Prevalence and burden of bipolar disorders in European countries

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Abstract

A literature search, supplemented by an expert survey and selected reanalyses of existing data from epidemiological studies was performed to determine the prevalence and associated burden of bipolar I and II disorder in EU countries. Only studies using established diagnostic instruments based on DSM-III-R or DSM-IV, or ICD-10 criteria were considered. Fourteen studies from a total of 10 countries were identified. The majority of studies reported 12-month estimates of approximately 1% (range 0.5–1.1%), with little evidence of a gender difference. The cumulative lifetime incidence (two prospective-longitudinal studies) is slightly higher (1.5–2%); and when the wider range of bipolar spectrum disorders is considered estimates increased to approximately 6%. Few studies have reported separate estimates for bipolar I and II disorders. Age of first onset of bipolar disorder is most frequently reported in late adolescence and early adulthood. A high degree of concurrent and sequential comorbidity with other mental disorders and physical illnesses is common. Most studies suggest equally high or even higher levels of impairments and disabilities of bipolar disorders as compared to major depression and schizophrenia. Few data are available on treatment and health care utilization.

Keywords: Prevalence; Burden; Bipolar disorder; Mania; Hypomania; Depression

1. Introduction

Bipolar disorder (previously also labeled manic-depressive illness) is typically referred to as an episodic, yet lifelong and clinically severe affective (or mood) disorder. Bipolar disorder, associated with considerable treatment needs, is associated with tremendous social and occupational burden for both the individual and family in a substantial percentage of cases (Abood et al., 2002; Bebbington and Ramana, 1995; Bijl and Ravelli, 2000a,b; Fichter et al., 1995; Simon, 2003; Wittchen et al., 2003; Woods, 2000). The term bipolar disorder, however, encompasses several phenotypes of mood disorders, i.e. mania, hypomania or cyclothymia that may present with a puzzling variety of other symptoms and disorders. According to the Fourth Edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; APA, 1994), the diagnostic classificatory system used in most epidemiological studies, bipolar disorder is defined by a set of specific symptom criteria. Bipolar type I requires the presence or the history of at least one manic or mixed episode. Although, typically, patients with a manic episode also experience major depressive episodes, bipolar disorder can be diagnosed even if only one manic episode and no past major depressive episodes are present. Bipolar disorder type II differs form type I only by presence of hypomanic but no manic episodes. Hypomanic episodes differ from mania by a shorter duration (at least 4 days instead of 1

week), and less severe impairment (not severe enough to cause marked impairment in social or occupational functioning, psychiatric hospitalization, or psychotic features). The DSM-IV also includes 'cyclothymia' as a bipolar spectrum disorder with hypomanic as well as depressive episodes that do not meet criteria for major depression (APA, 1994). More recently, some authors have suggested extending bipolar criteria in various ways. For instance, expanding the diagnosis to include childhood conditions despite different symptom presentations (Biederman et al., 2003), relaxing duration criteria to include subthreshold manifestations (Angst, 1998; Angst et al., 2003a,b), and more generally by including a wider scope of bipolar spectrum disorders (Akiskal, 1996). Aside from these conceptual considerations, the primary aim of this paper is to review epidemiological surveys in the community that provide data on bipolar disorder I and II in Europe, focusing on identifying similarities and differences of the prevalence rates from various studies. Further, available information on age of onset, comorbidity with physical and mental disorders, and burden associated with bipolar disorders will be reviewed.

2. Methods

Studies referenced in Medline, EMBASE and Psycho Info and published after 1980 were included in this review. For details regarding the search process see Wittchen and Jacobi (2005). Only studies meeting the following criteria were included: (i) use of structured or standardized diagnostic interviews, (ii) use of diagnostic criteria for bipolar disorder according to ICD-10 (1992) or the APA (1994), (iii) data published in either English, German, French, Italian, Portuguese, or Spanish language, (iv) study conducted in an European country, (v) findings are based on epidemiological samples either in the community or in clinical populations. The review covered the 25 European Union (EU) membership countries (Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden and United Kingdom) plus Iceland, Norway and Switzerland.

