al. 2014) ¹	37.2	9.0	1.2	33.3	57	?
(Potkin et al. 2015) ¹	41.2	10.0	0.5	25.8	353	18-64
(Sailer et al. 2015)	30.9	11.4	1.9	30.6	36	?
(Savitz et al. 2016) ¹	33.3	11.9	0.3	45.0	1429	18-70
(Silva et al. 2015) ¹	33.3	6.2	1.1	?	34	18-50
(Silverstein et al. 2014)	44.4	11.6	1.7	27.7	123	18-55
(Stauffer et al. 2010)	39.9	10.4	0.3	31.9	974	?
(Stauffer et al. 2014) ¹	42.7	11.4	1.1	27.2	103	18-65
(Strzelecki et al. 2015) ¹	38.3	?	?	52.0	50	18-60
(Svatkova et al. 2015) ¹	30.1	7.8	1.4	18.2	33	?
(Tandon et al. 2016) ¹	42.7	11.8	0.7	37.5	285	18-75
(Tomasik et al. 2015)	46.3	10.4	2.0	34.5	58	?
(Turkoz et al. 2015)	37.5	9.8	0.5	45.5	332	>18
(Weickert et al. 2015)	35.7	7.8	0.9	38.0	79	?
(Weiden et al. 2016) ¹	39.2	11.3	0.4	38.4	938	18-65
(Woolley et al. 2015)	44.0	9.7	1.7	19.4	31	?
(Zhang et al. 2015) ¹	38.9	10.2	0.7	48.1	235	18-60
(Zhang et al. 2016) ¹	30.7	10.5	1.0	59.0	106	>18
(Zhou and Gu 2014) ¹	35.0	9.8	0.7	47.3	201	18-60

¹ Schizophrenia only

Social Phobia	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Alden et al. 2004)	33.6	10.4	1.8	60.6	33	?
(Amir et al. 2009)	29.4	10.8	1.6	59.1	44	?
(Amir et al. 2011)	30.7	11.1	1.0	51.0	112	?
(Andersson et al. 2012b)	38.3	11.1	0.8	68.8	204	>18
(Baldwin et al. 1999)	36.1	11.5	0.7	54.2	290	>18
(Beard et al. 2011)	37.4	15.8	2.8	75.1	32	18-79
(Beidel et al. 2014)	36.4	14.0	1.4	51.9	106	>18
(Berger et al. 2011)	37.2	11.2	1.2	53.1	81	>18
(Blanco et al. 2010)	32.5	9.0	0.8	40.6	128	18-65
(Blomhoff et al. 2001)	40.4	10.4	0.5	60.5	387	18-65
(Borgeat et al. 2009)	40.0	9.8	1.9	48.1	27	18-65

Social Phobia	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Bunnell et al. 2013)	24.4	7.1	0.6	39.2	141	>18
(Caldirola et al. 1997)	30.7	9.6	2.4	31.0	16	?
(Carlbring et al. 2007)	32.7	9.2	1.2	65.1	57	>18
(Carlbring et al. 2012)	36.5	12.7	1.4	68.4	79	>18
(Cottraux et al. 2000)	33.7	10.4	1.3	58.7	63	18-60
(Craske et al. 2014)	28.4	6.8	0.7	46.0	87	?
(Davidson et al. 1993)	37.2	8.4	1.0	42.6	75	?
(Davidson et al. 2004b)	37.2	10.3	0.6	46.5	295	18-65
(de Oliveira et al. 2012)	34.4	11.8	2.0	75.0	36	?
(Furmark et al. 2002)	35.2	7.3	1.7	44.4	18	?
(Hackmann et al. 2000)	30.6	13.3	2.8	45.5	22	?
(Hedman et al. 2011)	35.4	11.4	1.0	35.7	126	?
(Hedman et al. 2013)	33.5	9.1	1.1	64.2	67	18-65
(Heimberg et al. 1998)	34.9	9.6	0.8	49.6	133	18-65
(Hofmann 2004)	32.0	9.5	1.0	36.0	90	?
(Hofmann et al. 2006b)	32.5	9.9	1.0	41.1	107	?
(Hofmann et al. 2006a)	33.7	10.0	1.9	40.7	27	>18
(Hofmann et al. 2013)	32.6	?	?	43.2	169	>18
(Jazaieri et al. 2012)	32.8	8.4	1.1	52.0	56	>18
(Kasper et al. 2005)	38.0	11.0	0.6	45.0	358	18-65
(Knijnenik et al. 2008)	33.4	10.2	1.4	51.6	57	18-65
(Kobak et al. 2005b)	37.5	13.2	1.9	52.5	49	18-65
(Liebowitz et al. 2005)	36.3	11.5	0.6	46.5	413	>18
(Mansson et al. 2016)	32.3	9.7	1.9	85.0	26	?
(Morgan and Raffle 1999)	32.4	7.7	1.4	46.7	30	?
(Mortberg et al. 2007)	34.6	9.1	0.9	63.0	100	18-65
(Mortberg et al. 2015)	35.9	9.6	1.8	69.0	29	18-65
(Neubauer et al. 2013)	39.5	11.2	1.5	66.1	56	18-65
(Niles et al. 2013)	28.4	6.5	0.6	42.1	124	?
(Niles et al. 2014)	28.4	6.5	0.9	43.0	50	>18
(Price et al. 2011)	41.4	11.3	2.3	29.0	24	?
(Price and Anderson 2011)	39.1	11.2	1.2	61.0	91	?
(Smits et al. 2013)	32.5	10.5	0.9	41.8	145	>18
(Stangier et al. 2011)	35.6	11.8	1.1	55.5	117	18-65
(Stein et al. 1998)	36.3	?	?	56.7	187	>18
(Stein et al. 2002)	38.2	11.5	0.6	60.4	323	>18
(Stein et al. 2014)	35.0	13.3	0.7	34.0	346	>18
(Thyer 1999)	35.0	?	?	50.0	133	>18
(Tulbure et al. 2015)	28.8	8.0	0.9	40.8	76	>18

Somatoform Disorder	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Allen et al. 2006a)	46.6	9.7	1.1	89.4	84	18-70
(Aragona et al. 2005)	53.6	15.8	2.7	72.4	35	>18
(Bleichardt et al. 2004)	43.9	10.4	0.8	73.3	191	?
(Dickinson et al. 2003)	47.1	14.1	0.7	93.5	382	?
(Eberhard et al. 1988)	50.3	12.6	1.5	72.9	70	?
(Han et al. 2008b)	45.2	12.6	1.3	61.0	95	>18
(Han et al. 2008a)	37.6	29.2	4.3	57.7	45	>18
(Hanel et al. 2009)	43.9	13.3	0.7	59.4	323	18-65
(Luo et al. 2009)	41.0	12.7	1.4	57.5	80	18-65
(McLeod et al. 1997)	39.4	9.4	1.0	73.6	96	?
(Melzer et al. 2009)	41.6	14.8	1.1	57.5	182	>18
(Moreno et al. 2013)	45.7	10.5	0.8	86.3	168	18-65
(Muller et al. 2004)	47.7	11.4	0.9	57.5	173	18-65
(Muller et al. 2008)	39.6	9.8	1.4	57.5	51	?
(Sattel et al. 2012)	48.0	11.6	0.8	66.0	211	18-77
(Schaefer et al. 2013)	48.9	12.4	0.7	75.0	304	18-70
(Smith et al. 2009)	52.5	?	?	83.3	30	>18
(Speckens et al. 1995)	37.1	12.6	1.4	49.5	79	18-64
(van Ravesteijn et al. 2013)	47.1	11.5	1.1	74.3	117	18-70
(Volz et al. 2000)	45.6	13.0	0.9	63.5	200	18-76
(Volz et al. 2002)	47.7	12.0	1.0	62.0	149	18-65
(Zonneveld et al. 2012)	42.4	11.1	0.9	80.9	162	18-65

Vascular Dementia	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Auchus et al. 2007)	72.3	8.9	0.3	36.0	786	?
(Ballard et al. 2008)	72.8	8.0	0.3	38.0	710	50-85
(Bastos Leite et al. 2004)	71.0	?	?	?	73	?
(Black et al. 2003)	73.9	0.3	0.0	44.8	603	>40
(Chen et al. 2011)	68.2	6.4	0.5	12.5	168	?
(Cohen et al. 2003)	77.9	4.7	0.8	48.7	39	>55
(Di Perri et al. 1991)	70.4	?	0.7	40.8	120	50-80
(Guekht et al. 2011)	67.3	8.0	0.5	62.5	232	50-85
(Gunstad et al. 2005)	77.9	5.4	1.1	47.0	25	>55
(Ihl et al. 2012)	66.1	10.3	1.2	73.2	71	>50
(Liu et al. 2014)	67.1	8.5	1.2	46.0	50	45-80
(Logue et al. 2011)	73.5	9.1	0.3	60.0	826	?
(Mishima et al. 1998)	81.0	?	?	58.3	12	?
(Mok et al. 2007)	74.9	5.9	0.9	60.0	40	40-90
(Moretti et al. 2005)	71.0	1.5	0.2	57.5	40	60-75
(Muresanu et al. 2008)	70.7	1.6	0.2	51.2	41	?
(Pantoni et al. 2005)	75.3	6.1	0.4	40.6	230	55-87

Vascular Dementia	Mean Age (yrs)	SD	SE	Female (%)	Sample Size (N)	Age Inclusion
(Parnetti et al. 1997)	75.0	5.0	0.5	60.2	93	?
(Roman et al. 2010)	73.0	0.4	0.0	41.1	974	35-94
(Shi et al. 2015)	64.3	10.1	1.3	54.0	63	?
(Staekenborg et al. 2008)	73.0	8.0	0.3	38.0	706	?
(Wilkinson et al. 2003)	75.0	?	0.3	40.1	616	>40
(Yu et al. 2006)	66.7	10.5	1.4	25.0	60	>45

8.1 Index of the investigated studies

Accurso EC, Ciao AC, Fitzsimmons-Craft EE, Lock JD, Le Grange D (2014): Is weight gain really a catalyst for broader recovery?: The impact of weight gain on psychological symptoms in the treatment of adolescent anorexia nervosa. *Behav Res Ther* 56, 1-6

Accurso EC, Fitzsimmons-Craft EE, Ciao A, Cao L, Crosby RD, Smith TL, Klein MH, Mitchell JE, Crow SJ, Wonderlich SA, et al. (2015a): Therapeutic alliance in a randomized clinical trial for bulimia nervosa. *J Consult Clin Psychol* 83, 637-642

Accurso EC, Fitzsimmons-Craft EE, Ciao AC, Le Grange D (2015b): From efficacy to effectiveness: comparing outcomes for youth with anorexia nervosa treated in research trials versus clinical care. *Behav Res Ther* 65, 36-41

Addolorato G, Caputo F, Capristo E, Domenicali M, Bernardi M, Janiri L, Agabio R, Colombo G, Gessa GL, Gasbarrini G (2002): Baclofen efficacy in reducing alcohol craving and intake: a preliminary double-blind randomized controlled study. *Alcohol Alcohol* 37, 504-508

Addolorato G, Leggio L, Ferrulli A, Cardone S, Bedogni G, Caputo F, Gasbarrini G, Landolfi R, Baclofen Study G (2011): Dose-response effect of baclofen in reducing daily alcohol intake in alcohol dependence: secondary analysis of a randomized, double-blind, placebo-controlled trial. *Alcohol Alcohol* 46, 312-317

Agras WS, Telch CF, Arnow B, Eldredge K, Detzer MJ, Henderson J, Marnell M (1995): Does interpersonal therapy help patients with binge eating disorder who fail to respond to cognitive-behavioural therapy? *J Consult Clin Psychol* 63, 356-360

Agras WS, Walsh T, Fairburn CG, Wilson GT, Kraemer HC (2000): A multicenter comparison of cognitive-behavioural therapy and interpersonal psychotherapy for bulimia nervosa. *Arch Gen Psychiatry* 57, 459-466

Agras WS, Lock J, Brandt H, Bryson SW, Dodge E, Halmi KA, Jo B, Johnson C, Kaye W, Wilfley D, et al. (2014): Comparison of 2 family therapies for adolescent anorexia nervosa: a randomized parallel trial. *JAMA Psychiatry* 71, 1279-1286

- Aguiar P, Neto D, Lambaz R, Chick J, Ferrinho P (2012): Prognostic factors during outpatient treatment for alcohol dependence: cohort study with 6 months of treatment follow-up. *Alcohol Alcohol* 47, 702-710
- Aisen PS, Schneider LS, Sano M, Diaz-Arrastia R, van Dyck CH, Weiner MF, Bottiglieri T, Jin S, Stokes KT, Thomas RG, et al. (2008): High-dose B vitamin supplementation and cognitive decline in Alzheimer disease: a randomized controlled trial. *JAMA* 300, 1774-1783
- Alam MY, Jacobsen PL, Chen Y, Serenko M, Mahableshwarkar AR (2014): Safety, tolerability, and efficacy of vortioxetine (Lu AA21004) in major depressive disorder: results of an open-label, flexible-dose, 52-week extension study. *Int Clin Psychopharmacol* 29, 36-44
- Albert U, Aguglia E, Maina G, Bogetto F (2002): Venlafaxine versus clomipramine in the treatment of obsessive-compulsive disorder: a preliminary single-blind, 12-week, controlled study. *J Clin Psychiatry* 63, 1004-1009
- Alden LE, Mellings TM, Laposa JM (2004): Framing social information and generalized social phobia. *Behav Res Ther* 42, 585-600
- Alfonsson S, Parling T, Ghaderi A (2015): Group behavioural activation for patients with severe obesity and binge eating disorder: a randomized controlled trial. *Behav Modif* 39, 270-294
- Allen LA, Woolfolk RL, Escobar JI, Gara MA, Hamer RM (2006a): Cognitive-behavioural therapy for somatization disorder: a randomized controlled trial. *Arch Intern Med* 166, 1512-1518
- Allen MH, Hirschfeld RM, Wozniak PJ, Baker JD, Bowden CL (2006b): Linear relationship of valproate serum concentration to response and optimal serum levels for acute mania. *Am J Psychiatry* 163, 272-275
- Almeida Montes LG, Ontiveros Uribe MP, Cortes Sotres J, Heinze Martin G (2003): Treatment of primary insomnia with melatonin: a double-blind, placebo-controlled, crossover study. *J Psychiatry Neurosci* 28, 191-196
- Alonso P, Pujol J, Cardoner N, Benlloch L, Deus J, Menchon JM, Capdevila A, Vallejo J (2001): Right prefrontal repetitive transcranial magnetic stimulation in obsessive-compulsive disorder: a double-blind, placebo-controlled study. *Am J Psychiatry* 158, 1143-1145
- Alvarez E, Perez V, Dragheim M, Loft H, Artigas F (2012): A double-blind, randomized, placebo-controlled, active reference study of Lu AA21004 in patients with major depressive disorder. *Int J Neuropsychopharmacol* 15, 589-600
- Amir N, Beard C, Taylor CT, Klumpp H, Elias J, Burns M, Chen X (2009): Attention training in individuals with generalized social phobia: A randomized controlled trial. *J Consult Clin Psychol* 77, 961-973

- Amir N, Taylor CT, Donohue MC (2011): Predictors of response to an attention modification program in generalized social phobia. *J Consult Clin Psychol* 79, 533-541
- Amore M, Jori MC, Investigators A (2001): Faster response on amisulpride 50 mg versus sertraline 50-100 mg in patients with dysthymia or double depression: a randomized, double-blind, parallel group study. *Int Clin Psychopharmacol* 16, 317-324
- Amrollahi Z, Rezaei F, Salehi B, Modabbernia AH, Maroufi A, Esfandiari GR, Naderi M, Ghebleh F, Ahmadi-Abhari SA, Sadeghi M, et al. (2011): Double-blind, randomized, placebo-controlled 6-week study on the efficacy and safety of the tamoxifen adjunctive to lithium in acute bipolar mania. *J Affect Disord* 129, 327-331
- Amsterdam JD, Shults J (2005): Fluoxetine monotherapy of bipolar type II and bipolar NOS major depression: a double-blind, placebo-substitution, continuation study. *Int Clin Psychopharmacol* 20, 257-264
- Amsterdam JD, Li Y, Soeller I, Rockwell K, Mao JJ, Shults J (2009): A randomized, double-blind, placebo-controlled trial of oral *Matricaria recutita* (chamomile) extract therapy for generalized anxiety disorder. *J Clin Psychopharmacol* 29, 378-382
- Andersch S, Rosenberg NK, Kullingsjo H, Ottosson JO, Bech P, Bruun-Hansen J, Hanson L, Lorentzen K, Møllergaard M, Rasmussen S, et al. (1991): Efficacy and safety of alprazolam, imipramine and placebo in treating panic disorder. A Scandinavian multicenter study. *Acta Psychiatr Scand* 365, 18-27
- Anderson RA, Rees CS (2007): Group versus individual cognitive-behavioural treatment for obsessive-compulsive disorder: a controlled trial. *Behav Res Ther* 45, 123-137
- Andersson E, Enander J, Andren P, Hedman E, Ljotsson B, Hursti T, Bergstrom J, Kaldo V, Lindefors N, Andersson G, et al. (2012a): Internet-based cognitive behaviour therapy for obsessive-compulsive disorder: a randomized controlled trial. *Psychol Med* 42, 2193-2203
- Andersson E, Hedman E, Enander J, Radu Djurfeldt D, Ljotsson B, Cervenka S, Isung J, Svanborg C, Mataix-Cols D, Kaldo V, et al. (2015): D-Cycloserine vs Placebo as Adjunct to Cognitive Behavioural Therapy for Obsessive-Compulsive Disorder and Interaction With Antidepressants: A Randomized Clinical Trial. *JAMA Psychiatry* 72, 659-667
- Andersson G, Carlbring P, Furmark T, Group SOFIER (2012b): Therapist experience and knowledge acquisition in internet-delivered CBT for social anxiety disorder: a randomized controlled trial. *PLoS One* 7, e37411
- Andersson G, Paxling B, Roch-Norlund P, Ostman G, Norgren A, Almlöv J, Georen L, Breitholtz E, Dahlin M, Cuijpers P, et al. (2012c): Internet-based psychodynamic versus cognitive behavioural guided self-help for generalized anxiety disorder: a randomized controlled trial. *Psychother Psychosom* 81, 344-355

- Andony LJ, Tay E, Allen KL, Wade TD, Hay P, Touyz S, McIntosh VV, Treasure J, Schmidt UH, Fairburn CG, et al. (2015): Therapist adherence in the strong without anorexia nervosa (SWAN) study: A randomized controlled trial of three treatments for adults with anorexia nervosa. *Int J Eat Disord* 48, 1170-1175
- Andreatini R, Sartori VA, Seabra ML, Leite JR (2002): Effect of valepotriates (valerian extract) in generalized anxiety disorder: a randomized placebo-controlled pilot study. *Phytother Res* 16, 650-654
- Andries A, Gram B, Stoving RK (2015): Effect of dronabinol therapy on physical activity in anorexia nervosa: a randomized, controlled trial. *Eat Weight Disord* 20, 13-21
- Anton RF, O'Malley SS, Ciraulo DA, Cisler RA, Couper D, Donovan DM, Gastfriend DR, Hosking JD, Johnson BA, LoCastro JS, et al. (2006): Combined pharmacotherapies and behavioural interventions for alcohol dependence: the COMBINE study: a randomized controlled trial. *JAMA* 295, 2003-2017
- Anton RF, Myrick H, Baros AM, Latham PK, Randall PK, Wright TM, Stewart SH, Waid R, Malcolm R (2009): Efficacy of a combination of flumazenil and gabapentin in the treatment of alcohol dependence: relationship to alcohol withdrawal symptoms. *J Clin Psychopharmacol* 29, 334-342
- Anton RF, Myrick H, Wright TM, Latham PK, Baros AM, Waid LR, Randall PK (2011): Gabapentin combined with naltrexone for the treatment of alcohol dependence. *Am J Psychiatry* 168, 709-717
- Appolinario JC, Bacaltchuk J, Sichieri R, Claudino AM, Godoy-Matos A, Morgan C, Zanella MT, Coutinho W (2003): A randomized, double-blind, placebo-controlled study of sibutramine in the treatment of binge-eating disorder. *Arch Gen Psychiatry* 60, 1109-1116
- Aragona M, Bancheri L, Perinelli D, Tarsitani L, Pizzimenti A, Conte A, Inghilleri M (2005): Randomized double-blind comparison of serotonergic (Citalopram) versus noradrenergic (Reboxetine) reuptake inhibitors in outpatients with somatoform, DSM-IV-TR pain disorder. *Eur J Pain* 9, 33-38
- Arias AJ, Feinn R, Oncken C, Covault J, Kranzler HR (2010): Placebo-controlled trial of zonisamide for the treatment of alcohol dependence. *J Clin Psychopharmacol* 30, 318-322
- Arntz A (2003): Cognitive therapy versus applied relaxation as treatment of generalized anxiety disorder. *Behav Res Ther* 41, 633-646
- Ascher-Svanum H, Novick D, Haro JM, Bertsch J, McDonnell D, Detke H (2014): Long-term functional improvements in the 2-year treatment of schizophrenia outpatients with olanzapine long-acting injection. *Neuropsychiatr Dis Treat* 10, 1125-1131
- Asnis GM, Bose A, Gommoll CP, Chen C, Greenberg WM (2013): Efficacy and safety of levomilnacipran sustained release 40 mg, 80 mg, or 120 mg in major depressive

- disorder: a phase 3, randomized, double-blind, placebo-controlled study. *J Clin Psychiatry* 74, 242-248
- Attia E, Haiman C, Walsh BT, Flater SR (1998): Does fluoxetine augment the inpatient treatment of anorexia nervosa? *Am J Psychiatry* 155, 548-551
- Attia E, Kaplan AS, Walsh BT, Gershkovich M, Yilmaz Z, Musante D, Wang Y (2011): Olanzapine versus placebo for out-patients with anorexia nervosa. *Psychol Med* 41, 2177-2182
- Auchus AP, Brashear HR, Salloway S, Korczyn AD, De Deyn PP, Gassmann-Mayer C, Group G-I-S (2007): Galantamine treatment of vascular dementia: a randomized trial. *Neurology* 69, 448-458
- Azhar MZ (2000): Comparison of Fluvoxamine alone, Fluvoxamine and cognitive psychotherapy and psychotherapy alone in the treatment of panic disorder in Kelantan-implications for management by family doctors. *Med J Malaysia* 55, 402-408
- Bachar E, Latzer Y, Kreitler S, Berry EM (1999): Empirical comparison of two psychological therapies. Self psychology and cognitive orientation in the treatment of anorexia and bulimia. *J Psychother Pract Res* 8, 115-128
- Bahk WM, Shin YC, Woo JM, Yoon BH, Lee JS, Jon DI, Chung SK, Choi SK, Paik IH, Pae CU (2005): Topiramate and divalproex in combination with risperidone for acute mania: a randomized open-label study. *Prog Neuropsychopharmacol Biol Psychiatry* 29, 115-121
- Bailer U, de Zwaan M, Leisch F, Strnad A, Lennkh-Wolfsberg C, El-Giamal N, Hornik K, Kasper S (2004): Guided self-help versus cognitive-behavioural group therapy in the treatment of bulimia nervosa. *Int J Eat Disord* 35, 522-537
- Baker AS, Litwack SD, Clapp JD, Beck JG, Sloan DM (2014): The Driving Behaviour Survey as a measure of behavioural stress responses to MVA-related PTSD. *Behav Ther* 45, 263-272
- Baker RW, Goldberg JF, Tohen M, Milton DR, Stauffer VL, Schuh LM (2002): The impact of response to previous mood stabilizer therapy on response to olanzapine versus placebo for acute mania. *Bipolar Disord* 4, 43-49
- Bakish D, Bose A, Gommoll C, Chen C, Nunez R, Greenberg WM, Liebowitz M, Khan A (2014): Levomilnacipran ER 40 mg and 80 mg in patients with major depressive disorder: a phase III, randomized, double-blind, fixed-dose, placebo-controlled study. *J Psychiatry Neurosci* 39, 40-49
- Baldessarini RJ, Hennen J, Wilson M, Calabrese J, Chengappa R, Keck PE, Jr., McElroy SL, Sachs G, Vieta E, Welge JA, et al. (2003): Olanzapine versus placebo in acute mania: treatment responses in subgroups. *J Clin Psychopharmacol* 23, 370-376

- Baldwin D, Bobes J, Stein DJ, Scharwachter I, Faure M (1999): Paroxetine in social phobia/social anxiety disorder. Randomized, double-blind, placebo-controlled study. Paroxetine Study Group. *Br J Psychiatry* 175, 120-126
- Ball JR, Mitchell PB, Corry JC, Skillecorn A, Smith M, Malhi GS (2006): A randomized controlled trial of cognitive therapy for bipolar disorder: focus on long-term change. *J Clin Psychiatry* 67, 277-286
- Ball S, Marangell LB, Lipsius S, Russell JM (2013): Brain-derived neurotrophic factor in generalized anxiety disorder: results from a duloxetine clinical trial. *Prog Neuropsychopharmacol Biol Psychiatry* 43, 217-221
- Ballard C, Sauter M, Scheltens P, He Y, Barkhof F, van Straaten EC, van der Flier WM, Hsu C, Wu S, Lane R (2008): Efficacy, safety and tolerability of rivastigmine capsules in patients with probable vascular dementia: the VantagE study. *Curr Med Res Opin* 24, 2561-2574
- Balodis IM, Kober H, Worhunsky PD, White MA, Stevens MC, Pearlson GD, Sinha R, Grilo CM, Potenza MN (2013): Monetary reward processing in obese individuals with and without binge eating disorder. *Biol Psychiatry* 73, 877-886
- Barbarich NC, McConaha CW, Halmi KA, Gendall K, Sunday SR, Gaskill J, La Via M, Frank GK, Brooks S, Plotnicov KH, et al. (2004): Use of nutritional supplements to increase the efficacy of fluoxetine in the treatment of anorexia nervosa. *Int J Eat Disord* 35, 10-15
- Barbini B, Scherillo P, Benedetti F, Crespi G, Colombo C, Smeraldi E (1997): Response to clozapine in acute mania is more rapid than that of chlorpromazine. *Int Clin Psychopharmacol* 12, 109-112
- Barlow DH, Gorman JM, Shear MK, Woods SW (2000): Cognitive-behavioural therapy, imipramine, or their combination for panic disorder: A randomized controlled trial. *JAMA* 283, 2529-2536
- Bastos Leite AJ, van Straaten EC, Scheltens P, Lycklama G, Barkhof F (2004): Thalamic lesions in vascular dementia: low sensitivity of fluid-attenuated inversion recovery (FLAIR) imaging. *Stroke* 35, 415-419
- Bateman A, Fonagy P (2013): Impact of clinical severity on outcomes of mentalisation-based treatment for borderline personality disorder. *Br J Psychiatry* 203, 221-227
- Bauer M, Berman S, Stamm T, Plotkin M, Adli M, Pilhatsch M, London ED, Hellemann GS, Whybrow PC, Schlagenhauf F (2016): Levothyroxine effects on depressive symptoms and limbic glucose metabolism in bipolar disorder: a randomized, placebo-controlled positron emission tomography study. *Mol Psychiatry* 21, 229-236
- Beard C, Weisberg RB, Amir N (2011): Combined cognitive bias modification treatment for social anxiety disorder: a pilot trial. *Depress Anxiety* 28, 981-988

- Beck JG, Coffey SF, Foy DW, Keane TM, Blanchard EB (2009): Group cognitive behaviour therapy for chronic posttraumatic stress disorder: an initial randomized pilot study. *Behav Ther* 40, 82-92
- Bedics JD, Atkins DC, Comtois KA, Linehan MM (2012): Treatment differences in the therapeutic relationship and introject during a 2-year randomized controlled trial of dialectical behaviour therapy versus nonbehavioural psychotherapy experts for borderline personality disorder. *J Consult Clin Psychol* 80, 66-77
- Behzadi AH, Omrani Z, Chalian M, Asadi S, Ghadiri M (2009): Folic acid efficacy as an alternative drug added to sodium valproate in the treatment of acute phase of mania in bipolar disorder: a double-blind randomized controlled trial. *Acta Psychiatr Scand* 120, 441-445
- Beidel DC, Alfano CA, Kofler MJ, Rao PA, Scharfstein L, Wong Sarver N (2014): The impact of social skills training for social anxiety disorder: a randomized controlled trial. *J Anxiety Disord* 28, 908-918
- Bello NT, Coughlin JW, Redgrave GW, Moran TH, Guarda AS (2010): Oral sensory and cephalic hormonal responses to fat and non-fat liquids in bulimia nervosa. *Physiol Behav* 99, 611-617
- Berger T, Caspar F, Richardson R, Kneubuhler B, Sutter D, Andersson G (2011): Internet-based treatment of social phobia: a randomized controlled trial comparing unguided with two types of guided self-help. *Behav Res Ther* 49, 158-169
- Bergstrom J, Andersson G, Ljotsson B, Ruck C, Andreevitch S, Karlsson A, Carlbring P, Andersson E, Lindefors N (2010): Internet-versus group-administered cognitive behaviour therapy for panic disorder in a psychiatric setting: a randomized trial. *BMC Psychiatry* 10, 54
- Berk M, Ichim L, Brook S (1999): Olanzapine compared to lithium in mania: a double-blind randomized controlled trial. *Int Clin Psychopharmacol* 14, 339-343
- Berk M, Dean OM, Cotton SM, Jeavons S, Tanious M, Kohlmann K, Hewitt K, Moss K, Allwang C, Schapkaitz I, et al. (2014): The efficacy of adjunctive N-acetylcysteine in major depressive disorder: a double-blind, randomized, placebo-controlled trial. *J Clin Psychiatry* 75, 628-636
- Berking M, Neacsiu A, Comtois KA, Linehan MM (2009): The impact of experiential avoidance on the reduction of depression in treatment for borderline personality disorder. *Behav Res Ther* 47, 663-670
- Bersudsky Y, Applebaum J, Gaiduk Y, Sharony L, Mishory A, Podberezsky A, Agam G, Belmaker RH (2010): Valnoctamide as a valproate substitute with low teratogenic potential in mania: a double-blind, controlled, add-on clinical trial. *Bipolar Disord* 12, 376-382

- Berwaerts J, Lane R, Nuamah IF, Lim P, Remmerie B, Hough DW (2011): Paliperidone extended-release as adjunctive therapy to lithium or valproate in the treatment of acute mania: a randomized, placebo-controlled study. *J Affect Disord* 129, 252-260
- Bissada H, Tasca GA, Barber AM, Bradwejn J (2008): Olanzapine in the treatment of low body weight and obsessive thinking in women with anorexia nervosa: a randomized, double-blind, placebo-controlled trial. *Am J Psychiatry* 165, 1281-1288
- Black DW, Zanarini MC, Romine A, Shaw M, Allen J, Schulz SC (2014): Comparison of low and moderate dosages of extended-release quetiapine in borderline personality disorder: a randomized, double-blind, placebo-controlled trial. *Am J Psychiatry* 171, 1174-1182
- Black DW, Simsek-Duran F, Blum N, McCormick B, Allen J (2016): Do people with borderline personality disorder complicated by antisocial personality disorder benefit from the STEPPS treatment program? *Personal Ment Health* 10, 205-215
- Black RS, Sperling RA, Safirstein B, Motter RN, Pallay A, Nichols A, Grundman M (2010): A single ascending dose study of bapineuzumab in patients with Alzheimer disease. *Alzheimer Dis Assoc Disord* 24, 198-203
- Black S, Roman GC, Geldmacher DS, Salloway S, Hecker J, Burns A, Perdomo C, Kumar D, Pratt R, Donepezil 307 Vascular Dementia Study G (2003): Efficacy and tolerability of donepezil in vascular dementia: positive results of a 24-week, multicenter, international, randomized, placebo-controlled clinical trial. *Stroke* 34, 2323-2330
- Blanco C, Heimberg RG, Schneier FR, Fresco DM, Chen H, Turk CL, Vermes D, Erwin BA, Schmidt AB, Juster HR, et al. (2010): A placebo-controlled trial of phenelzine, cognitive behavioural group therapy, and their combination for social anxiety disorder. *Arch Gen Psychiatry* 67, 286-295
- Bleichhardt G, Timmer B, Rief W (2004): Cognitive-behavioural therapy for patients with multiple somatoform symptoms-a randomized controlled trial in tertiary care. *J Psychosom Res* 56, 449-454
- Blomhoff S, Haug TT, Hellstrom K, Holme I, Humble M, Madsbu HP, Wold JE (2001): Randomized controlled general practice trial of sertraline, exposure therapy and combined treatment in generalised social phobia. *Br J Psychiatry* 179, 23-30
- Blondell RD, Frydrych LM, Jaanimagi U, Ashrafioun L, Homish GG, Foschio EM, Bashaw HL (2011): A randomized trial of two behavioural interventions to improve outcomes following inpatient detoxification for alcohol dependence. *J Addict Dis* 30, 136-148
- Blouin AG, Blouin JH, Perez EL, Bushnik T, Zuro C, Mulder E (1988): Treatment of bulimia with fenfluramine and desipramine. *J Clin Psychopharmacol* 8, 261-269
- Blouin AG, Blouin J, Bushnik T, Braaten J, Goldstein C, Sarwar G (1993): A double-blind placebo-controlled glucose challenge in bulimia nervosa: psychological effects. *Biol Psychiatry* 33, 160-168

