Global burden of panic disorder in the year 2000: Version 1 estimates

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1. Introduction

Panic disorder is an anxiety disorder characterised by …… Panic disorder was estimated to be the 27th leading cause of non-fatal burden in the world in 1990, accounting for 1.0% of total YLD, around the same percentage as ischaemic heart disease (1). In the Version 1 estimates for the Global Burden of Disease 2000 study, published in the World Health Report 2001 (2), there has been a slight increase in the estimated burden of panic disorder (now accounting for 1.2% of total global YLDs) due to improved data on prevalence of the condition. This draft paper summarises the data and methods used to produce the Version 1 estimates of panic disorder burden for the year 2000. It will be replaced by a more complete and final paper within a few months, when the Version 2 estimates are finalised.

2. Case and sequelae definitions

The case definition and sequelae used for panic disorder are given in Table 1 below.

Table 1. Case and sequelae definitions for panic disorder

Cause category	GBD 2000 Code	ICD 9 codes	ICD 10 codes
Panic disorder	U093		F 41.0 and F 40.01

Sequela	Definition	Alternate definitions that are useable
Untreated	ICD 10 criteria for Panic Disorder (F 41.0) and Agoraphobia with Panic Disorder (F 40.01)	DSM IV
Treated	Treated PD	

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3. Disease model

The disease model for bipolar disorders was based on evidence from the literature which describes them as chronic diseases with periods of remission and relapse. This differs from the approach adopted in the GBD 1990 study in which short durations of around 1.4 years for bipolar disorder were assumed. Table 2 summarizes the disease model for bipolar disorder. Evidence on average age at onset is summarized in Table 3.

Table 2. Disease model assumptions

Definitions	ICD-10 overall. In AMRO A DSMIV. Adjusted for comorbidity
Incidence/Prevalence	Incidence from Dismod
Remission	Annual remission rate of 7.75% from a follow up study (1)
Case fatality	0
Severity distribution	-
Other assumptions	SMR 200, unnatural causes 429, natural 178
Data	F/m worldwide from Weissman cross-cultural study
	Comorbidity with depression from ECA
	Age of onset from ECA and Weissman

Table 3. Comparison between GBD 1990 and GBD 2000

	GBD 1990	GBD 2000
Prevalence	M=0.27 F=0.46	Prev. From surveys . Pure PD. 50% adjustment for comorbidity
Age of onset	M=29 F=30	Younger age of onset
Incidence	713 per 100 000	26 per 100 000
Remission rate	High remission rate	RR: 7.75
Duration	1.6 years	11 years
RRm		178 (natural causes)

4. Disability weights and health state descriptions

Disability weights from the Global Burden of Disease 1990 study have been used.

Table 4. Disability weights

Sequela/stage/severity level	Disability weight	Health state description

Panic disorder Untreated	**0.129**	Recurrent and unpredictable attacks of severe anxiety associated with fear, heart palpitations, sweating, tremors, and dryness of mouth, chest discomfort and abdominal distress. If this occur in a specific situation such as on a bus or in a crowd, the patient may subsequently avoid that situation. A panic attack is often followed by a persistent fear of having another attack. Fear of future attacks may impede usual activities.
Panic disorder Treated	**0.080**	Currently free of severe attacks of anxiety. Occasionally they remember with distress their past attacks. Mild anxiety associated with anticipation of future attacks.

5. Epidemiological data

Tables 5 to 7 summarizes the available sources of population data on incidence, average age at onset, and prevalence of PTSD. Table 8 summarizes the assumptions and data sources for prevalence estimates for each of the 17 epidemiological subregions used in the GBD 2000.