3. Results

3.1. Prevalence and incidence

Table 1 displays the findings from a total of 14 studies in 10 EU countries meeting the inclusion criteria. All studies are general population samples. Age ranges covered were quite variable, ranging from birth cohort studies of subjects aged 55–57, over studies in 14–24 years olds, to studies covering a wider age range. The majority of studies included are regional surveys, with the exception of four studies. Five are based on small sample sizes of less than 1.000 subjects. The majority of studies used DSM-III, -IIIR or -IV criteria, respectively–three studies were based on ICD-10 criteria.

Overall, the lifetime prevalence rate of mania, respectively bipolar I appears to be very similar across studies, with estimates ranging from 0.1–0.2% for two smaller Spanish studies to 1.8% in the Netherlands. The highest estimate was found in the Zurich study with an estimate of 4.4%. The 12-month rate for adults appears more consistent with estimates of 0.2% in Ireland to 1.1% in Netherlands. The point estimates indicated for some studies are usually considerably lower. Only a few studies are powered or designed to indicate the prevalence of bipolar II disorder. In Hungary and Iceland, the overall lifetime prevalence of bipolar II disorder and atypical bipolar disorder appears to be higher than for bipolar disorder I. Conversely, in Italy and Ireland higher 12- month rates for bipolar disorder type I than bipolar

II were reported. Overall estimates for bipolar II appear to be less consistent, probably due to the use of different diagnostic assessment instruments.

Taking together the findings of six studies that used largely comparable diagnostic assessment tools (namely the Composite international Diagnostic Interview; CIDI; Wittchen, 1994) and its predecessor the Diagnostic Interview Schedule, Robins et al., 1981) and that report 12-month rates (Czech Republic, Germany, Hungary, Netherlands, Norway) quite convergent 12-month rates for having any bipolar disorder were obtained for the age range 18–65. The median of the 12-month prevalence estimates across these studies, comprising altogether 21.848 subjects, was 0.9% (interquartile range: 0.5–0.9).

The female/male ratio of bipolar disorders was relatively similar in all studies, revealing slightly higher rates for females as compared to males. The only exception is a Belgian study with higher rates in men (Baruffol and Thilmany, 1993). Although none of the studies available was sufficiently powered to detect differences in age-specific 12-month prevalences, Table 1 reveals some indications that the highest rates occur in subjects aged 18–34. In contrast, the lowest estimates were found for the highest age groups examined. However, the large confidence intervals do not allow to conclude the existence of significantly different rates in the age range 18–65.

Findings on the age of first onset appear to be quite variable, possibly due to different sample composition. Using retrospective age of onset data and cumulative incidence data from a study in adolescents and young adults (ages up 29), Fig. 1a reveals that the mean onset of first hypomanic and of manic episodes may be quite early and much earlier than those for depressive episodes. Among 14–24 years old in the Early Developmental Stages of Psychopathology Study (EDSP) the cumulative incidence was 2.3% for hypomania and 1.5% for DSM-IV manic episode. Over two subsequent waves of follow-up, covering a period of 5 years, the cumulative incidence up to age 29 was 4.7% (hypomania) and 2.6% for mania, respectively (Fig. 1b). The mean age of onset in this young birth cohort was 14.8 years for hypomania and 15.4 years for mania). In studies with samples of a wider age range (18–65) the mean age for the first manic or hypomanic episodes is 26.2 years, with 40% having their first episode between 18 and 24 years (NEMESIS, Ten Have et al., 2002). In the German National Survey (age 18–65) the mean age of onset was found to be 18 and 23.8 years, respectively, with 75% of the cases occurring up to 25 years (Jacobi et al., 2002, 2004; Wittchen et al., 2003). In Hungary, the mean age of onset of bipolar disorders is 19.9 years, the first symptoms are reported slightly earlier by female (17.9 years) and the age interval with highest probability for development of the illness was between 15 and 19 years in both sexes (Szádóczky et al., 1998).