- Blum N, St John D, Pfohl B, Stuart S, McCormick B, Allen J, Arndt S, Black DW (2008): Systems Training for Emotional Predictability and Problem Solving (STEPPS) for outpatients with borderline personality disorder: a randomized controlled trial and 1-year follow-up. *Am J Psychiatry* 165, 468-478
- Bobo WV, Epstein RA, Lynch A, Patton TD, Bossaller NA, Shelton RC (2011): A randomized open comparison of long-acting injectable risperidone and treatment as usual for prevention of relapse, rehospitalization, and urgent care referral in community-treated patients with rapid cycling bipolar disorder. *Clin Neuropharmacol* 34, 224-233
- Bobo WV, Reilly-Harrington NA, Ketter TA, Brody BD, Kinrys G, Kemp DE, Shelton RC, McElroy SL, Sylvia LG, Kocsis JH, et al. (2014): Effect of adjunctive benzodiazepines on clinical outcomes in lithium- or quetiapine-treated outpatients with bipolar I or II disorder: results from the Bipolar CHOICE trial. *J Affect Disord* 161, 30-35
- Bogenschutz MP, George Nurnberg H (2004): Olanzapine versus placebo in the treatment of borderline personality disorder. *J Clin Psychiatry* 65, 104-109
- Bomyea J, Stein MB, Lang AJ (2015): Interference control training for PTSD: A randomized controlled trial of a novel computer-based intervention. *J Anxiety Disord* 34, 33-42
- Borgeat F, Stankovic M, Khazaal Y, Rouget BW, Baumann MC, Riquier F, O'Connor K, Jermann F, Zullino D, Bondolfi G (2009): Does the form or the amount of exposure make a difference in the cognitive-behavioural therapy treatment of social phobia? *J Nerv Ment Dis* 197, 507-513
- Borschmann R, Barrett B, Hellier JM, Byford S, Henderson C, Rose D, Slade M, Sutherby K, Sz mukler G, Thornicroft G, et al. (2013): Joint crisis plans for people with borderline personality disorder: feasibility and outcomes in a randomized controlled trial. *Br J Psychiatry* 202, 357-364
- Bos EH, van Wel EB, Appelo MT, Verbraak MJ (2010): A randomized controlled trial of a Dutch version of systems training for emotional predictability and problem solving for borderline personality disorder. *J Nerv Ment Dis* 198, 299-304
- Bose A, Korotzer A, Gommoll C, Li D (2008): Randomized placebo-controlled trial of escitalopram and venlafaxine XR in the treatment of generalized anxiety disorder. *Depress Anxiety* 25, 854-861
- Boulenger JP, Loft H, Olsen CK (2014): Efficacy and safety of vortioxetine (Lu AA21004), 15 and 20 mg/day: a randomized, double-blind, placebo-controlled, duloxetine-referenced study in the acute treatment of adult patients with major depressive disorder. *Int Clin Psychopharmacol* 29, 138-149
- Bourin MS, Severus E, Schronen JP, Gass P, Szamosi J, Eriksson H, Chandrashekar H (2014): Lithium as add-on to quetiapine XR in adult patients with acute mania: a 6-week, multicenter, double-blind, randomized, placebo-controlled study. *Int J Bipolar Disord* 2, 14

- Bowden C, Gogus A, Grunze H, Haggstrom L, Rybakowski J, Vieta E (2008): A 12-week, open, randomized trial comparing sodium valproate to lithium in patients with bipolar I disorder suffering from a manic episode. *Int Clin Psychopharmacol* 23, 254-262
- Bowden CL, Calabrese JR, McElroy SL, Gyulai L, Wassef A, Petty F, Pope HG, Jr., Chou JC, Keck PE, Jr., Rhodes LJ, et al. (2000): A randomized, placebo-controlled 12-month trial of divalproex and lithium in treatment of outpatients with bipolar I disorder. Divalproex Maintenance Study Group. *Arch Gen Psychiatry* 57, 481-489
- Bowden CL, Collins MA, McElroy SL, Calabrese JR, Swann AC, Weisler RH, Wozniak PJ (2005a): Relationship of mania symptomatology to maintenance treatment response with divalproex, lithium, or placebo. *Neuropsychopharmacology* 30, 1932-1939
- Bowden CL, Grunze H, Mullen J, Brecher M, Paulsson B, Jones M, Vagero M, Svensson K (2005b): A randomized, double-blind, placebo-controlled efficacy and safety study of quetiapine or lithium as monotherapy for mania in bipolar disorder. *J Clin Psychiatry* 66, 111-121
- Bowden CL, Mosolov S, Hranov L, Chen E, Habil H, Kongsakon R, Manfredi R, Lin HN (2010): Efficacy of valproate versus lithium in mania or mixed mania: a randomized, open 12-week trial. *Int Clin Psychopharmacol* 25, 60-67
- Bradwejn J, Ahokas A, Stein DJ, Salinas E, Emilien G, Whitaker T (2005): Venlafaxine extended-release capsules in panic disorder: flexible-dose, double-blind, placebo-controlled study. *Br J Psychiatry* 187, 352-359
- Brambilla F, Garcia CS, Fassino S, Daga GA, Favaro A, Santonastaso P, Ramaciotti C, Bondi E, Mellado C, Borriello R, et al. (2007a): Olanzapine therapy in anorexia nervosa: psychobiological effects. *Int Clin Psychopharmacol* 22, 197-204
- Brambilla F, Monteleone P, Maj M (2007b): Olanzapine-induced weight gain in anorexia nervosa: involvement of leptin and ghrelin secretion? *Psychoneuroendocrinology* 32, 402-406
- Brambilla F, Samek L, Company M, Lovo F, Cioni L, Mellado C (2009): Multivariate therapeutic approach to binge-eating disorder: combined nutritional, psychological and pharmacological treatment. *Int Clin Psychopharmacol* 24, 312-317
- Brodsky H, Mittelman M, Gibson L, Seeher K, Burns A (2009): The effects of counseling spouse caregivers of people with Alzheimer disease taking donepezil and of country of residence on rates of admission to nursing homes and mortality. *Am J Geriatr Psychiatry* 17, 734-743
- Brom D, Kleber RJ, Defares PB (1989): Brief psychotherapy for posttraumatic stress disorders. *J Consult Clin Psychol* 57, 607-612
- Broocks A, Bandelow B, Koch K, Bartmann U, Kinkelbur J, Schweiger U, Hohagen F, Hajak G (2002): Smoking modulates neuroendocrine responses to ipsapirone in patients with panic disorder. *Neuropsychopharmacology* 27, 270-278

- Brown E, Dunner DL, McElroy SL, Keck PE, Adams DH, Degenhardt E, Tohen M, Houston JP (2009a): Olanzapine/fluoxetine combination vs. lamotrigine in the 6-month treatment of bipolar I depression. *Int J Neuropsychopharmacol* 12, 773-782
- Brown MZ, Linehan MM, Comtois KA, Murray A, Chapman AL (2009b): Shame as a prospective predictor of self-inflicted injury in borderline personality disorder: a multi-modal analysis. *Behav Res Ther* 47, 815-822
- Brown RA, Abrantes AM, Minami H, Read JP, Marcus BH, Jakicic JM, Strong DR, Dubreuil ME, Gordon AA, Ramsey SE, et al. (2014): A preliminary, randomized trial of aerobic exercise for alcohol dependence. *J Subst Abuse Treat* 47, 1-9
- Brownley KA, Von Holle A, Hamer RM, La Via M, Bulik CM (2013): A double-blind, randomized pilot trial of chromium picolinate for binge eating disorder: results of the Binge Eating and Chromium (BEACh) study. *J Psychosom Res* 75, 36-42
- Brownstone L, Anderson K, Beenhakker J, Lock J, Le Grange D (2012): Recruitment and retention in an adolescent anorexia nervosa treatment trial. *Int J Eat Disord* 45, 812-815
- Brune M, Kolb M, Ebert A, Roser P, Edel MA (2015): Nonverbal communication of patients with borderline personality disorder during clinical interviews: a double-blind placebo-controlled study using intranasal oxytocin. *J Nerv Ment Dis* 203, 107-111
- Brunoni AR, Kemp AH, Dantas EM, Goulart AC, Nunes MA, Boggio PS, Mill JG, Lotufo PA, Fregni F, Bensenor IM (2013): Heart rate variability is a trait marker of major depressive disorder: evidence from the sertraline vs. electric current therapy to treat depression clinical study. *Int J Neuropsychopharmacol* 16, 1937-1949
- Bryant RA, Moulds ML, Guthrie RM, Dang ST, Nixon RD (2003): Imaginal exposure alone and imaginal exposure with cognitive restructuring in treatment of posttraumatic stress disorder. *J Consult Clin Psychol* 71, 706-712
- Bryant RA, Ekasawin S, Chakrabhand S, Suwanmitri S, Duangchun O, Chantaluckwong T (2011): A randomized controlled effectiveness trial of cognitive behaviour therapy for post-traumatic stress disorder in terrorist-affected people in Thailand. *World Psychiatry* 10, 205-209
- Bunnell BE, Beidel DC, Mesa F (2013): A randomized trial of attention training for generalized social phobia: does attention training change social behaviour? *Behav Ther* 44, 662-673
- Burton E, Stice E (2006): Evaluation of a healthy-weight treatment program for bulimia nervosa: a preliminary randomized trial. *Behav Res Ther* 44, 1727-1738
- Butchart J, Brook L, Hopkins V, Teeling J, Puntener U, Culliford D, Sharples R, Sharif S, McFarlane B, Raybould R, et al. (2015): Etanercept in Alzheimer disease: A randomized, placebo-controlled, double-blind, phase 2 trial. *Neurology* 84, 2161-2168

- Byrne CE, Kass AE, Accurso EC, Fischer S, O'Brien S, Goodyear A, Lock J, Le Grange D (2015): Overvaluation of shape and weight in adolescents with anorexia nervosa: does shape concern or weight concern matter more for treatment outcome? *J Eat Disord* 3, 49
- Calabrese JR, Shelton MD, Rapport DJ, Youngstrom EA, Jackson K, Bilali S, Ganocy SJ, Findling RL (2005): A 20-month, double-blind, maintenance trial of lithium versus divalproex in rapid-cycling bipolar disorder. *Am J Psychiatry* 162, 2152-2161
- Caldirola D, Perna G, Arancio C, Bertani A, Bellodi L (1997): The 35% CO₂ challenge test in patients with social phobia. *Psychiatry Res* 71, 41-48
- Cambridge VC, Ziauddeen H, Nathan PJ, Subramaniam N, Dodds C, Chamberlain SR, Koch A, Maltby K, Skeggs AL, Napolitano A, et al. (2013): Neural and behavioural effects of a novel mu opioid receptor antagonist in binge-eating obese people. *Biol Psychiatry* 73, 887-894
- Carlbring P, Gunnarsdottir M, Hedensjo L, Andersson G, Ekselius L, Furmark T (2007): Treatment of social phobia: randomized trial of internet-delivered cognitive-behavioural therapy with telephone support. *Br J Psychiatry* 190, 123-128
- Carlbring P, Apelstrand M, Sehlin H, Amir N, Rousseau A, Hofmann SG, Andersson G (2012): Internet-delivered attention bias modification training in individuals with social anxiety disorder--a double blind randomized controlled trial. *BMC Psychiatry* 12, 66
- Carlson JG, Chemtob CM, Rusnak K, Hedlund NL, Muraoka MY (1998): Eye movement desensitization and reprocessing (EDMR) treatment for combat-related posttraumatic stress disorder. *J Trauma Stress* 11, 3-24
- Carter JC, Fairburn CG (1998): Cognitive-behavioural self-help for binge eating disorder: a controlled effectiveness study. *J Consult Clin Psychol* 66, 616-623
- Carter GL, Willcox CH, Lewin TJ, Conrad AM, Bendit N (2010): Hunter DBT project: randomized controlled trial of dialectical behaviour therapy in women with borderline personality disorder. *Aust N Z J Psychiatry* 44, 162-173
- Carter JC, Olmsted MP, Kaplan AS, McCabe RE, Mills JS, Aime A (2003): Self-help for bulimia nervosa: a randomized controlled trial. *Am J Psychiatry* 160, 973-978
- Cassin SE, von Ranson KM, Heng K, Brar J, Wojtowicz AE (2008): Adapted motivational interviewing for women with binge eating disorder: a randomized controlled trial. *Psychol Addict Behav* 22, 417-425
- Castelnuovo G, Manzoni GM, Villa V, Cesa GL, Molinari E (2011): Brief Strategic Therapy vs Cognitive Behavioural Therapy for the Inpatient and Telephone-Based Outpatient Treatment of Binge Eating Disorder: The STRATOB Randomized Controlled Clinical Trial. *Clin Pract Epidemiol Ment Health* 7, 29-37

- Cazorla P, Zhao J, Mackle M, Szegedi A (2013): Aripiprazole effects on individual Young Mania Rating Scale items in bipolar disorder patients with acute manic or mixed episodes: a pooled analysis. *Neuropsychiatr Dis Treat* 9, 409-413
- Chan AS, Han YM, Sze SL, Wong QY, Cheung MC (2013): A randomized controlled neurophysiological study of a Chinese Chan-based mind-body intervention in patients with major depressive disorder. *Evid Based Complement Alternat Med* 2013, 812096
- Channon S, de Silva P, Hemsley D, Perkins R (1989): A controlled trial of cognitive-behavioural and behavioural treatment of anorexia nervosa. *Behav Res Ther* 27, 529-535
- Chard KM (2005): An evaluation of cognitive processing therapy for the treatment of posttraumatic stress disorder related to childhood sexual abuse. *J Consult Clin Psychol* 73, 965-971
- Chatellier G, Lacomblez L (1990): Tacrine (tetrahydroaminoacridine; THA) and lecithin in senile dementia of the Alzheimer type: a multicentre trial. *Groupe Francais d'Etude de la Tetrahydroaminoacridine. BMJ* 300, 495-499
- Chavira DA, Stein MB, Golinelli D, Sherbourne CD, Craske MG, Sullivan G, Bystritsky A, Roy-Byrne PP (2009): Predictors of clinical improvement in a randomized effectiveness trial for primary care patients with panic disorder. *J Nerv Ment Dis* 197, 715-721
- Chen H, Wang P, Yang J, Liu G (2011): [Impacts of moxibustion on vascular dementia and neuropeptide substance content in cerebral spinal fluid]. *Zhongguo Zhen Jiu* 31, 19-22
- Chen J, Lu Z, Zhang M, Zhang J, Ni X, Jiang X, Xu H, Heeramun-Aubeeluck A, Hu Q, Jin H, et al. (2013): A randomized, 4-week double-blind placebo control study on the efficacy of donepezil augmentation of lithium for treatment of acute mania. *Neuropsychiatr Dis Treat* 9, 839-845
- Chengappa KN, Turkin SR, Schlicht PJ, Murphy SL, Brar JS, Fagiolini A, Houck PR, Garbutt RG, Fredrick N (2010): A Pilot, 15-month, randomized effectiveness trial of Risperidone long-acting injection (RLAI) versus oral atypical antipsychotic agents (AAP) in persons with bipolar disorder. *Acta Neuropsychiatr* 22, 68-80
- Chick J, Anton R, Checinski K, Croop R, Drummond DC, Farmer R, Labriola D, Marshall J, Moncrieff J, Morgan MY, et al. (2000): A multicentre, randomized, double-blind, placebo-controlled trial of naltrexone in the treatment of alcohol dependence or abuse. *Alcohol Alcohol* 35, 587-593
- Chien WT, Mui J, Gray R, Cheung E (2016): Adherence therapy versus routine psychiatric care for people with schizophrenia spectrum disorders: a randomized controlled trial. *BMC Psychiatry* 16, 42

- Citrome L, Gommoll CP, Tang X, Nunez R, Mathews M (2015): Evaluating the efficacy of vilazodone in achieving remission in patients with major depressive disorder: post-hoc analyses of a phase IV trial. *Int Clin Psychopharmacol* 30, 75-81
- Citrome L, Durgam S, Lu K, Ferguson P, Laszlovszky I (2016): The effect of cariprazine on hostility associated with schizophrenia: post hoc analyses from 3 randomized controlled trials. *J Clin Psychiatry* 77, 109-115
- Clarkin JF, Levy KN, Lenzenweger MF, Kernberg OF (2007): Evaluating three treatments for borderline personality disorder: a multiwave study. *Am J Psychiatry* 164, 922-928
- Claudino AM, de Oliveira IR, Appolinario JC, Cordas TA, Duchesne M, Sichieri R, Bacaltchuk J (2007): Double-blind, randomized, placebo-controlled trial of topiramate plus cognitive-behaviour therapy in binge-eating disorder. *J Clin Psychiatry* 68, 1324-1332
- Cloitre M, Stovall-McClough KC, Nooner K, Zorbas P, Cherry S, Jackson CL, Gan W, Petkova E (2010): Treatment for PTSD related to childhood abuse: a randomized controlled trial. *Am J Psychiatry* 167, 915-924
- Cohen RA, Browndyke JN, Moser DJ, Paul RH, Gordon N, Sweet L (2003): Long-term citicoline (cytidine diphosphate choline) use in patients with vascular dementia: neuroimaging and neuropsychological outcomes. *Cerebrovasc Dis* 16, 199-204
- Conceicao EM, Crosby R, Mitchell JE, Engel SG, Wonderlich SA, Simonich HK, Peterson CB, Crow SJ, Le Grange D (2013): Picking or nibbling: frequency and associated clinical features in bulimia nervosa, anorexia nervosa, and binge eating disorder. *Int J Eat Disord* 46, 815-818
- Connor KM, Mahoney E, Jackson S, Hutzelmann J, Zhao X, Jia N, Snyder E, Snavely D, Michelson D, Roth T, et al. (2016): A Phase II Dose-Ranging Study Evaluating the Efficacy and Safety of the Orexin Receptor Antagonist Filorexant (MK-6096) in Patients with Primary Insomnia. *Int J Neuropsychopharmacol* 19(8), pyw022
- Coric V, Feldman HH, Oren DA, Shekhar A, Pultz J, Dockens RC, Wu X, Gentile KA, Huang SP, Emison E, et al. (2010): Multicenter, randomized, double-blind, active comparator and placebo-controlled trial of a corticotropin-releasing factor receptor-1 antagonist in generalized anxiety disorder. *Depress Anxiety* 27, 417-425
- Corruble E, de Bodinat C, Belaidi C, Goodwin GM, agomelatine study g (2013): Efficacy of agomelatine and escitalopram on depression, subjective sleep and emotional experiences in patients with major depressive disorder: a 24-wk randomized, controlled, double-blind trial. *Int J Neuropsychopharmacol* 16, 2219-2234
- Cortoo A, De Valck E, Arns M, Breteler MH, Cluydts R (2010): An exploratory study on the effects of tele-neurofeedback and tele-biofeedback on objective and subjective sleep in patients with primary insomnia. *Appl Psychophysiol Biofeedback* 35, 125-134

- Costa RT, Cheniaux E, Rosaes PA, Carvalho MR, Freire RC, Versiani M, Range BP, Nardi AE (2011): The effectiveness of cognitive behavioural group therapy in treating bipolar disorder: a randomized controlled study. *Rev Bras Psiquiatr* 33, 144-149
- Cottraux J, Note I, Albuissou E, Yao SN, Note B, Mollard E, Bonasse F, Jalenques I, Guerin J, Coudert AJ (2000): Cognitive behaviour therapy versus supportive therapy in social phobia: a randomized controlled trial. *Psychother Psychosom* 69, 137-146
- Cottraux J, Note I, Yao SN, Lafont S, Note B, Mollard E, Bouvard M, Sauteraud A, Bourgeois M, Dartigues JF (2001): A randomized controlled trial of cognitive therapy versus intensive behaviour therapy in obsessive compulsive disorder. *Psychother Psychosom* 70, 288-297
- Cottraux J, Note ID, Boutitie F, Milliere M, Genouihlac V, Yao SN, Note B, Mollard E, Bonasse F, Gaillard S, et al. (2009): Cognitive therapy versus Rogerian supportive therapy in borderline personality disorder. Two-year follow-up of a controlled pilot study. *Psychother Psychosom* 78, 307-316
- Craske MG, Niles AN, Burklund LJ, Wolitzky-Taylor KB, Vilaridaga JC, Arch JJ, Saxbe DE, Lieberman MD (2014): Randomized controlled trial of cognitive behavioural therapy and acceptance and commitment therapy for social phobia: outcomes and moderators. *J Consult Clin Psychol* 82, 1034-1048
- Crisp AH, Norton K, Gowers S, Halek C, Bowyer C, Yeldham D, Levett G, Bhat A (1991): A controlled study of the effect of therapies aimed at adolescent and family psychopathology in anorexia nervosa. *Br J Psychiatry* 159, 325-333
- Crits-Christoph P, Newman MG, Rickels K, Gallop R, Gibbons MB, Hamilton JL, Ring-Kurtz S, Pastva AM (2011): Combined medication and cognitive therapy for generalized anxiety disorder. *J Anxiety Disord* 25, 1087-1094
- Croft HA, Pomara N, Gommoll C, Chen D, Nunez R, Mathews M (2014): Efficacy and safety of vilazodone in major depressive disorder: a randomized, double-blind, placebo-controlled trial. *J Clin Psychiatry* 75, e1291-1298
- Crow SJ, Mitchell JE, Crosby RD, Swanson SA, Wonderlich S, Lancaster K (2009): The cost effectiveness of cognitive behavioural therapy for bulimia nervosa delivered via telemedicine versus face-to-face. *Behav Res Ther* 47, 451-453
- Crow SJ, Agras WS, Halmi KA, Fairburn CG, Mitchell JE, Nyman JA (2013): A cost effectiveness analysis of stepped care treatment for bulimia nervosa. *Int J Eat Disord* 46, 302-307
- Czobor P, Skolnick P, Beer B, Lippa A (2010): A multicenter, placebo-controlled, double-blind, randomized study of efficacy and safety of ocinaplon (DOV 273,547) in generalized anxiety disorder. *CNS Neurosci Ther* 16, 63-75
- Dahl AA, Ravindran A, Allgulander C, Kutcher SP, Austin C, Burt T (2005): Sertraline in generalized anxiety disorder: efficacy in treating the psychic and somatic anxiety factors. *Acta Psychiatr Scand* 111, 429-435

- Dahlin M, Andersson G, Magnusson K, Johansson T, Sjogren J, Hakansson A, Pettersson M, Kadowaki A, Cuijpers P, Carlbring P (2016): Internet-delivered acceptance-based behaviour therapy for generalized anxiety disorder: A randomized controlled trial. *Behav Res Ther* 77, 86-95
- Daniel DG, Zimbroff DL, Potkin SG, Reeves KR, Harrigan EP, Lakshminarayanan M (1999): Ziprasidone 80 mg/day and 160 mg/day in the acute exacerbation of schizophrenia and schizoaffective disorder: a 6-week placebo-controlled trial. Ziprasidone Study Group. *Neuropsychopharmacology* 20, 491-505
- Daniel SI, Poulsen S, Lunn S (2016): Client attachment in a randomized clinical trial of psychoanalytic and cognitive-behavioural psychotherapy for bulimia nervosa: Outcome moderation and change. *Psychotherapy (Chic)* 53, 174-184
- Dare C, Eisler I, Russell G, Treasure J, Dodge L (2001): Psychological therapies for adults with anorexia nervosa: randomized controlled trial of out-patient treatments. *Br J Psychiatry* 178, 216-221
- Dauphinais D, Knable M, Rosenthal J, Polanski M, Rosenthal N (2011): Zonisamide for bipolar disorder, mania or mixed states: a randomized, double blind, placebo-controlled adjunctive trial. *Psychopharmacol Bull* 44, 5-17
- David D, Szentagotai A, Lupu V, Cosman D (2008): Rational emotive behaviour therapy, cognitive therapy, and medication in the treatment of major depressive disorder: a randomized clinical trial, posttreatment outcomes, and six-month follow-up. *J Clin Psychol* 64, 728-746
- Davidson JR, Potts N, Richichi E, Krishnan R, Ford SM, Smith R, Wilson WH (1993): Treatment of social phobia with clonazepam and placebo. *J Clin Psychopharmacol* 13, 423-428
- Davidson JR, Bose A, Korotzer A, Zheng H (2004a): Escitalopram in the treatment of generalized anxiety disorder: double-blind, placebo controlled, flexible-dose study. *Depress Anxiety* 19, 234-240
- Davidson JR, Foa EB, Huppert JD, Keefe FJ, Franklin ME, Compton JS, Zhao N, Connor KM, Lynch TR, Gadde KM (2004b): Fluoxetine, comprehensive cognitive behavioural therapy, and placebo in generalized social phobia. *Arch Gen Psychiatry* 61, 1005-1013
- Davidson K, Tyrer P, Gumley A, Tata P, Norrie J, Palmer S, Millar H, Drummond L, Seivewright H, Murray H, et al. (2006): A randomized controlled trial of cognitive behaviour therapy for borderline personality disorder: rationale for trial, method, and description of sample. *J Pers Disord* 20, 431-449
- Davidson KM, Tyrer P, Norrie J, Palmer SJ, Tyrer H (2010): Cognitive therapy v. usual treatment for borderline personality disorder: prospective 6-year follow-up. *Br J Psychiatry* 197, 456-462

- de Beurs E, van Balkom AJ, Lange A, Koele P, van Dyck R (1995): Treatment of panic disorder with agoraphobia: comparison of fluvoxamine, placebo, and psychological panic management combined with exposure and of exposure in vivo alone. *Am J Psychiatry* 152, 683-691
- de la Cruz MS, Lai Z, Goodrich DE, Kilbourne AM (2013): Gender differences in health-related quality of life in patients with bipolar disorder. *Arch Womens Ment Health* 16, 317-323
- de la Fuente JM, Lotstra F (1994): A trial of carbamazepine in borderline personality disorder. *Eur Neuropsychopharmacol* 4, 479-486
- de Oliveira IR, Powell VB, Wenzel A, Caldas M, Seixas C, Almeida C, Bonfim T, Grangeon MC, Castro M, Galvao A, et al. (2012): Efficacy of the trial-based thought record, a new cognitive therapy strategy designed to change core beliefs, in social phobia. *J Clin Pharm Ther* 37, 328-334
- de Sousa AA, De Sousa J, Kapoor H (2008): An open randomized trial comparing disulfiram and topiramate in the treatment of alcohol dependence. *J Subst Abuse Treat* 34, 460-463
- Deacon S, Staner L, Staner C, Legters A, Loft H, Lundahl J (2007): Effect of short-term treatment with gaboxadol on sleep maintenance and initiation in patients with primary insomnia. *Sleep* 30, 281-287
- Dear BF, Staples LG, Terides MD, Karin E, Zou J, Johnston L, Gandy M, Fogliati VJ, Wootton BM, McEvoy PM, et al. (2015): Transdiagnostic versus disorder-specific and clinician-guided versus self-guided internet-delivered treatment for generalized anxiety disorder and comorbid disorders: A randomized controlled trial. *J Anxiety Disord* 36, 63-77
- Del-Monte J, Raffard S, Capdevielle D, Salesse RN, Schmidt RC, Varlet M, Bardy BG, Boulenger JP, Gely-Nargeot MC, Marin L (2014): Social priming increases nonverbal expressive behaviours in schizophrenia. *PLoS One* 9, e109139
- Delorme R, Chabane N, Callebort J, Falissard B, Mouren-Simeoni MC, Rouillon F, Launay JM, Leboyer M (2004): Platelet serotonergic predictors of clinical improvement in obsessive compulsive disorder. *J Clin Psychopharmacol* 24, 18-23
- Denys D, van der Wee N, van Megen HJ, Westenberg HG (2003): A double blind comparison of venlafaxine and paroxetine in obsessive-compulsive disorder. *J Clin Psychopharmacol* 23, 568-575
- Depp CA, Ceglowski J, Wang VC, Yaghouti F, Mausbach BT, Thompson WK, Granholm EL (2015): Augmenting psychoeducation with a mobile intervention for bipolar disorder: a randomized controlled trial. *J Affect Disord* 174, 23-30
- DeRubeis RJ, Hollon SD, Amsterdam JD, Shelton RC, Young PR, Salomon RM, O'Reardon JP, Lovett ML, Gladis MM, Brown LL, et al. (2005): Cognitive therapy vs medications in the treatment of moderate to severe depression. *Arch Gen Psychiatry* 62, 409-416

- Devilley GJ, Spence SH (1999): The relative efficacy and treatment distress of EMDR and a cognitive-behaviour trauma treatment protocol in the amelioration of posttraumatic stress disorder. *J Anxiety Disord* 13, 131-157
- Devlin MJ, Goldfein JA, Petkova E, Jiang H, Raizman PS, Wolk S, Mayer L, Carino J, Bellace D, Kamenetz C, et al. (2005): Cognitive behavioural therapy and fluoxetine as adjuncts to group behavioural therapy for binge eating disorder. *Obes Res* 13, 1077-1088
- Devlin MJ, Kissileff HR, Zimmerli EJ, Samuels F, Chen BE, Brown AJ, Geliebter A, Walsh BT (2012): Gastric emptying and symptoms of bulimia nervosa: effect of a prokinetic agent. *Physiol Behav* 106, 238-242
- Di Perri R, Coppola G, Ambrosio LA, Grasso A, Puca FM, Rizzo M (1991): A multicentre trial to evaluate the efficacy and tolerability of alpha-glycerylphosphorylcholine versus cytosine diphosphocholine in patients with vascular dementia. *J Int Med Res* 19, 330-341
- Dickinson WP, Dickinson LM, deGruy FV, Main DS, Candib LM, Rost K (2003): A randomized clinical trial of a care recommendation letter intervention for somatization in primary care. *Ann Fam Med* 1, 228-235
- Dimidjian S, Hollon SD, Dobson KS, Schmaling KB, Kohlenberg RJ, Addis ME, Gallop R, McGlinchey JB, Markley DK, Gollan JK, et al. (2006): Randomized trial of behavioural activation, cognitive therapy, and antidepressant medication in the acute treatment of adults with major depression. *J Consult Clin Psychol* 74, 658-670
- Dingemans AE, Martijn C, Jansen AT, van Furth EF (2009): The effect of suppressing negative emotions on eating behaviour in binge eating disorder. *Appetite* 52, 51-57
- DiVasta AD, Feldman HA, Rubin CT, Gallagher JS, Stokes N, Kiel DP, Snyder BD, Gordon CM (2017): The ability of low-magnitude mechanical signals to normalize bone turnover in adolescents hospitalized for anorexia nervosa. *Osteoporos Int* 28, 1255-1263
- Doering S, Horz S, Rentrop M, Fischer-Kern M, Schuster P, Benecke C, Buchheim A, Martius P, Buchheim P (2010): Transference-focused psychotherapy v. treatment by community psychotherapists for borderline personality disorder: randomized controlled trial. *Br J Psychiatry* 196, 389-395
- Downing AM, Kinon BJ, Millen BA, Zhang L, Liu L, Morozova MA, Brenner R, Rayle TJ, Nisenbaum L, Zhao F, et al. (2014): A Double-Blind, Placebo-Controlled Comparator Study of LY2140023 monohydrate in patients with schizophrenia. *BMC Psychiatry* 14, 351
- Doyle SR, Donovan DM (2009): A validation study of the alcohol dependence scale. *J Stud Alcohol Drugs* 70, 689-699

- Drake CL, Roehrs TA, Mangano RM, Roth T (2000): Dose-response effects of zaleplon as compared with triazolam (0.25 mg) and placebo in chronic primary insomnia. *Hum Psychopharmacol* 15, 595-604
- Drummond C, Gilbert H, Burns T, Copello A, Crawford M, Day E, Deluca P, Godfrey C, Parrott S, Rose A, et al. (2017): Assertive Community Treatment For People With Alcohol Dependence: A Pilot Randomized Controlled Trial. *Alcohol Alcohol* 52, 234-241
- Dugas MJ, Brillon P, Savard P, Turcotte J, Gaudet A, Ladouceur R, Leblanc R, Gervais NJ (2010): A randomized clinical trial of cognitive-behavioural therapy and applied relaxation for adults with generalized anxiety disorder. *Behav Ther* 41, 46-58
- Dunayevich E, Erickson J, Levine L, Landbloom R, Schoepp DD, Tollefson GD (2008): Efficacy and tolerability of an mGlu2/3 agonist in the treatment of generalized anxiety disorder. *Neuropsychopharmacology* 33, 1603-1610
- Dundon WD, Pettinati HM, Lynch KG, Xie H, Varillo KM, Makadon C, Oslin DW (2008): The therapeutic alliance in medical-based interventions impacts outcome in treating alcohol dependence. *Drug Alcohol Depend* 95, 230-236
- Dunne RL, Kenardy J, Sterling M (2012): A randomized controlled trial of cognitive-behavioural therapy for the treatment of PTSD in the context of chronic whiplash. *Clin J Pain* 28, 755-765
- Durand MA, King M (2003): Specialist treatment versus self-help for bulimia nervosa: a randomized controlled trial in general practice. *Br J Gen Pract* 53, 371-377
- Durgam S, Cutler AJ, Lu K, Migliore R, Ruth A, Laszlovszky I, Nemeth G, Meltzer HY (2015a): Cariprazine in acute exacerbation of schizophrenia: a fixed-dose, phase 3, randomized, double-blind, placebo- and active-controlled trial. *J Clin Psychiatry* 76, e1574-1582
- Durgam S, Starace A, Li D, Migliore R, Ruth A, Nemeth G, Laszlovszky I (2015b): The efficacy and tolerability of cariprazine in acute mania associated with bipolar I disorder: a phase II trial. *Bipolar Disord* 17, 63-75
- Durgam S, Gommoll C, Forero G, Nunez R, Tang X, Mathews M, Sheehan DV (2016): Efficacy and Safety of Vilazodone in Patients With Generalized Anxiety Disorder: A Randomized, Double-Blind, Placebo-Controlled, Flexible-Dose Trial. *J Clin Psychiatry* 77, 1687-1694
- Durham RC, Allan T, Hackett CA (1997): On predicting improvement and relapse in generalized anxiety disorder following psychotherapy. *Br J Clin Psychol* 36(Pt 1), 101-119
- Eagleson C, Hayes S, Mathews A, Perman G, Hirsch CR (2016): The power of positive thinking: Pathological worry is reduced by thought replacement in Generalized Anxiety Disorder. *Behav Res Ther* 78, 13-18