Table 5. Incidence data for PTSD

Sites	**Incidence**
Finland (2)	Annual incidence phobic neurosis: Male 3.4/1000 Female 4.5/1000
Oregon, adolescent sample (3)	One year incidence: Male 0.14 Female 0.37
ECA (4)	Phobic neurosis: 40/1000

Table 6. Average age at onset of PTSD (5)

Site	**Mean age at onset**
ECA USA	24.8
Edmonton, Alberta	23.7
Puerto Rico	27.3
Savigny, France	25.4
West Germany	35.5
Florence, Italy	26.1
Beirut, Lebanon	27.8
Taiwan	24.2
Korea	32.1
Christchurch	23.2
National Comorbidity Survey USA	25.5

Table 7. Prevalence data for PTSD

Country	Site	Prevalence	Age range	Prevalence %	
				Male	Female
Netherlands (7)	Netherlands 1996	DSMIIR lifetime	All ages	1.9	5.7
		DSMIIR 12 month		1.1	3.4
		DSMIIR one month		0.8	2.2
Spain (8)	Badalona 1997	SCAN one month	18 years	0	0
Spain (9)	Formentura 1997	SCAN one month	> 15		
		TOTAL: 0.3			
Italy (10)	Florence	DOS lifetime	> 18	1.2	3.9
Switzerland (11)	Zurich	SPIKE one year		1.5	2.2
France	Savigny 1987	DIS/CIDI 6 month	> 18	0.8	1.6
		DIS/CIDI lifetime		2.3	3.1
Germnay (12)	Munich	DIS lifetime	25-64	1.7	2.9
Iceland (4)	Iceland	DIS lifetime	55-57	1.1	3.1
Iceland (13)	Iceland	DIS one month	55-57	0.2	0.7
		DIE one year		0.7	1.4
Canada (14)	Edmonton	DIS 6 month	> 18	0.4	1.0
		DIS lifetime		0.8	1.7
USA (15)	New Haven	SADS-PD point	> 18	0.5	0.3
USA (16)	ECA	CIDI one month	> 18	0.8	2.0
USA (17)	ECA 5 sites	DIS one month	> 18	0.4	0.7
		DIS one year		0.4	1.2
		DIS lifetime		1.0	2.1
USA (18)	NCA	CIDI one year	15-54	1.3	3.2
		CIDI lifetime		2.0	5.0
Puerto Rico (19)	Puerto Rico	6 month	18-64	1.2	0.9
		lifetime		1.6	1.9
Mexico (20)	Mexico	PSE one month	Adults	0.7	0.71
Chile (21)	Santiago	CIDI lifetime	> 18	0.4	0.8
Israel (22)	Israel	SADS-D 6 month	24-33	0.2	0.2
		SADS-D one year		0.2	0.2
Taiwan (23)	Taipei	DIS lifetime	> 18	0.1	0.3
Hong Kong (24)	Hong Kong 1993	CIDI lifetime	18-65	0.1	0.3
Korea (25)	Seoul 1990	DIS lifetime	18-65	0.1	0.3
New Zealand (26)	Christchurch 1986	DIS 6 month	18-64	0.5	1.7
New Zealand (27)	Christchurch	DIS lifetime	18-64	0.9	3.4
Africa (28)	Lesotho	DIS one month	19-93	3.7	15.3

Table 8. PTSD data sources and assumptions - summary

AFRO D	=AFRO E
AFRO E	Data from Lesotho and Ethiopia
AMRO A	Prevalence data from from US and Canada. Incidence data from US
AMRO B	Data from Chile and Puerto Rico, Mexico
AMRO D	Data from Chile and Puerto Rico, Mexico
EMRO B	Data from Lebanon
EMRO D	= EMRO B
EURO A	Prevalence data from Germany, UK, Spain., Israel, Netherlands, Switzerland, France Iceland, Israel. Incidence data from Finland
EURO B1	= EURO A
EURO B2	= EURO A
EURO C	= EURO A
SEARO B	= WPRO B1
SEARO D	= WPRO B1
WPRO A	Data from Australia and New Zealand. Prevalence figures with exclusion criteria operationalised from Australia (Andrews, personal communication).
WPRO B1	Data from Hong Kong, Korea and Taiwan
WPRO B2	= WPR0 B1
WPRO B3	= WPR0 B1

6. Incidence, prevalence and mortality estimates for 2000

Table 9. Age-standardized incidence, prevalence and mortality rate estimates for WHO epidemiological subregions, 2000.