3.2. Natural course

Data on the natural course of bipolar disorders from epidemiological studies are available from three studies (Zurich study, EDSP, NEMESIS). Using data from the EDSP (Table 2) it has been estimated that 20.7% of all subjects (aged 14–24 years at the outset of the study) with an initial hypomanic episode at baseline will experience another hypomanic or manic episode over the next 5 years; the risk for a depressive episode was estimated to be 26.7%. Relatively similar figures were found for those with an initial manic episode (19.3% and 33.1%, respectively). 59% developed neither a manic/hypomanic nor a depressive episode. Similar conditional proportions were reported for mania. Although these data are by and large concordant with observations from one other epidemiological study and clinical studies (Angst and Sellaro, 2000), caution in the generalizability of such results is needed, because

such findings depend heavily on the studies' age range, the length of the follow-up and the diagnostic criteria and thresholds used.

The course of bipolar disorder is typically polyphasic with manic, depressive and mixed episodes. The short observation time in available epidemiological studies does not allow an in-depth characterization of the temporal patterns. There is evidence, however, that bipolar disorders experience a greater number of episodes as compared to unipolar depression. The length of episodes has been examined in several studies of both patient as well as community samples. Table 3 indicates that the four population based epidemiological studies (bottom of list) reveal shorter mean episode duration (0.9–3 months) as compared to the findings in patient samples (3+ months) and those of less recent studies (7–8 months). It is not clear to what degree these differences are influenced by age and severity.

3.3. Comorbidity with mental disorders

The vast majority of the studies reviewed suggest that bipolar disorder is frequently comorbid with a wide range of other disorders. Significant associations (odds ratios controlled for age and gender as a measure for the strength of relationship) were found for all axis I disorders examined. In the German and Dutch studies almost all patients who were diagnosed with bipolar I disorder had a lifetime history of at least one other axis I disorder. More than two third of patients had a history of one or more anxiety disorders and over 70% had a history of a substance abuse disorder. Among bipolar disorder subjects the rates of alcohol use ranges from 21.4 % in adults to 54.5% in adolescents and young adults (Angst, 1998; Wittchen et al., 2003). With regard to anxiety disorders, persons with bipolar disorder have an increased risk of generalized anxiety disorder, panic disorder and specific phobias (Szádóczky et al., 1998; Wittchen et al., 1998). Specifically, bipolar II disorder is associated with a more than 10-fold increased risk of panic disorder and repeated panic attacks than compared to without bipolar (Angst, 1998). In the German EDSP cohort study of adolescents and young adults (up to 29 years), a high degree of comorbidity is evident even in early stages of this disorder. Particularly high associations were evident for the link between bipolar I disorder with substance use, panic disorder, agoraphobia, post-traumatic stress disorder (PTSD) and obsessive-compulsive disorder (OCD), both within as well as in between episodes (Wittchen et al., 2003).

The Zurich Cohort community study is among the few community studies also reporting the prevalence of antisocial behavior and classic measurements of personality, as aggression and neuroticism, and verified that all measures are elevated in bipolar patients when compared with a control group (Angst, 1995). Despite the interesting implications of links between personality, personality disorder and bipolar syndromes (Maier et al., 1995), no epidemiological study to date has examined the association between personality disorders and bipolar disorders in unselected community samples, with the exception of elevated odds for antisocial personality disorder (Robins and Regier, 1991). Evidence from clinical studies usually reveals increased rates for personality disorders; however, there are rarely substantial differences between unipolar and bipolar depressive patients (Rossi et al., 2001). Most studies indicate that both conditions have elevated rates of avoidant and dependent personality disorder (Akiskal, 1996; Battaglia et al., 1996; Rossi et al., 2001). A small number suggest elevated risks for obsessive and/or borderline features are an unnoticed sign of bipolarity (Akiskal, 1996; Savino et al., 1993).