- Eberhard G, von Knorring L, Nilsson HL, Sundequist U, Bjorling G, Linder H, Svard KO, Tysk L (1988): A double-blind randomized study of clomipramine versus maprotiline in patients with idiopathic pain syndromes. *Neuropsychobiology* 19, 25-34
- Eberl C, Wiers RW, Pawelczack S, Rinck M, Becker ES, Lindenmeyer J (2013): Approach bias modification in alcohol dependence: do clinical effects replicate and for whom does it work best? *Dev Cogn Neurosci* 4, 38-51
- Ebrahimi A, Neshatdoost HT, Mousavi SG, Asadollahi GA, Nasiri H (2013): Controlled randomized clinical trial of spirituality integrated psychotherapy, cognitive-behavioural therapy and medication intervention on depressive symptoms and dysfunctional attitudes in patients with dysthymic disorder. *Adv Biomed Res* 2, 53
- Edinger JD, Olsen MK, Stechuchak KM, Means MK, Lineberger MD, Kirby A, Carney CE (2009): Cognitive behavioural therapy for patients with primary insomnia or insomnia associated predominantly with mixed psychiatric disorders: a randomized clinical trial. *Sleep* 32, 499-510
- Ehlers A, Clark DM, Hackmann A, McManus F, Fennell M (2005): Cognitive therapy for post-traumatic stress disorder: development and evaluation. *Behav Res Ther* 43, 413-431
- Ehlers A, Hackmann A, Grey N, Wild J, Liness S, Albert I, Deale A, Stott R, Clark DM (2014): A randomized controlled trial of 7-day intensive and standard weekly cognitive therapy for PTSD and emotion-focused supportive therapy. *Am J Psychiatry* 171, 294-304
- Eisler I, Simic M, Hodsoll J, Asen E, Berelowitz M, Connan F, Ellis G, Hugo P, Schmidt U, Treasure J, et al. (2016): A pragmatic randomized multi-centre trial of multifamily and single family therapy for adolescent anorexia nervosa. *BMC Psychiatry* 16, 422
- El Alaoui S, Hedman E, Ljotsson B, Bergstrom J, Andersson E, Ruck C, Andersson G, Lindfors N (2013): Predictors and moderators of internet- and group-based cognitive behaviour therapy for panic disorder. *PLoS One* 8, e79024
- El Mallakh RS, Vieta E, Rollin L, Marcus R, Carson WH, McQuade R (2010): A comparison of two fixed doses of aripiprazole with placebo in acutely relapsed, hospitalized patients with bipolar disorder I (manic or mixed) in subpopulations (CN138-007). *Eur Neuropsychopharmacol* 20, 776-783
- Eldredge KL, Stewart Agras W, Arnow B, Telch CF, Bell S, Castonguay L, Marnell M (1997): The effects of extending cognitive-behavioural therapy for binge eating disorder among initial treatment nonresponders. *Int J Eat Disord* 21, 347-352
- Ellison JM, Simonich HK, Wonderlich SA, Crosby RD, Cao L, Mitchell JE, Smith TL, Klein MH, Crow SJ, Peterson CB (2016): Meal patterning in the treatment of bulimia nervosa. *Eat Behav* 20, 39-42
- Emamzadehfard S, Kamaloo A, Paydary K, Ahmadipour A, Zeinoddini A, Ghaleiha A, Mohammadinejad P, Zeinoddini A, Akhondzadeh S (2016): Riluzole in augmentation

- of fluvoxamine for moderate to severe obsessive-compulsive disorder: Randomized, double-blind, placebo-controlled study. *Psychiatry Clin Neurosci* 70, 332-341
- Engel CC, Litz B, Magruder KM, Harper E, Gore K, Stein N, Yeager D, Liu X, Coe TR (2015): Delivery of self training and education for stressful situations (DESTRESS-PC): a randomized trial of nurse assisted online self-management for PTSD in primary care. *Gen Hosp Psychiatry* 37, 323-328
- Erman MK, Zammit G, Rubens R, Schaefer K, Wessel T, Amato D, Caron J, Walsh JK (2008): A polysomnographic placebo-controlled evaluation of the efficacy and safety of eszopiclone relative to placebo and zolpidem in the treatment of primary insomnia. *J Clin Sleep Med* 4, 229-234
- Ertelt TW, Crosby RD, Marino JM, Mitchell JE, Lancaster K, Crow SJ (2011): Therapeutic factors affecting the cognitive behavioural treatment of bulimia nervosa via telemedicine versus face-to-face delivery. *Int J Eat Disord* 44, 687-691
- Esplen MJ, Garfinkel PE, Olmsted M, Gallop RM, Kennedy S (1998): A randomized controlled trial of guided imagery in bulimia nervosa. *Psychol Med* 28, 1347-1357
- Fairburn CG, Kirk J, O'Connor M, Cooper PJ (1986): A comparison of two psychological treatments for bulimia nervosa. *Behav Res Ther* 24, 629-643
- Faje AT, Fazeli PK, Katzman D, Miller KK, Breggia A, Rosen CJ, Mendes N, Misra M, Klibanski A (2013): Inhibition of Pref-1 (preadipocyte factor 1) by oestradiol in adolescent girls with anorexia nervosa is associated with improvement in lumbar bone mineral density. *Clin Endocrinol (Oxf)* 79, 326-332
- Farrell JM, Shaw IA, Webber MA (2009): A schema-focused approach to group psychotherapy for outpatients with borderline personality disorder: a randomized controlled trial. *J Behav Ther Exp Psychiatry* 40, 317-328
- Farren CK, Scimeca M, Wu R, Malley SO (2009): A double-blind, placebo-controlled study of sertraline with naltrexone for alcohol dependence. *Drug Alcohol Depend* 99, 317-321
- Fassino S, Leombruni P, Daga G, Brustolin A, Migliaretti G, Cavallo F, Rovera G (2002): Efficacy of citalopram in anorexia nervosa: a pilot study. *Eur Neuropsychopharmacol* 12, 453-459
- Fassino S, Daga GA, Boggio S, Garzaro L, Piero A (2004): Use of reboxetine in bulimia nervosa: a pilot study. *J Psychopharmacol* 18, 423-428
- Fazeli PK, Lawson EA, Prabhakaran R, Miller KK, Donoho DA, Clemmons DR, Herzog DB, Misra M, Klibanski A (2010): Effects of recombinant human growth hormone in anorexia nervosa: a randomized, placebo-controlled study. *J Clin Endocrinol Metab* 95, 4889-4897
- Feifel D, Galangue B, Macdonald K, Cobb P, Dinca A, Becker O, Cooper J, Hadley A (2011): A Naturalistic, Single-blind Comparison of Rapid Dose Administration of

- Divalproex ER Versus Quetiapine in Patients with Acute Bipolar Mania. *Innov Clin Neurosci* 8, 29-35
- Feltner D, Wittchen HU, Kavoussi R, Brock J, Baldinetti F, Pande AC (2008): Long-term efficacy of pregabalin in generalized anxiety disorder. *Int Clin Psychopharmacol* 23, 18-28
- Feltner D, Hill C, Lenderking W, Williams V, Morlock R (2009): Development of a patient-reported assessment to identify placebo responders in a generalized anxiety disorder trial. *J Psychiatr Res* 43, 1224-1230
- Feltner DE, Crockatt JG, Dubovsky SJ, Cohn CK, Shrivastava RK, Targum SD, Liu-Dumaw M, Carter CM, Pande AC (2003): A randomized, double-blind, placebo-controlled, fixed-dose, multicenter study of pregabalin in patients with generalized anxiety disorder. *J Clin Psychopharmacol* 23, 240-249
- Fertuck EA, Keilp J, Song I, Morris MC, Wilson ST, Brodsky BS, Stanley B (2012): Higher executive control and visual memory performance predict treatment completion in borderline personality disorder. *Psychother Psychosom* 81, 38-43
- Fichter MM, Quadflieg N, Lindner S (2013): Internet-based relapse prevention for anorexia nervosa: nine-month follow-up. *J Eat Disord* 1, 23
- Filip V, Kolibas E (1999): Selegiline in the treatment of Alzheimer's disease: a long-term randomized placebo-controlled trial. Czech and Slovak Senile Dementia of Alzheimer Type Study Group. *J Psychiatry Neurosci* 24, 234-243
- Fleischer J, Wingenfeld K, Kuehl LK, Hinkelmann K, Roepke S, Otte C (2015): Does fludrocortisone influence autobiographical memory retrieval? A study in patients with major depression, patients with borderline personality disorder and healthy controls. *Stress* 18, 718-722
- Fleisher AS, Raman R, Siemers ER, Becerra L, Clark CM, Dean RA, Farlow MR, Galvin JE, Peskind ER, Quinn JF, et al. (2008): Phase 2 safety trial targeting amyloid beta production with a gamma-secretase inhibitor in Alzheimer disease. *Arch Neurol* 65, 1031-1038
- Fleisher AS, Truran D, Mai JT, Langbaum JB, Aisen PS, Cummings JL, Jack CR, Jr., Weiner MW, Thomas RG, Schneider LS, et al. (2011): Chronic divalproex sodium use and brain atrophy in Alzheimer disease. *Neurology* 77, 1263-1271
- Fluckiger C, Forrer L, Schnider B, Battig I, Bodenmann G, Zinbarg RE (2016): A Single-blinded, Randomized Clinical Trial of How to Implement an Evidence-based Treatment for Generalized Anxiety Disorder [IMPLEMENT]-Effects of Three Different Strategies of Implementation. *EBioMedicine* 3, 163-171
- Foa EB, Liebowitz MR, Kozak MJ, Davies S, Campeas R, Franklin ME, Huppert JD, Kjernisted K, Rowan V, Schmidt AB, et al. (2005): Randomized, placebo-controlled trial of exposure and ritual prevention, clomipramine, and their combination in the treatment of obsessive-compulsive disorder. *Am J Psychiatry* 162, 151-161

- Forbes D, Lloyd D, Nixon RD, Elliott P, Varker T, Perry D, Bryant RA, Creamer M (2012): A multisite randomized controlled effectiveness trial of cognitive processing therapy for military-related posttraumatic stress disorder. *J Anxiety Disord* 26, 442-452
- Frank E, Soreca I, Swartz HA, Fagiolini AM, Mallinger AG, Thase ME, Grochocinski VJ, Houck PR, Kupfer DJ (2008): The role of interpersonal and social rhythm therapy in improving occupational functioning in patients with bipolar I disorder. *Am J Psychiatry* 165, 1559-1565
- Franko DL, Thompson-Brenner H, Thompson DR, Boisseau CL, Davis A, Forbush KT, Roehrig JP, Bryson SW, Bulik CM, Crow SJ, et al. (2012): Racial/ethnic differences in adults in randomized clinical trials of binge eating disorder. *J Consult Clin Psychol* 80, 186-195
- Freeman CP, Barry F, Dunkeld-Turnbull J, Henderson A (1988): Controlled trial of psychotherapy for bulimia nervosa. *Br Med J (Clin Res Ed)* 296, 521-525
- Freeston MH, Ladouceur R, Gagnon F, Thibodeau N, Rheume J, Letarte H, Bujold A (1997): Cognitive-behavioural treatment of obsessive thoughts: a controlled study. *J Consult Clin Psychol* 65, 405-413
- Fu DJ, Turkoz I, Simonson RB, Walling DP, Schooler NR, Lindenmayer JP, Canuso CM, Alphs L (2015): Paliperidone palmitate once-monthly reduces risk of relapse of psychotic, depressive, and manic symptoms and maintains functioning in a double-blind, randomized study of schizoaffective disorder. *J Clin Psychiatry* 76, 253-262
- Furmark T, Tillfors M, Marteinsdottir I, Fischer H, Pissiota A, Langstrom B, Fredrikson M (2002): Common changes in cerebral blood flow in patients with social phobia treated with citalopram or cognitive-behavioural therapy. *Arch Gen Psychiatry* 59, 425-433
- Fux M, Benjamin J, Belmaker RH (1999): Inositol versus placebo augmentation of serotonin reuptake inhibitors in the treatment of obsessive-compulsive disorder: a double-blind cross-over study. *Int J Neuropsychopharmacol* 2, 193-195
- Gaebel W, Schreiner A, Bergmans P, de Arce R, Rouillon F, Cordes J, Eriksson L, Smeraldi E (2010): Relapse prevention in schizophrenia and schizoaffective disorder with risperidone long-acting injectable vs quetiapine: results of a long-term, open-label, randomized clinical trial. *Neuropsychopharmacology* 35, 2367-2377
- Galasko D, Bell J, Mancuso JY, Kupiec JW, Sabbagh MN, van Dyck C, Thomas RG, Aisen PS, Alzheimer's Disease Cooperative S (2014): Clinical trial of an inhibitor of RAGE-Abeta interactions in Alzheimer disease. *Neurology* 82, 1536-1542
- Galasko DR, Peskind E, Clark CM, Quinn JF, Ringman JM, Jicha GA, Cotman C, Cottrell B, Montine TJ, Thomas RG, et al. (2012): Antioxidants for Alzheimer disease: a randomized clinical trial with cerebrospinal fluid biomarker measures. *Arch Neurol* 69, 836-841

- Gallagher MW, Payne LA, White KS, Shear KM, Woods SW, Gorman JM, Barlow DH (2013): Mechanisms of change in cognitive behavioural therapy for panic disorder: the unique effects of self-efficacy and anxiety sensitivity. *Behav Res Ther* 51, 767-777
- Galovski TE, Blain LM, Mott JM, Elwood L, Houle T (2012): Manualized therapy for PTSD: flexing the structure of cognitive processing therapy. *J Consult Clin Psychol* 80, 968-981
- Garbutt JC, Kampov-Polevoy AB, Gallop R, Kalka-Juhl L, Flannery BA (2010): Efficacy and safety of baclofen for alcohol dependence: a randomized, double-blind, placebo-controlled trial. *Alcohol Clin Exp Res* 34, 1849-1857
- Garland EL, Gaylord SA, Boettiger CA, Howard MO (2010): Mindfulness training modifies cognitive, affective, and physiological mechanisms implicated in alcohol dependence: results of a randomized controlled pilot trial. *J Psychoactive Drugs* 42, 177-192
- Garlow SJ, Dunlop BW, Ninan PT, Nemeroff CB (2012): The combination of triiodothyronine (T3) and sertraline is not superior to sertraline monotherapy in the treatment of major depressive disorder. *J Psychiatr Res* 46, 1406-1413
- Garner DM, Rockert W, Davis R, Garner MV, Olmsted MP, Eagle M (1993): Comparison of cognitive-behavioural and supportive-expressive therapy for bulimia nervosa. *Am J Psychiatry* 150, 37-46
- Gaudiano BA, Uebelacker LA, Miller IW (2007): Course of illness in psychotic mania: is mood incongruence important? *J Nerv Ment Dis* 195, 226-232
- Gehrman PR, Connor DJ, Martin JL, Shochat T, Corey-Bloom J, Ancoli-Israel S (2009): Melatonin fails to improve sleep or agitation in double-blind randomized placebo-controlled trial of institutionalized patients with Alzheimer disease. *Am J Geriatr Psychiatry* 17, 166-169
- Gelenberg AJ, Lydiard RB, Rudolph RL, Aguiar L, Haskins JT, Salinas E (2000): Efficacy of venlafaxine extended-release capsules in nondepressed outpatients with generalized anxiety disorder: A 6-month randomized controlled trial. *JAMA* 283, 3082-3088
- Geliebter A, Gluck ME, Hashim SA (2005): Plasma ghrelin concentrations are lower in binge-eating disorder. *J Nutr* 135, 1326-1330
- Gersons BP, Carlier IV, Lamberts RD, van der Kolk BA (2000): Randomized clinical trial of brief eclectic psychotherapy for police officers with posttraumatic stress disorder. *J Trauma Stress* 13, 333-347
- Ghanizadeh A, OmraniSigaroodi M, Javadpour A, Dabbaghmanesh MH, Shafiee S (2014): Lovastatin as an adjuvant to lithium for treating manic phase of bipolar disorder: a 4-week, randomized, double-blind, placebo-controlled clinical trial. *Depress Res Treat* 2014, 730505
- Giesen-Bloo J, van Dyck R, Spinhoven P, van Tilburg W, Dirksen C, van Asselt T, Kremers I, Nadort M, Arntz A (2006): Outpatient psychotherapy for borderline personality

- disorder: randomized trial of schema-focused therapy vs transference-focused psychotherapy. *Arch Gen Psychiatry* 63, 649-658
- Godart N, Berthoz S, Curt F, Perdereau F, Rein Z, Wallier J, Horreard AS, Kaganski I, Lucet R, Atger F, et al. (2012): A randomized controlled trial of adjunctive family therapy and treatment as usual following inpatient treatment for anorexia nervosa adolescents. *PLoS One* 7, e28249
- Golay A, Laurent-Jaccard A, Habicht F, Gachoud JP, Chabloz M, Kammer A, Schutz Y (2005): Effect of orlistat in obese patients with binge eating disorder. *Obes Res* 13, 1701-1708
- Golier JA, Caramanica K, Demaria R, Yehuda R (2012): A Pilot Study of Mifepristone in Combat-Related PTSD. *Depress Res Treat* 2012, 393251
- Gomar JJ, Valls E, Radua J, Mareca C, Tristany J, del Olmo F, Rebolleda-Gil C, Janez-Alvarez M, de Alvaro FJ, Ovejero MR, et al. (2015): A Multisite, Randomized Controlled Clinical Trial of Computerized Cognitive Remediation Therapy for Schizophrenia. *Schizophr Bull* 41, 1387-1396
- Gomes PV, Brasil-Neto JP, Allam N, Rodrigues de Souza E (2012): A randomized, double-blind trial of repetitive transcranial magnetic stimulation in obsessive-compulsive disorder with three-month follow-up. *J Neuropsychiatry Clin Neurosci* 24, 437-443
- Gommoll C, Durgam S, Mathews M, Forero G, Nunez R, Tang X, Thase ME (2015a): A double-blind, randomized, placebo-controlled, fixed-dose phase III study of vilazodone in patients with generalized anxiety disorder. *Depress Anxiety* 32, 451-459
- Gommoll C, Forero G, Mathews M, Nunez R, Tang X, Durgam S, Sambunaris A (2015b): Vilazodone in patients with generalized anxiety disorder: a double-blind, randomized, placebo-controlled, flexible-dose study. *Int Clin Psychopharmacol* 30, 297-306
- Gommoll CP, Greenberg WM, Chen C (2014): A randomized, double-blind, placebo-controlled study of flexible doses of levomilnacipran ER (40-120 mg/day) in patients with major depressive disorder. *J Drug Assess* 3, 10-19
- Goodman WK, Bose A, Wang Q (2005): Treatment of generalized anxiety disorder with escitalopram: pooled results from double-blind, placebo-controlled trials. *J Affect Disord* 87, 161-167
- Gowers SG, Clark A, Roberts C, Griffiths A, Edwards V, Bryan C, Smethurst N, Byford S, Barrett B (2007): Clinical effectiveness of treatments for anorexia nervosa in adolescents: randomized controlled trial. *Br J Psychiatry* 191, 427-435
- Gratz KL, Dixon-Gordon KL, Tull MT (2014a): Predictors of treatment response to an adjunctive emotion regulation group therapy for deliberate self-harm among women with borderline personality disorder. *Personal Disord* 5, 97-107

- Gratz KL, Tull MT, Levy R (2014b): Randomized controlled trial and uncontrolled 9-month follow-up of an adjunctive emotion regulation group therapy for deliberate self-harm among women with borderline personality disorder. *Psychol Med* 44, 2099-2112
- Greist J, Chouinard G, DuBoff E, Halaris A, Kim SW, Koran L, Liebowitz M, Lydiard RB, Rasmussen S, White K, et al. (1995a): Double-blind parallel comparison of three dosages of sertraline and placebo in outpatients with obsessive-compulsive disorder. *Arch Gen Psychiatry* 52, 289-295
- Greist JH, Jefferson JW, Kobak KA, Chouinard G, DuBoff E, Halaris A, Kim SW, Koran L, Liebowitz MR, Lydiard B, et al. (1995b): A 1 year double-blind placebo-controlled fixed dose study of sertraline in the treatment of obsessive-compulsive disorder. *Int Clin Psychopharmacol* 10, 57-65
- Grilo CM, Masheb RM, Wilson GT, Gueorguieva R, White MA (2011): Cognitive-behavioural therapy, behavioural weight loss, and sequential treatment for obese patients with binge-eating disorder: a randomized controlled trial. *J Consult Clin Psychol* 79, 675-685
- Grilo CM, Masheb RM, Crosby RD (2012): Predictors and moderators of response to cognitive behavioural therapy and medication for the treatment of binge eating disorder. *J Consult Clin Psychol* 80, 897-906
- Grilo CM, White MA, Gueorguieva R, Barnes RD, Masheb RM (2013): Self-help for binge eating disorder in primary care: a randomized controlled trial with ethnically and racially diverse obese patients. *Behav Res Ther* 51, 855-861
- Grilo CM, Masheb RM, White MA, Gueorguieva R, Barnes RD, Walsh BT, McKenzie KC, Genao I, Garcia R (2014): Treatment of binge eating disorder in racially and ethnically diverse obese patients in primary care: randomized placebo-controlled clinical trial of self-help and medication. *Behav Res Ther* 58, 1-9
- Grob S, Pizzagalli DA, Dutra SJ, Stern J, Morgeli H, Milos G, Schnyder U, Hasler G (2012): Dopamine-related deficit in reward learning after catecholamine depletion in unmedicated, remitted subjects with bulimia nervosa. *Neuropsychopharmacology* 37, 1945-1952
- Gross CR, Kreitzer MJ, Reilly-Spong M, Wall M, Winbush NY, Patterson R, Mahowald M, Cramer-Bornemann M (2011): Mindfulness-based stress reduction versus pharmacotherapy for chronic primary insomnia: a randomized controlled clinical trial. *Explore (NY)* 7, 76-87
- Gual A, Leher P (2001): Acamprosate during and after acute alcohol withdrawal: a double-blind placebo-controlled study in Spain. *Alcohol Alcohol* 36, 413-418
- Guekht AB, Moessler H, Novak PH, Gusev EI, Cerebrolysin I (2011): Cerebrolysin in vascular dementia: improvement of clinical outcome in a randomized, double-blind, placebo-controlled multicenter trial. *J Stroke Cerebrovasc Dis* 20, 310-318

- Gunstad J, Brickman AM, Paul RH, Browndyke J, Moser DJ, Ott BR, Gordon N, Haque O, Cohen RA (2005): Progressive morphometric and cognitive changes in vascular dementia. *Arch Clin Neuropsychol* 20, 229-241
- Guo J, Wang LP, Liu CZ, Zhang J, Wang GL, Yi JH, Cheng JL (2013a): Efficacy of acupuncture for primary insomnia: a randomized controlled clinical trial. *Evid Based Complement Alternat Med* 2013, 163850
- Guo LH, Alexopoulos P, Wagenpfeil S, Kurz A, Perneczky R, Alzheimer's Disease Neuroimaging I (2013b): Plasma proteomics for the identification of Alzheimer disease. *Alzheimer Dis Assoc Disord* 27, 337-342
- Hackmann A, Clark DM, McManus F (2000): Recurrent images and early memories in social phobia. *Behav Res Ther* 38, 601-610
- Hagman J, Gralla J, Sigel E, Ellert S, Dodge M, Gardner R, O'Lonegan T, Frank G, Wamboldt MZ (2011): A double-blind, placebo-controlled study of risperidone for the treatment of adolescents and young adults with anorexia nervosa: a pilot study. *J Am Acad Child Adolesc Psychiatry* 50, 915-924
- Hajak G, Rodenbeck A, Adler L, Huether G, Bandelow B, Herrendorf G, Staedt J, Ruther E (1996): Nocturnal melatonin secretion and sleep after doxepin administration in chronic primary insomnia. *Pharmacopsychiatry* 29, 187-192
- Hammersley P, Dias A, Todd G, Bowen-Jones K, Reilly B, Bentall RP (2003): Childhood trauma and hallucinations in bipolar affective disorder: preliminary investigation. *Br J Psychiatry* 182, 543-547
- Han C, Pae CU, Lee BH, Ko YH, Masand PS, Patkar AA, Joe SH, Jung IK (2008a): Venlafaxine versus mirtazapine in the treatment of undifferentiated somatoform disorder: a 12-week prospective, open-label, randomized, parallel-group trial. *Clin Drug Investig* 28, 251-261
- Han C, Pae CU, Lee BH, Ko YH, Masand PS, Patkar AA, Jung IK (2008b): Fluoxetine versus sertraline in the treatment of patients with undifferentiated somatoform disorder: a randomized, open-label, 12-week, parallel-group trial. *Prog Neuropsychopharmacol Biol Psychiatry* 32, 437-444
- Hanel G, Henningsen P, Herzog W, Sauer N, Schaefer R, Szecsenyi J, Lowe B (2009): Depression, anxiety, and somatoform disorders: vague or distinct categories in primary care? Results from a large cross-sectional study. *J Psychosom Res* 67, 189-197
- Hartford J, Kornstein S, Liebowitz M, Pigott T, Russell J, Detke M, Walker D, Ball S, Dunayevich E, Dinkel J, et al. (2007): Duloxetine as an SNRI treatment for generalized anxiety disorder: results from a placebo and active-controlled trial. *Int Clin Psychopharmacol* 22, 167-174
- Hasan AA, Callaghan P, Lymn JS (2015): Evaluation of the impact of a psycho-educational intervention for people diagnosed with schizophrenia and their primary caregivers in Jordan: a randomized controlled trial. *BMC Psychiatry* 15, 72

- Hawken ER, Dilkov D, Kaludiev E, Simek S, Zhang F, Milev R (2016): Transcranial Magnetic Stimulation of the Supplementary Motor Area in the Treatment of Obsessive-Compulsive Disorder: A Multi-Site Study. *Int J Mol Sci* 17, 420
- Hayes-Skelton SA, Roemer L, Orsillo SM (2013): A randomized clinical trial comparing an acceptance-based behaviour therapy to applied relaxation for generalized anxiety disorder. *J Consult Clin Psychol* 81, 761-773
- Hedman E, Andersson G, Ljotsson B, Andersson E, Ruck C, Mortberg E, Lindefors N (2011): Internet-based cognitive behaviour therapy vs. cognitive behavioural group therapy for social anxiety disorder: a randomized controlled non-inferiority trial. *PLoS One* 6, e18001
- Hedman E, Strom P, Stunkel A, Mortberg E (2013): Shame and guilt in social anxiety disorder: effects of cognitive behaviour therapy and association with social anxiety and depressive symptoms. *PLoS One* 8, e61713
- Heffner JL, Tran GQ, Johnson CS, Barrett SW, Blom TJ, Thompson RD, Anthenelli RM (2010): Combining motivational interviewing with compliance enhancement therapy (MI-CET): development and preliminary evaluation of a new, manual-guided psychosocial adjunct to alcohol-dependence pharmacotherapy. *J Stud Alcohol Drugs* 71, 61-70
- Hegerl U, Hautzinger M, Mergl R, Kohnen R, Schutze M, Scheunemann W, Allgaier AK, Coyne J, Henkel V (2010): Effects of pharmacotherapy and psychotherapy in depressed primary-care patients: a randomized, controlled trial including a patients' choice arm. *Int J Neuropsychopharmacol* 13, 31-44
- Heimberg RG, Liebowitz MR, Hope DA, Schneier FR, Holt CS, Welkowitz LA, Juster HR, Campeas R, Bruch MA, Cloitre M, et al. (1998): Cognitive behavioural group therapy vs phenelzine therapy for social phobia: 12-week outcome. *Arch Gen Psychiatry* 55, 1133-1141
- Hellerstein DJ, Little SA, Samstag LW, Batchelder S, Muran JC, Fedak M, Kreditor D, Rosenthal RN, Winston A (2001): Adding group psychotherapy to medication treatment in dysthymia: a randomized prospective pilot study. *J Psychother Pract Res* 10, 93-103
- Helmreich I, Wagner S, Mergl R, Allgaier AK, Hautzinger M, Henkel V, Hegerl U, Tadic A (2012): Sensitivity to changes during antidepressant treatment: a comparison of unidimensional subscales of the Inventory of Depressive Symptomatology (IDS-C) and the Hamilton Depression Rating Scale (HAMD) in patients with mild major, minor or subsyndromal depression. *Eur Arch Psychiatry Clin Neurosci* 262, 291-304
- Henigsberg N, Mahableshwarkar AR, Jacobsen P, Chen Y, Thase ME (2012): A randomized, double-blind, placebo-controlled 8-week trial of the efficacy and tolerability of multiple doses of Lu AA21004 in adults with major depressive disorder. *J Clin Psychiatry* 73, 953-959

- Henriksen TE, Skrede S, Fasmer OB, Schoeyen H, Leskauskaite I, Bjorke-Bertheussen J, Assmus J, Hamre B, Gronli J, Lund A (2016): Blue-blocking glasses as additive treatment for mania: a randomized placebo-controlled trial. *Bipolar Disord* 18, 221-232
- Hermens ML, van Hout HP, Terluin B, Ader HJ, Penninx BW, van Marwijk HW, Bosmans JE, van Dyck R, de Haan M (2007): Clinical effectiveness of usual care with or without antidepressant medication for primary care patients with minor or mild-major depression: a randomized equivalence trial. *BMC Med* 5, 36
- Herpertz-Dahlmann B, Schwarte R, Krei M, Egberts K, Warnke A, Wewetzer C, Pfeiffer E, Fleischhaker C, Scherag A, Holtkamp K, et al. (2014): Day-patient treatment after short inpatient care versus continued inpatient treatment in adolescents with anorexia nervosa (ANDI): a multicentre, randomized, open-label, non-inferiority trial. *Lancet* 383, 1222-1229
- Higuchi S, Japanese Acamprosate Study G (2015): Efficacy of acamprosate for the treatment of alcohol dependence long after recovery from withdrawal syndrome: a randomized, double-blind, placebo-controlled study conducted in Japan (Sunrise Study). *J Clin Psychiatry* 76, 181-188
- Hilbert A, Bishop ME, Stein RI, Tanofsky-Kraff M, Swenson AK, Welch RR, Wilfley DE (2012): Long-term efficacy of psychological treatments for binge eating disorder. *Br J Psychiatry* 200, 232-237
- Hiss H, Foa EB, Kozak MJ (1994): Relapse prevention program for treatment of obsessive-compulsive disorder. *J Consult Clin Psychol* 62, 801-808
- Hoexter MQ, de Souza Duran FL, D'Alcanta CC, Dougherty DD, Shavitt RG, Lopes AC, Diniz JB, Deckersbach T, Batistuzzo MC, Bressan RA, et al. (2012): Gray matter volumes in obsessive-compulsive disorder before and after fluoxetine or cognitive-behaviour therapy: a randomized clinical trial. *Neuropsychopharmacology* 37, 734-745
- Hofmann SG (2004): Cognitive mediation of treatment change in social phobia. *J Consult Clin Psychol* 72, 393-399
- Hofmann SG, Meuret AE, Smits JA, Simon NM, Pollack MH, Eisenmenger K, Shiekh M, Otto MW (2006a): Augmentation of exposure therapy with D-cycloserine for social anxiety disorder. *Arch Gen Psychiatry* 63, 298-304
- Hofmann SG, Schulz SM, Meuret AE, Moscovitch DA, Suvak M (2006b): Sudden gains during therapy of social phobia. *J Consult Clin Psychol* 74, 687-697
- Hofmann SG, Smits JA, Rosenfield D, Simon N, Otto MW, Meuret AE, Marques L, Fang A, Tart C, Pollack MH (2013): D-Cycloserine as an augmentation strategy with cognitive-behavioural therapy for social anxiety disorder. *Am J Psychiatry* 170, 751-758

- Hoge EA, Bui E, Marques L, Metcalf CA, Morris LK, Robinaugh DJ, Worthington JJ, Pollack MH, Simon NM (2013): Randomized controlled trial of mindfulness meditation for generalized anxiety disorder: effects on anxiety and stress reactivity. *J Clin Psychiatry* 74, 786-792
- Hollander E, Allen A, Lopez RP, Bienstock CA, Grossman R, Siever LJ, Merkatz L, Stein DJ (2001): A preliminary double-blind, placebo-controlled trial of divalproex sodium in borderline personality disorder. *J Clin Psychiatry* 62, 199-203
- Hollifield M, Sinclair-Lian N, Warner TD, Hammerschlag R (2007): Acupuncture for posttraumatic stress disorder: a randomized controlled pilot trial. *J Nerv Ment Dis* 195, 504-513
- Holzel BK, Hoge EA, Greve DN, Gard T, Creswell JD, Brown KW, Barrett LF, Schwartz C, Vaitl D, Lazar SW (2013): Neural mechanisms of symptom improvements in generalized anxiety disorder following mindfulness training. *Neuroimage Clin* 2, 448-458
- Hong LE, Thaker GK, McMahon RP, Summerfelt A, Rachbeisel J, Fuller RL, Wonodi I, Buchanan RW, Myers C, Heishman SJ, et al. (2011): Effects of moderate-dose treatment with varenicline on neurobiological and cognitive biomarkers in smokers and nonsmokers with schizophrenia or schizoaffective disorder. *Arch Gen Psychiatry* 68, 1195-1206
- Hosenfeld B, Bos EH, Wardenaar KJ, Conradi HJ, van der Maas HL, Visser I, de Jonge P (2015): Major depressive disorder as a nonlinear dynamic system: bimodality in the frequency distribution of depressive symptoms over time. *BMC Psychiatry* 15, 222
- Hovland A, Nordhus IH, Sjobo T, Gjestad BA, Birknes B, Martinsen EW, Torsheim T, Pallesen S (2013): Comparing physical exercise in groups to group cognitive behaviour therapy for the treatment of panic disorder in a randomized controlled trial. *Behav Cogn Psychother* 41, 408-432
- Hoyer J, Beesdo K, Gloster AT, Runge J, Hofler M, Becker ES (2009): Worry exposure versus applied relaxation in the treatment of generalized anxiety disorder. *Psychother Psychosom* 78, 106-115
- Hsu LK, Clement L, Santhouse R, Ju ES (1991): Treatment of bulimia nervosa with lithium carbonate. A controlled study. *J Nerv Ment Dis* 179, 351-355
- Huang YS, Hsu SC, Liu SI, Chen CK (2011): A double-blind, randomized, comparative study to evaluate the efficacy and safety of zaleplon versus zolpidem in shortening sleep latency in primary insomnia. *Chang Gung Med J* 34, 50-56
- Hudson JI, McElroy SL, Raymond NC, Crow S, Keck PE, Jr., Carter WP, Mitchell JE, Strakowski SM, Pope HG, Jr., Coleman BS, et al. (1998): Fluvoxamine in the treatment of binge-eating disorder: a multicenter placebo-controlled, double-blind trial. *Am J Psychiatry* 155, 1756-1762

