Global burden of obsessive-compulsive disorder in the year 2000

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1. Introduction

Obsessive-compulsive disorder is characterised by an obsessive need to repeatedly do certain things, such as handwashing, checking or cleaning house. Also ideas, images or impulses that enter the individuals mind again and again even though they may acknowledge them as excessive and irrational. Affected people cannot stop these thoughts and actions. These acts and ideas are distressing and the person tries to resist them. As a consequence of this condition, the person often takes longer to complete tasks and may have some disturbances in interpersonal relationships. Obsessive-compulsive disorder is a chronic disease with periods of remission and relapse. Obsessive-compulsive disorder was estimated to be the 11th leading cause of non-fatal burden in the world in 1990, accounting for 2.2% of total YLD, around the same percentage as schizophrenia (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 substantial reduction in the estimated burden of obsessive-compulsive disorder (now accounting for 2.5% 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 obsessive-compulsive 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 obsessive-compulsive disorder are given in Table 1 below.

Table 1. Case and sequelae definitions for obsessive-compulsive disorder

Cause category	GBD 2000 Code	ICD 9 codes	ICD 10 codes
Obsessive-compulsive disorder	U092		F 42

Sequela	Definition	Alternate definitions that are useable
Untreated	ICD 10 OCD	DSM IV
Treated	Treated OCD	

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3. Disease model

The literature on obsessive-compulsive disordersuggests that it generally runs a chronic course with periods of remission and relapse. This is in contrast to the relatively short duration estimated in the GBD study of 1.6 years, for OCD. To account for asymptomatic periods during the course of these chronic conditions we adjusted our durations by the ratio of point prevalence and one-year prevalence.

Table 2. Disease model assumptions

Definitions	ICD-10 overall. In AMRO A DSMIV. Adjusted for comorbidity.
Incidence/Prevalence	Incidence rates from Dismod driven by point prevalence. Data consistent with the only incidence study published were the incidence of DSM-III-R obsessive-compulsive disorder in adults was estimated at 0.55 per 1000 person-years (1). A relatively high rate of new cases was found in elderly women. The comorbidity with other psychiatric disorders was high, particularly major depression and phobias. The authors suggested that this finding might be related to a general neurotic propensity in some persons. The high rates of treatment-seeking are a reflection that obsessive-compulsive disorder is a disabling condition.
Remission	14.7% annual remission (2)
Case fatality	0
Severity distribution	-
Other assumptions	20% comorbidity with depression
Data	F/m worldwide 1.671429 (3)
	20% comorbidity with depression
	Age of onset from ECA and Weissman

Table 3. Comparison between GBD 1990 and GBD 2000

	GBD 1990	**GBD 2000**
Prevalence	M=0.9% F= 1.1%	From surveys conducted with clinical interview when possible
Remission	High remission rate	Chronic
Duration	1.6 years	
Age at onset	M=29 F=30	

Mean age at onset was estimated from a USA clinical sample (4) as 20 years for males and 25 years for females. No incidence data were available and incidence was estimated from prevalence using DISMOD.

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
Obsessive compulsive disorder, untreated	**0.129**	An internal force to repeat certain things such as handwashing, checking or cleaning house. Also ideas, images or impulses that enter the individuals mind again and again even though they may acknowledge them as excessive and irrational. People cannot stop them. These acts and ideas are distressing and the person tries to resist them. As a consequence of this condition, the person often takes longer to complete tasks and may have some disturbances in interpersonal relationships.
Obsessive compulsive disorder, treated	**0.080**	Personal has occasional ideas, images or impulses that enter the individuals mind again and again and repeat some acts but they do not interfere with day to day tasks. The person is occasionally upset with these symptoms.

5. Epidemiological data

Table 5 summarizes the available sources of population prevalence data on obsessive-compulsive disorder. Table 6 summarizes the assumptions and data sources for prevalence estimates for each of the 17 epidemiological subregions used in the GBD 2000.