3.4. Somatic disorders and mortality

Bipolar disorder is associated with reduced general and mental health perception, emotional and social functioning, and vitality when compared with other types of mental disorder and controls (Angst, 1995; Ten Have et al., 2002). Wunderlich et al. (1998) highlighted that bipolar disorders have an elevated risk of suicide attempts, though it is not clear whether this increase in risk is due to the high degree of comorbidity, or to the manic/hypomanic or depressive component. Further, there have been UK reports that suicide is the cause of death of approximately 20% of persons with bipolar disorder (Ösby et al., 2001) and 60% mention suicidal ideation (Ten Have et al., 2002). The increased risk for suicide attempts is high in the first years of the illness; and clinical studies highlight the highest suicide risk during the first year after the first hospital admission regardless of age and gender (Wunderlich et al., 1998). Further, a decrease in suicidality with increasing duration of illness up to 5 years after first admission has been observed (Hoyer et al., 2000, 2004).

Bipolar disorders are also associated with a poor physical health status and with increased deaths due to natural causes. The most frequent diseases that cause death are cardiovascular, followed by cancer, and respiratory and cerebrovascular diseases. Bipolar patients with a history of hospitalization are more likely to die because of unnatural causes (i.e. suicide), with a higher mortality ratio in patients with their first admission at younger ages and during the first years after the diagnosis (Hoyer et al., 2000; Ösby et al., 2001).

3.5. Health services utilization

Little information is available from the review of studies concerning health care utilization and treatment. Individuals with bipolar disorders are more likely to use all forms of care compared to people with somatoform, substance use and some anxiety disorders and less likely compared to panic disorder, GAD, OCD and psychotic disorders (Bijl et al., 1998a,b; Jacobi et al., 2004). Faravelli et al. (1990) observed that patients with bipolar disorder types I and II had a significantly greater probability of seeking any form of medical help, being prescribed medication by their general practitioner, being referred to a psychiatrist and being hospitalized than patients with cyclothymia, dysthymia or minor depression. Ten Have et al. (2002) showed that 70% of the sample with bipolar disorder had sought help for emotional problems from a primary care provider (general practitioner or a community social worker), 56% had called a mental health care provider and 25.5% had never sought any help. Of the 56% who sought mental health care, 20% had never spoken to a professional about their hypomanic or manic episode. Thus, these patients remained under-recognized and did not receive adequate treatment. Epidemiologic parameters such as hospitalization risk and duration, outpatient treatment duration with drugs, as well as other forms of intervention require additional study.

3.6. Costs

There are only three studies in Europe that estimated cost-of-illness for bipolar disorder. De Zelicourt et al. (2003) estimated the annual costs of inpatient care associated with manic episodes in France to be around 1.3 billion, with 98% of the total cost referring to hospitalisation. Olié and Lévy (2002) estimated the 3-month direct medical costs for manic episode necessitating hospitalisation and in a 3-month period following hospitalisation in 22297. Cost of hospitalisation emerged as the main cost driver and the cost of institutionalisation (hospitalisation plus nursing home care) accounted for more than 99% of all costs. A limitation of this study is that consists of a 3-month cross-sectional evaluation of this patient population; therefore, extrapolation to longterm management cannot be easily undertaken. Moreover, this study specifically investigated the cost of single manic episodes,

not the wider costs of treating bipolar illness. As pointed out by the authors, the study was based on hospital records and, because of the variability of the diligence with which out-patient treatment is recorded by hospitals, might have underestimated the direct costs associated with out-patient treatment. On the other hand, as manic episodes are very disruptive of daily life, work and career development as well as family life and relationships, it is likely that indirect costs would be relatively high in this population of manic patients.

In the UK, the annual cost attributed to bipolar disorder was estimated to be U2 billion, at 1999/2000 currency value or approximately U6900 per person with bipolar disorder (Das Gupta and Guest, 2002). The unemployment rate among people with bipolar disorder was estimated to be 46%. This figure has been compared with the 3% of 1999/2000 unemployed rate among general population in UK. As a result, an excess of 76,500 people annually are unemployed for cause attributable to bipolar disorder. Therefore, the annual indirect cost related to excess unemployment among people with bipolar disorder was estimated to be U1510 million at 1999/2000 value (Das Gupta and Guest, 2002).