- Hudson JI, McElroy SL, Ferreira-Cornwell MC, Radewonuk J, Gasior M (2017): Efficacy of Lisdexamfetamine in Adults With Moderate to Severe Binge-Eating Disorder: A Randomized Clinical Trial. *JAMA Psychiatry* 74(9), 903-910
- Humble M, Bejerot S, Bergqvist PB, Bengtsson F (2001): Reactivity of serotonin in whole blood: relationship with drug response in obsessive-compulsive disorder. *Biol Psychiatry* 49, 360-368
- Huppert JD, Simpson HB, Nissenson KJ, Liebowitz MR, Foa EB (2009): Quality of life and functional impairment in obsessive-compulsive disorder: a comparison of patients with and without comorbidity, patients in remission, and healthy controls. *Depress Anxiety* 26, 39-45
- Husain MI, Chaudhry IB, Rahman RR, Hamirani MM, Mehmood N, Haddad PM, Hodsoll J, Young AH, Naeem F, Husain N (2017): Pilot study of a culturally adapted psychoeducation (CaPE) intervention for bipolar disorder in Pakistan. *Int J Bipolar Disord* 5, 3
- Hussey EP, Smolinsky JG, Piryatinsky I, Budson AE, Ally BA (2012): Using mental imagery to improve memory in patients with Alzheimer disease: trouble generating or remembering the mind's eye? *Alzheimer Dis Assoc Disord* 26, 124-134
- Ichim L, Berk M, Brook S (2000): Lamotrigine compared with lithium in mania: a double-blind randomized controlled trial. *Ann Clin Psychiatry* 12, 5-10
- Ihl R, Tribanek M, Bachinskaya N, Group GS (2012): Efficacy and tolerability of a once daily formulation of Ginkgo biloba extract EGb 761(R) in Alzheimer's disease and vascular dementia: results from a randomized controlled trial. *Pharmacopsychiatry* 45, 41-46
- IsHak WW, Mirocha J, James D, Tobia G, Vilhauer J, Fakhry H, Pi S, Hanson E, Nashawati R, Peselow ED, et al. (2015): Quality of life in major depressive disorder before/after multiple steps of treatment and one-year follow-up. *Acta Psychiatr Scand* 131, 51-60
- Ito LM, de Araujo LA, Tess VL, de Barros-Neto TP, Asbahr FR, Marks I (2001): Self-exposure therapy for panic disorder with agoraphobia: randomized controlled study of external v. interoceptive self-exposure. *Br J Psychiatry* 178, 331-336
- Jacobs RJ, Davidson JR, Gupta S, Meyerhoff AS (1997): The effects of clonazepam on quality of life and work productivity in panic disorder. *Am J Manag Care* 3, 1187-1196
- Jacobs-Pilipski MJ, Wilfley DE, Crow SJ, Walsh BT, Lilenfeld LR, West DS, Berkowitz RI, Hudson JI, Fairburn CG (2007): Placebo response in binge eating disorder. *Int J Eat Disord* 40, 204-211
- Jacobsen PL, Mahableshwarkar AR, Serenko M, Chan S, Trivedi MH (2015): A randomized, double-blind, placebo-controlled study of the efficacy and safety of vortioxetine 10 mg and 20 mg in adults with major depressive disorder. *J Clin Psychiatry* 76, 575-582

- Jahangard L, Soroush S, Haghighi M, Ghaleiha A, Bajoghli H, Holsboer-Trachsler E, Brand S (2014): In a double-blind, randomized and placebo-controlled trial, adjuvant allopurinol improved symptoms of mania in in-patients suffering from bipolar disorder. *Eur Neuropsychopharmacol* 24, 1210-1221
- Jain R, Mahableshwarkar AR, Jacobsen PL, Chen Y, Thase ME (2013): A randomized, double-blind, placebo-controlled 6-wk trial of the efficacy and tolerability of 5 mg vortioxetine in adults with major depressive disorder. *Int J Neuropsychopharmacol* 16, 313-321
- Janicak PG, Bresnahan DB, Sharma R, Davis JM, Comaty JE, Malinick C (1988): A comparison of thiothixene with chlorpromazine in the treatment of mania. *J Clin Psychopharmacol* 8, 33-37
- Janicak PG, Sharma RP, Easton M, Comaty JE, Davis JM (1989): A double-blind, placebo-controlled trial of clonidine in the treatment of acute mania. *Psychopharmacol Bull* 25, 243-245
- Janicak PG, Sharma RP, Pandey G, Davis JM (1998): Verapamil for the treatment of acute mania: a double-blind, placebo-controlled trial. *Am J Psychiatry* 155, 972-973
- Jaurrieta N, Jimenez-Murcia S, Alonso P, Granero R, Segalas C, Labad J, Menchon JM (2008): Individual versus group cognitive behavioural treatment for obsessive-compulsive disorder: follow up. *Psychiatry Clin Neurosci* 62, 697-704
- Jazaieri H, Goldin PR, Werner K, Ziv M, Gross JJ (2012): A randomized trial of MBSR versus aerobic exercise for social anxiety disorder. *J Clin Psychol* 68, 715-731
- Jenike MA, Baer L, Minichiello WE, Rauch SL, Buttolph ML (1997): Placebo-controlled trial of fluoxetine and phenelzine for obsessive-compulsive disorder. *Am J Psychiatry* 154, 1261-1264
- Jeong HG, Lee MS, Ko YH, Han C, Jung IK (2012): Combination treatment with aripiprazole and valproic acid for acute mania: an 8-week, single-blind, randomized controlled trial. *Clin Neuropharmacol* 35, 97-102
- Ji E, Weickert CS, Lenroot R, Kindler J, Skilleter AJ, Vercammen A, White C, Gur RE, Weickert TW (2016): Adjunctive selective estrogen receptor modulator increases neural activity in the hippocampus and inferior frontal gyrus during emotional face recognition in schizophrenia. *Transl Psychiatry* 6, e795
- Jiang RF, Tong HQ, Delucchi KL, Neylan TC, Shi Q, Meffert SM (2014): Interpersonal psychotherapy versus treatment as usual for PTSD and depression among Sichuan earthquake survivors: a randomized clinical trial. *Confl Health* 8, 14
- Johnson BA, Rosenthal N, Capece JA, Wiegand F, Mao L, Beyers K, McKay A, Ait-Daoud N, Anton RF, Ciraulo DA, et al. (2007): Topiramate for treating alcohol dependence: a randomized controlled trial. *JAMA* 298, 1641-1651

- Jones SH, Smith G, Mulligan LD, Lobban F, Law H, Dunn G, Welford M, Kelly J, Mulligan J, Morrison AP (2015): Recovery-focused cognitive-behavioural therapy for recent-onset bipolar disorder: randomized controlled pilot trial. *Br J Psychiatry* 206, 58-66
- Jonsson K, Kjellgren A (2016): Promising effects of treatment with flotation-REST (restricted environmental stimulation technique) as an intervention for generalized anxiety disorder (GAD): a randomized controlled pilot trial. *BMC Complement Altern Med* 16, 108
- Judd LL, Rapaport MH, Yonkers KA, Rush AJ, Frank E, Thase ME, Kupfer DJ, Plewes JM, Schettler PJ, Tollefson G (2004): Randomized, placebo-controlled trial of fluoxetine for acute treatment of minor depressive disorder. *Am J Psychiatry* 161, 1864-1871
- Jun JJ, Zoellner LA, Feeny NC (2013): Sudden gains in prolonged exposure and sertraline for chronic PTSD. *Depress Anxiety* 30, 607-613
- Jung JG, Kim JS, Kim GJ, Oh MK, Kim SS (2011): Brief insight-enhancement intervention among patients with alcohol dependence. *J Korean Med Sci* 26, 11-16
- Kampman KM, Pettinati HM, Lynch KG, Xie H, Dackis C, Oslin DW, Sparkman T, Sharkoski T, O'Brien CP (2009): Initiating acamprosate within-detoxification versus post-detoxification in the treatment of alcohol dependence. *Addict Behav* 34, 581-586
- Kanba S, Kawasaki H, Ishigooka J, Sakamoto K, Kinoshita T, Kuroki T (2014): A placebo-controlled, double-blind study of the efficacy and safety of aripiprazole for the treatment of acute manic or mixed episodes in Asian patients with bipolar I disorder (the AMAZE study). *World J Biol Psychiatry* 15, 113-121
- Kane JM, Peters-Strickland T, Baker RA, Hertel P, Eramo A, Jin N, Perry PP, Gara M, McQuade RD, Carson WH, et al. (2014): Aripiprazole once-monthly in the acute treatment of schizophrenia: findings from a 12-week, randomized, double-blind, placebo-controlled study. *J Clin Psychiatry* 75, 1254-1260
- Kaplan AS, Walsh BT, Olmsted M, Attia E, Carter JC, Devlin MJ, Pike KM, Woodside B, Rockert W, Roberto CA, et al. (2009): The slippery slope: prediction of successful weight maintenance in anorexia nervosa. *Psychol Med* 39, 1037-1045
- Kasper S, Stein DJ, Loft H, Nil R (2005): Escitalopram in the treatment of social anxiety disorder: randomized, placebo-controlled, flexible-dosage study. *Br J Psychiatry* 186, 222-226
- Kasper S, Herman B, Nivoli G, Van Ameringen M, Petralia A, Mandel FS, Baldinetti F, Bandelow B (2009): Efficacy of pregabalin and venlafaxine-XR in generalized anxiety disorder: results of a double-blind, placebo-controlled 8-week trial. *Int Clin Psychopharmacol* 24, 87-96
- Kato M, Serretti A, Nonen S, Takekita Y, Wakeno M, Azuma J, Kinoshita T (2015): Genetic variants in combination with early partial improvement as a clinical utility predictor of treatment outcome in major depressive disorder: the result of two pooled RCTs. *Transl Psychiatry* 5, e513

- Katzelnick DJ, Saidi J, Vanelli MR, Jefferson JW, Harper JM, McCrary KE (2006): Time to response in panic disorder in a naturalistic setting: combination therapy with alprazolam orally disintegrating tablets and serotonin reuptake inhibitors compared to serotonin reuptake inhibitors alone. *Psychiatry (Edmont)* 3, 39-49
- Katzman MA, Bara-Carril N, Rabe-Hesketh S, Schmidt U, Troop N, Treasure J (2010): A randomized controlled two-stage trial in the treatment of bulimia nervosa, comparing CBT versus motivational enhancement in Phase 1 followed by group versus individual CBT in Phase 2. *Psychosom Med* 72, 656-663
- Katzman MA, Brawman-Mintzer O, Reyes EB, Olausson B, Liu S, Eriksson H (2011): Extended release quetiapine fumarate (quetiapine XR) monotherapy as maintenance treatment for generalized anxiety disorder: a long-term, randomized, placebo-controlled trial. *Int Clin Psychopharmacol* 26, 11-24
- Kaye WH, Nagata T, Weltzin TE, Hsu LK, Sokol MS, McConaha C, Plotnicov KH, Weise J, Deep D (2001): Double-blind placebo-controlled administration of fluoxetine in restricting- and restricting-purging-type anorexia nervosa. *Biol Psychiatry* 49, 644-652
- Kearney DJ, McDermott K, Malte C, Martinez M, Simpson TL (2013): Effects of participation in a mindfulness program for veterans with posttraumatic stress disorder: a randomized controlled pilot study. *J Clin Psychol* 69, 14-27
- Keck PE, Orsulak PJ, Cutler AJ, Sanchez R, Torbeyns A, Marcus RN, McQuade RD, Carson WH, Group CNS (2009): Aripiprazole monotherapy in the treatment of acute bipolar I mania: a randomized, double-blind, placebo- and lithium-controlled study. *J Affect Disord* 112, 36-49
- Keck PE, Jr., Marcus R, Tourkodimitris S, Ali M, Liebeskind A, Saha A, Ingenito G, Aripiprazole Study G (2003a): A placebo-controlled, double-blind study of the efficacy and safety of aripiprazole in patients with acute bipolar mania. *Am J Psychiatry* 160, 1651-1658
- Keck PE, Jr., Versiani M, Potkin S, West SA, Giller E, Ice K, Ziprasidone in Mania Study G (2003b): Ziprasidone in the treatment of acute bipolar mania: a three-week, placebo-controlled, double-blind, randomized trial. *Am J Psychiatry* 160, 741-748
- Keefe RS, Malhotra AK, Meltzer HY, Kane JM, Buchanan RW, Murthy A, Sovel M, Li C, Goldman R (2008): Efficacy and safety of donepezil in patients with schizophrenia or schizoaffective disorder: significant placebo/practice effects in a 12-week, randomized, double-blind, placebo-controlled trial. *Neuropsychopharmacology* 33, 1217-1228
- Keefe RS, Meltzer HA, Dgetluck N, Gawryl M, Koenig G, Moebius HJ, Lombardo I, Hilt DC (2015): Randomized, Double-Blind, Placebo-Controlled Study of Encenicline, an alpha7 Nicotinic Acetylcholine Receptor Agonist, as a Treatment for Cognitive Impairment in Schizophrenia. *Neuropsychopharmacology* 40, 3053-3060

- Keks NA, Ingham M, Khan A, Karcher K (2007): Long-acting injectable risperidone v. olanzapine tablets for schizophrenia or schizoaffective disorder. Randomized, controlled, open-label study. *Br J Psychiatry* 191, 131-139
- Kenardy JA, Dow MG, Johnston DW, Newman MG, Thomson A, Taylor CB (2003): A comparison of delivery methods of cognitive-behavioural therapy for panic disorder: an international multicenter trial. *J Consult Clin Psychol* 71, 1068-1075
- Khanna S, Vieta E, Lyons B, Grossman F, Eerdekens M, Kramer M (2005): Risperidone in the treatment of acute mania: double-blind, placebo-controlled study. *Br J Psychiatry* 187, 229-234
- Kiefer F, Witt SH, Frank J, Richter A, Treutlein J, Lemenager T, Nothen MM, Cichon S, Batra A, Berner M, et al. (2011): Involvement of the atrial natriuretic peptide transcription factor GATA4 in alcohol dependence, relapse risk and treatment response to acamprosate. *Pharmacogenomics J* 11, 368-374
- Kim TS, Pae CU, Yoon SJ, Bahk WM, Jun TY, Rhee WI, Chae JH (2006): Comparison of venlafaxine extended release versus paroxetine for treatment of patients with generalized anxiety disorder. *Psychiatry Clin Neurosci* 60, 347-351
- Kim YR, Kim CH, Park JH, Pyo J, Treasure J (2014): The impact of intranasal oxytocin on attention to social emotional stimuli in patients with anorexia nervosa: a double blind within-subject cross-over experiment. *PLoS One* 9, e90721
- Kimhy D, Vakhrusheva J, Bartels MN, Armstrong HF, Ballon JS, Khan S, Chang RW, Hansen MC, Ayanruoh L, Lister A, et al. (2015): The Impact of Aerobic Exercise on Brain-Derived Neurotrophic Factor and Neurocognition in Individuals With Schizophrenia: A Single-Blind, Randomized Clinical Trial. *Schizophr Bull* 41, 859-868
- Kindler J, Weickert CS, Skilleter AJ, Catts SV, Lenroot R, Weickert TW (2015): Selective Estrogen Receptor Modulation Increases Hippocampal Activity during Probabilistic Association Learning in Schizophrenia. *Neuropsychopharmacology* 40, 2388-2397
- King AL, Valenca AM, de Melo-Neto VL, Freire RC, Mezzasalma MA, Silva AC, Nardi AE (2011): Efficacy of a specific model for cognitive-behavioural therapy among panic disorder patients with agoraphobia: a randomized clinical trial. *Sao Paulo Med J* 129, 325-334
- Kiritze-Topor P, Huas D, Rosenzweig C, Comte S, Paille F, Lehert P (2004): A pragmatic trial of acamprosate in the treatment of alcohol dependence in primary care. *Alcohol Alcohol* 39, 520-527
- Klass ET, Milrod BL, Leon AC, Kay SJ, Schwalberg M, Li C, Markowitz JC (2009): Does interpersonal loss preceding panic disorder onset moderate response to psychotherapy? An exploratory study. *J Clin Psychiatry* 70, 406-411
- Klauss J, Penido Pinheiro LC, Silva Merlo BL, de Almeida Correia Santos G, Fregni F, Nitsche MA, Miyuki Nakamura-Palacios E (2014): A randomized controlled trial of

- targeted prefrontal cortex modulation with tDCS in patients with alcohol dependence. *Int J Neuropsychopharmacol* 17, 1793-1803
- Klein DA, Schebendach JE, Brown AJ, Smith GP, Walsh BT (2009): Modified sham feeding of sweet solutions in women with and without bulimia nervosa. *Physiol Behav* 96, 44-50
- Klein DA, Schebendach JE, Gershkovich M, Smith GP, Walsh BT (2010): Modified sham feeding of sweet solutions in women with anorexia nervosa. *Physiol Behav* 101, 132-140
- Knijnik DZ, Blanco C, Salum GA, Moraes CU, Mombach C, Almeida E, Pereira M, Strapasson A, Manfro GG, Eizirik CL (2008): A pilot study of clonazepam versus psychodynamic group therapy plus clonazepam in the treatment of generalized social anxiety disorder. *Eur Psychiatry* 23, 567-574
- Kobak KA, Taylor LV, Bystritsky A, Kohlenberg CJ, Greist JH, Tucker P, Warner G, Futterer R, Vapnik T (2005a): St John's wort versus placebo in obsessive-compulsive disorder: results from a double-blind study. *Int Clin Psychopharmacol* 20, 299-304
- Kobak KA, Taylor LV, Warner G, Futterer R (2005b): St. John's wort versus placebo in social phobia: results from a placebo-controlled pilot study. *J Clin Psychopharmacol* 25, 51-58
- Koponen H, Allgulander C, Erickson J, Dunayevich E, Pritchett Y, Detke MJ, Ball SG, Russell JM (2007): Efficacy of duloxetine for the treatment of generalized anxiety disorder: implications for primary care physicians. *Prim Care Companion J Clin Psychiatry* 9, 100-107
- Koprivova J, Congedo M, Horacek J, Prasko J, Raszka M, Brunovsky M, Kohutova B, Hoschl C (2011): EEG source analysis in obsessive-compulsive disorder. *Clin Neurophysiol* 122, 1735-1743
- Korgaonkar MS, Williams LM, Song YJ, Usherwood T, Grieve SM (2014): Diffusion tensor imaging predictors of treatment outcomes in major depressive disorder. *Br J Psychiatry* 205, 321-328
- Koshino Y, Bahk WM, Sakai H, Kobayashi T (2013): The efficacy and safety of bupropion sustained-release formulation for the treatment of major depressive disorder: a multi-center, randomized, double-blind, placebo-controlled study in Asian patients. *Neuropsychiatr Dis Treat* 9, 1273-1280
- Koszycki D, Raab K, Aldosary F, Bradwejn J (2010): A multifaith spiritually based intervention for generalized anxiety disorder: a pilot randomized trial. *J Clin Psychol* 66, 430-441
- Koszycki D, Bilodeau C, Raab-Mayo K, Bradwejn J (2014): A multifaith spiritually based intervention versus supportive therapy for generalized anxiety disorder: a pilot randomized controlled trial. *J Clin Psychol* 70, 489-509

- Kramer U, Berger T, Kolly S, Marquet P, Preisig M, de Roten Y, Despland JN, Caspar F (2011): Effects of motive-oriented therapeutic relationship in early-phase treatment of borderline personality disorder: a pilot study of a randomized trial. *J Nerv Ment Dis* 199, 244-250
- Kranzler HR, Modesto-Lowe V, Van Kirk J (2000): Naltrexone vs. nefazodone for treatment of alcohol dependence. A placebo-controlled trial. *Neuropsychopharmacology* 22, 493-503
- Kranzler HR, Armeli S, Tennen H, Covault J, Feinn R, Arias AJ, Pettinati H, Oncken C (2011): A double-blind, randomized trial of sertraline for alcohol dependence: moderation by age of onset [corrected] and 5-hydroxytryptamine transporter-linked promoter region genotype. *J Clin Psychopharmacol* 31, 22-30
- Krystal AD, Erman M, Zammit GK, Soubrane C, Roth T, Group ZS (2008): Long-term efficacy and safety of zolpidem extended-release 12.5 mg, administered 3 to 7 nights per week for 24 weeks, in patients with chronic primary insomnia: a 6-month, randomized, double-blind, placebo-controlled, parallel-group, multicenter study. *Sleep* 31, 79-90
- Krystal AD, Lankford A, Durrence HH, Ludington E, Jochelson P, Rogowski R, Roth T (2011): Efficacy and safety of doxepin 3 and 6 mg in a 35-day sleep laboratory trial in adults with chronic primary insomnia. *Sleep* 34, 1433-1442
- Kumari V, Ettinger U, Lee SE, Deuschl C, Anilkumar AP, Schmechtig A, Corr PJ, Ffytche DH, Williams SC (2015): Common and distinct neural effects of risperidone and olanzapine during procedural learning in schizophrenia: a randomized longitudinal fMRI study. *Psychopharmacology (Berl)* 232, 3135-3147
- Kwako LE, Spagnolo PA, Schwandt ML, Thorsell A, George DT, Momenan R, Rio DE, Huestis M, Anizan S, Concheiro M, et al. (2015): The corticotropin releasing hormone-1 (CRH1) receptor antagonist pexacerfont in alcohol dependence: a randomized controlled experimental medicine study. *Neuropsychopharmacology* 40, 1053-1063
- Laaksonen E, Koski-Jannes A, Salaspuro M, Ahtinen H, Alho H (2008): A randomized, multicentre, open-label, comparative trial of disulfiram, naltrexone and acamprosate in the treatment of alcohol dependence. *Alcohol Alcohol* 43, 53-61
- Lam DH, Watkins ER, Hayward P, Bright J, Wright K, Kerr N, Parr-Davis G, Sham P (2003): A randomized controlled study of cognitive therapy for relapse prevention for bipolar affective disorder: outcome of the first year. *Arch Gen Psychiatry* 60, 145-152
- Lam DH, Hayward P, Watkins ER, Wright K, Sham P (2005): Relapse prevention in patients with bipolar disorder: cognitive therapy outcome after 2 years. *Am J Psychiatry* 162, 324-329
- Landeros-Weisenberger A, Bloch MH, Kelmendi B, Wegner R, Nudel J, Dombrowski P, Pittenger C, Krystal JH, Goodman WK, Leckman JF, et al. (2010): Dimensional

- predictors of response to SRI pharmacotherapy in obsessive-compulsive disorder. *J Affect Disord* 121, 175-179
- Lang AJ, Wilkins K, Roy-Byrne PP, Golinelli D, Chavira D, Sherbourne C, Rose RD, Bystritsky A, Sullivan G, Craske MG, et al. (2012): Abbreviated PTSD Checklist (PCL) as a guide to clinical response. *Gen Hosp Psychiatry* 34, 332-338
- Lankford DA, Corser BC, Zheng YP, Li Z, Snavely DB, Lines CR, Deacon S (2008): Effect of gaboxadol on sleep in adult and elderly patients with primary insomnia: results from two randomized, placebo-controlled, 30-night polysomnography studies. *Sleep* 31, 1359-1370
- Laties AM, Flach AJ, Baldycheva I, Rak I, Earley W, Pathak S (2015): Cataractogenic potential of quetiapine versus risperidone in the long-term treatment of patients with schizophrenia or schizoaffective disorder: a randomized, open-label, ophthalmologist-masked, flexible-dose, non-inferiority trial. *J Psychopharmacol* 29, 69-79
- Latt NC, Jurd S, Houseman J, Wutzke SE (2002): Naltrexone in alcohol dependence: a randomized controlled trial of effectiveness in a standard clinical setting. *Med J Aust* 176, 530-534
- Lavender A, Startup H, Naumann U, Samarawickrema N, Dejong H, Kenyon M, van den Eynde F, Schmidt U (2012): Emotional and social mind training: a randomized controlled trial of a new group-based treatment for bulimia nervosa. *PLoS One* 7, e46047
- Lavender JM, Wonderlich SA, Peterson CB, Crosby RD, Engel SG, Mitchell JE, Crow SJ, Smith TL, Klein MH, Goldschmidt AB, et al. (2014): Dimensions of emotion dysregulation in bulimia nervosa. *Eur Eat Disord Rev* 22, 212-216
- Le Grange D, Hoste RR, Lock J, Bryson SW (2011): Parental expressed emotion of adolescents with anorexia nervosa: outcome in family-based treatment. *Int J Eat Disord* 44, 731-734
- Le Grange D, Lock J, Agras WS, Moye A, Bryson SW, Jo B, Kraemer HC (2012): Moderators and mediators of remission in family-based treatment and adolescent focused therapy for anorexia nervosa. *Behav Res Ther* 50, 85-92
- Le Grange D, Hughes EK, Court A, Yeo M, Crosby RD, Sawyer SM (2016): Randomized Clinical Trial of Parent-Focused Treatment and Family-Based Treatment for Adolescent Anorexia Nervosa. *J Am Acad Child Adolesc Psychiatry* 55, 683-692
- Le QA, Doctor JN, Zoellner LA, Feeny NC (2013): Minimal clinically important differences for the EQ-5D and QWB-SA in Post-traumatic Stress Disorder (PTSD): results from a Doubly Randomized Preference Trial (DRPT). *Health Qual Life Outcomes* 11, 59
- Lee BH, Park YM, Lee SH, Shim M (2015): Prediction of long-term treatment response to selective serotonin reuptake inhibitors (SSRIs) using scalp and source loudness dependence of auditory evoked potentials (LDAEP) analysis in patients with major depressive disorder. *Int J Mol Sci* 16, 6251-6265

- Lee C, Gavriel H, Drummond P, Richards J, Greenwald R (2002): Treatment of PTSD: stress inoculation training with prolonged exposure compared to EMDR. *J Clin Psychol* 58, 1071-1089
- Lee SY, Chen SL, Chang YH, Chen PS, Huang SY, Tzeng NS, Wang YS, Wang LJ, Lee IH, Yeh TL, et al. (2013): Add-on memantine to valproate treatment increased HDL-C in bipolar II disorder. *J Psychiatr Res* 47, 1343-1348
- Lee SY, Chen SL, Chang YH, Chen SH, Chu CH, Huang SY, Tzeng NS, Wang CL, Wang LJ, Lee IH, et al. (2014): Genotype variant associated with add-on memantine in bipolar II disorder. *Int J Neuropsychopharmacol* 17, 189-197
- Leombruni P, Piero A, Lavagnino L, Brustolin A, Campisi S, Fassino S (2008): A randomized, double-blind trial comparing sertraline and fluoxetine 6-month treatment in obese patients with Binge Eating Disorder. *Prog Neuropsychopharmacol Biol Psychiatry* 32, 1599-1605
- Leykin Y, Amsterdam JD, DeRubeis RJ, Gallop R, Shelton RC, Hollon SD (2007): Progressive resistance to a selective serotonin reuptake inhibitor but not to cognitive therapy in the treatment of major depression. *J Consult Clin Psychol* 75, 267-276
- Li CH, Pollock BG, Lyketsos CG, Vaidya V, Drye LT, Kirshner M, Sorisio D, Bies RR, Group D-R (2013): Population pharmacokinetic modeling of sertraline treatment in patients with Alzheimer disease: the DIADS-2 study. *J Clin Pharmacol* 53, 234-239
- Liebowitz MR, Gelenberg AJ, Munjack D (2005): Venlafaxine extended release vs placebo and paroxetine in social anxiety disorder. *Arch Gen Psychiatry* 62, 190-198
- Liebowitz MR, Tourian KA, Hwang E, Mele L, Study I (2013): A double-blind, randomized, placebo-controlled study assessing the efficacy and tolerability of desvenlafaxine 10 and 50 mg/day in adult outpatients with major depressive disorder. *BMC Psychiatry* 13, 94
- Lindauer RJ, Gersons BP, van Meijel EP, Blom K, Carlier IV, Vrijlandt I, Olf M (2005): Effects of brief eclectic psychotherapy in patients with posttraumatic stress disorder: randomized clinical trial. *J Trauma Stress* 18, 205-212
- Linde JA, Jeffery RW, Levy RL, Sherwood NE, Utter J, Pronk NP, Boyle RG (2004): Binge eating disorder, weight control self-efficacy, and depression in overweight men and women. *Int J Obes Relat Metab Disord* 28, 418-425
- Lindsay M, Crino R, Andrews G (1997): Controlled trial of exposure and response prevention in obsessive-compulsive disorder. *Br J Psychiatry* 171, 135-139
- Linehan MM, McDavid JD, Brown MZ, Sayrs JH, Gallop RJ (2008): Olanzapine plus dialectical behaviour therapy for women with high irritability who meet criteria for borderline personality disorder: a double-blind, placebo-controlled pilot study. *J Clin Psychiatry* 69, 999-1005

- Lipkovich IA, Houston JP, Ahl J (2008): Identifying patterns in treatment response profiles in acute bipolar mania: a cluster analysis approach. *BMC Psychiatry* 8, 65
- Litt MD, Kadden RM, Kabela-Cormier E (2009): Individualized assessment and treatment program for alcohol dependence: results of an initial study to train coping skills. *Addiction* 104, 1837-1838
- Litt MD, Kadden RM, Tennen H (2015): Network Support treatment for alcohol dependence: gender differences in treatment mechanisms and outcomes. *Addict Behav* 45, 87-92
- Litten RZ, Ryan ML, Fertig JB, Falk DE, Johnson B, Dunn KE, Green AI, Pettinati HM, Ciraulo DA, Sarid-Segal O, et al. (2013): A double-blind, placebo-controlled trial assessing the efficacy of varenicline tartrate for alcohol dependence. *J Addict Med* 7, 277-286
- Liu X, Zhang J, Sun D, Fan Y, Zhou H, Fu B (2014): Effects of fluoxetine on brain-derived neurotrophic factor serum concentration and cognition in patients with vascular dementia. *Clin Interv Aging* 9, 411-418
- Lock J, Le Grange D, Agras WS, Moye A, Bryson SW, Jo B (2010): Randomized clinical trial comparing family-based treatment with adolescent-focused individual therapy for adolescents with anorexia nervosa. *Arch Gen Psychiatry* 67, 1025-1032
- Lock J, Agras WS, Fitzpatrick KK, Bryson SW, Jo B, Tchanturia K (2013): Is outpatient cognitive remediation therapy feasible to use in randomized clinical trials for anorexia nervosa? *Int J Eat Disord* 46, 567-575
- Lock J, Le Grange D, Agras WS, Fitzpatrick KK, Jo B, Accurso E, Forsberg S, Anderson K, Arnow K, Stainer M (2015): Can adaptive treatment improve outcomes in family-based therapy for adolescents with anorexia nervosa? Feasibility and treatment effects of a multi-site treatment study. *Behav Res Ther* 73, 90-95
- Loew TH, Nickel MK, Muehlbacher M, Kaplan P, Nickel C, Kettler C, Fartacek R, Lahmann C, Buschmann W, Tritt K, et al. (2006): Topiramate treatment for women with borderline personality disorder: a double-blind, placebo-controlled study. *J Clin Psychopharmacol* 26, 61-66
- Logue MW, Posner H, Green RC, Moline M, Cupples LA, Lunetta KL, Zou H, Hurt SW, Farrer LA, Decarli C, et al. (2011): Magnetic resonance imaging-measured atrophy and its relationship to cognitive functioning in vascular dementia and Alzheimer's disease patients. *Alzheimers Dement* 7, 493-500
- Loh SY, Abdullah A, Abu Bakar AK, Thambu M, Nik Jaafar NR (2015): Structured Walking and Chronic Institutionalized Schizophrenia Inmates: A pilot RCT Study on Quality of Life. *Glob J Health Sci* 8, 238-248
- Lopez-Ibor JJ, Jr., Saiz J, Cottraux J, Note I, Vinas R, Bourgeois M, Hernandez M, Gomez-Perez JC (1996): Double-blind comparison of fluoxetine versus clomipramine in the treatment of obsessive compulsive disorder. *Eur Neuropsychopharmacol* 6, 111-118

- Lovell K, Bower P, Gellatly J, Byford S, Bee P, McMillan D, Arundel C, Gilbody S, Gega L, Hardy G, et al. (2017): Low-intensity cognitive-behaviour therapy interventions for obsessive-compulsive disorder compared to waiting list for therapist-led cognitive-behaviour therapy: 3-arm randomized controlled trial of clinical effectiveness. *PLoS Med* 14, e1002337
- Luo YL, Zhang MY, Wu WY, Li CB, Lu Z, Li QW (2009): A randomized double-blind clinical trial on analgesic efficacy of fluoxetine for persistent somatoform pain disorder. *Prog Neuropsychopharmacol Biol Psychiatry* 33, 1522-1525
- Ma J, Svetnik V, Snyder E, Lines C, Roth T, Herring WJ (2014a): Electroencephalographic power spectral density profile of the orexin receptor antagonist suvorexant in patients with primary insomnia and healthy subjects. *Sleep* 37, 1609-1619
- Ma X, Huang Y, Liao L, Jin Y (2014b): A randomized double-blinded sham-controlled trial of alpha electroencephalogram-guided transcranial magnetic stimulation for obsessive-compulsive disorder. *Chin Med J (Engl)* 127, 601-606
- Macdonald A, Pukay-Martin ND, Wagner AC, Fredman SJ, Monson CM (2016): Cognitive-behavioural conjoint therapy for PTSD improves various PTSD symptoms and trauma-related cognitions: Results from a randomized controlled trial. *J Fam Psychol* 30, 157-162
- Macfadden W, Alphas L, Haskins JT, Turner N, Turkoz I, Bossie C, Kujawa M, Mahmoud R (2009): A randomized, double-blind, placebo-controlled study of maintenance treatment with adjunctive risperidone long-acting therapy in patients with bipolar I disorder who relapse frequently. *Bipolar Disord* 11, 827-839
- Machado-Vieira R, Soares JC, Lara DR, Luckenbaugh DA, Busnello JV, Marca G, Cunha A, Souza DO, Zarate CA, Jr., Kapczinski F (2008): A double-blind, randomized, placebo-controlled 4-week study on the efficacy and safety of the purinergic agents allopurinol and dipyridamole adjunctive to lithium in acute bipolar mania. *J Clin Psychiatry* 69, 1237-1245
- Madden S, Miskovic-Wheatley J, Wallis A, Kohn M, Lock J, Le Grange D, Jo B, Clarke S, Rhodes P, Hay P, et al. (2015): A randomized controlled trial of in-patient treatment for anorexia nervosa in medically unstable adolescents. *Psychol Med* 45, 415-427
- Maercker A, Zollner T, Menning H, Rabe S, Karl A (2006): Dresden PTSD treatment study: randomized controlled trial of motor vehicle accident survivors. *BMC Psychiatry* 6, 29
- Mahableshwarkar AR, Jacobsen PL, Serenko M, Chen Y, Trivedi MH (2015a): A randomized, double-blind, placebo-controlled study of the efficacy and safety of 2 doses of vortioxetine in adults with major depressive disorder. *J Clin Psychiatry* 76, 583-591
- Mahableshwarkar AR, Zajecka J, Jacobson W, Chen Y, Keefe RS (2015b): A Randomized, Placebo-Controlled, Active-Reference, Double-Blind, Flexible-Dose Study of the