	Age-std. Incidence/100,000		Age-std. prevalence/100,000	
Subregion	**Males**	**Females**	**Males**	**Females**
AFRO D	31.7	63.4	309	613
AFRO E	31.7	63.4	309	613
AMRO A	29.3	59.1	324	649
AMRO B	31.1	60.9	315	637
AMRO D	31.1	60.9	315	637
EMRO B	31.4	62.6	310	624
EMRO D	31.4	62.6	310	624
EURO A	29.3	59.1	324	649
EURO B1	30.8	60.4	321	630
EURO B2	31.4	62.6	310	624
EURO C	30.8	60.4	321	630
SEARO B	30.1	61.2	317	637
SEARO D	30.5	61.7	316	625
WPRO A	29.3	59.1	324	649
WPRO B1	28.8	61.2	330	637
WPRO B2	30.1	61.2	317	637
WPRO B3	30.1	61.2	317	637
World	30.1	61.2	319	631

- Age-standardized to World Standard Population (29).

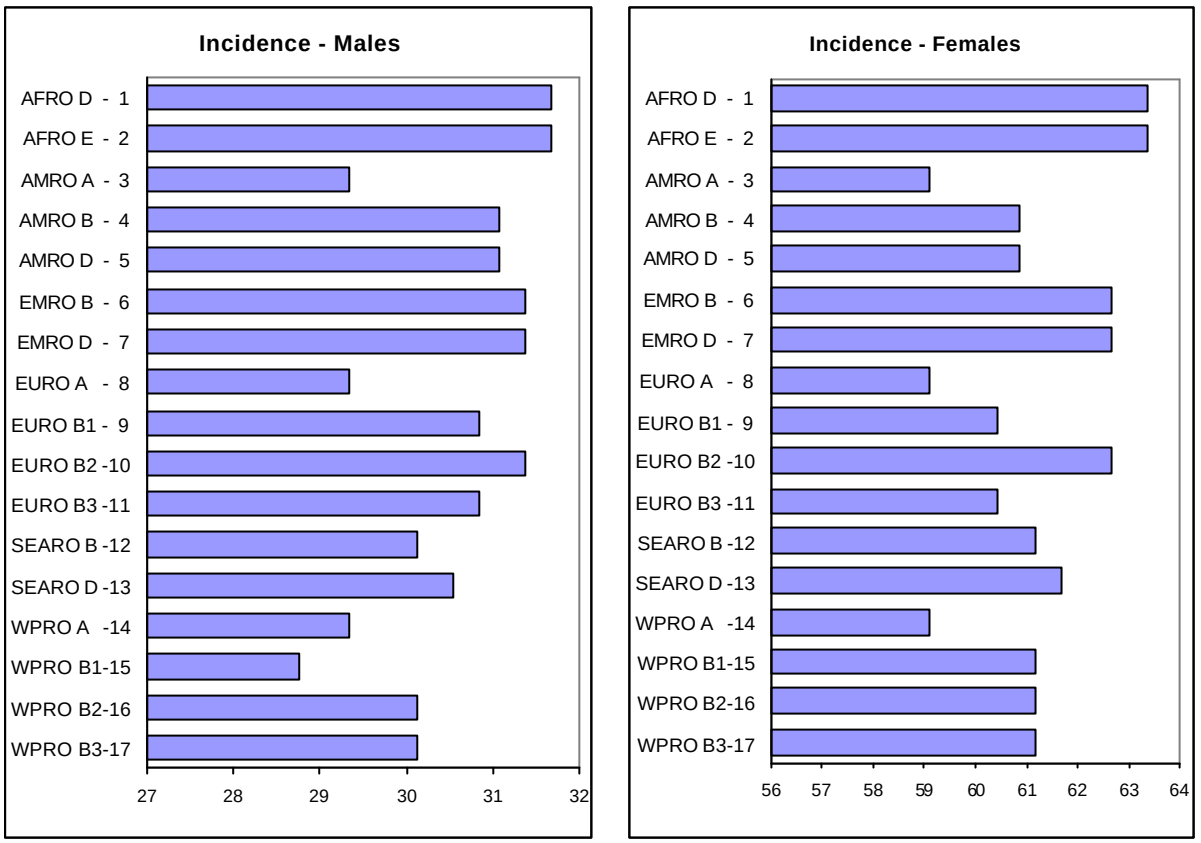


Figure 1. Age-standardized panic disorder prevalence rate estimates, WHO epidemiological subregions, by sex, 2000.