4. Discussion

4.1. Prevalence

The epidemiology of bipolar disorders in Europe has been described in several studies with a remarkable degree of consistency across diverse study designs and countries. The evidence from community studies is highlighted by the clinical description of bipolar disorder as an episodic disorder that usually emerges in early adulthood, with a mean age of onset estimated to be between age 20 and 30. There is fairly convergent evidence that bipolar I and II disorders, according to DSM-IV criteria, have an estimated 12-month prevalence of approx. 1% with no evidence for major differences by age group and gender. This finding is consistent with other studies and reviews. Epidemiological studies carried out in US in the 1990s suggest a lifetime prevalence rate for bipolar I disorder of approximately 1% (Kessler et al., 1994; Jonas et al., 2003; Weissman et al., 1996). Angst (1998) reviewed results from another ten studies between 1985 and 1994 and reported lifetime prevalence rates of 0.7%. He also reviewed nine reports of bipolar II disorder suggesting lifetime prevalence rates of 0.2–3.0%.

Some exceptional prevalence estimates come from are prospective-longitudinal studies with several waves of investigations over many years. Data from Switzerland reported a lifetime prevalence of mania of 4.4%. Similarly, Wittchen et al. (2003) reported a cumulative lifetime incidence risk for community subjects up to age 30 of 2.6%. For bipolar II such longitudinal studies report even higher rates. The findings of five studies in this review report estimates ranging from 2.6% to 6.0%. The reason of such high rates could largely be explained by design and assessment differences. The two highest rates (5.1% and 6.0%), obtained in the studies of Szádóczky et al. (1998) in Hungary and Angst (1998) in Switzerland are probably explained by the adoption of less stringent criteria for diagnosis of bipolar disorder with the inclusion of softer forms along with bipolar type I.

4.2. Disability and treatment

Regarding disability and treatment the existing EU data base is very limited, largely due to the fact, that bipolar I and II disorder are relatively rare disorders; no epidemiological study was powered to describe these disorders in greater detail. Nevertheless, there are a few noteworthy observations. When compared to other mood disorders, anxiety disorders or substance use

disorders, persons with bipolar disorder tend to reveal a lower level of functioning, a greater severity of disability and a longer duration of illness. Persons with bipolar I disorder suffer greater losses in productivity, with more bed rest and absenteeism days (Abood et al., 2002; Simon, 2003; Ten Have et al., 2002; Wittchen et al., 1992, 2003). In 1990, the World Health Organization identified bipolar disorder as the sixth leading cause of disability-adjusted life years in the world among people aged 15–44 years with high costs to society (Kleinman et al., 2003; Murray and Lopez, 1996; Woods, 2000). However, studies on bipolar costs in Europe are still scarce, are based on approximate value for direct costs and cannot be generalized to all European countries.

With regard to early recognition and treatment there are even fewer data. Currently, the proportion of bipolar patients in treatment, and how patients are treated and managed through the various stages of their disorder, is not known (Goodwin, 1999; Goodwin and Ghaemi, 1999; Kessing et al., 1998). Furthermore, in clinical samples evidence exists that bipolar disorder may be under-diagnosed (Ghaemi et al., 1999). Treatment choices are particularly important in patients with bipolar disorder where compliance with conventional maintenance treatment is low. For example, some atypical antipsychotics have been show to have good acute anti-manic and preventive mood-stabilizing properties together with a low incidence of extra-pyramidal effects as compared to typical neuroleptics. These factors may be important for improving compliance. In contrast, significant delays in the diagnosis and treatment of bipolar patients appear to be the rule rather than the exception. The American National Depressive and Manic-Depressive Association (DMDA) survey of bipolar members reported that 50% of bipolar patients did not seek help for 5 years or more after onset of their initial symptoms. The survey also reported that 48% of patients did not receive a bipolar disorder diagnosis until seeing the third professional consulted and that in 34% the interval between seeking help and receiving a bipolar diagnosis was more than 10 years. This delay in receiving care was greatest when symptoms began during childhood and adolescence. Additionally, of those patients who do seek treatment during the initial episode, about one third are likely to have the condition misdiagnosed (Lish et al., 1994). For these reasons, it is important to make a timely, accurate diagnosis and to provide optimal treatment with available pharmacologic options that provide sufficient long-term efficacy while minimizing the risk of side effects (Müller-Oerlinghausen et al., 2002).