- Efficacy of Vortioxetine on Cognitive Function in Major Depressive Disorder. *Neuropsychopharmacology* 40, 2025-2037
- Mansson KN, Salami A, Frick A, Carlbring P, Andersson G, Furmark T, Boraxbekk CJ (2016): Neuroplasticity in response to cognitive behaviour therapy for social anxiety disorder. *Transl Psychiatry* 6, e727
- Manzardo AM, He J, Poje A, Penick EC, Campbell J, Butler MG (2013): Double-blind, randomized placebo-controlled clinical trial of benfotiamine for severe alcohol dependence. *Drug Alcohol Depend* 133, 562-570
- Marchand A, Coutu MF, Dupuis G, Fleet R, Borgeat F, Todorov C, Mainguy N (2008): Treatment of panic disorder with agoraphobia: randomized placebo-controlled trial of four psychosocial treatments combined with imipramine or placebo. *Cogn Behav Ther* 37, 146-159
- Markowitz JC, Petkova E, Neria Y, Van Meter PE, Zhao Y, Hembree E, Lovell K, Biyanova T, Marshall RD (2015): Is Exposure Necessary? A Randomized Clinical Trial of Interpersonal Psychotherapy for PTSD. *Am J Psychiatry* 172, 430-440
- Marks IM, Swinson RP, Basoglu M, Kuch K, Noshirvani H, O'Sullivan G, Lelliott PT, Kirby M, McNamee G, Sengun S, et al. (1993): Alprazolam and exposure alone and combined in panic disorder with agoraphobia. A controlled study in London and Toronto. *Br J Psychiatry* 162, 776-787
- Martin EC, Dick AM, Scioli-Salter ER, Mitchell KS (2015): Impact of a Yoga Intervention on Physical Activity, Self-Efficacy, and Motivation in Women with PTSD Symptoms. *J Altern Complement Med* 21, 327-332
- Martin LA, Koch SC, Hirjak D, Fuchs T (2016): Overcoming Disembodiment: The Effect of Movement Therapy on Negative Symptoms in Schizophrenia-A Multicenter Randomized Controlled Trial. *Front Psychol* 7, 483
- Martinez JM, Garakani A, Aaronson CJ, Gorman JM (2015): Heart rate and respiratory response to doxapram in patients with panic disorder. *Psychiatry Res* 227, 32-38
- Marzola E, Desedime N, Giovannone C, Amianto F, Fassino S, Abbate-Daga G (2015): Atypical antipsychotics as augmentation therapy in anorexia nervosa. *PLoS One* 10, e0125569
- Masheb RM, Grilo CM (2008): Examination of predictors and moderators for self-help treatments of binge-eating disorder. *J Consult Clin Psychol* 76, 900-904
- Masheb RM, Grilo CM, Rolls BJ (2011): A randomized controlled trial for obesity and binge eating disorder: low-energy-density dietary counseling and cognitive-behavioural therapy. *Behav Res Ther* 49, 821-829
- Mason BJ, Light JM, Williams LD, Drobos DJ (2009): Proof-of-concept human laboratory study for protracted abstinence in alcohol dependence: effects of gabapentin. *Addict Biol* 14, 73-83

- Mason BJ, Quello S, Goodell V, Shadan F, Kyle M, Begovic A (2014): Gabapentin treatment for alcohol dependence: a randomized clinical trial. *JAMA Intern Med* 174, 70-77
- Mathews M, Gommoll C, Chen D, Nunez R, Khan A (2015): Efficacy and safety of vilazodone 20 and 40 mg in major depressive disorder: a randomized, double-blind, placebo-controlled trial. *Int Clin Psychopharmacol* 30, 67-74
- Mayer G, Wang-Weigand S, Roth-Schechter B, Lehmann R, Staner C, Partinen M (2009): Efficacy and safety of 6-month nightly ramelteon administration in adults with chronic primary insomnia. *Sleep* 32, 351-360
- McCall WV (2015): A rest-activity biomarker to predict response to SSRIs in major depressive disorder. *J Psychiatr Res* 64, 19-22
- McClelland J, Kekic M, Bozhilova N, Nestler S, Dew T, Van den Eynde F, David AS, Rubia K, Campbell IC, Schmidt U (2016): A Randomized Controlled Trial of Neuronavigated Repetitive Transcranial Magnetic Stimulation (rTMS) in Anorexia Nervosa. *PLoS One* 11, e0148606
- McDonagh A, Friedman M, McHugo G, Ford J, Sengupta A, Mueser K, Demment CC, Fournier D, Schnurr PP, Descamps M (2005): Randomized trial of cognitive-behavioural therapy for chronic posttraumatic stress disorder in adult female survivors of childhood sexual abuse. *J Consult Clin Psychol* 73, 515-524
- McElroy SL, Arnold LM, Shapira NA, Keck PE, Jr., Rosenthal NR, Karim MR, Kamin M, Hudson JI (2003): Topiramate in the treatment of binge eating disorder associated with obesity: a randomized, placebo-controlled trial. *Am J Psychiatry* 160, 255-261
- McElroy SL, Guerdjikova AI, Blom TJ, Crow SJ, Memisoglu A, Silverman BL, Ehrich EW (2013): A placebo-controlled pilot study of the novel opioid receptor antagonist ALKS-33 in binge eating disorder. *Int J Eat Disord* 46, 239-245
- McElroy SL, Guerdjikova AI, Mori N, Blom TJ, Williams S, Casuto LS, Keck PE, Jr. (2015): Armodafinil in binge eating disorder: a randomized, placebo-controlled trial. *Int Clin Psychopharmacol* 30, 209-215
- McElroy SL, Hudson J, Ferreira-Cornwell MC, Radewonuk J, Whitaker T, Gasior M (2016): Lisdexamfetamine Dimesylate for Adults with Moderate to Severe Binge Eating Disorder: Results of Two Pivotal Phase 3 Randomized Controlled Trials. *Neuropsychopharmacology* 41, 1251-1260
- McEvoy JP, Citrome L, Hernandez D, Cucchiaro J, Hsu J, Pikalov A, Loebel A (2013): Effectiveness of lurasidone in patients with schizophrenia or schizoaffective disorder switched from other antipsychotics: a randomized, 6-week, open-label study. *J Clin Psychiatry* 74, 170-179
- McIntyre RS, Lophaven S, Olsen CK (2014): A randomized, double-blind, placebo-controlled study of vortioxetine on cognitive function in depressed adults. *Int J Neuropsychopharmacol* 17, 1557-1567

- McKay JR, Van Horn D, Oslin DW, Ivey M, Drapkin ML, Coviello DM, Yu Q, Lynch KG (2011): Extended telephone-based continuing care for alcohol dependence: 24-month outcomes and subgroup analyses. *Addiction* 106, 1760-1769
- McLean PD, Whittal ML, Thordarson DS, Taylor S, Sochting I, Koch WJ, Paterson R, Anderson KW (2001): Cognitive versus behaviour therapy in the group treatment of obsessive-compulsive disorder. *J Consult Clin Psychol* 69, 205-214
- McLeod CC, Budd MA, McClelland DC (1997): Treatment of somatization in primary care. *Gen Hosp Psychiatry* 19, 251-258
- McMain SF, Links PS, Gnam WH, Guimond T, Cardish RJ, Korman L, Streiner DL (2009): A randomized trial of dialectical behaviour therapy versus general psychiatric management for borderline personality disorder. *Am J Psychiatry* 166, 1365-1374
- Meltzer HY, Risinger R, Nasrallah HA, Du Y, Zummo J, Corey L, Bose A, Stankovic S, Silverman BL, Ehrich EW (2015): A randomized, double-blind, placebo-controlled trial of aripiprazole lauroxil in acute exacerbation of schizophrenia. *J Clin Psychiatry* 76, 1085-1090
- Melzer J, Schrader E, Brattstrom A, Schellenberg R, Saller R (2009): Fixed herbal drug combination with and without butterbur (Ze 185) for the treatment of patients with somatoform disorders: randomized, placebo-controlled pharmaco-clinical trial. *Phytother Res* 23, 1303-1308
- Meuret AE, Wilhelm FH, Ritz T, Roth WT (2008): Feedback of end-tidal pCO₂ as a therapeutic approach for panic disorder. *J Psychiatr Res* 42, 560-568
- Meuret AE, Rosenfield D, Seidel A, Bhaskara L, Hofmann SG (2010): Respiratory and cognitive mediators of treatment change in panic disorder: evidence for intervention specificity. *J Consult Clin Psychol* 78, 691-704
- Meyer TD, Hautzinger M (2012): Cognitive behaviour therapy and supportive therapy for bipolar disorders: relapse rates for treatment period and 2-year follow-up. *Psychol Med* 42, 1429-1439
- Michelson D, Lydiard RB, Pollack MH, Tamura RN, Hoog SL, Tepner R, Demitrack MA, Tollefson GD (1998): Outcome assessment and clinical improvement in panic disorder: evidence from a randomized controlled trial of fluoxetine and placebo. The Fluoxetine Panic Disorder Study Group. *Am J Psychiatry* 155, 1570-1577
- Michelson D, Allgulander C, Dantendorfer K, Knezevic A, Maierhofer D, Micev V, Paunovic VR, Timotijevic I, Sarkar N, Skoglund L, et al. (2001): Efficacy of usual antidepressant dosing regimens of fluoxetine in panic disorder: randomized, placebo-controlled trial. *Br J Psychiatry* 179, 514-518
- Miklowitz DJ, George EL, Richards JA, Simoneau TL, Suddath RL (2003): A randomized study of family-focused psychoeducation and pharmacotherapy in the outpatient management of bipolar disorder. *Arch Gen Psychiatry* 60, 904-912

- Miller IW, Keitner GI, Ryan CE, Uebelacker LA, Johnson SL, Solomon DA (2008): Family treatment for bipolar disorder: family impairment by treatment interactions. *J Clin Psychiatry* 69, 732-740
- Miller KK, Meenaghan E, Lawson EA, Misra M, Gleysteen S, Schoenfeld D, Herzog D, Klibanski A (2011): Effects of risedronate and low-dose transdermal testosterone on bone mineral density in women with anorexia nervosa: a randomized, placebo-controlled study. *J Clin Endocrinol Metab* 96, 2081-2088
- Millstein DJ, Orsillo SM, Hayes-Skelton SA, Roemer L (2015): Interpersonal Problems, Mindfulness, and Therapy Outcome in an Acceptance-Based Behaviour Therapy for Generalized Anxiety Disorder. *Cogn Behav Ther* 44, 491-501
- Minzenberg MJ, Yoon JH, Cheng Y, Carter CS (2014): Modafinil effects on middle-frequency oscillatory power during rule selection in schizophrenia. *Neuropsychopharmacology* 39, 3018-3026
- Mirsepassi Z, Mazinani R, Fadai F, Alibeigi N, Nazeri Astaneh A (2013): Topiramate Add-on Lithium Carbonate for Treatment of Acute Mania. *Iran J Psychiatry Behav Sci* 7, 11-15
- Mishima K, Hishikawa Y, Okawa M (1998): Randomized, dim light controlled, crossover test of morning bright light therapy for rest-activity rhythm disorders in patients with vascular dementia and dementia of Alzheimer's type. *Chronobiol Int* 15, 647-654
- Misra M, Katzman D, Miller KK, Mendes N, Snelgrove D, Russell M, Goldstein MA, Ebrahimi S, Clauss L, Weigel T, et al. (2011): Physiologic estrogen replacement increases bone density in adolescent girls with anorexia nervosa. *J Bone Miner Res* 26, 2430-2438
- Mitchell JE, Gosnell BA, Roerig JL, de Zwaan M, Wonderlich SA, Crosby RD, Burgard MA, Wambach BN (2003): Effects of sibutramine on binge eating, hunger, and fullness in a laboratory human feeding paradigm. *Obes Res* 11, 599-602
- Mitchell JE, Crosby RD, Wonderlich SA, Crow S, Lancaster K, Simonich H, Swan-Kremeier L, Lysne C, Myers TC (2008): A randomized trial comparing the efficacy of cognitive-behavioural therapy for bulimia nervosa delivered via telemedicine versus face-to-face. *Behav Res Ther* 46, 581-592
- Mitchell JE, Agras S, Crow S, Halmi K, Fairburn CG, Bryson S, Kraemer H (2011): Stepped care and cognitive-behavioural therapy for bulimia nervosa: randomized trial. *Br J Psychiatry* 198, 391-397
- Mok V, Wong A, Ho S, Leung T, Lam WW, Wong KS (2007): Rivastigmine in Chinese patients with subcortical vascular dementia. *Neuropsychiatr Dis Treat* 3, 943-948
- Mokhber N, Lane CJ, Azarpazhooh MR, Salari E, Fayazi R, Shakeri MT, Young AH (2008): Anticonvulsant treatments of dysphoric mania: a trial of gabapentin, lamotrigine and carbamazepine in Iran. *Neuropsychiatr Dis Treat* 4, 227-234

- Mondraty N, Birmingham CL, Touyz S, Sundakov V, Chapman L, Beumont P (2005): Randomized controlled trial of olanzapine in the treatment of cognitions in anorexia nervosa. *Australas Psychiatry* 13, 72-75
- Monson CM, Schnurr PP, Resick PA, Friedman MJ, Young-Xu Y, Stevens SP (2006): Cognitive processing therapy for veterans with military-related posttraumatic stress disorder. *J Consult Clin Psychol* 74, 898-907
- Monson CM, Fredman SJ, Macdonald A, Pukay-Martin ND, Resick PA, Schnurr PP (2012): Effect of cognitive-behavioural couple therapy for PTSD: a randomized controlled trial. *JAMA* 308, 700-709
- Montgomery SA, Kasper S, Stein DJ, Bang Hedegaard K, Lemming OM (2001): Citalopram 20 mg, 40 mg and 60 mg are all effective and well tolerated compared with placebo in obsessive-compulsive disorder. *Int Clin Psychopharmacol* 16, 75-86
- Montgomery SA, Mansuy L, Ruth A, Bose A, Li H, Li D (2013): Efficacy and safety of levomilnacipran sustained release in moderate to severe major depressive disorder: a randomized, double-blind, placebo-controlled, proof-of-concept study. *J Clin Psychiatry* 74, 363-369
- Moreno RA, Hanna MM, Tavares SM, Wang YP (2007): A double-blind comparison of the effect of the antipsychotics haloperidol and olanzapine on sleep in mania. *Braz J Med Biol Res* 40, 357-366
- Moreno S, Gili M, Magallon R, Bauza N, Roca M, Del Hoyo YL, Garcia-Campayo J (2013): Effectiveness of group versus individual cognitive-behavioural therapy in patients with abridged somatization disorder: a randomized controlled trial. *Psychosom Med* 75, 600-608
- Moretti R, Torre P, Antonello RM, Cattaruzza T, Cazzato G, Bava A (2005): Frontal lobe dementia and subcortical vascular dementia: a neuropsychological comparison. *Psychol Rep* 96, 141-151
- Morgan H, Raffle C (1999): Does reducing safety behaviours improve treatment response in patients with social phobia? *Aust N Z J Psychiatry* 33, 503-510
- Morley KC, Baillie A, Leung S, Addolorato G, Leggio L, Haber PS (2014): Baclofen for the Treatment of Alcohol Dependence and Possible Role of Comorbid Anxiety. *Alcohol Alcohol* 49, 654-660
- Mortberg E, Clark DM, Sundin O, Aberg Wistedt A (2007): Intensive group cognitive treatment and individual cognitive therapy vs. treatment as usual in social phobia: a randomized controlled trial. *Acta Psychiatr Scand* 115, 142-154
- Mortberg E, Hoffart A, Boecking B, Clark DM (2015): Shifting the focus of one's attention mediates improvement in cognitive therapy for social anxiety disorder. *Behav Cogn Psychother* 43, 63-73

- Mueller DR, Schmidt SJ, Roder V (2015): One-year randomized controlled trial and follow-up of integrated neurocognitive therapy for schizophrenia outpatients. *Schizophr Bull* 41, 604-616
- Muller JE, Wentzel I, Koen L, Niehaus DJ, Seedat S, Stein DJ (2008): Escitalopram in the treatment of multisomatoform disorder: a double-blind, placebo-controlled trial. *Int Clin Psychopharmacol* 23, 43-48
- Muller T, Mannel M, Murck H, Rahlfs VW (2004): Treatment of somatoform disorders with St. John's wort: a randomized, double-blind and placebo-controlled trial. *Psychosom Med* 66, 538-547
- Muresanu DF, Alvarez XA, Moessler H, Buia M, Stan A, Pinteau D, Moldovan F, Popescu BO (2008): A pilot study to evaluate the effects of Cerebrolysin on cognition and qEEG in vascular dementia: cognitive improvement correlates with qEEG acceleration. *J Neurol Sci* 267, 112-119
- Muzina DJ, Momah C, Eudicone JM, Pikalov A, McQuade RD, Marcus RN, Sanchez R, Carlson BX (2008): Aripiprazole monotherapy in patients with rapid-cycling bipolar I disorder: an analysis from a long-term, double-blind, placebo-controlled study. *Int J Clin Pract* 62, 679-687
- Mynors-Wallis LM, Gath DH, Day A, Baker F (2000): Randomized controlled trial of problem solving treatment, antidepressant medication, and combined treatment for major depression in primary care. *BMJ* 320, 26-30
- Nakahara T, Nagai N, Tanaka M, Muranaga T, Kojima S, Nozoe S, Naruo T (2006): The effects of bone therapy on tibial bone loss in young women with anorexia nervosa. *Int J Eat Disord* 39, 20-26
- Nakatani E, Nakagawa A, Nakao T, Yoshizato C, Nabeyama M, Kudo A, Isomura K, Kato N, Yoshioka K, Kawamoto M (2005): A randomized controlled trial of Japanese patients with obsessive-compulsive disorder--effectiveness of behaviour therapy and fluvoxamine. *Psychother Psychosom* 74, 269-276
- Nasrallah HA, Cucchiaro JB, Mao Y, Pikalov AA, Loebel AD (2015): Lurasidone for the treatment of depressive symptoms in schizophrenia: analysis of 4 pooled, 6-week, placebo-controlled studies. *CNS Spectr* 20, 140-147
- Nasrallah HA, Newcomer JW, Risinger R, Du Y, Zummo J, Bose A, Stankovic S, Silverman BL, Ehrich EW (2016): Effect of Aripiprazole Lauroxil on Metabolic and Endocrine Profiles and Related Safety Considerations Among Patients With Acute Schizophrenia. *J Clin Psychiatry* 77(11), 1519-1525
- Neacsiu AD, Rizvi SL, Linehan MM (2010): Dialectical behaviour therapy skills use as a mediator and outcome of treatment for borderline personality disorder. *Behav Res Ther* 48, 832-839
- Neacsiu AD, Lungu A, Harned MS, Rizvi SL, Linehan MM (2014): Impact of dialectical behaviour therapy versus community treatment by experts on emotional experience,

- expression, and acceptance in borderline personality disorder. *Behav Res Ther* 53, 47-54
- Neto D, Lambaz R, Aguiar P, Chick J (2008): Effectiveness of sequential combined treatment in comparison with treatment as usual in preventing relapse in alcohol dependence. *Alcohol Alcohol* 43, 661-668
- Neubauer K, von Auer M, Murray E, Petermann F, Helbig-Lang S, Gerlach AL (2013): Internet-delivered attention modification training as a treatment for social phobia: a randomized controlled trial. *Behav Res Ther* 51, 87-97
- Neuner F, Schauer M, Klaschik C, Karunakara U, Elbert T (2004): A comparison of narrative exposure therapy, supportive counseling, and psychoeducation for treating posttraumatic stress disorder in an african refugee settlement. *J Consult Clin Psychol* 72, 579-587
- Neuner F, Onyut PL, Ertl V, Odenwald M, Schauer E, Elbert T (2008): Treatment of posttraumatic stress disorder by trained lay counselors in an African refugee settlement: a randomized controlled trial. *J Consult Clin Psychol* 76, 686-694
- Neuner F, Kurreck S, Ruf M, Odenwald M, Elbert T, Schauer M (2010): Can asylum-seekers with posttraumatic stress disorder be successfully treated? A randomized controlled pilot study. *Cogn Behav Ther* 39, 81-91
- Newman MG, Castonguay LG, Borkovec TD, Fisher AJ, Boswell JF, Szkodny LE, Nordberg SS (2011): A randomized controlled trial of cognitive-behavioural therapy for generalized anxiety disorder with integrated techniques from emotion-focused and interpersonal therapies. *J Consult Clin Psychol* 79, 171-181
- Nickel C, Tritt K, Muehlbacher M, Pedrosa Gil F, Mitterlehner FO, Kaplan P, Lahmann C, Leiberich PK, Krawczyk J, Kettler C, et al. (2005): Topiramate treatment in bulimia nervosa patients: a randomized, double-blind, placebo-controlled trial. *Int J Eat Disord* 38, 295-300
- Nicolini H, Bakish D, Duenas H, Spann M, Erickson J, Hallberg C, Ball S, Sagman D, Russell JM (2009): Improvement of psychic and somatic symptoms in adult patients with generalized anxiety disorder: examination from a duloxetine, venlafaxine extended-release and placebo-controlled trial. *Psychol Med* 39, 267-276
- Nijdam MJ, Gersons BP, Reitsma JB, de Jongh A, Olf M (2012): Brief eclectic psychotherapy v. eye movement desensitisation and reprocessing therapy for post-traumatic stress disorder: randomized controlled trial. *Br J Psychiatry* 200, 224-231
- Nikbakhat MR, Arabzadeh S, Zeinoddini A, Khalili Z, Rezaei F, Mohammadinejad P, Ghaleiha A, Akhondzadeh S (2016): Duloxetine Add-On to Risperidone for Treatment of Negative Symptoms in Patients with Stable Schizophrenia: Randomized Double-Blind Placebo-Controlled Study. *Pharmacopsychiatry* 49, 162-169

- Niles AN, Mesri B, Burklund LJ, Lieberman MD, Craske MG (2013): Attentional bias and emotional reactivity as predictors and moderators of behavioural treatment for social phobia. *Behav Res Ther* 51, 669-679
- Niles AN, Burklund LJ, Arch JJ, Lieberman MD, Saxbe D, Craske MG (2014): Cognitive mediators of treatment for social anxiety disorder: comparing acceptance and commitment therapy and cognitive-behavioural therapy. *Behav Ther* 45, 664-677
- Nordberg A, Darreh-Shori T, Peskind E, Soininen H, Mousavi M, Eagle G, Lane R (2009): Different cholinesterase inhibitor effects on CSF cholinesterases in Alzheimer patients. *Curr Alzheimer Res* 6, 4-14
- Nugent AC, Diazgranados N, Carlson PJ, Ibrahim L, Luckenbaugh DA, Brutsche N, Herscovitch P, Drevets WC, Zarate CA, Jr. (2014): Neural correlates of rapid antidepressant response to ketamine in bipolar disorder. *Bipolar Disord* 16, 119-128
- Nurnberg HG (2011): Randomized controlled trials of olanzapine treatment of borderline personality disorder: two similar studies with different results. *J Clin Psychiatry* 72, 1363-1365
- O'Connor KP, Aardema F, Robillard S, Guay S, Pelissier MC, Todorov C, Borgeat F, Leblanc V, Grenier S, Doucet P (2006): Cognitive behaviour therapy and medication in the treatment of obsessive-compulsive disorder. *Acta Psychiatr Scand* 113, 408-419
- Olbrich S, Olbrich H, Adamaszek M, Jahn I, Hegerl U, Stengler K (2013): Altered EEG lagged coherence during rest in obsessive-compulsive disorder. *Clin Neurophysiol* 124, 2421-2430
- Otto MW, Tolin DF, Simon NM, Pearlson GD, Basden S, Meunier SA, Hofmann SG, Eisenmenger K, Krystal JH, Pollack MH (2010): Efficacy of d-cycloserine for enhancing response to cognitive-behaviour therapy for panic disorder. *Biol Psychiatry* 67, 365-370
- Oxman TE, Hegel MT, Hull JG, Dietrich AJ (2008): Problem-solving treatment and coping styles in primary care for minor depression. *J Consult Clin Psychol* 76, 933-943
- Pacella ML, Feeny N, Zoellner L, Delahanty DL (2014): The impact of PTSD treatment on the cortisol awakening response. *Depress Anxiety* 31, 862-869
- Palmer BW, Ryan KA, Kim HM, Karlawish JH, Appelbaum PS, Kim SY (2013): Neuropsychological correlates of capacity determinations in Alzheimer disease: implications for assessment. *Am J Geriatr Psychiatry* 21, 373-381
- Pantoni L, del Ser T, Sogliani AG, Amigoni S, Spadari G, Binelli D, Inzitari D (2005): Efficacy and safety of nimodipine in subcortical vascular dementia: a randomized placebo-controlled trial. *Stroke* 36, 619-624
- Papakostas GI, Fava M, Baer L, Swee MB, Jaeger A, Bobo WV, Shelton RC (2015): Ziprasidone Augmentation of Escitalopram for Major Depressive Disorder: Efficacy

- Results From a Randomized, Double-Blind, Placebo-Controlled Study. *Am J Psychiatry* 172, 1251-1258
- Parling T, Cernvall M, Ramklint M, Holmgren S, Ghaderi A (2016): A randomized trial of Acceptance and Commitment Therapy for Anorexia Nervosa after daycare treatment, including five-year follow-up. *BMC Psychiatry* 16, 272
- Parnetti L, Mari D, Abate G, Balestreri R, Cucinotta D, Coppola R, Cherubini A, Ferrari P, Senin U (1997): Vascular dementia Italian sulodexide study (VA.D.I.S.S.). Clinical and biological results. *Thromb Res* 87, 225-233
- Pascual JC, Soler J, Puigdemont D, Perez-Egea R, Tiana T, Alvarez E, Perez V (2008): Ziprasidone in the treatment of borderline personality disorder: a double-blind, placebo-controlled, randomized study. *J Clin Psychiatry* 69, 603-608
- Pascual JC, Palomares N, Ibanez A, Portella MJ, Arza R, Reyes R, Feliu-Soler A, Diaz-Marsa M, Saiz-Ruiz J, Soler J, et al. (2015): Efficacy of cognitive rehabilitation on psychosocial functioning in Borderline Personality Disorder: a randomized controlled trial. *BMC Psychiatry* 15, 255
- Paxling B, Almlöv J, Dahlin M, Carlbring P, Breitholtz E, Eriksson T, Andersson G (2011): duGuided internet-delivered cognitive behaviour therapy for generalized anxiety disorder: a randomized controlled trial. *Cogn Behav Ther* 40, 159-173
- Pelc I, Hanak C, Baert I, Houtain C, Lehert P, Landron F, Verbanck P (2005): Effect of community nurse follow-up when treating alcohol dependence with acamprosat. *Alcohol Alcohol* 40, 302-307
- Penzlin AI, Siepmann T, Illigens BM, Weidner K, Siepmann M (2015): Heart rate variability biofeedback in patients with alcohol dependence: a randomized controlled study. *Neuropsychiatr Dis Treat* 11, 2619-2627
- Perlick DA, Miklowitz DJ, Lopez N, Chou J, Calvin C, Adzhishvili V, Aronson A (2010): Family-focused treatment for caregivers of patients with bipolar disorder. *Bipolar Disord* 12, 627-637
- Perry A, Tarrier N, Morriss R, McCarthy E, Limb K (1999): Randomized controlled trial of efficacy of teaching patients with bipolar disorder to identify early symptoms of relapse and obtain treatment. *BMJ* 318, 149-153
- Peters A, Sylvia LG, Magalhaes PV, Miklowitz DJ, Frank E, Otto MW, Hansen NS, Dougherty DD, Berk M, Nierenberg AA, et al. (2014): Age at onset, course of illness and response to psychotherapy in bipolar disorder: results from the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD). *Psychol Med* 44, 3455-3467
- Peters-Strickland T, Baker RA, McQuade RD, Jin N, Eramo A, Perry P, Johnson BR, Duca A, Sanchez R (2015): Aripiprazole once-monthly 400 mg for long-term maintenance treatment of schizophrenia: a 52-week open-label study. *NPJ Schizophr* 1, 15039

- Peterson CB, Mitchell JE, Crow SJ, Crosby RD, Wonderlich SA (2009): The efficacy of self-help group treatment and therapist-led group treatment for binge eating disorder. *Am J Psychiatry* 166, 1347-1354
- Peterson CB, Crosby RD, Wonderlich SA, Mitchell JE, Crow SJ, Engel S (2013): Predicting group cognitive-behavioural therapy outcome of binge eating disorder using empirical classification. *Behav Res Ther* 51, 526-532
- Pfohl B, Blum N, St John D, McCormick B, Allen J, Black DW (2009): Reliability and validity of the Borderline Evaluation of Severity Over Time (BEST): a self-rated scale to measure severity and change in persons with borderline personality disorder. *J Pers Disord* 23, 281-293
- Plebani JG, Tirado CF, Pettinati HM, Kampman KM, Volpicelli JR, Oslin DW (2010): Combined effects of alcohol and hepatitis C: a secondary analysis of alcohol use biomarkers and high-risk behaviours from two medication trials for alcohol dependence. *Addict Behav* 35, 123-128
- Pohl R, Balon R, Yeragani VK, Gershon S (1989): Serotonergic anxiolytics in the treatment of panic disorder: a controlled study with buspirone. *Psychopathology* 22(1), 60-67
- Pollack MH, Lepola U, Koponen H, Simon NM, Worthington JJ, Emilien G, Tzanis E, Salinas E, Whitaker T, Gao B (2007): A double-blind study of the efficacy of venlafaxine extended-release, paroxetine, and placebo in the treatment of panic disorder. *Depress Anxiety* 24, 1-14
- Popova P, Popov TG, Wienbruch C, Carolus AM, Miller GA, Rockstroh BS (2014): Changing facial affect recognition in schizophrenia: effects of training on brain dynamics. *Neuroimage Clin* 6, 156-165
- Porsteinsson AP, Drye LT, Pollock BG, Devanand DP, Frangakis C, Ismail Z, Marano C, Meinert CL, Mintzer JE, Munro CA, et al. (2014): Effect of citalopram on agitation in Alzheimer disease: the CitAD randomized clinical trial. *JAMA* 311, 682-691
- Portelius E, Dean RA, Gustavsson MK, Andreasson U, Zetterberg H, Siemers E, Blennow K (2010): A novel Aβ isoform pattern in CSF reflects gamma-secretase inhibition in Alzheimer disease. *Alzheimers Res Ther* 2, 7
- Posner J, Hellerstein DJ, Gat I, Mechling A, Klahr K, Wang Z, McGrath PJ, Stewart JW, Peterson BS (2013): Antidepressants normalize the default mode network in patients with dysthymia. *JAMA Psychiatry* 70, 373-382
- Potkin SG, Kimura T, Guarino J (2015): A 6-week, double-blind, placebo- and haloperidol-controlled, phase II study of lurasidone in patients with acute schizophrenia. *Ther Adv Psychopharmacol* 5, 322-331
- Poulsen S, Lunn S, Daniel SI, Folke S, Mathiesen BB, Katznelson H, Fairburn CG (2014): A randomized controlled trial of psychoanalytic psychotherapy or cognitive-behavioural therapy for bulimia nervosa. *Am J Psychiatry* 171, 109-116

- Power KG, Simpson RJ, Swanson V, Wallace LA (1990): Controlled comparison of pharmacological and psychological treatment of generalized anxiety disorder in primary care. *Br J Gen Pract* 40, 289-294
- Powers MB, Medina JL, Burns S, Kauffman BY, Monfils M, Asmundson GJ, Diamond A, McIntyre C, Smits JA (2015): Exercise Augmentation of Exposure Therapy for PTSD: Rationale and Pilot Efficacy Data. *Cogn Behav Ther* 44, 314-327
- Powers PS, Klabunde M, Kaye W (2012): Double-blind placebo-controlled trial of quetiapine in anorexia nervosa. *Eur Eat Disord Rev* 20, 331-334
- Prasko J, Paskova B, Zalesky R, Novak T, Kopecek M, Bares M, Horacek J (2006): The effect of repetitive transcranial magnetic stimulation (rTMS) on symptoms in obsessive compulsive disorder. A randomized, double blind, sham controlled study. *Neuro Endocrinol Lett* 27, 327-332
- Price M, Anderson PL (2011): The impact of cognitive behavioural therapy on post event processing among those with social anxiety disorder. *Behav Res Ther* 49, 132-137
- Price M, Tone EB, Anderson PL (2011): Vigilant and avoidant attention biases as predictors of response to cognitive behavioural therapy for social phobia. *Depress Anxiety* 28, 349-353
- Prien RF, Kupfer DJ, Mansky PA, Small JG, Tuason VB, Voss CB, Johnson WE (1984): Drug therapy in the prevention of recurrences in unipolar and bipolar affective disorders. Report of the NIMH Collaborative Study Group comparing lithium carbonate, imipramine, and a lithium carbonate-imipramine combination. *Arch Gen Psychiatry* 41, 1096-1104
- Puhl RM, White MA, Paris M, Anez LM, Silva MA, Grilo CM (2011): Negative weight-based attitudes in treatment-seeking obese monolingual Hispanic patients with and without binge eating disorder. *Compr Psychiatry* 52, 737-743
- Quinn JF, Raman R, Thomas RG, Yurko-Mauro K, Nelson EB, Van Dyck C, Galvin JE, Emond J, Jack CR, Jr., Weiner M, et al. (2010): Docosahexaenoic acid supplementation and cognitive decline in Alzheimer disease: a randomized trial. *JAMA* 304, 1903-1911
- Quiroz JA, Yatham LN, Palumbo JM, Karcher K, Kushner S, Kusumakar V (2010): Risperidone long-acting injectable monotherapy in the maintenance treatment of bipolar I disorder. *Biol Psychiatry* 68, 156-162
- Quitkin FM, Kane J, Rifkin A, Ramos-Lorenzi JR, Nayak DV (1981): Prophylactic lithium carbonate with and without imipramine for bipolar I patients. A double-blind study. *Arch Gen Psychiatry* 38, 902-907
- Raman R, Thomas RG, Weiner MW, Jack CR, Ernstrom K, Aisen PS, Tariot PN, Quinn JF (2009): MRI substudy participation in Alzheimer disease (AD) clinical trials: baseline comparability of a substudy sample to entire study population. *Alzheimer Dis Assoc Disord* 23, 333-336