Table 5. Prevalence data sources - summary

				Gender prevalence %	
Country	**Site**	**Prevalence**	**Age range**	**Male**	**Female**
Netherlands (6)	Netherlands 1996	DSMIIIR	All ages		
		Lifetime		0.9	0.8
		12 month		0.5	0.4
		One month		0.3	0.2
Spain (7)	Badalona 1997	SCAN one month	18 years	2.1	0.6
Spain (8)	Formentera 1997	SCAN one month = 0.9	> 15		
Germany (9)	Munich	DIS lifetime	25-64	1.8	2.3
Iceland (10)	Iceland	DIS lifetime	Cohort born 1931	1.8	2.1
Iceland (11)	Iceland	DIS one month	Cohort born 1931	0.2	1.2
		DIS one year		0.2	1.4
Canada (12)	Edmonton	DIS 6 month		1.6	1.6
		DIS lifetime		2.8	3.1

USA (13)	ECA 5 sites	DIS one month		1.1	1.5
		DIS one year		1.4	1.9
		DIS lifetime		2.0	3.0
Puerto Rico (14)	Puerto Rico	6 month	> 18	1.3	2.3
		lifetime		3.3	3.1
Israel (15)	Israel	SADS-D	24-33		
		6 month		0.9	0.7
		One year		0.9	0.7
		Lifetime		1.2	1.6
Taiwan (16)	Taipei	DIS lifetime	> 18	0.8	1.1
Hong Kong (17)	Hong Kong 1993	CIDI lifetime	18-64	0.9	1.2
Korea (18)	Seoul 1990	DIS lifetime	18-65	2.2	2.4
New Zealand (19)	Christchurch	DIS 6 month	18-64	0.6	1.4
New Zealand (20)	Christchurch	DIS lifetime	18-64	1.0	3.4

Table 6. Prevalence assumptions for GBD 2000 epidemiological subregions

AFRO D	Data from GBD
AFRO E	Data from GBD
AMRO A	Data from US and Canada. Stein overall 0.6 (Clinical interview) 0.75f and 0.5 m
AMRO B	Data from Chile and Puerto Rico adjusting for comorbidity with depression (20%) Age of onset from Puerto Rico consistent with prevalence figures from Chile. Brasil
AMRO D	Data from Chile and Puerto Rico
EMRO B	=AMRO D
EMRO D	=AMRO D
EURO A	Data from Germany, UK, Spain., Netherlands, Iceland, Israel
EURO B1	=EURO A
EURO B2	=EURO A
EURO C	=EURO A
SEARO B	Data from Taiwan
SEARO D	Data from India
WPRO A	Data from Australia and New Zealand. Prevalence figures with exclusion criteria operationalised from Australia (Andrews, personal comunication). 1.5 f/m
WPRO B1	Data from China, Korea and Taiwan Age of onset from Taiwan
WPRO B2	=WPR0 B1
WPRO B3	=WPR0 B1

6. Incidence, prevalence and mortality estimates for 2000

Table 7. Obsessive-compulsive disorder: age-standardized incidence and prevalence rate estimates for WHO epidemiological subregions, 2000.

	Age-std. Incidence/100,000		Age-std. prevalence/100,000	
Subregion	**Males**	**Females**	**Males**	**Females**
AFRO D	77	83	586	790
AFRO E	77	83	586	790
AMRO A	51	83	317	525
AMRO B	121	113	707	776
AMRO D	121	113	707	776
EMRO B	70	142	593	821
EMRO D	70	142	593	821
EURO A	49	63	380	475
EURO B1	137	115	615	803
EURO B2	70	142	593	821
EURO C	137	115	615	803
SEARO B	41	64	248	386
SEARO D	36	74	313	475
WPRO A	27	43	223	323
WPRO B1	34	51	213	313
WPRO B2	40	59	244	354
WPRO B3	40	59	244	354
World	58	77	376	522

- Age-standardized to World Standard Population (22).