4.3. Future research needs

1. There is clearly a marked need for epidemiological studies that provide a fuller account of the degree of met and unmet needs for intervention, treatment and longterm management of bipolar disorders. Because of the low prevalence of bipolar disorder, such studies might either use two-stage designs with screening in the first stage or cohort designs in high risk populations (Mortensen et al., 2003). These studies should not only estimate the degree of under-diagnosing but should also provide data on the type of drug and non-drug treatment received by these patients in various sectors of the health care system.

2. Beyond the assessment of bipolar I and II disorders as currently defined by DSM-IV and ICD-10, these studies should also consider wider definitions. The current diagnostic criteria for bipolar disorders are under discussion and the use of wider criteria for so-called bipolar spectrum disorders (Akiskal and Pinto, 1999) has been stimulated by several comprehensive epidemiological inquiries. Angst et al. (2003a,b) has provided evidence for various alternative diagnostic models that might prove to be more useful and adequate as the current diagnoses. The core role of future epidemiological work in the domain is exploration of more adequate threshold definitions and the provision of data demonstrating their clinical validity and utility.

3. There is a need for studies that provide a better understanding of the complex comorbidity patterns typically associated with bipolar disorders. Most valuable in this respect may be cohort studies in children and adolescents. This is particularly true in light of recent speculations that bipolar disorders might start even before age of 10 (Biederman et al., 2003). It is speculated that a substantial proportion of children and adolescents remain undiagnosed or misdiagnosed, not receiving adequate treatment. In this respect, the relationship to attentional deficit and hyperactivity disorders (ADHD) in childhood and adulthood might be of special interest. Such epidemiological studies may serve a useful double purpose: contributing data that help resolving basic, as well as a clinical, research issues such as threshold and comorbidity, and secondly, a public health issue, namely providing data to improve the situation of patients.

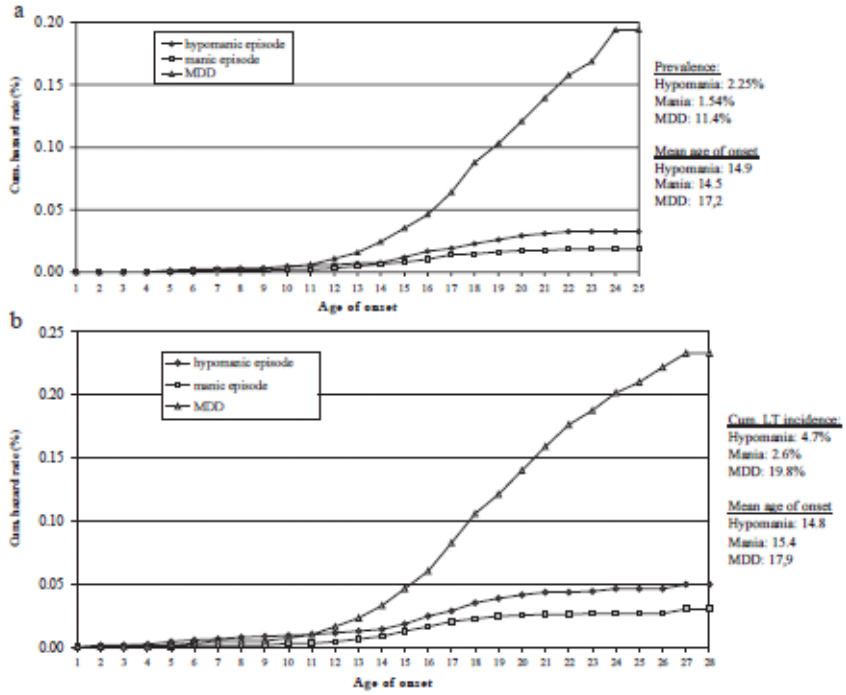

Fig. 1. (a) First onset of hypomanic and manic episodes in a community sample ($n = 3021$) aged 14–24 years (EDSP). From: Wittchen et al., 2003. (b) First onset of hypomanic and manic episodes in a community sample ($n = 3021$) cumulative incidence after 5 years. From: Wittchen et al., 2003.