7. Global burden of panic disorder in 2000

General methods used for the estimation of the global burden of disease are given elsewhere (30). The tables and graphs below summarise the global burden of leprosy estimates for the GBD 2000 and compare them with the leprosy estimates from the GBD 1990 (31).

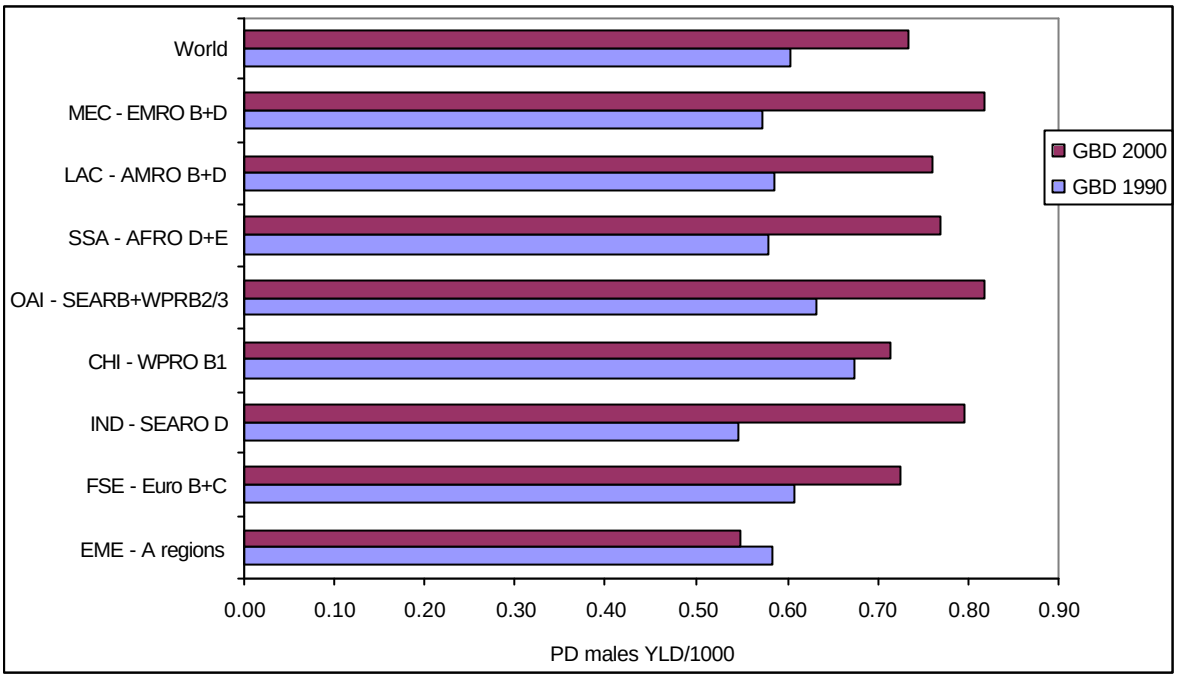
Table 10. Panic disorder: global total YLD, YLL and DALY estimates, 1990 and 2000.

	Males	*Females*	*Persons*
YLD('000)			
GBD1990	1,603	3,163	4,766
GBD2000	2,239	4,352	6,591
YLL('000)			
GBD1990	0	0	0
GBD2000	0	0	0
DALY('000)			
GBD1990	1,603	3,163	4,766
GBD2000	2,239	4,352	6,591

Table 11. Panic disorder: YLD, YLL and DALY estimates for WHO epidemiological subregions, 2000.