- Rapaport MH, Skarky SB, Katzelnick DJ, Dewester JN, Harper JM, McCrary KE (2006): Time to response in generalized anxiety disorder in a naturalistic setting: combination therapy with alprazolam orally disintegrating tablets and serotonin reuptake inhibitors compared to serotonin reuptake inhibitors alone. *Psychiatry (Edgmont)* 3, 50-59
- Rapaport MH, Nierenberg AA, Howland R, Dording C, Schettler PJ, Mischoulon D (2011): The treatment of minor depression with St. John's Wort or citalopram: failure to show benefit over placebo. *J Psychiatr Res* 45, 931-941
- Rapaport MH, Nierenberg AA, Schettler PJ, Kinkead B, Cardoos A, Walker R, Mischoulon D (2016): Inflammation as a predictive biomarker for response to omega-3 fatty acids in major depressive disorder: a proof-of-concept study. *Mol Psychiatry* 21, 71-79
- Ratti E, Carpenter DJ, Zamuner S, Fernandes S, Squassante L, Danker-Hopfe H, Archer G, Robertson J, Alexander R, Trist DG, et al. (2013): Efficacy of vestipitant, a neurokinin-1 receptor antagonist, in primary insomnia. *Sleep* 36, 1823-1830
- Ravindran AV, Cameron C, Bhatla R, Ravindran LN, da Silva TL (2013): Paroxetine in the treatment of dysthymic disorder without co-morbidities: A double-blind, placebo-controlled, flexible-dose study. *Asian J Psychiatr* 6, 157-161
- Ready DJ, Gerardi RJ, Backscheider AG, Mascaro N, Rothbaum BO (2010): Comparing virtual reality exposure therapy to present-centered therapy with 11 U.S. Vietnam veterans with PTSD. *Cyberpsychol Behav Soc Netw* 13, 49-54
- Reich DB, Zanarini MC, Bieri KA (2009): A preliminary study of lamotrigine in the treatment of affective instability in borderline personality disorder. *Int Clin Psychopharmacol* 24, 270-275
- Reist C, Duffy JG, Fujimoto K, Cahill L (2001): beta-Adrenergic blockade and emotional memory in PTSD. *Int J Neuropsychopharmacol* 4, 377-383
- Resick PA, Nishith P, Weaver TL, Astin MC, Feuer CA (2002): A comparison of cognitive-processing therapy with prolonged exposure and a waiting condition for the treatment of chronic posttraumatic stress disorder in female rape victims. *J Consult Clin Psychol* 70, 867-879
- Ribeiro L, Busnello JV, Kauer-Sant'Anna M, Madruga M, Quevedo J, Busnello EA, Kapczinski F (2001): Mirtazapine versus fluoxetine in the treatment of panic disorder. *Braz J Med Biol Res* 34, 1303-1307
- Richards J, Klein B, Carlbring P (2003): Internet-based treatment for panic disorder. *Cogn Behav Ther* 32, 125-135
- Rickels K, Pollack MH, Feltner DE, Lydiard RB, Zimbroff DL, Bielski RJ, Tobias K, Brock JD, Zornberg GL, Pande AC (2005): Pregabalin for treatment of generalized anxiety disorder: a 4-week, multicenter, double-blind, placebo-controlled trial of pregabalin and alprazolam. *Arch Gen Psychiatry* 62, 1022-1030

- Rickels K, Etemad B, Khalid-Khan S, Lohoff FW, Rynn MA, Gallop RJ (2010): Time to relapse after 6 and 12 months' treatment of generalized anxiety disorder with venlafaxine extended release. *Arch Gen Psychiatry* 67, 1274-1281
- Riemann D, Voderholzer U, Cohrs S, Rodenbeck A, Hajak G, Ruther E, Wiegand MH, Laakmann G, Baghai T, Fischer W, et al. (2002): Trimipramine in primary insomnia: results of a polysomnographic double-blind controlled study. *Pharmacopsychiatry* 35, 165-174
- Rienecke RD, Accurso EC, Lock J, Le Grange D (2016): Expressed Emotion, Family Functioning, and Treatment Outcome for Adolescents with Anorexia Nervosa. *Eur Eat Disord Rev* 24, 43-51
- Rinne T, van den Brink W, Wouters L, van Dyck R (2002): SSRI treatment of borderline personality disorder: a randomized, placebo-controlled clinical trial for female patients with borderline personality disorder. *Am J Psychiatry* 159, 2048-2054
- Roach KE, Tappen RM, Kirk-Sanchez N, Williams CL, Loewenstein D (2011): A randomized controlled trial of an activity specific exercise program for individuals with Alzheimer disease in long-term care settings. *J Geriatr Phys Ther* 34, 50-56
- Robinson A, Safer DL, Austin JL, Etkin A (2015): Does implicit emotion regulation in binge eating disorder matter? *Eat Behav* 18, 186-191
- Robinson AH, Safer DL (2012): Moderators of dialectical behaviour therapy for binge eating disorder: results from a randomized controlled trial. *Int J Eat Disord* 45, 597-602
- Robinson E, Titov N, Andrews G, McIntyre K, Schwencke G, Solley K (2010): Internet treatment for generalized anxiety disorder: a randomized controlled trial comparing clinician vs. technician assistance. *PLoS One* 5, e10942
- Robinson PH, Checkley SA, Russell GF (1985): Suppression of eating by fenfluramine in patients with bulimia nervosa. *Br J Psychiatry* 146, 169-176
- Rodriguez CI, Kegeles LS, Levinson A, Feng T, Marcus SM, Vermes D, Flood P, Simpson HB (2013): Randomized controlled crossover trial of ketamine in obsessive-compulsive disorder: proof-of-concept. *Neuropsychopharmacology* 38, 2475-2483
- Roehrs TA, Randall S, Harris E, Maan R, Roth T (2011): MSLT in primary insomnia: stability and relation to nocturnal sleep. *Sleep* 34, 1647-1652
- Roemer L, Orsillo SM, Salters-Pedneault K (2008): Efficacy of an acceptance-based behaviour therapy for generalized anxiety disorder: evaluation in a randomized controlled trial. *J Consult Clin Psychol* 76, 1083-1089
- Roman GC, Salloway S, Black SE, Royall DR, Decarli C, Weiner MW, Moline M, Kumar D, Schindler R, Posner H (2010): Randomized, placebo-controlled, clinical trial of donepezil in vascular dementia: differential effects by hippocampal size. *Stroke* 41, 1213-1221

- Rose GL, Skelly JM, Badger GJ, Ferraro TA, Helzer JE (2015): Efficacy of automated telephone continuing care following outpatient therapy for alcohol dependence. *Addict Behav* 41, 223-231
- Rosenberg R, Seiden DJ, Hull SG, Erman M, Schwartz H, Anderson C, Prosser W, Shanahan W, Sanchez M, Chuang E, et al. (2008): APD125, a selective serotonin 5-HT(2A) receptor inverse agonist, significantly improves sleep maintenance in primary insomnia. *Sleep* 31, 1663-1671
- Rosling A, Salonen Ros H, Swenne I (2016): One-year outcome and incidence of anorexia nervosa and restrictive eating disorders among adolescent girls treated as out-patients in a family-based setting. *Ups J Med Sci* 121, 50-59
- Roth T, Soubrane C, Titeux L, Walsh JK, Zoladul Study G (2006): Efficacy and safety of zolpidem-MR: a double-blind, placebo-controlled study in adults with primary insomnia. *Sleep Med* 7, 397-406
- Roth T, Rogowski R, Hull S, Schwartz H, Koshorek G, Corser B, Seiden D, Lankford A (2007): Efficacy and safety of doxepin 1 mg, 3 mg, and 6 mg in adults with primary insomnia. *Sleep* 30, 1555-1561
- Roth T, Lines C, Vandormael K, Ceesay P, Anderson D, Snively D (2010): Effect of gaboxadol on patient-reported measures of sleep and waking function in patients with Primary Insomnia: results from two randomized, controlled, 3-month studies. *J Clin Sleep Med* 6, 30-39
- Rothbaum BO (1997): A controlled study of eye movement desensitization and reprocessing in the treatment of posttraumatic stress disorder sexual assault victims. *Bull Menninger Clin* 61, 317-334
- Roy-Byrne PP, Craske MG, Stein MB, Sullivan G, Bystritsky A, Katon W, Golinelli D, Sherbourne CD (2005): A randomized effectiveness trial of cognitive-behavioural therapy and medication for primary care panic disorder. *Arch Gen Psychiatry* 62, 290-298
- Rubright J, Sankar P, Casarett DJ, Gur R, Xie SX, Karlawish J (2010): A memory and organizational aid improves Alzheimer disease research consent capacity: results of a randomized, controlled trial. *Am J Geriatr Psychiatry* 18, 1124-1132
- Rufer M, Hand I, Alsleben H, Braatz A, Ortmann J, Katenkamp B, Fricke S, Peter H (2005): Long-term course and outcome of obsessive-compulsive patients after cognitive-behavioural therapy in combination with either fluvoxamine or placebo: a 7-year follow-up of a randomized double-blind trial. *Eur Arch Psychiatry Clin Neurosci* 255, 121-128
- Ruggiero GM, Laini V, Mauri MC, Ferrari VM, Clemente A, Lugo F, Mantero M, Redaelli G, Zappulli D, Cavagnini F (2001): A single blind comparison of amisulpride, fluoxetine and clomipramine in the treatment of restricting anorectics. *Prog Neuropsychopharmacol Biol Psychiatry* 25, 1049-1059

- Rynn M, Russell J, Erickson J, Detke MJ, Ball S, Dinkel J, Rickels K, Raskin J (2008): Efficacy and safety of duloxetine in the treatment of generalized anxiety disorder: a flexible-dose, progressive-titration, placebo-controlled trial. *Depress Anxiety* 25, 182-189
- Sabbagh MN, Agro A, Bell J, Aisen PS, Schweizer E, Galasko D (2011): PF-04494700, an oral inhibitor of receptor for advanced glycation end products (RAGE), in Alzheimer disease. *Alzheimer Dis Assoc Disord* 25, 206-212
- Sabine EJ, Yonace A, Farrington AJ, Barratt KH, Wakeling A (1983): Bulimia nervosa: a placebo controlled double-blind therapeutic trial of mianserin. *Br J Clin Pharmacol* 15 (2), 195S-202S
- Sachs G, Sanchez R, Marcus R, Stock E, McQuade R, Carson W, Abou-Gharbia N, Impellizzeri C, Kaplita S, Rollin L, et al. (2006): Aripiprazole in the treatment of acute manic or mixed episodes in patients with bipolar I disorder: a 3-week placebo-controlled study. *J Psychopharmacol* 20, 536-546
- Sachs GS, Greenberg WM, Starace A, Lu K, Ruth A, Laszlovszky I, Nemeth G, Durgam S (2015): Cariprazine in the treatment of acute mania in bipolar I disorder: a double-blind, placebo-controlled, phase III trial. *J Affect Disord* 174, 296-302
- Safer DL, Telch CF, Agras WS (2001): Dialectical behaviour therapy for bulimia nervosa. *Am J Psychiatry* 158, 632-634
- Safer DL, Robinson AH, Jo B (2010): Outcome from a randomized controlled trial of group therapy for binge eating disorder: comparing dialectical behaviour therapy adapted for binge eating to an active comparison group therapy. *Behav Ther* 41, 106-120
- Sahraian A, Ghanizadeh A, Kazemeini F (2015): Vitamin C as an adjuvant for treating major depressive disorder and suicidal behaviour, a randomized placebo-controlled clinical trial. *Trials* 16, 94
- Sailer P, Wieber F, Propster K, Stoewer S, Nischk D, Volk F, Odenwald M (2015): A brief intervention to improve exercising in patients with schizophrenia: a controlled pilot study with mental contrasting and implementation intentions (MCII). *BMC Psychiatry* 15, 211
- Salzman C, Wolfson AN, Schatzberg A, Looper J, Henke R, Albanese M, Schwartz J, Miyawaki E (1995): Effect of fluoxetine on anger in symptomatic volunteers with borderline personality disorder. *J Clin Psychopharmacol* 15, 23-29
- Sambunaris A, Bose A, Gommoll CP, Chen C, Greenberg WM, Sheehan DV (2014): A phase III, double-blind, placebo-controlled, flexible-dose study of levomilnacipran extended-release in patients with major depressive disorder. *J Clin Psychopharmacol* 34, 47-56
- Sandmann J, Lorch B, Bandelow B, Hartter S, Winter P, Hiemke C, Benkert O (1998): Fluvoxamine or placebo in the treatment of panic disorder and relationship to blood concentrations of fluvoxamine. *Pharmacopsychiatry* 31, 117-121

- Sano M, Bell KL, Galasko D, Galvin JE, Thomas RG, van Dyck CH, Aisen PS (2011a): A randomized, double-blind, placebo-controlled trial of simvastatin to treat Alzheimer disease. *Neurology* 77, 556-563
- Sano M, Raman R, Emond J, Thomas RG, Petersen R, Schneider LS, Aisen PS (2011b): Adding delayed recall to the Alzheimer Disease Assessment Scale is useful in studies of mild cognitive impairment but not Alzheimer disease. *Alzheimer Dis Assoc Disord* 25, 122-127
- Sarris J, Oliver G, Camfield DA, Dean OM, Dowling N, Smith DJ, Murphy J, Menon R, Berk M, Blair-West S, et al. (2015): N-Acetyl Cysteine (NAC) in the Treatment of Obsessive-Compulsive Disorder: A 16-Week, Double-Blind, Randomized, Placebo-Controlled Study. *CNS Drugs* 29, 801-809
- Sattel H, Lahmann C, Gundel H, Guthrie E, Kruse J, Noll-Hussong M, Ohmann C, Ronel J, Sack M, Sauer N, et al. (2012): Brief psychodynamic interpersonal psychotherapy for patients with multisomatoform disorder: randomized controlled trial. *Br J Psychiatry* 200, 60-67
- Sauer SE, Baer RA (2012): Ruminative and mindful self-focused attention in borderline personality disorder. *Personal Disord* 3, 433-441
- Savitz AJ, Xu H, Gopal S, Nuamah I, Ravenstijn P, Janik A, Schotte A, Hough D, Fleischhacker WW (2016): Efficacy and Safety of Paliperidone Palmitate 3-Month Formulation for Patients with Schizophrenia: A Randomized, Multicenter, Double-Blind, Noninferiority Study. *Int J Neuropsychopharmacol* 19(7), pyw018
- Scarna A, Gijsman HJ, McTavish SF, Harmer CJ, Cowen PJ, Goodwin GM (2003): Effects of a branched-chain amino acid drink in mania. *Br J Psychiatry* 182, 210-213
- Schacht JP, Randall PK, Waid LR, Baros AM, Latham PK, Wright TM, Myrick H, Anton RF (2011): Neurocognitive performance, alcohol withdrawal, and effects of a combination of flumazenil and gabapentin in alcohol dependence. *Alcohol Clin Exp Res* 35, 2030-2038
- Schaefer R, Kaufmann C, Wild B, Schellberg D, Boelter R, Faber R, Szecsenyi J, Sauer N, Guthrie E, Herzog W (2013): Specific collaborative group intervention for patients with medically unexplained symptoms in general practice: a cluster randomized controlled trial. *Psychother Psychosom* 82, 106-119
- Scharf MB, Black J, Hull S, Landin R, Farber R (2007): Long-term nightly treatment with indiplon in adults with primary insomnia: results of a double-blind, placebo-controlled, 3-month study. *Sleep* 30, 743-752
- Schmahl C, Kleindienst N, Limberger M, Ludascher P, Mauchnik J, Deibler P, Brunen S, Hiemke C, Lieb K, Herpertz S, et al. (2012): Evaluation of naltrexone for dissociative symptoms in borderline personality disorder. *Int Clin Psychopharmacol* 27, 61-68

- Schmidt NB, Woolaway-Bickel K, Trakowski J, Santiago H, Storey J, Koselka M, Cook J (2000): Dismantling cognitive-behavioural treatment for panic disorder: questioning the utility of breathing retraining. *J Consult Clin Psychol* 68, 417-424
- Schmidt U, Landau S, Pombo-Carril MG, Bara-Carril N, Reid Y, Murray K, Treasure J, Katzman M (2006): Does personalized feedback improve the outcome of cognitive-behavioural guided self-care in bulimia nervosa? A preliminary randomized controlled trial. *Br J Clin Psychol* 45, 111-121
- Schmidt U, Andiappan M, Grover M, Robinson S, Perkins S, Dugmore O, Treasure J, Landau S, Eisler I, Williams C (2008): Randomized controlled trial of CD-ROM-based cognitive-behavioural self-care for bulimia nervosa. *Br J Psychiatry* 193, 493-500
- Schmidt U, Oldershaw A, Jichi F, Sternheim L, Startup H, McIntosh V, Jordan J, Tchanturia K, Wolff G, Rooney M, et al. (2012): Out-patient psychological therapies for adults with anorexia nervosa: randomized controlled trial. *Br J Psychiatry* 201, 392-399
- Schneier FR, Campeas R, Carcamo J, Glass A, Lewis-Fernandez R, Neria Y, Sanchez-Lacay A, Vermes D, Wall MM (2015): Combined Mirtazapine and Ssri Treatment of Ptsd: A Placebo-Controlled Trial. *Depress Anxiety* 32, 570-579
- Schnurr PP, Friedman MJ, Foy DW, Shea MT, Hsieh FY, Lavori PW, Glynn SM, Wattenberg M, Bernardy NC (2003): Randomized trial of trauma-focused group therapy for posttraumatic stress disorder: results from a department of veterans affairs cooperative study. *Arch Gen Psychiatry* 60, 481-489
- Schnurr PP, Friedman MJ, Oxman TE, Dietrich AJ, Smith MW, Shiner B, Forshay E, Gui J, Thurston V (2013): RESPECT-PTSD: re-engineering systems for the primary care treatment of PTSD, a randomized controlled trial. *J Gen Intern Med* 28, 32-40
- Schulz SC, Zanarini MC, Bateman A, Bohus M, Detke HC, Trzaskoma Q, Tanaka Y, Lin D, Deberdt W, Corya S (2008): Olanzapine for the treatment of borderline personality disorder: variable dose 12-week randomized double-blind placebo-controlled study. *Br J Psychiatry* 193, 485-492
- Schutzmann K, Schutzmann M, Eckert J (2010): [The efficacy of outpatient client-centered psychotherapy for bulimia nervosa: results of a randomized controlled trial]. *Psychother Psychosom Med Psychol* 60, 52-63
- Schweizer E, Fox I, Case G, Rickels K (1988): Lorazepam vs. alprazolam in the treatment of panic disorder. *Psychopharmacol Bull* 24, 224-227
- Schweizer E, Patterson W, Rickels K, Rosenthal M (1993): Double-blind, placebo-controlled study of a once-a-day, sustained-release preparation of alprazolam for the treatment of panic disorder. *Am J Psychiatry* 150, 1210-1215
- Segal J, Berk M, Brook S (1998): Risperidone compared with both lithium and haloperidol in mania: a double-blind randomized controlled trial. *Clin Neuropharmacol* 21, 176-180

- Sekhar S, Kalra B, Mendhekar DN, Tekur U (2010): Efficacy of sodium valproate and haloperidol in the management of acute mania: a randomized open-label comparative study. *J Clin Pharmacol* 50, 688-692
- Shachar-Malach T, Cooper Kazaz R, Constantini N, Lifschytz T, Lerner B (2015): Effectiveness of Aerobic Exercise as an Augmentation Therapy for Inpatients with Major Depressive Disorder: A Preliminary Randomized Controlled Trial. *Isr J Psychiatry Relat Sci* 52, 65-70
- Shallcross AJ, Gross JJ, Visvanathan PD, Kumar N, Palfrey A, Ford BQ, Dimidjian S, Shirk S, Holm-Denoma J, Goode KM, et al. (2015): Relapse prevention in major depressive disorder: Mindfulness-based cognitive therapy versus an active control condition. *J Consult Clin Psychol* 83, 964-975
- Shams Alizadeh N, Maroufi A, Nasseri K, Sadeghi Najafabadi SH, Mousavi Taghiabad A, Gharibi F, Esfandiari GR (2015): Antidepressant Effect of Combined Ketamine and Electroconvulsive Therapy on Patients With Major Depressive Disorder: A Randomized Trial. *Iran J Psychiatry Behav Sci* 9, e1578
- Sharp DM, Power KG, Simpson RJ, Swanson V, Anstee JA (1997): Global measures of outcome in a controlled comparison of pharmacological and psychological treatment of panic disorder and agoraphobia in primary care. *Br J Gen Pract* 47, 150-155
- Sharp DM, Power KG, Swanson V (2000): Reducing therapist contact in cognitive behaviour therapy for panic disorder and agoraphobia in primary care: global measures of outcome in a randomized controlled trial. *Br J Gen Pract* 50, 963-968
- Sheehan DV, Raj AB, Harnett-Sheehan K, Soto S, Knapp E (1993): The relative efficacy of high-dose buspirone and alprazolam in the treatment of panic disorder: a double-blind placebo-controlled study. *Acta Psychiatr Scand* 88, 1-11
- Sheehan DV, Burnham DB, Iyengar MK, Perera P, Paxil CRPDSG (2005): Efficacy and tolerability of controlled-release paroxetine in the treatment of panic disorder. *J Clin Psychiatry* 66, 34-40
- Sheehan DV, Mancini M, Wang J, Berggren L, Cao H, Duenas HJ, Yue L (2016): Assessment of functional outcomes by Sheehan Disability Scale in patients with major depressive disorder treated with duloxetine versus selective serotonin reuptake inhibitors. *Hum Psychopharmacol* 31, 53-63
- Shelton RC, Davidson J, Yonkers KA, Koran L, Thase ME, Pearlstein T, Halbreich U (1997): The undertreatment of dysthymia. *J Clin Psychiatry* 58, 59-65
- Sherman KJ, Ludman EJ, Cook AJ, Hawkes RJ, Roy-Byrne PP, Bentley S, Brooks MZ, Cherkin DC (2010): Effectiveness of therapeutic massage for generalized anxiety disorder: a randomized controlled trial. *Depress Anxiety* 27, 441-450
- Shi GX, Li QQ, Yang BF, Liu Y, Guan LP, Wu MM, Wang LP, Liu CZ (2015): Acupuncture for Vascular Dementia: A Pragmatic Randomized Clinical Trial. *ScientificWorldJournal* 2015, 161439

- Shingleton RM, Thompson-Brenner H, Thompson DR, Pratt EM, Franko DL (2015): Gender differences in clinical trials of binge eating disorder: An analysis of aggregated data. *J Consult Clin Psychol* 83, 382-386
- Shiovitz T, Greenberg WM, Chen C, Forero G, Gommoll CP (2014): A Randomized, Double-blind, Placebo-controlled Trial of the Efficacy and Safety of Levomilnacipran ER 40-120mg/day for Prevention of Relapse in Patients with Major Depressive Disorder. *Innov Clin Neurosci* 11, 10-22
- Silva BA, Cassilhas RC, Attux C, Cordeiro Q, Gadelha AL, Telles BA, Bressan RA, Ferreira FN, Rodstein PH, Daltio CS, et al. (2015): A 20-week program of resistance or concurrent exercise improves symptoms of schizophrenia: results of a blind, randomized controlled trial. *Rev Bras Psiquiatr* 37, 271-279
- Silverstein SM, Roche MW, Khan Z, Carson SJ, Malinovsky I, Newbill WA, Menditto AA, Wilkniss SM (2014): Enhancing and Promoting Recovery In Attentionally Impaired People Diagnosed With Schizophrenia: Results From A Randomized Controlled Trial Of Attention Shaping In A Partial Hospital Program. *Am J Psychiatr Rehabil* 17, 272-305
- Simon GE, Rutter CM (2008): Accuracy of recall for mania symptoms using a three month timeline follow-back interview. *J Affect Disord* 107, 271-274
- Simon GE, Ludman EJ, Unutzer J, Bauer MS, Operskalski B, Rutter C (2005): Randomized trial of a population-based care program for people with bipolar disorder. *Psychol Med* 35, 13-24
- Simon NM, Otto MW, Worthington JJ, Hoge EA, Thompson EH, Lebeau RT, Moshier SJ, Zalta AK, Pollack MH (2009): Next-step strategies for panic disorder refractory to initial pharmacotherapy: a 3-phase randomized clinical trial. *J Clin Psychiatry* 70, 1563-1570
- Simpson EB, Yen S, Costello E, Rosen K, Begin A, Pistorello J, Pearlstein T (2004a): Combined dialectical behaviour therapy and fluoxetine in the treatment of borderline personality disorder. *J Clin Psychiatry* 65, 379-385
- Simpson HB, Liebowitz MR, Foa EB, Kozak MJ, Schmidt AB, Rowan V, Petkova E, Kjernisted K, Huppert JD, Franklin ME, et al. (2004b): Post-treatment effects of exposure therapy and clomipramine in obsessive-compulsive disorder. *Depress Anxiety* 19, 225-233
- Simpson HB, Foa EB, Liebowitz MR, Ledley DR, Huppert JD, Cahill S, Vermes D, Schmidt AB, Hembree E, Franklin M, et al. (2008): A randomized, controlled trial of cognitive-behavioural therapy for augmenting pharmacotherapy in obsessive-compulsive disorder. *Am J Psychiatry* 165, 621-630
- Simpson HB, Zuckoff AM, Maher MJ, Page JR, Franklin ME, Foa EB, Schmidt AB, Wang Y (2010): Challenges using motivational interviewing as an adjunct to exposure therapy for obsessive-compulsive disorder. *Behav Res Ther* 48, 941-948

- Simpson HB, Foa EB, Liebowitz MR, Huppert JD, Cahill S, Maher MJ, McLean CP, Bender J, Jr., Marcus SM, Williams MT, et al. (2013): Cognitive-behavioural therapy vs risperidone for augmenting serotonin reuptake inhibitors in obsessive-compulsive disorder: a randomized clinical trial. *JAMA Psychiatry* 70, 1190-1199
- Smith RC, Gardiner JC, Luo Z, Schooley S, Lamerato L, Rost K (2009): Primary care physicians treat somatization. *J Gen Intern Med* 24, 829-832
- Smitka K, Papezova H, Vondra K, Hill M, Hainer V, Nedvidkova J (2011): A higher response of plasma neuropeptide Y, growth hormone, leptin levels and extracellular glycerol levels in subcutaneous abdominal adipose tissue to Acipimox during exercise in patients with bulimia nervosa: single-blind, randomized, microdialysis study. *Nutr Metab (Lond)* 8, 81
- Smits JA, Rosenfield D, Otto MW, Marques L, Davis ML, Meuret AE, Simon NM, Pollack MH, Hofmann SG (2013): D-cycloserine enhancement of exposure therapy for social anxiety disorder depends on the success of exposure sessions. *J Psychiatr Res* 47, 1455-1461
- Soler J, Pascual JC, Campins J, Barrachina J, Puigdemont D, Alvarez E, Perez V (2005): Double-blind, placebo-controlled study of dialectical behaviour therapy plus olanzapine for borderline personality disorder. *Am J Psychiatry* 162, 1221-1224
- Soler J, Elices M, Pascual JC, Martin-Blanco A, Feliu-Soler A, Carmona C, Portella MJ (2016): Effects of mindfulness training on different components of impulsivity in borderline personality disorder: results from a pilot randomized study. *Borderline Personal Disord Emot Dysregul* 3, 1
- Soloff PH, George A, Nathan S, Schulz PM, Cornelius JR, Herring J, Perel JM (1989): Amitriptyline versus haloperidol in borderlines: final outcomes and predictors of response. *J Clin Psychopharmacol* 9, 238-246
- Soloff PH, Cornelius J, George A, Nathan S, Perel JM, Ulrich RF (1993): Efficacy of phenelzine and haloperidol in borderline personality disorder. *Arch Gen Psychiatry* 50, 377-385
- Soyka M, Koller G, Schmidt P, Lesch OM, Leweke M, Fehr C, Gann H, Mann KF, Investigators AS (2008): Cannabinoid receptor 1 blocker rimonabant (SR 141716) for treatment of alcohol dependence: results from a placebo-controlled, double-blind trial. *J Clin Psychopharmacol* 28, 317-324
- Speckens AE, van Hemert AM, Spinhoven P, Hawton KE, Bolk JH, Rooijmans HG (1995): Cognitive behavioural therapy for medically unexplained physical symptoms: a randomized controlled trial. *BMJ* 311, 1328-1332
- Stacher G, Kiss A, Wiesnagrotzki S, Bergmann H, Hobart J, Schneider C (1986): Oesophageal and gastric motility disorders in patients categorised as having primary anorexia nervosa. *Gut* 27, 1120-1126

- Stacher G, Bergmann H, Granser-Vacariu GV, Wiesnagrotzki S, Wenzelabatzi TA, Gaupmann G, Kugi A, Steinringer H, Schneider C, Hobart J (1991): Lack of systematic effects of the 5-hydroxytryptamine 3 receptor antagonist ICS 205-930 on gastric emptying and antral motor activity in patients with primary anorexia nervosa. *Br J Clin Pharmacol* 32, 685-689
- Staekenborg SS, van der Flier WM, van Straaten EC, Lane R, Barkhof F, Scheltens P (2008): Neurological signs in relation to type of cerebrovascular disease in vascular dementia. *Stroke* 39, 317-322
- Stahl SM, Gergel I, Li D (2003): Escitalopram in the treatment of panic disorder: a randomized, double-blind, placebo-controlled trial. *J Clin Psychiatry* 64, 1322-1327
- Stange JP, Sylvia LG, Magalhaes PV, Frank E, Otto MW, Miklowitz DJ, Berk M, Nierenberg AA, Deckersbach T (2013): Extreme attributions predict transition from depression to mania or hypomania in bipolar disorder. *J Psychiatr Res* 47, 1329-1336
- Stangier U, Schramm E, Heidenreich T, Berger M, Clark DM (2011): Cognitive therapy vs interpersonal psychotherapy in social anxiety disorder: a randomized controlled trial. *Arch Gen Psychiatry* 68, 692-700
- Stauffer VL, Sniadecki JL, Piezer KW, Gatz J, Kollack-Walker S, Hoffmann VP, Conley R, Durell T (2010): Impact of race on efficacy and safety during treatment with olanzapine in schizophrenia, schizophreniform or schizoaffective disorder. *BMC Psychiatry* 10, 89
- Stauffer VL, Baygani SK, Kinon BJ, Krikke-Workel JO (2014): A short-term, multicenter, placebo-controlled, randomized withdrawal study of a metabotropic glutamate 2/3 receptor agonist using an electronic patient-reported outcome device in patients with schizophrenia. *J Clin Psychopharmacol* 34, 552-558
- Stecker T, McHugo G, Xie H, Whyman K, Jones M (2014): RCT of a brief phone-based CBT intervention to improve PTSD treatment utilization by returning service members. *Psychiatr Serv* 65, 1232-1237
- Steele AL, Wade TD (2008): A randomized trial investigating guided self-help to reduce perfectionism and its impact on bulimia nervosa: a pilot study. *Behav Res Ther* 46, 1316-1323
- Steele AL, Bergin J, Wade TD (2011): Self-efficacy as a robust predictor of outcome in guided self-help treatment for broadly defined bulimia nervosa. *Int J Eat Disord* 44, 389-396
- Stein DJ, Versiani M, Hair T, Kumar R (2002): Efficacy of paroxetine for relapse prevention in social anxiety disorder: a 24-week study. *Arch Gen Psychiatry* 59, 1111-1118
- Stein DJ, Andersen EW, Tonnoir B, Fineberg N (2007): Escitalopram in obsessive-compulsive disorder: a randomized, placebo-controlled, paroxetine-referenced, fixed-dose, 24-week study. *Curr Med Res Opin* 23, 701-711

- Stein MB, Liebowitz MR, Lydiard RB, Pitts CD, Bushnell W, Gergel I (1998): Paroxetine treatment of generalized social phobia (social anxiety disorder): a randomized controlled trial. *JAMA* 280, 708-713
- Stein MB, Keshaviah A, Haddad SA, Van Ameringen M, Simon NM, Pollack MH, Smoller JW (2014): Influence of RGS2 on sertraline treatment for social anxiety disorder. *Neuropsychopharmacology* 39, 1340-1346
- Steinglass J, Sysko R, Schebendach J, Broft A, Strober M, Walsh BT (2007): The application of exposure therapy and D-cycloserine to the treatment of anorexia nervosa: a preliminary trial. *J Psychiatr Pract* 13, 238-245
- Steinglass JE, Albano AM, Simpson HB, Wang Y, Zou J, Attia E, Walsh BT (2014): Confronting fear using exposure and response prevention for anorexia nervosa: A randomized controlled pilot study. *Int J Eat Disord* 47, 174-180
- Stice E, Bohon C, Marti CN, Fischer K (2008): Subtyping women with bulimia nervosa along dietary and negative affect dimensions: further evidence of reliability and validity. *J Consult Clin Psychol* 76, 1022-1033
- Street JS, Clark WS, Gannon KS, Cummings JL, Bymaster FP, Tamura RN, Mitan SJ, Kadam DL, Sanger TM, Feldman PD, et al. (2000): Olanzapine treatment of psychotic and behavioural symptoms in patients with Alzheimer disease in nursing care facilities: a double-blind, randomized, placebo-controlled trial. The HGEU Study Group. *Arch Gen Psychiatry* 57, 968-976
- Strokosch GR, Friedman AJ, Wu SC, Kamin M (2006): Effects of an oral contraceptive (norgestimate/ethinyl estradiol) on bone mineral density in adolescent females with anorexia nervosa: a double-blind, placebo-controlled study. *J Adolesc Health* 39, 819-827
- Strzelecki D, Podgorski M, Kaluzynska O, Gawlik-Kotelnicka O, Stefanczyk L, Kotlicka-Antczak M, Gmitrowicz A, Grzelak P (2015): Supplementation of Antipsychotic Treatment with the Amino Acid Sarcosine Influences Proton Magnetic Resonance Spectroscopy Parameters in Left Frontal White Matter in Patients with Schizophrenia. *Nutrients* 7, 8767-8782
- Svatkova A, Mandl RC, Scheewe TW, Cahn W, Kahn RS, Hulshoff Pol HE (2015): Physical Exercise Keeps the Brain Connected: Biking Increases White Matter Integrity in Patients With Schizophrenia and Healthy Controls. *Schizophr Bull* 41, 869-878
- Swinson RP, Fergus KD, Cox BJ, Wickwire K (1995): Efficacy of telephone-administered behavioural therapy for panic disorder with agoraphobia. *Behav Res Ther* 33, 465-469
- Sylvia LG, Rabideau DJ, Nierenberg AA, Bowden CL, Friedman ES, Iosifescu DV, Thase ME, Ketter T, Greiter EA, Calabrese JR, et al. (2014a): The effect of personalized guideline-concordant treatment on quality of life and functional impairment in bipolar disorder. *J Affect Disord* 169, 144-148