Table 1
The prevalence of bipolar disorders in Europe

Country/region	Sample (*n*)/ Population	Instruments	Diagnoses	Age (years)	Prevalence (%) Overall (female/male)	Type of prevalence
Belgium						
Bruxelles region	235	DISSI	Mania	3 cohorts:	1.7 (0.8/2.6)	Lifetime
1990	121 females	DSM-III		25,35,45		
(Baruffol and Thilmany, 1993)	114 males					
	General population					
Czech republic						
Unpublished data		CIDI		18–65	0.5 (0.5/0.5)	12-month
		DSM-IV				
Germany						
National	6159	M-CIDI	Any bipolar	18–65	1.0 (1.2/0.8)	Lifetime
1998–1999	3125 females	DSM-IV	disorder		0.8 (1.1/0.6)	12-month
(Jacobi et al., 2004;	3034 males					
Wittchen et al., 2000)	General population			18–34	1.1 (1.2/1.0)	12-month
				35–49	1.1 (1.5/0.7)	12-month
				50–65	0.3 (5.0/0.0)	12-month
Former West Germany	1366	DIS	Bipolar disorder	25–64	0.2 (0.5/0.0)	Lifetime
1981	682 females	DSM-III		25–44	0.5	Lifetime
(Wittchen et al., 1992)	684 males			45–64	0	Lifetime
	General population					
		ICD-9	Manic-depressive psychosis, circular type	25–64	0.1	Lifetime
			Manic- depressive psychosis, manic type	25–64	0.5	Lifetime
Munich region	3021	M-CIDI	Bipolar I	14–24	1.4 (1.7/1.1)	Lifetime
1995	1528 females	DSM-IV			1.3 (1.6/0.9)	12-month
(Wittchen et al., 1998)	1493 males					
	General population		Bipolar II		0.4 (0.7/0.2)	Lifetime
					0.4 (0.7/0.1)	12-month
			Single episode mania		0.1 (0.1/0.0)	Lifetime
					0.1 (0.1/0.0)	12-month
			Hypomania		1.5 (1.7/1.4)	Lifetime
					1.2 (1.5/0.9)	12-month
Hungary						
National	2953	DIS	Manic episode	18–64	1.5 (0.8/2.2)	Lifetime
1995–1996	1645 females	DSM-III-R			0.9 (0.9/1.0)	12-month
(Szádóczky et al., 1998)	1308 males				0.5 (0.5/0.6)	Point
	General population					
				18–24	2.3 (1.4/3.3)	12-month
					1.8 (1.1/2.9)	Point
				25–34	1.4 (0.9/1.9)	12-month
					1.2 (1.1/1.6)	Point
				35–44	0.6 (0.3/0.0)	12-month
					0.5 (0.6/0.4)	Point
				45–54	0.5 (1.4/0.0)	12-month
					0.5 (0.7/0.0)	Point
				55–64	0.0 (0.0/0.0)	12-month
					0.0 (0.0/0.0)	Point
			Bipolar Disorder I	18–64	1.5 (1.6/1.3)	Lifetime
			Bipolar Disorder II or Atypical	18–64	2.0 (2.0/2.0)	Lifetime
			Hypomania	18–64	2.2 (2.1/2.2)	Lifetime
			Any Bipolar Disorder	18–64	5.1 (4.5/5.7)	Lifetime

Table 1 (*continued*)