	YLD/100,000		YLD	YLL	DALY
Subregion	**Males**	**Females**	**('000)**	**('000)**	**('000)**
AFRO D	77	152	**382**	0	**382**
AFRO E	77	151	**386**	0	**386**
AMRO A	55	106	**251**	0	**251**
AMRO B	76	151	**504**	0	**504**
AMRO D	77	156	**83**	0	**83**
EMRO B	82	170	**174**	0	**174**
EMRO D	82	160	**166**	0	**166**
EURO A	54	102	**323**	0	**323**
EURO B1	76	143	**182**	0	**182**
EURO B2	79	153	**59**	0	**59**
EURO C	69	121	**237**	0	**237**
SEARO B	81	164	**483**	0	**483**
SEARO D	80	157	**1,581**	0	**1,581**
WPRO A	57	108	**124**	0	**124**
WPRO B1	72	147	**1,470**	0	**1,470**
WPRO B2	84	165	**177**	0	**177**

WPRO B3	81	164	**8**	0	**8**
World	74	145	6,591	0	6,591



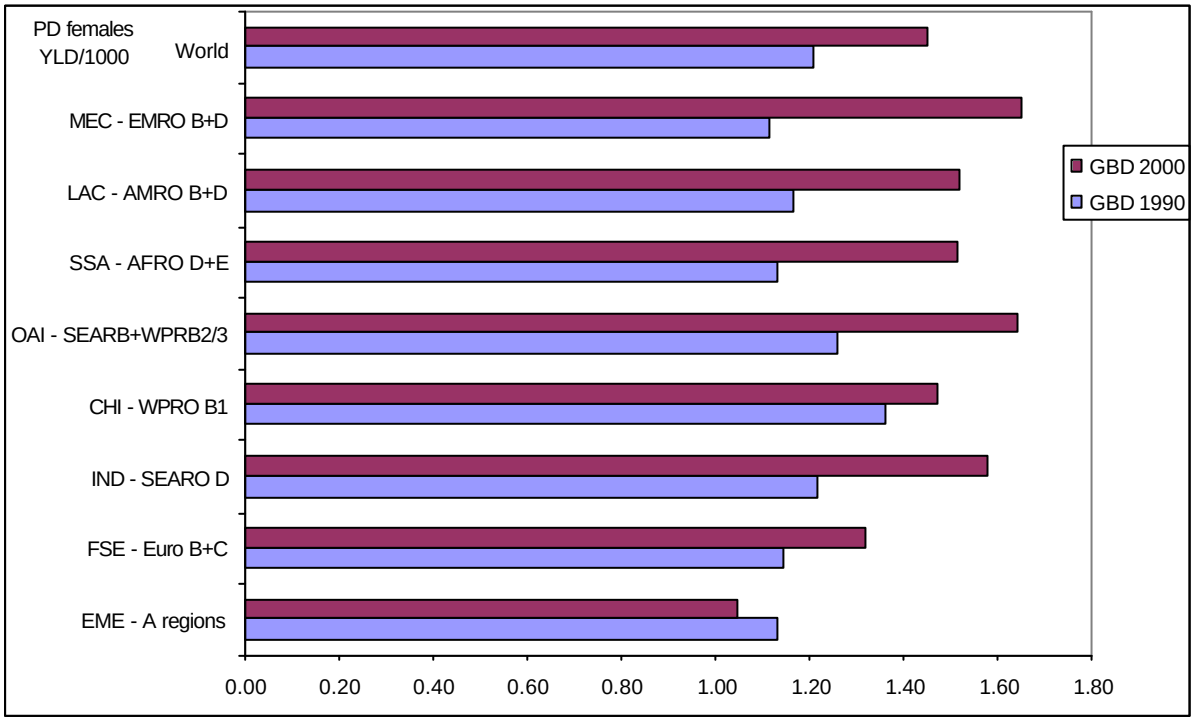


Figure 2. Panic disorder: total YLD rates, by sex, broad regions, 1990 and 2000.

8. Uncertainty analysis

General methods for uncertainty analysis of estimates for the Global Burden of Disease 2000 are outlined elsewhere (32). Uncertainty analysis for panic disorder estimates has not yet been completed.

9. Conclusions

These are version 2 estimates for the GBD 2000. Apart from the uncertainty analysis, updating estimates to reflect revisions of mortality estimates and any new or revised epidemiological data or evidence, it is not intended to undertake any major addition revision of these estimates.

We welcome comments and criticisms of these draft estimates, and information on additional sources of data and evidence. Please contact Colin Mathers (EBD/GPE) on email mathersc@who.ch

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