- Sylvia LG, Reilly-Harrington NA, Leon AC, Kansky CI, Calabrese JR, Bowden CL, Ketter TA, Friedman ES, Iosifescu DV, Thase ME, et al. (2014b): Medication adherence in a comparative effectiveness trial for bipolar disorder. *Acta Psychiatr Scand* 129, 359-365
- Sysko R, Hildebrandt T, Wilson GT, Wilfley DE, Agras WS (2010a): Heterogeneity moderates treatment response among patients with binge eating disorder. *J Consult Clin Psychol* 78, 681-690
- Sysko R, Sha N, Wang Y, Duan N, Walsh BT (2010b): Early response to antidepressant treatment in bulimia nervosa. *Psychol Med* 40, 999-1005
- Szegedi A, Calabrese JR, Stet L, Mackle M, Zhao J, Panagides J, Apollo Study G (2012): Asenapine as adjunctive treatment for acute mania associated with bipolar disorder: results of a 12-week core study and 40-week extension. *J Clin Psychopharmacol* 32, 46-55
- Tandon R, Cucchiaro J, Phillips D, Hernandez D, Mao Y, Pikalov A, Loebel A (2016): A double-blind, placebo-controlled, randomized withdrawal study of lurasidone for the maintenance of efficacy in patients with schizophrenia. *J Psychopharmacol* 30, 69-77
- Tappen RM, Roach KE, Applegate EB, Stowell P (2000): Effect of a combined walking and conversation intervention on functional mobility of nursing home residents with Alzheimer disease. *Alzheimer Dis Assoc Disord* 14, 196-201
- Taylor S, Thordarson DS, Maxfield L, Fedoroff IC, Lovell K, Ogradniczuk J (2003): Comparative efficacy, speed, and adverse effects of three PTSD treatments: exposure therapy, EMDR, and relaxation training. *J Consult Clin Psychol* 71, 330-338
- Telch CF, Agras WS, Linehan MM (2001): Dialectical behaviour therapy for binge eating disorder. *J Consult Clin Psychol* 69, 1061-1065
- Telch MJ, Lucas JA, Schmidt NB, Hanna HH, LaNae Jaimez T, Lucas RA (1993): Group cognitive-behavioural treatment of panic disorder. *Behav Res Ther* 31, 279-287
- Tempesta E, Janiri L, Bignamini A, Chabac S, Potgieter A (2000): Acamprosate and relapse prevention in the treatment of alcohol dependence: a placebo-controlled study. *Alcohol Alcohol* 35, 202-209
- Thase ME, Clayton AH, Haight BR, Thompson AH, Modell JG, Johnston JA (2006): A double-blind comparison between bupropion XL and venlafaxine XR: sexual functioning, antidepressant efficacy, and tolerability. *J Clin Psychopharmacol* 26, 482-488
- Thiels C, Schmidt U, Treasure J, Garthe R, Troop N (1998): Guided self-change for bulimia nervosa incorporating use of a self-care manual. *Am J Psychiatry* 155, 947-953
- Thomas P, Vieta E, group Ss (2008): Amisulpride plus valproate vs haloperidol plus valproate in the treatment of acute mania of bipolar I patients: a multicenter, open-label, randomized, comparative trial. *Neuropsychiatr Dis Treat* 4, 675-686

- Thompson-Hollands J, Abramovitch A, Tompson MC, Barlow DH (2015): A randomized clinical trial of a brief family intervention to reduce accommodation in obsessive-compulsive disorder: a preliminary study. *Behav Ther* 46, 218-229
- Thyer BA (1999): Cognitive behavioural group therapy and phenelzine both effective in social phobia. *West J Med* 171, 240
- Tohen M, Goldberg JF, Gonzalez-Pinto Arrillaga AM, Azorin JM, Vieta E, Hardy-Bayle MC, Lawson WB, Emsley RA, Zhang F, Baker RW, et al. (2003): A 12-week, double-blind comparison of olanzapine vs haloperidol in the treatment of acute mania. *Arch Gen Psychiatry* 60, 1218-1226
- Tohen M, Sutton VK, Calabrese JR, Sachs GS, Bowden CL (2009): Maintenance of response following stabilization of mixed index episodes with olanzapine monotherapy in a randomized, double-blind, placebo-controlled study of bipolar 1 disorder. *J Affect Disord* 116, 43-50
- Tomasik J, Yolken RH, Bahn S, Dickerson FB (2015): Immunomodulatory Effects of Probiotic Supplementation in Schizophrenia Patients: A Randomized, Placebo-Controlled Trial. *Biomark Insights* 10, 47-54
- Treasure J, Schmidt U, Troop N, Tiller J, Todd G, Keilen M, Dodge E (1994): First step in managing bulimia nervosa: controlled trial of therapeutic manual. *BMJ* 308, 686-689
- Treasure J, Schmidt U, Troop N, Tiller J, Todd G, Turnbull S (1996): Sequential treatment for bulimia nervosa incorporating a self-care manual. *Br J Psychiatry* 168, 94-98
- Trivedi MH, Bandelow B, Demyttenaere K, Papakostas GI, Szamosi J, Earley W, Eriksson H (2013): Evaluation of the effects of extended release quetiapine fumarate monotherapy on sleep disturbance in patients with major depressive disorder: a pooled analysis of four randomized acute studies. *Int J Neuropsychopharmacol* 16, 1733-1744
- Trombetti A, Carrier E, Perroud A, Lang F, Herrmann FR, Rizzoli R (2016): Influence of a fermented protein-fortified dairy product on serum insulin-like growth factor-I in women with anorexia nervosa: A randomized controlled trial. *Clin Nutr* 35, 1032-1038
- Tsutsui S, Zolpidem Study G (2001): A double-blind comparative study of zolpidem versus zopiclone in the treatment of chronic primary insomnia. *J Int Med Res* 29, 163-177
- Tulbure BT, Szentagotai A, David O, Stefan S, Mansson KN, David D, Andersson G (2015): Internet-delivered cognitive-behavioural therapy for social anxiety disorder in Romania: a randomized controlled trial. *PLoS One* 10, e0123997
- Turkoz I, Fu DJ, Bossie CA, Alphas L (2015): The Direct and Indirect Effects of Paliperidone Extended-release on Depressive Symptoms in Schizoaffective Disorder: A Path Analysis. *Innov Clin Neurosci* 12, 10-17
- Turner RS, Thomas RG, Craft S, van Dyck CH, Mintzer J, Reynolds BA, Brewer JB, Rissman RA, Raman R, Aisen PS, et al. (2015): A randomized, double-blind, placebo-controlled trial of resveratrol for Alzheimer disease. *Neurology* 85, 1383-1391

- Twohig MP, Hayes SC, Plumb JC, Pruitt LD, Collins AB, Hazlett-Stevens H, Woidneck MR (2010): A randomized clinical trial of acceptance and commitment therapy versus progressive relaxation training for obsessive-compulsive disorder. *J Consult Clin Psychol* 78, 705-716
- Uhlenhuth EH, Matuzas W, Glass RM, Easton C (1989): Response of panic disorder to fixed doses of alprazolam or imipramine. *J Affect Disord* 17, 261-270
- Utzinger LM, Mitchell JE, Cao L, Crosby RD, Crow SJ, Wonderlich SA, Peterson CB (2015): Clinical utility of subtyping binge eating disorder by history of anorexia or bulimia nervosa in a treatment sample. *Int J Eat Disord* 48, 785-789
- Valenca AM, Nardi AE, Nascimento I, Mezzasalma MA, Lopes FL, Zin W (2000): Double-blind clonazepam vs placebo in panic disorder treatment. *Arq Neuropsiquiatr* 58, 1025-1029
- Valenca AM, Nardi AE, Nascimento I, Zin WA, Versiani M (2002): Carbon dioxide test as an additional clinical measure of treatment response in panic disorder. *Arq Neuropsiquiatr* 60, 358-361
- Valenca AM, Nardi AE, Mezzasalma MA, Nascimento I, Zin WA, Lopes FL, Versiani M (2003): Therapeutic response to benzodiazepine in panic disorder subtypes. *Sao Paulo Med J* 121, 77-80
- Vallejo J, Olivares J, Marcos T, Bulbena A, Menchon JM (1992): Clomipramine versus phenelzine in obsessive-compulsive disorder. A controlled clinical trial. *Br J Psychiatry* 161, 665-670
- van den Brink W, Sorensen P, Torup L, Mann K, Gual A, Group SS (2014): Long-term efficacy, tolerability and safety of nalmefene as-needed in patients with alcohol dependence: A 1-year, randomized controlled study. *J Psychopharmacol* 28, 733-744
- van der Voort TY, van Meijel B, Goossens PJ, Hoogendoorn AW, Draisma S, Beekman A, Kupka RW (2015): Collaborative care for patients with bipolar disorder: randomized controlled trial. *Br J Psychiatry* 206, 393-400
- van Dyck CH, Newhouse P, Falk WE, Mattes JA (2000): Extended-release physostigmine in Alzheimer disease: a multicenter, double-blind, 12-week study with dose enrichment. Physostigmine Study Group. *Arch Gen Psychiatry* 57, 157-164
- van Dyck R, Spinhoven P (1997): Does preference for type of treatment matter? A study of exposure in vivo with or without hypnosis in the treatment of panic disorder with agoraphobia. *Behav Modif* 21, 172-186
- van Horn DH, Rennert L, Lynch KG, McKay JR (2014): Social network correlates of participation in telephone continuing care for alcohol dependence. *Am J Addict* 23, 447-452

- van Oppen P, de Haan E, van Balkom AJ, Spinhoven P, Hoogduin K, van Dyck R (1995): Cognitive therapy and exposure in vivo in the treatment of obsessive compulsive disorder. *Behav Res Ther* 33, 379-390
- van Ravesteijn H, Lucassen P, Bor H, van Weel C, Speckens A (2013): Mindfulness-based cognitive therapy for patients with medically unexplained symptoms: a randomized controlled trial. *Psychother Psychosom* 82, 299-310
- Vandereycken W (1984): Neuroleptics in the short-term treatment of anorexia nervosa. A double-blind placebo-controlled study with sulphiride. *Br J Psychiatry* 144, 288-292
- Vieta E, Bourin M, Sanchez R, Marcus R, Stock E, McQuade R, Carson W, Abou-Gharbia N, Swanink R, Iwamoto T, et al. (2005): Effectiveness of aripiprazole v. haloperidol in acute bipolar mania: double-blind, randomized, comparative 12-week trial. *Br J Psychiatry* 187, 235-242
- Vieta E, Calabrese JR, Goikolea JM, Raines S, Macfadden W, Group BS (2007): Quetiapine monotherapy in the treatment of patients with bipolar I or II depression and a rapid-cycling disease course: a randomized, double-blind, placebo-controlled study. *Bipolar Disord* 9, 413-425
- Vieta E, Cruz N, Garcia-Campayo J, de Arce R, Manuel Crespo J, Valles V, Perez-Blanco J, Roca E, Manuel Olivares J, Morinigo A, et al. (2008): A double-blind, randomized, placebo-controlled prophylaxis trial of oxcarbazepine as adjunctive treatment to lithium in the long-term treatment of bipolar I and II disorder. *Int J Neuropsychopharmacol* 11, 445-452
- Vieta E, Pappadopulos E, Mandel FS, Lombardo I (2011): Impact of geographical and cultural factors on clinical trials in acute mania: lessons from a ziprasidone and haloperidol placebo-controlled study. *Int J Neuropsychopharmacol* 14, 1017-1027
- Vieta E, Montgomery S, Sulaiman AH, Cordoba R, Huberlant B, Martinez L, Schreiner A (2012): A randomized, double-blind, placebo-controlled trial to assess prevention of mood episodes with risperidone long-acting injectable in patients with bipolar I disorder. *Eur Neuropsychopharmacol* 22, 825-835
- Vittengl JR, Clark LA, Thase ME, Jarrett RB (2015): Predictors of longitudinal outcomes after unstable response to acute-phase cognitive therapy for major depressive disorder. *Psychotherapy (Chic)* 52, 268-277
- Volavka J, Neziroglu F, Yaryura-Tobias JA (1985): Clomipramine and imipramine in obsessive-compulsive disorder. *Psychiatry Res* 14, 85-93
- Volz HP, Moller HJ, Reimann I, Stoll KD (2000): Opipramol for the treatment of somatoform disorders results from a placebo-controlled trial. *Eur Neuropsychopharmacol* 10, 211-217
- Volz HP, Murck H, Kasper S, Moller HJ (2002): St John's wort extract (LI 160) in somatoform disorders: results of a placebo-controlled trial. *Psychopharmacology (Berl)* 164, 294-300

- von Wietersheim J, Muler-Bock V, Rauh S, Danner B, Chrenko K, Buhler G (2008): No effect of spironolactone on bulimia nervosa symptoms. *J Clin Psychopharmacol* 28, 258-260
- Voon V, Droux F, Morris L, Chabardes S, Bougerol T, David O, Krack P, Polosan M (2017): Decisional impulsivity and the associative-limbic subthalamic nucleus in obsessive-compulsive disorder: stimulation and connectivity. *Brain* 140, 442-456
- Wade AG, Ford I, Crawford G, McConnachie A, Nir T, Laudon M, Zisapel N (2010): Nightly treatment of primary insomnia with prolonged release melatonin for 6 months: a randomized placebo controlled trial on age and endogenous melatonin as predictors of efficacy and safety. *BMC Med* 8, 51
- Wagner G, Penelo E, Wanner C, Gwinner P, Trofaier ML, Imgart H, Waldherr K, Wober-Bingol C, Karwautz AF (2013): Internet-delivered cognitive-behavioural therapy v. conventional guided self-help for bulimia nervosa: long-term evaluation of a randomized controlled trial. *Br J Psychiatry* 202, 135-141
- Walsh BT, Wilson GT, Loeb KL, Devlin MJ, Pike KM, Roose SP, Fleiss J, Wateraux C (1997): Medication and psychotherapy in the treatment of bulimia nervosa. *Am J Psychiatry* 154, 523-531
- Walsh BT, Fairburn CG, Mickley D, Sysko R, Parides MK (2004): Treatment of bulimia nervosa in a primary care setting. *Am J Psychiatry* 161, 556-561
- Walsh BT, Kaplan AS, Attia E, Olmsted M, Parides M, Carter JC, Pike KM, Devlin MJ, Woodside B, Roberto CA, et al. (2006a): Fluoxetine after weight restoration in anorexia nervosa: a randomized controlled trial. *JAMA* 295, 2605-2612
- Walsh JK, Roth T, Randazzo A, Erman M, Jamieson A, Scharf M, Schweitzer PK, Ware JC (2000): Eight weeks of non-nightly use of zolpidem for primary insomnia. *Sleep* 23, 1087-1096
- Walsh JK, Perlis M, Rosenthal M, Krystal A, Jiang J, Roth T (2006b): Tiagabine increases slow-wave sleep in a dose-dependent fashion without affecting traditional efficacy measures in adults with primary insomnia. *J Clin Sleep Med* 2, 35-41
- Walsh JK, Krystal AD, Amato DA, Rubens R, Caron J, Wessel TC, Schaefer K, Roach J, Wallenstein G, Roth T (2007): Nightly treatment of primary insomnia with eszopiclone for six months: effect on sleep, quality of life, and work limitations. *Sleep* 30, 959-968
- Wang G, McIntyre A, Earley WR, Raines SR, Eriksson H (2014): A randomized, double-blind study of the efficacy and tolerability of extended-release quetiapine fumarate (quetiapine XR) monotherapy in patients with major depressive disorder. *Neuropsychiatr Dis Treat* 10, 201-216
- Wardle J, Hayward P, Higgitt A, Stabl M, Blizard R, Gray J (1994): Effects of concurrent diazepam treatment on the outcome of exposure therapy in agoraphobia. *Behav Res Ther* 32, 203-215

- Waxmonsky J, Kilbourne AM, Goodrich DE, Nord KM, Lai Z, Laird C, Clogston J, Kim HM, Miller C, Bauer MS (2014): Enhanced fidelity to treatment for bipolar disorder: results from a randomized controlled implementation trial. *Psychiatr Serv* 65, 81-90
- Weickert TW, Weinberg D, Lenroot R, Catts SV, Wells R, Vercammen A, O'Donnell M, Galletly C, Liu D, Balzan R, et al. (2015): Adjunctive raloxifene treatment improves attention and memory in men and women with schizophrenia. *Mol Psychiatry* 20, 685-694
- Weiden PJ, Manning R, Wolfgang CD, Ryan JM, Mancione L, Han G, Ahmed S, Mayo MG (2016): A Randomized Trial of Iloperidone for Prevention of Relapse in Schizophrenia: The REPRIEVE Study. *CNS Drugs* 30, 735-747
- Weisler RH, Kalali AH, Cutler AJ, Gazda TD, Ginsberg L (2008): Efficacy and Safety of Once- versus Twice-Daily Carbamazepine Extended-Release Capsules for the Treatment of Manic Symptoms in Patients with Bipolar I Disorder. *Psychiatry (Edgmont)* 5, 35-48
- White KS, Payne LA, Gorman JM, Shear MK, Woods SW, Saksa JR, Barlow DH (2013): Does maintenance CBT contribute to long-term treatment response of panic disorder with or without agoraphobia? A randomized controlled clinical trial. *J Consult Clin Psychol* 81, 47-57
- White MA, Grilo CM (2013): Bupropion for overweight women with binge-eating disorder: a randomized, double-blind, placebo-controlled trial. *J Clin Psychiatry* 74, 400-406
- Whittal ML, Thordarson DS, McLean PD (2005): Treatment of obsessive-compulsive disorder: cognitive behaviour therapy vs. exposure and response prevention. *Behav Res Ther* 43, 1559-1576
- Wiborg IM, Dahl AA (1996): Does brief dynamic psychotherapy reduce the relapse rate of panic disorder? *Arch Gen Psychiatry* 53, 689-694
- Wildes JE, Marcus MD, Bright AC, Dapelo MM, Psychol MC (2012): Emotion and eating disorder symptoms in patients with anorexia nervosa: an experimental study. *Int J Eat Disord* 45, 876-882
- Wilfley DE, Welch RR, Stein RI, Spurrell EB, Cohen LR, Saelens BE, Douchis JZ, Frank MA, Wiseman CV, Matt GE (2002): A randomized comparison of group cognitive-behavioural therapy and group interpersonal psychotherapy for the treatment of overweight individuals with binge-eating disorder. *Arch Gen Psychiatry* 59, 713-721
- Wilfley DE, Crow SJ, Hudson JI, Mitchell JE, Berkowitz RI, Blakesley V, Walsh BT, Sibutramine Binge Eating Disorder Research G (2008): Efficacy of sibutramine for the treatment of binge eating disorder: a randomized multicenter placebo-controlled double-blind study. *Am J Psychiatry* 165, 51-58
- Wilkinson D, Doody R, Helme R, Taubman K, Mintzer J, Kertesz A, Pratt RD, Donepezil 308 Study G (2003): Donepezil in vascular dementia: a randomized, placebo-controlled study. *Neurology* 61, 479-486

- Wilson GT, Wilfley DE, Agras WS, Bryson SW (2010): Psychological treatments of binge eating disorder. *Arch Gen Psychiatry* 67, 94-101
- Wingenfeld K, Kuehl LK, Janke K, Hinkelmann K, Dziobek I, Fleischer J, Otte C, Roepke S (2014): Enhanced emotional empathy after mineralocorticoid receptor stimulation in women with borderline personality disorder and healthy women. *Neuropsychopharmacology* 39, 1799-1804
- Woolley JD, Lam O, Chuang B, Ford JM, Mathalon DH, Vinogradov S (2015): Oxytocin administration selectively improves olfactory detection thresholds for lral in patients with schizophrenia. *Psychoneuroendocrinology* 53, 217-222
- Xu SS, Cai ZY, Qu ZW, Yang RM, Cai YL, Wang GQ, Su XQ, Zhong XS, Cheng RY, Xu WA, et al. (1999): Huperzine-A in capsules and tablets for treating patients with Alzheimer disease. *Zhongguo Yao Li Xue Bao* 20, 486-490
- Yatham LN, Fallu A, Binder CE (2007a): A 6-month randomized open-label comparison of continuation of oral atypical antipsychotic therapy or switch to long acting injectable risperidone in patients with bipolar disorder. *Acta Psychiatr Scand* (434), 50-56
- Yatham LN, Vieta E, Young AH, Moller HJ, Paulsson B, Vagero M (2007b): A double blind, randomized, placebo-controlled trial of quetiapine as an add-on therapy to lithium or divalproex for the treatment of bipolar mania. *Int Clin Psychopharmacol* 22, 212-220
- Yeung WF, Chung KF, Zhang SP, Yap TG, Law AC (2009): Electroacupuncture for primary insomnia: a randomized controlled trial. *Sleep* 32, 1039-1047
- Young AH, Oren DA, Lowy A, McQuade RD, Marcus RN, Carson WH, Spiller NH, Torbeyns AF, Sanchez R (2009): Aripiprazole monotherapy in acute mania: 12-week randomized placebo- and haloperidol-controlled study. *Br J Psychiatry* 194, 40-48
- Yu J, Zhang X, Liu C, Meng Y, Han J (2006): Effect of acupuncture treatment on vascular dementia. *Neurol Res* 28, 97-103
- Zalta AK, Gillihan SJ, Fisher AJ, Mintz J, McLean CP, Yehuda R, Foa EB (2014): Change in negative cognitions associated with PTSD predicts symptom reduction in prolonged exposure. *J Consult Clin Psychol* 82, 171-175
- Zanardi R, Smeraldi E (2006): A double-blind, randomized, controlled clinical trial of acetyl-L-carnitine vs. amisulpride in the treatment of dysthymia. *Eur Neuropsychopharmacol* 16, 281-287
- Zanarini MC, Frankenburg FR (2001): Olanzapine treatment of female borderline personality disorder patients: a double-blind, placebo-controlled pilot study. *J Clin Psychiatry* 62, 849-854
- Zanarini MC, Frankenburg FR (2003): omega-3 Fatty acid treatment of women with borderline personality disorder: a double-blind, placebo-controlled pilot study. *Am J Psychiatry* 160, 167-169

- Zanarini MC, Schulz SC, Detke HC, Tanaka Y, Zhao F, Lin D, Deberdt W, Kryzhanovskaya L, Corya S (2011): A dose comparison of olanzapine for the treatment of borderline personality disorder: a 12-week randomized, double-blind, placebo-controlled study. *J Clin Psychiatry* 72, 1353-1362
- Zang Y, Hunt N, Cox T (2013): A randomized controlled pilot study: the effectiveness of narrative exposure therapy with adult survivors of the Sichuan earthquake. *BMC Psychiatry* 13, 41
- Zarate CA, Jr., Singh JB, Carlson PJ, Quiroz J, Jolkovsky L, Luckenbaugh DA, Manji HK (2007): Efficacy of a protein kinase C inhibitor (tamoxifen) in the treatment of acute mania: a pilot study. *Bipolar Disord* 9, 561-570
- Zaretsky A, Lancee W, Miller C, Harris A, Parikh SV (2008): Is cognitive-behavioural therapy more effective than psychoeducation in bipolar disorder? *Can J Psychiatry* 53, 441-448
- Zhang H, Li C, Zhao L, Zhan G (2015): Single-blind, randomized controlled trial of effectiveness of Naikan therapy as an adjunctive treatment for schizophrenia over a one-year follow-up period. *Shanghai Arch Psychiatry* 27, 220-227
- Zhang H, Li H, Liu Y, Wu C, Wu Q, Nuamah I, Shi J, Xie S, Wang G, Gopal S (2016): Safety and efficacy of paliperidone extended-release in Chinese patients with schizophrenia: a 24-week, open-label extension of a randomized, double-blind, placebo-controlled study. *Neuropsychiatr Dis Treat* 12, 69-77
- Zhou B, Gu Y (2014): Effect of self-management training on adherence to medications among community residents with chronic schizophrenia: a singleblind randomized controlled trial in Shanghai, China. *Shanghai Arch Psychiatry* 26, 332-338
- Zhu H, Bogdanov MB, Boyle SH, Matson W, Sharma S, Matson S, Churchill E, Fiehn O, Rush JA, Krishnan RR, et al. (2013): Pharmacometabolomics of response to sertraline and to placebo in major depressive disorder - possible role for methoxyindole pathway. *PLoS One* 8, e68283
- Zick SM, Wright BD, Sen A, Arnedt JT (2011): Preliminary examination of the efficacy and safety of a standardized chamomile extract for chronic primary insomnia: a randomized placebo-controlled pilot study. *BMC Complement Altern Med* 11, 78
- Zilcha-Mano S, Barber JP (2014): Instability of depression severity at intake as a moderator of outcome in the treatment for major depressive disorder. *Psychother Psychosom* 83, 382-383
- Zipfel S, Wild B, Gross G, Friederich HC, Teufel M, Schellberg D, Giel KE, de Zwaan M, Dinkel A, Herpertz S, et al. (2014): Focal psychodynamic therapy, cognitive behaviour therapy, and optimised treatment as usual in outpatients with anorexia nervosa (ANTOP study): randomized controlled trial. *Lancet* 383, 127-137
- Zonneveld LN, van Rood YR, Timman R, Kooiman CG, Van't Spijker A, Busschbach JJ (2012): Effective group training for patients with unexplained physical symptoms: a

randomized controlled trial with a non-randomized one-year follow-up. PLoS One 7, e42629

Zunker C, Peterson CB, Cao L, Mitchell JE, Wonderlich SA, Crow S, Crosby RD (2010): A receiver operator characteristics analysis of treatment outcome in binge eating disorder to identify patterns of rapid response. Behav Res Ther 48, 1227-1231

9. Reference list

- Acierno R, Resnick H, Kilpatrick DG, Saunders B, Best CL (1999): Risk factors for rape, physical assault, and posttraumatic stress disorder in women: examination of differential multivariate relationships. *J Anxiety Disord* 13, 541-563
- Agh T, Kovacs G, Pawaskar M, Supina D, Inotai A, Voko Z (2015): Epidemiology, health-related quality of life and economic burden of binge eating disorder: a systematic literature review. *Eat Weight Disord* 20, 1-12
- Allgulander C (1989): Psychoactive drug use in a general population sample, Sweden: correlates with perceived health, psychiatric diagnoses, and mortality in an automated record-linkage study. *Am J Public Health* 79, 1006-1010
- Alonso J, Angermeyer MC, Bernert S, Bruffaerts R, Brugha TS, Bryson H, de Girolamo G, Graaf R, Demyttenaere K, Gasquet I, et al. (2004): Sampling and methods of the European Study of the Epidemiology of Mental Disorders (ESEMeD) project. *Acta Psychiatr Scand* 109(420), 8-20
- Andrews G (2000): The anxiety disorder inclusion and exclusion criteria in DSM-IV and ICD-10. *Curr Opin Psychiatry* 13, 139-141
- Andrews G, Peters L, Guzman AM, Bird K (1995): A comparison of two structured diagnostic interviews: CIDI and SCAN. *Aust N Z J Psychiatry* 29, 124-132
- Andrews G, Henderson S, Hall W (2001): Prevalence, comorbidity, disability and service utilisation. Overview of the Australian National Mental Health Survey. *Br J Psychiatry* 178, 145-153
- Arnold LE (1996): Sex differences in ADHD: conference summary. *J Abnorm Child Psychol* 24, 555-569
- Bachman DL, Wolf PA, Linn RT, Knoefel JE, Cobb JL, Belanger AJ, White LR, D'Agostino RB (1993): Incidence of dementia and probable Alzheimer's disease in a general population: the Framingham Study. *Neurology* 43, 515-519
- Ballenger JC, Davidson JR, Lecrubier Y, Nutt DJ, Borkovec TD, Rickels K, Stein DJ, Wittchen HU (2001): Consensus statement on generalized anxiety disorder from the International Consensus Group on Depression and Anxiety. *J Clin Psychiatry* 62(11), 53-58
- Bandelow B (1995): Assessing the efficacy of treatments for panic disorder and agoraphobia. II. The Panic and Agoraphobia Scale. *Int Clin Psychopharmacol* 10, 73-81
- Bandelow B, Michaelis S (2015): Epidemiology of anxiety disorders in the 21st century. *Dialogues Clin Neurosci* 17, 327-335

- Barnes LL, Wilson RS, Schneider JA, Bienias JL, Evans DA, Bennett DA (2003): Gender, cognitive decline, and risk of AD in older persons. *Neurology* 60, 1777-1781
- Bebbington PE (1998): Sex and depression. *Psychol Med* 28, 1-8
- Beck AT, Steer RA, Ball R, Ranieri W (1996): Comparison of Beck Depression Inventories -IA and -II in psychiatric outpatients. *J Pers Assess* 67, 588-597
- Bijl RV, Ravelli A (2000): Psychiatric morbidity, service use, and need for care in the general population: results of The Netherlands Mental Health Survey and Incidence Study. *Am J Public Health* 90, 602-607
- Bijl RV, Ravelli A, van Zessen G (1998): Prevalence of psychiatric disorder in the general population: results of The Netherlands Mental Health Survey and Incidence Study (NEMESIS). *Soc Psychiatry Psychiatr Epidemiol* 33, 587-595
- Bijl RV, de Graaf R, Hiripi E, Kessler RC, Kohn R, Offord DR, Ustun TB, Vicente B, Vollebergh WA, Walters EE, et al. (2003): The prevalence of treated and untreated mental disorders in five countries. *Health Aff (Millwood)* 22, 122-133
- Bjorklund P (2006): No man's land: gender bias and social constructivism in the diagnosis of borderline personality disorder. *Issues Ment Health Nurs* 27, 3-23
- Bland RC, Newman SC, Orn H (1997): Help-seeking for psychiatric disorders. *Can J Psychiatry* 42, 935-942
- Bracke P (2000): The three-year persistence of depressive symptoms in men and women. *Soc Sci Med* 51, 51-64
- Brady KT, Randall CL (1999): Gender differences in substance use disorders. *Psychiatr Clin North Am* 22, 241-252
- Braunig P, Sarkar R, Effenberger S, Schoofs N, Kruger S (2009): Gender differences in psychotic bipolar mania. *Gend Med* 6, 356-361
- Breslau N (2002): Gender differences in trauma and posttraumatic stress disorder. *J Gen Specif Med* 5, 34-40
- Breslau N (2009): The epidemiology of trauma, PTSD, and other posttrauma disorders. *Trauma Violence Abuse* 10, 198-210
- Breslau N, Anthony JC (2007): Gender differences in the sensitivity to posttraumatic stress disorder: An epidemiological study of urban young adults. *J Abnorm Psychol* 116, 607-611
- Breslau N, Davis GC, Andreski P (1991a): Migraine, psychiatric disorders, and suicide attempts: an epidemiologic study of young adults. *Psychiatry Res* 37, 11-23

- Breslau N, Davis GC, Andreski P, Peterson E (1991b): Traumatic events and posttraumatic stress disorder in an urban population of young adults. *Arch Gen Psychiatry* 48, 216-222
- Breslau N, Davis GC, Peterson EL, Schultz L (1997): Psychiatric sequelae of posttraumatic stress disorder in women. *Arch Gen Psychiatry* 54, 81-87
- Bromet E, Sonnega A, Kessler RC (1998): Risk factors for DSM-III-R posttraumatic stress disorder: findings from the National Comorbidity Survey. *Am J Epidemiol* 147, 353-361
- Bruce ML, Wells KB, Miranda J, Lewis L, Gonzalez JL, Workgroup NAD (2002): Barriers to reducing burden of affective disorders. *Ment Health Serv Res* 4, 187-197
- Brugha TS, Jenkins R, Taub N, Meltzer H, Bebbington PE (2001): A general population comparison of the Composite International Diagnostic Interview (CIDI) and the Schedules for Clinical Assessment in Neuropsychiatry (SCAN). *Psychol Med* 31, 1001-1013
- Bulik CM, Sullivan PF, Fear J, Pickering A (1997): Predictors of the development of bulimia nervosa in women with anorexia nervosa. *J Nerv Ment Dis* 185, 704-707
- Cannell CF, Marquis KH, Laurent A (1977): A summary of studies of interviewing methodology. *Vital Health Stat* 2, i-viii, 1-78
- Carey PD, Stein DJ, Zungu-Dirwayi N, Seedat S (2003): Trauma and posttraumatic stress disorder in an urban Xhosa primary care population: prevalence, comorbidity, and service use patterns. *J Nerv Ment Dis* 191, 230-236
- Castle D, Sham P, Murray R (1998): Differences in distribution of ages of onset in males and females with schizophrenia. *Schizophr Res* 33, 179-183
- Choquet M, Darves-Bornoz JM, Ledoux S, Manfredi R, Hassler C (1997): Self-reported health and behavioral problems among adolescent victims of rape in France: results of a cross-sectional survey. *Child Abuse Negl* 21, 823-832
- Christiana JM, Gilman SE, Guardino M, Mickelson K, Morselli PL, Olfson M, Kessler RC (2000): Duration between onset and time of obtaining initial treatment among people with anxiety and mood disorders: an international survey of members of mental health patient advocate groups. *Psychol Med* 30, 693-703
- Christie KA, Burke JD, Jr., Regier DA, Rae DS, Boyd JH, Locke BZ (1988): Epidemiologic evidence for early onset of mental disorders and higher risk of drug abuse in young adults. *Am J Psychiatry* 145, 971-975
- Clark DB, Jones BL, Wood DS, Cornelius JR (2006): Substance use disorder trajectory classes: diachronic integration of onset age, severity, and course. *Addict Behav* 31, 995-1009