Country/region	Sample (*n*)/ Population	Instruments	Diagnoses	Age (years)	Prevalence (%) Overall (female/male)	Type of prevalence
Iceland						
National	862	DIS	Bipolar disorder	55–57	0.2 (0.2/0.2)	Lifetime
1987–1988	421 females	DSM-III	Atypical Bipolar	Cohort of	0.5 (0.5/0.5)	Lifetime
(Stefánsson et al., 1991)	441 males		Disorder	people born		
	General population			in 1931		
Northern Ireland						
District of Derry region	923	SCAN	Bipolar Disorder	18–64	0.2	12-month
1993–1994	496 females	ICD-10				
(McConnell et al., 2002)	427 males					
	General population					
Republic of Ireland						
County of Monaghan region	not provided	SCID	Bipolar Disorder I	not	0.3 (0.3/0.3)	Lifetime
1996	General population	DSM-III-R		provided		
(Scully et al., 2004)			Bipolar Disorder II		0.1 (0.1/0.1)	Lifetime
Italy						
Florence area	1000	Structured	Bipolar Disorder I	15 years and	1.3 (1.9/0.7)	12-month
(Faravelli et al., 1990)	537 females	interview/		older	0.4 (0.2/0.2)	Point
	463 males	DSM-III				
	General population	DSM-III-R	Bipolar Disorder II		0.2 (0.4/0.0)	12-month
					0.1 (0.2/0.0)	Point
			Cyclothymic		0.4 (1.6/0.2)	12-month
			disorder		0.4 (0.56/0.22)	Point
Netherlands						
National 1996	7076	CIDI	Bipolar Disorder I/	18–64	1.8 (2.1/1.5)	Lifetime
(Bijl et al., 1998a,b)	3488 females		Bipolar Disorder		1.1 (1.1/1.1)	12-month
	3588 males	DSM-III-R	NOS		0.6 (0.8/0.4)	Point
	General population					
Spain						
Reus region	290	SCAN	Hypomania	17–18	0.0 (0.0/0.0)	Point
1987–1990	152 females	DSM-III-R	DSM-III-R			
(Canals et al., 1997)	138 males	ICD-10				
	General population		Hypomania		2.4 (3.9/0.7)	Point
			ICD-10			
Spain						
Cantabria region	1223	PSE-GHQ	Manic depressive	17 years	0.08 (0.17/0.0)	Point
(Vasquez-Barquero	642 females	ICD-9	psychosis,	and older		
et al., 1986, 1987)	581 males		manic type			
	General population					
Switzerland						
Zurich	4547	SPIKE	Any bipolar	22–35	6.0	Lifetime
1978–1993	2346 females	SCL-90	disorder		4.4	Lifetime
(Angst, 1995)	2201 males	DSM-IV	Mania			
	General population					

Table 2
Community sample—EDSP community cohort aged 14–24 years at baseline ($n=2548$): Conditional probability of cases with hypomania or mania or major depression disorder (MDD; DSM-IV criteria) at baseline to develop further episodes over 4.2 years

Baseline condition	Type of further episodes over 5 years[a,b]			
	Hypomania	Mania	MDD	Neither
Hypomania (BIP I) ($n=54$)	10 (14.8%)	3 (5.9%)	15 (26.7%)	31 (59.0%)
Mania (BIP II) ($n=34$)	4 (13.4%)	3 (5.9%)	10 (33.1%)	19 (56.3%)
MDD ($n=288$)	8 (2.0%)	6 (1.8%)	59 (23.8%)	178 (73.4%)
No BIP/MDD ($n=2162$)	58 (2.3%)	26 (1.0%)	215 (9.4%)	1937 (88.1%)

From Wittchen et al., 2003.
[a] Numbers indicate conditional probabilities (%) by line.
[b] few cases developed psychotic syndromes ($n=4$ cases).

Table 3
Natural length of episodes (in months) in patient and community samples (adapted from Angst and Sellaro, 2000)

Study	Mean	Median	Q1	Q3
Mendel (1881)		5–6	3–4	6–7
Kraepelin (1913)	3–8			
Panse (1924)	7			
Wertham (1929)		4–6	2–4	8–10
Rennie (1942)	3.5–5.8			
Kinkelin (1954)	3.5–4.8			
Keller et al. (1986)	3–6			
Angst and Preisig (1995)	4.3	3	2	5
Eaton et al. (1997)	2–3			
Lewinsohn et al. (1995)	2			
Wittchen et al. (2000; GHS[a])	1.7			
Wittchen et al. (2003; EDSP[b])	0.9			

[a] German National Health Interview and Examination Survey.
[b] Early Developmental Stages of Psychopathology.

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