- Criqui MH, Barrett-Connor E, Austin M (1978): Differences between respondents and non-respondents in a population-based cardiovascular disease study. *Am J Epidemiol* 108, 367-372
- Crow MR, Smith HL, McNamee AH, Piland NF (1994): Considerations in predicting mental health care use: implications for managed care plans. *J Ment Health Adm* 21, 5-23
- Darves-Bornoz JM, Choquet M, Ledoux S, Gasquet I, Manfredi R (1998): Gender differences in symptoms of adolescents reporting sexual assault. *Soc Psychiatry Psychiatr Epidemiol* 33, 111-117
- Darves-Bornoz JM, Alonso J, de Girolamo G, de Graaf R, Haro JM, Kovess-Masfety V, Lepine JP, Nachbaur G, Negre-Pages L, Vilagut G, et al. (2008): Main traumatic events in Europe: PTSD in the European study of the epidemiology of mental disorders survey. *J Trauma Stress* 21, 455-462
- del Rio Vega JM, Ayuso-Gutierrez JL (1990): Course of schizoaffective psychosis: a retrospective study. *Acta Psychiatr Scand* 81, 534-537
- Demyttenaere K, Bruffaerts R, Posada-Villa J, Gasquet I, Kovess V, Lepine JP, Angermeyer MC, Bernert S, de Girolamo G, Morosini P, et al. (2004): Prevalence, severity, and unmet need for treatment of mental disorders in the World Health Organization World Mental Health Surveys. *JAMA* 291, 2581-2590
- Ditlevsen DN, Elklit A (2010): The combined effect of gender and age on post traumatic stress disorder: do men and women show differences in the lifespan distribution of the disorder? *Ann Gen Psychiatry* 9, 32
- Eaton WW, Anthony JC, Tepper S, Dryman A (1992): Psychopathology and attrition in the epidemiologic catchment area surveys. *Am J Epidemiol* 135, 1051-1059
- Eckert ED, Halmi KA, Marchi P, Grove W, Crosby R (1995): Ten-year follow-up of anorexia nervosa: clinical course and outcome. *Psychol Med* 25, 143-156
- Eddy KT, Keel PK, Dorer DJ, Delinsky SS, Franko DL, Herzog DB (2002): Longitudinal comparison of anorexia nervosa subtypes. *Int J Eat Disord* 31, 191-201
- Eisen JL, Goodman WK, Keller MB, Warshaw MG, DeMarco LM, Luce DD, Rasmussen SA (1999): Patterns of remission and relapse in obsessive-compulsive disorder: a 2-year prospective study. *J Clin Psychiatry* 60, 346-351; quiz 352
- Epidemiology WICiP (2000): Cross-national comparisons of the prevalences and correlates of mental disorders. *Bull World Health Organ* 78, 413-426
- Evans DA, Bennett DA, Wilson RS, Bienias JL, Morris MC, Scherr PA, Hebert LE, Aggarwal N, Beckett LA, Joglekar R, et al. (2003): Incidence of Alzheimer disease in a biracial urban community: relation to apolipoprotein E allele status. *Arch Neurol* 60, 185-189

- Faravelli C, Paterniti S, Scarpato A (1995): 5-year prospective, naturalistic follow-up study of panic disorder. *Compr Psychiatry* 36, 271-277
- Fillenbaum GG, Heyman A, Huber MS, Woodbury MA, Leiss J, Schmader KE, Bohannon A, Trapp-Moen B (1998): The prevalence and 3-year incidence of dementia in older Black and White community residents. *J Clin Epidemiol* 51, 587-595
- Fitzpatrick AL, Kuller LH, Ives DG, Lopez OL, Jagust W, Breitner JC, Jones B, Lyketsos C, Dulberg C (2004): Incidence and prevalence of dementia in the Cardiovascular Health Study. *J Am Geriatr Soc* 52, 195-204
- Folstein MF, Folstein SE, McHugh PR (1975): "Mini-mental state". A practical method for grading the cognitive state of patients for the clinician. *J Psychiatr Res* 12, 189-198
- Frans O, Rimmo PA, Aberg L, Fredrikson M (2005): Trauma exposure and post-traumatic stress disorder in the general population. *Acta Psychiatr Scand* 111, 291-299
- Freedman SA, Gluck N, Tuval-Mashiach R, Brandes D, Peri T, Shalev AY (2002): Gender differences in responses to traumatic events: a prospective study. *J Trauma Stress* 15, 407-413
- Gater R, Tansella M, Korten A, Tiemens BG, Mavreas VG, Olatawura MO (1998): Sex differences in the prevalence and detection of depressive and anxiety disorders in general health care settings: report from the World Health Organization Collaborative Study on Psychological Problems in General Health Care. *Arch Gen Psychiatry* 55, 405-413
- Gili M, Ferrer V, Roca M, Bernardo M (1998): [Gender differences in mental health: epidemiological study in the general population of the island of Formentera]. *Actas Luso Esp Neurol Psiquiatr Cienc Afines* 26, 90-96
- Goodman WK, Price LH, Rasmussen SA, Mazure C, Fleischmann RL, Hill CL, Heninger GR, Charney DS (1989): The Yale-Brown Obsessive Compulsive Scale. I. Development, use, and reliability. *Arch Gen Psychiatry* 46, 1006-1011
- Grant BF, Chou SP, Goldstein RB, Huang B, Stinson FS, Saha TD, Smith SM, Dawson DA, Pulay AJ, Pickering RP, et al. (2008): Prevalence, correlates, disability, and comorbidity of DSM-IV borderline personality disorder: results from the Wave 2 National Epidemiologic Survey on Alcohol and Related Conditions. *J Clin Psychiatry* 69, 533-545
- Greenberg PE, Sisitsky T, Kessler RC, Finkelstein SN, Berndt ER, Davidson JR, Ballenger JC, Fyer AJ (1999): The economic burden of anxiety disorders in the 1990s. *J Clin Psychiatry* 60, 427-435
- Gustavsson A, Svensson M, Jacobi F, Allgulander C, Alonso J, Beghi E, Dodel R, Ekman M, Faravelli C, Fratiglioni L, et al. (2011): Cost of disorders of the brain in Europe 2010. *Eur Neuropsychopharmacol* 21, 718-779

- Guy W: Clinical Global Impression Scale (CGI). ECDEU assessment manual for psychopharmacology. National Institute of Mental Health-US Dept of Health, Education, and Welfare publication (ADM), Washington, DC, 1976
- Hafner H (2003): Gender differences in schizophrenia. *Psychoneuroendocrinology* 28(2), 17-54
- Hafner H, an der Heiden W (1999): The course of schizophrenia in the light of modern follow-up studies: the ABC and WHO studies. *Eur Arch Psychiatry Clin Neurosci* 249(4), 14-26
- Hafner H, Riecher-Rossler A, Maurer K, Fatkenheuer B, Loffler W (1992): First onset and early symptomatology of schizophrenia. A chapter of epidemiological and neurobiological research into age and sex differences. *Eur Arch Psychiatry Clin Neurosci* 242, 109-118
- Hafner H, Maurer K, Loffler W, Fatkenheuer B, an der Heiden W, Riecher-Rossler A, Behrens S, Gattaz WF (1994): The epidemiology of early schizophrenia. Influence of age and gender on onset and early course. *Br J Psychiatry* (23), 29-38
- Hambrecht M, Maurer K, Hafner H, Sartorius N (1992): Transnational stability of gender differences in schizophrenia? An analysis based on the WHO study on determinants of outcome of severe mental disorders. *Eur Arch Psychiatry Clin Neurosci* 242, 6-12
- Hambrecht M, Riecher-Rossler A, Fatkenheuer B, Louza MR, Hafner H (1994): Higher morbidity risk for schizophrenia in males: fact or fiction? *Compr Psychiatry* 35, 39-49
- Hamilton M (1959): The assessment of anxiety states by rating. *Br J Med Psychol* 32, 50-55
- Hamilton M (1960): A rating scale for depression. *J Neurol Neurosurg Psychiatry* 23, 56-62
- Haro JM, Arbabzadeh-Bouchez S, Brugha TS, de Girolamo G, Guyer ME, Jin R, Lepine JP, Mazzi F, Reneses B, Vilagut G, et al. (2006): Concordance of the Composite International Diagnostic Interview Version 3.0 (CIDI 3.0) with standardized clinical assessments in the WHO World Mental Health surveys. *Int J Methods Psychiatr Res* 15, 167-180
- Hebert LE, Scherr PA, McCann JJ, Beckett LA, Evans DA (2001): Is the risk of developing Alzheimer's disease greater for women than for men? *Am J Epidemiol* 153, 132-136
- Hendrick V, Altshuler LL, Gitlin MJ, Delrahim S, Hammen C (2000): Gender and bipolar illness. *J Clin Psychiatry* 61, 393-396; quiz 397
- Hoek HW (2006): Incidence, prevalence and mortality of anorexia nervosa and other eating disorders. *Curr Opin Psychiatry* 19, 389-394
- Hudson JI, Hiripi E, Pope HG, Jr., Kessler RC (2007): The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. *Biol Psychiatry* 61, 348-358

- Irish LA, Fischer B, Fallon W, Spoonster E, Sledjeski EM, Delahanty DL (2011): Gender differences in PTSD symptoms: an exploration of peritraumatic mechanisms. *J Anxiety Disord* 25, 209-216
- Jacobi F, Wittchen HU, Holting C, Hofler M, Pfister H, Muller N, Lieb R (2004): Prevalence, co-morbidity and correlates of mental disorders in the general population: results from the German Health Interview and Examination Survey (GHS). *Psychol Med* 34, 597-611
- Jacobi F, Hofler M, Siebert J, Mack S, Gerschler A, Scholl L, Busch MA, Hapke U, Maske U, Seiffert I, et al. (2014a): Twelve-month prevalence, comorbidity and correlates of mental disorders in Germany: the Mental Health Module of the German Health Interview and Examination Survey for Adults (DEGS1-MH). *Int J Methods Psychiatr Res* 23, 304-319
- Jacobi F, Hofler M, Strehle J, Mack S, Gerschler A, Scholl L, Busch MA, Maske U, Hapke U, Gaebel W, et al. (2014b): [Mental disorders in the general population : Study on the health of adults in Germany and the additional module mental health (DEGS1-MH)]. *Nervenarzt* 85, 77-87
- Jones P, Rodgers B, Murray R, Marmot M (1994): Child development risk factors for adult schizophrenia in the British 1946 birth cohort. *Lancet* 344, 1398-1402
- Jordanova V, Wickramesinghe C, Gerada C, Prince M (2004): Validation of two survey diagnostic interviews among primary care attendees: a comparison of CIS-R and CIDI with SCAN ICD-10 diagnostic categories. *Psychol Med* 34, 1013-1024
- Kalaria R (2002): Similarities between Alzheimer's disease and vascular dementia. *J Neurol Sci* 203-204, 29-34
- Katz SJ, Kessler RC, Frank RG, Leaf P, Lin E, Edlund M (1997): The use of outpatient mental health services in the United States and Ontario: the impact of mental morbidity and perceived need for care. *Am J Public Health* 87, 1136-1143
- Kay SR, Fiszbein A, Opler LA (1987): The positive and negative syndrome scale (PANSS) for schizophrenia. *Schizophr Bull* 13, 261-276
- Keenan K, Loeber R, Green S (1999): Conduct disorder in girls: a review of the literature. *Clin Child Fam Psychol Rev* 2, 3-19
- Kessler RC (2007): Psychiatric epidemiology: challenges and opportunities. *Int Rev Psychiatry* 19, 509-521
- Kessler RC, McGonagle KA, Swartz M, Blazer DG, Nelson CB (1993): Sex and depression in the National Comorbidity Survey. I: Lifetime prevalence, chronicity and recurrence. *J Affect Disord* 29, 85-96
- Kessler RC, McGonagle KA, Nelson CB, Hughes M, Swartz M, Blazer DG (1994a): Sex and depression in the National Comorbidity Survey. II: Cohort effects. *J Affect Disord* 30, 15-26

- Kessler RC, McGonagle KA, Zhao S, Nelson CB, Hughes M, Eshleman S, Wittchen HU, Kendler KS (1994b): Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. Results from the National Comorbidity Survey. *Arch Gen Psychiatry* 51, 8-19
- Kessler RC, Little RJ, Groves RM (1995a): Advances in strategies for minimizing and adjusting for survey nonresponse. *Epidemiol Rev* 17, 192-204
- Kessler RC, Sonnega A, Bromet E, Hughes M, Nelson CB (1995b): Posttraumatic stress disorder in the National Comorbidity Survey. *Arch Gen Psychiatry* 52, 1048-1060
- Kessler RC, Frank RG, Edlund M, Katz SJ, Lin E, Leaf P (1997): Differences in the use of psychiatric outpatient services between the United States and Ontario. *N Engl J Med* 336, 551-557
- Kessler RC, Olfson M, Berglund PA (1998): Patterns and predictors of treatment contact after first onset of psychiatric disorders. *Am J Psychiatry* 155, 62-69
- Kessler RC, Berglund PA, Bruce ML, Koch JR, Laska EM, Leaf PJ, Manderscheid RW, Rosenheck RA, Walters EE, Wang PS (2001a): The prevalence and correlates of untreated serious mental illness. *Health Serv Res* 36, 987-1007
- Kessler RC, Greenberg PE, Mickelson KD, Meneades LM, Wang PS (2001b): The effects of chronic medical conditions on work loss and work cutback. *J Occup Environ Med* 43, 218-225
- Kessler RC, Keller MB, Wittchen HU (2001c): The epidemiology of generalized anxiety disorder. *Psychiatr Clin North Am* 24, 19-39
- Kessler RC, Berglund P, Demler O, Jin R, Koretz D, Merikangas KR, Rush AJ, Walters EE, Wang PS, National Comorbidity Survey R (2003): The epidemiology of major depressive disorder: results from the National Comorbidity Survey Replication (NCS-R). *JAMA* 289, 3095-3105
- Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE (2005a): Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry* 62, 593-602
- Kessler RC, Chiu WT, Demler O, Merikangas KR, Walters EE (2005b): Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry* 62, 617-627
- Kessler RC, Haro JM, Heeringa SG, Pennell BE, Ustun TB (2006): The World Health Organization World Mental Health Survey Initiative. *Epidemiol Psychiatr Soc* 15, 161-166
- Kessler RC, Amminger GP, Aguilar-Gaxiola S, Alonso J, Lee S, Ustun TB (2007a): Age of onset of mental disorders: a review of recent literature. *Curr Opin Psychiatry* 20, 359-364

- Kessler RC, Angermeyer M, Anthony JC, R DEG, Demyttenaere K, Gasquet I, G DEG, Gluzman S, Gureje O, Haro JM, et al. (2007b): Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World Psychiatry* 6, 168-176
- Kiejna A, Rymaszewska J, Kantorska-Janiec M, Tokarski W (2002): [Epidemiology of obsessive-compulsive disorder]. *Psychiatr Pol* 36, 539-548
- Klose M, Jacobi F (2004): Can gender differences in the prevalence of mental disorders be explained by sociodemographic factors? *Arch Womens Ment Health* 7, 133-148
- Klump KL, Racine S, Hildebrandt B, Sisk CL (2013): Sex differences in binge eating patterns in male and female adult rats. *Int J Eat Disord* 46, 729-736
- Koenen KC (2006): Developmental epidemiology of PTSD: self-regulation as a central mechanism. *Ann N Y Acad Sci* 1071, 255-266
- Kuehner C (1999): Gender differences in the short-term course of unipolar depression in a follow-up sample of depressed inpatients. *J Affect Disord* 56, 127-139
- Kuehner C (2003): Gender differences in unipolar depression: an update of epidemiological findings and possible explanations. *Acta Psychiatr Scand* 108, 163-174
- Kukull WA, Higdon R, Bowen JD, McCormick WC, Teri L, Schellenberg GD, van Belle G, Jolley L, Larson EB (2002): Dementia and Alzheimer disease incidence: a prospective cohort study. *Arch Neurol* 59, 1737-1746
- Kulkarni J, Riedel A, de Castella AR, Fitzgerald PB, Rolfe TJ, Taffe J, Burger H (2001): Estrogen - a potential treatment for schizophrenia. *Schizophr Res* 48, 137-144
- Laufer A, Solomon Z (2009): Gender Differences in PTSD in Israeli Youth Exposed to Terror Attacks. *J Interpers Violence* 24, 959-976
- Lauronen E, Miettunen J, Veijola J, Karhu M, Jones PB, Isohanni M (2007): Outcome and its predictors in schizophrenia within the Northern Finland 1966 Birth Cohort. *Eur Psychiatry* 22, 129-136
- Leaf PJ, Bruce ML, Tischler GL, Freeman DH, Jr., Weissman MM, Myers JK (1988): Factors affecting the utilization of specialty and general medical mental health services. *Med Care* 26, 9-26
- Leibenluft E (1997): Issues in the treatment of women with bipolar illness. *J Clin Psychiatry* 58(15), 5-11
- Leon AC, Olfson M, Portera L, Farber L, Sheehan DV (1997): Assessing psychiatric impairment in primary care with the Sheehan Disability Scale. *Int J Psychiatry Med* 27, 93-105
- Lepine JP, Pariente P, Boulenger JP, Hardy P, Zarifian E, Lemperiere T, Lellouch J (1989): Anxiety disorders in a French general psychiatric outpatient sample. Comparison

- between DSM-III and DSM-III-R criteria. *Soc Psychiatry Psychiatr Epidemiol* 24, 301-308
- Lewinsohn PM, Gotlib IH, Lewinsohn M, Seeley JR, Allen NB (1998): Gender differences in anxiety disorders and anxiety symptoms in adolescents. *J Abnorm Psychol* 107, 109-117
- Lewis SF, Resnick HS, Ruggiero KJ, Smith DW, Kilpatrick DG, Best CL, Saunders BE (2005): Assault, psychiatric diagnoses, and sociodemographic variables in relation to help-seeking behavior in a national sample of women. *J Trauma Stress* 18, 97-105
- Lieb R, Pfister H, Mastaler M, Wittchen HU (2000): Somatoform syndromes and disorders in a representative population sample of adolescents and young adults: prevalence, comorbidity and impairments. *Acta Psychiatr Scand* 101, 194-208
- Lin E, Goering P, Offord DR, Campbell D, Boyle MH (1996): The use of mental health services in Ontario: epidemiologic findings. *Can J Psychiatry* 41, 572-577
- Lindamer LA, Lohr JB, Harris MJ, McAdams LA, Jeste DV (1999): Gender-related clinical differences in older patients with schizophrenia. *J Clin Psychiatry* 60, 61-67; quiz 68-69
- Lobbestael J, Leurgans M, Arntz A (2011): Inter-rater reliability of the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID I) and Axis II Disorders (SCID II). *Clin Psychol Psychother* 18, 75-79
- Maier W, Gansicke M, Freyberger HJ, Linz M, Heun R, Lecrubier Y (2000): Generalized anxiety disorder (ICD-10) in primary care from a cross-cultural perspective: a valid diagnostic entity? *Acta Psychiatr Scand* 101, 29-36
- Marneros A, Deister A, Rohde A (1990): Psychopathological and social status of patients with affective, schizophrenic and schizoaffective disorders after long-term course. *Acta Psychiatr Scand* 82, 352-358
- Mayou R, Bryant B, Ehlers A (2001): Prediction of psychological outcomes one year after a motor vehicle accident. *Am J Psychiatry* 158, 1231-1238
- McFarlane AC (1989): The aetiology of post-traumatic morbidity: predisposing, precipitating and perpetuating factors. *Br J Psychiatry* 154, 221-228
- McLean CP, Asnaani A, Litz BT, Hofmann SG (2011): Gender differences in anxiety disorders: prevalence, course of illness, comorbidity and burden of illness. *J Psychiatr Res* 45, 1027-1035
- Merikangas KR, Avenevoli S, Acharyya S, Zhang H, Angst J (2002): The spectrum of social phobia in the Zurich cohort study of young adults. *Biol Psychiatry* 51, 81-91
- Miech RA, Breitner JC, Zandi PP, Khachaturian AS, Anthony JC, Mayer L (2002): Incidence of AD may decline in the early 90s for men, later for women: The Cache County study. *Neurology* 58, 209-218

- Moher D, Liberati A, Tetzlaff J, Altman DG, Group P (2009): Preferred reporting items for systematic reviews and meta-analyses: the PRISMA Statement. *Open Med* 3, e123-130
- Montgomery SA, Asberg M (1979): A new depression scale designed to be sensitive to change. *Br J Psychiatry* 134, 382-389
- Murray CJ, Lopez AD (1996): Evidence-based health policy--lessons from the Global Burden of Disease Study. *Science* 274, 740-743
- Mussell MP, Mitchell JE, Weller CL, Raymond NC, Crow SJ, Crosby RD (1995): Onset of binge eating, dieting, obesity, and mood disorders among subjects seeking treatment for binge eating disorder. *Int J Eat Disord* 17, 395-401
- National Institute of Mental Health: Towards a model for a comprehensive community-based mental health system. NIMH, Washington, DC, 1987
- Nelson CB, Wittchen HU (1998): DSM-IV alcohol disorders in a general population sample of adolescents and young adults. *Addiction* 93, 1065-1077
- Nierenberg AA, Quitkin FM, Kremer C, Keller MB, Thase ME (2004): Placebo-controlled continuation treatment with mirtazapine: acute pattern of response predicts relapse. *Neuropsychopharmacology* 29, 1012-1018
- Nolen-Hoeksema S, Girgus JS (1994): The emergence of gender differences in depression during adolescence. *Psychol Bull* 115, 424-443
- Olfson M, Kessler RC, Berglund PA, Lin E (1998): Psychiatric disorder onset and first treatment contact in the United States and Ontario. *Am J Psychiatry* 155, 1415-1422
- Parslow RA, Jorm AF (2000): Who uses mental health services in Australia? An analysis of data from the National Survey of Mental Health and Wellbeing. *Aust N Z J Psychiatry* 34, 997-1008
- Perala J, Suvisaari J, Saarni SI, Kuoppasalmi K, Isometsa E, Pirkola S, Partonen T, Tuulio-Henriksson A, Hintikka J, Kieseppa T, et al. (2007): Lifetime prevalence of psychotic and bipolar I disorders in a general population. *Arch Gen Psychiatry* 64, 19-28
- Perkonig A, Kessler RC, Storz S, Wittchen HU (2000): Traumatic events and post-traumatic stress disorder in the community: prevalence, risk factors and comorbidity. *Acta Psychiatr Scand* 101, 46-59
- Piccinelli M, Simon G (1997): Gender and cross-cultural differences in somatic symptoms associated with emotional distress. An international study in primary care. *Psychol Med* 27, 433-444
- Pigott TA (1999): Gender differences in the epidemiology and treatment of anxiety disorders. *J Clin Psychiatry* 60(18), 4-15

- Rayburn NR, Wenzel SL, Elliott MN, Hambarsoomians K, Marshall GN, Tucker JS (2005): Trauma, depression, coping, and mental health service seeking among impoverished women. *J Consult Clin Psychol* 73, 667-677
- Rocca WA, Cha RH, Waring SC, Kokmen E (1998): Incidence of dementia and Alzheimer's disease: a reanalysis of data from Rochester, Minnesota, 1975-1984. *Am J Epidemiol* 148, 51-62
- Rogers MP, Warshaw MG, Goisman RM, Goldenberg I, Rodriguez-Villa F, Mallya G, Freeman SA, Keller MB (1999): Comparing primary and secondary generalized anxiety disorder in a long-term naturalistic study of anxiety disorders. *Depress Anxiety* 10, 1-7
- Roy-Byrne PP, Katon W (1997): Generalized anxiety disorder in primary care: the precursor/modifier pathway to increased health care utilization. *J Clin Psychiatry* 58(3), 34-38; discussion 39-40
- Ruggeri M, Leese M, Thornicroft G, Bisoffi G, Tansella M (2000): Definition and prevalence of severe and persistent mental illness. *Br J Psychiatry* 177, 149-155
- Ruscio AM, Stein DJ, Chiu WT, Kessler RC (2010): The epidemiology of obsessive-compulsive disorder in the National Comorbidity Survey Replication. *Mol Psychiatry* 15, 53-63
- Rush AJ, Trivedi MH, Ibrahim HM, Carmody TJ, Arnow B, Klein DN, Markowitz JC, Ninan PT, Kornstein S, Manber R, et al. (2003): The 16-Item Quick Inventory of Depressive Symptomatology (QIDS), clinician rating (QIDS-C), and self-report (QIDS-SR): a psychometric evaluation in patients with chronic major depression. *Biol Psychiatry* 54, 573-583
- Sansone RA, Sansone LA (2011): Gender patterns in borderline personality disorder. *Innov Clin Neurosci* 8, 16-20
- Sartorius N, Ustun TB, Lecrubier Y, Wittchen HU (1996): Depression comorbid with anxiety: results from the WHO study on psychological disorders in primary health care. *Br J Psychiatry* (30), 38-43
- Saxena S, Sharan P, Saraceno B (2003): Budget and financing of mental health services: baseline information on 89 countries from WHO's project atlas. *J Ment Health Policy Econ* 6, 135-143
- Schinnar AP, Rothbard AB, Kanter R, Jung YS (1990): An empirical literature review of definitions of severe and persistent mental illness. *Am J Psychiatry* 147, 1602-1608
- Seshadri S, Wolf PA, Beiser A, Au R, McNulty K, White R, D'Agostino RB (1997): Lifetime risk of dementia and Alzheimer's disease. The impact of mortality on risk estimates in the Framingham Study. *Neurology* 49, 1498-1504

- Shear MK, Rucci P, Williams J, Frank E, Grochocinski V, Vander Bilt J, Houck P, Wang T (2001): Reliability and validity of the Panic Disorder Severity Scale: replication and extension. *J Psychiatr Res* 35, 293-296
- Sheehan DV, Lecrubier Y, Sheehan KH, Amorim P, Janavs J, Weiller E, Hergueta T, Baker R, Dunbar GC (1998): The Mini-International Neuropsychiatric Interview (M.I.N.I.): the development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *J Clin Psychiatry* 59(20), 22-33;quiz 34-57
- Simon GE, VonKorff M (1995): Recall of psychiatric history in cross-sectional surveys: implications for epidemiologic research. *Epidemiol Rev* 17, 221-227
- Simon GE, Ludman EJ, Unutzer J, Bauer MS, Operskalski B, Rutter C (2005): Randomized trial of a population-based care program for people with bipolar disorder. *Psychol Med* 35, 13-24
- Smink FR, van Hoeken D, Hoek HW (2012): Epidemiology of eating disorders: incidence, prevalence and mortality rates. *Curr Psychiatry Rep* 14, 406-414
- Smith BH, Elliott AM, Chambers WA, Smith WC, Hannaford PC, Penny K (2001): The impact of chronic pain in the community. *Fam Pract* 18, 292-299
- Spauwen J, Krabbendam L, Lieb R, Wittchen HU, van Os J (2003): Sex differences in psychosis: normal or pathological? *Schizophr Res* 62, 45-49
- Stallard P, Salter E, Velleman R (2004): Posttraumatic stress disorder following road traffic accidents - a second prospective study. *Eur Child Adolesc Psychiatry* 13, 172-178
- Striegel RH, Bedrosian R, Wang C, Schwartz S (2012): Why men should be included in research on binge eating: results from a comparison of psychosocial impairment in men and women. *Int J Eat Disord* 45, 233-240
- Striegel-Moore RH, Bulik CM (2007): Risk factors for eating disorders. *Am Psychol* 62, 181-198
- Strober M, Freeman R, Morrell W (1997): The long-term course of severe anorexia nervosa in adolescents: survival analysis of recovery, relapse, and outcome predictors over 10-15 years in a prospective study. *Int J Eat Disord* 22, 339-360
- Substance Abuse and Mental Health Services Administration: Racial/ Ethnic Differences in Mental Health Service Use among Adults. SAMHSA, Rockville, MD, 2015
- Sullivan JT, Sykora K, Schneiderman J, Naranjo CA, Sellers EM (1989): Assessment of alcohol withdrawal: the revised clinical institute withdrawal assessment for alcohol scale (CIWA-Ar). *Br J Addict* 84, 1353-1357
- The World Mental Health Survey Initiative (2005): WMH Cross National Sample, Vol 2017: https://www.hcp.med.harvard.edu/wmh/national_sample.php, access 12.06.2017

- Thomsen PH (1996): Schizophrenia with childhood and adolescent onset--a nationwide register-based study. *Acta Psychiatr Scand* 94, 187-193
- Tolin DF, Foa EB (2006): Sex differences in trauma and posttraumatic stress disorder: a quantitative review of 25 years of research. *Psychol Bull* 132, 959-992
- Tozzi F, Thornton LM, Klump KL, Fichter MM, Halmi KA, Kaplan AS, Strober M, Woodside DB, Crow S, Mitchell J, et al. (2005): Symptom fluctuation in eating disorders: correlates of diagnostic crossover. *Am J Psychiatry* 162, 732-740
- Vos T, Flaxman AD, Naghavi M, Lozano R, Michaud C, Ezzati M, Shibuya K, Salomon JA, Abdalla S, Aboyans V, et al. (2012): Years lived with disability (YLDs) for 1160 sequelae of 289 diseases and injuries 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet* 380, 2163-2196
- Walker JL, Carey PD, Mohr N, Stein DJ, Seedat S (2004): Gender differences in the prevalence of childhood sexual abuse and in the development of pediatric PTSD. *Arch Womens Ment Health* 7, 111-121
- Wang PS, Lane M, Olfson M, Pincus HA, Wells KB, Kessler RC (2005): Twelve-month use of mental health services in the United States: results from the National Comorbidity Survey Replication. *Arch Gen Psychiatry* 62, 629-640
- Wang PS, Angermeyer M, Borges G, Bruffaerts R, Tat Chiu W, G DEG, Fayyad J, Gureje O, Haro JM, Huang Y, et al. (2007): Delay and failure in treatment seeking after first onset of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World Psychiatry* 6, 177-185
- Weissman MM, Bland R, Joyce PR, Newman S, Wells JE, Wittchen HU (1993): Sex differences in rates of depression: cross-national perspectives. *J Affect Disord* 29, 77-84
- Weissman MM, Bland RC, Canino GJ, Faravelli C, Greenwald S, Hwu HG, Joyce PR, Karam EG, Lee CK, Lellouch J, et al. (1997): The cross-national epidemiology of panic disorder. *Arch Gen Psychiatry* 54, 305-309
- Wing JK, Babor T, Brugha T, Burke J, Cooper JE, Giel R, Jablenski A, Regier D, Sartorius N (1990): SCAN. Schedules for Clinical Assessment in Neuropsychiatry. *Arch Gen Psychiatry* 47, 589-593
- Wittchen HU (1994): Reliability and validity studies of the WHO--Composite International Diagnostic Interview (CIDI): a critical review. *J Psychiatr Res* 28, 57-84
- Wittchen HU (2004): Continued needs for epidemiological studies of mental disorders in the community. *Psychother Psychosom* 73, 197-206
- Wittchen HU, Jacobi F (2005): Size and burden of mental disorders in Europe--a critical review and appraisal of 27 studies. *Eur Neuropsychopharmacol* 15, 357-376

- Wittchen HU, Burke JD, Semler G, Pfister H, Von Cranach M, Zaudig M (1989): Recall and dating of psychiatric symptoms. Test-retest reliability of time-related symptom questions in a standardized psychiatric interview. *Arch Gen Psychiatry* 46, 437-443
- Wittchen HU, Robins LN, Cottler LB, Sartorius N, Burke JD, Regier D (1991): Cross-cultural feasibility, reliability and sources of variance of the Composite International Diagnostic Interview (CIDI). The Multicentre WHO/ADAMHA Field Trials. *Br J Psychiatry* 159, 645-653, 658
- Wittchen HU, Essau CA, von Zerssen D, Krieg JC, Zaudig M (1992): Lifetime and six-month prevalence of mental disorders in the Munich Follow-Up Study. *Eur Arch Psychiatry Clin Neurosci* 241, 247-258
- Wittchen HU, Nelson CB, Lachner G (1998): Prevalence of mental disorders and psychosocial impairments in adolescents and young adults. *Psychol Med* 28, 109-126
- Wittchen HU, Stein MB, Kessler RC (1999): Social fears and social phobia in a community sample of adolescents and young adults: prevalence, risk factors and co-morbidity. *Psychol Med* 29, 309-323
- Wittchen HU, Carter RM, Pfister H, Montgomery SA, Kessler RC (2000): Disabilities and quality of life in pure and comorbid generalized anxiety disorder and major depression in a national survey. *Int Clin Psychopharmacol* 15, 319-328
- Wittchen HU, Kessler RC, Beesdo K, Krause P, Hofler M, Hoyer J (2002): Generalized anxiety and depression in primary care: prevalence, recognition, and management. *J Clin Psychiatry* 63(8), 24-34
- Wittchen HU, Gloster A, Beesdo K, Schonfeld S, Perkonigg A (2009): Posttraumatic stress disorder: diagnostic and epidemiological perspectives. *CNS Spectr* 14, 5-12
- Wittchen HU, Jacobi F, Rehm J, Gustavsson A, Svensson M, Jonsson B, Olesen J, Allgulander C, Alonso J, Faravelli C, et al. (2011): The size and burden of mental disorders and other disorders of the brain in Europe 2010. *Eur Neuropsychopharmacol* 21, 655-679
- Yonkers KA, Zlotnick C, Allsworth J, Warshaw M, Shea T, Keller MB (1998): Is the course of panic disorder the same in women and men? *Am J Psychiatry* 155, 596-602
- Young RC, Biggs JT, Ziegler VE, Meyer DA (1978): A rating scale for mania: reliability, validity and sensitivity. *Br J Psychiatry* 133, 429-435

Acknowledgements

This thesis has been written at the Department of Psychiatry and Psychotherapy, University Medical Center Goettingen, Georg-August-University Goettingen (director Prof. Dr. Wiltfang).

I would like to thank everyone who provided me with support and encouragement through the process of researching and writing this thesis.

Especially, I would like to express my gratitude to my advisor Prof. Dr. Bandelow for the continuous support, for his patience, motivation and guidance during the research. I could not have imagined a better advisor.