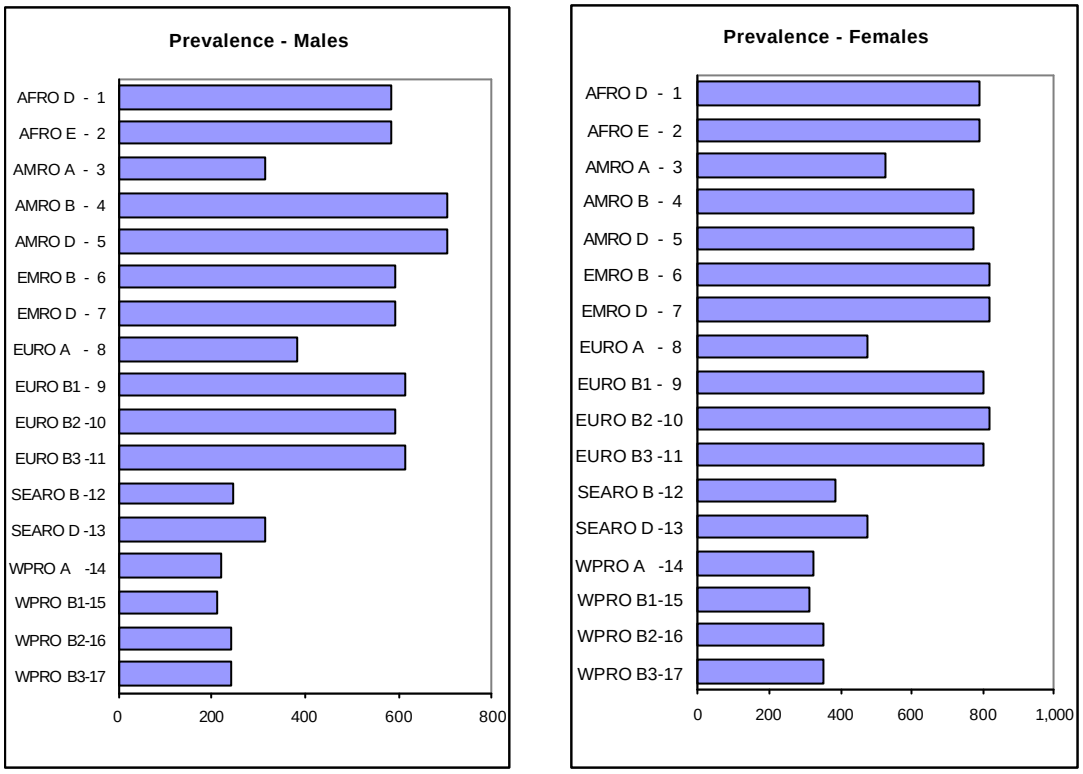

Figure 1. Obsessive-compulsive disorder: age-standardized prevalence rate estimates, WHO epidemiological subregions, by sex, 2000.

7. Global burden of obsessive-compulsive disorder in 2000

General methods used for the estimation of the global burden of disease are given elsewhere (21). The tables and graphs below summarise the global burden of obsessive-compulsive estimates for the GBD 2000 and compare them with the obsessive-compulsive estimates from the GBD 1990 (23).

Table 8. Obsessive-compulsive disorder:Global total YLD, YLL and DALY estimates, 1990 and 2000.

	Males	*Females*	*Persons*
YLD('000)			
GBD1990	4,435	5,778	10,213
GBD2000	2,048	2,713	4,761
YLL('000)			
GBD1990	-	-	-
GBD2000	-	-	-
DALY('000)			
GBD1990	4,435	5,778	10,213
GBD2000	2,048	2,713	4,761

Table 9. Obsessive-compulsive disorder: YLD and DALY estimates for WHO epidemiological subregions, 2000.

	YLD/100,000		YLD	DALY
Subregion	**Males**	**Females**	**('000)**	**('000)**
AFRO D	107	144	**420**	**420**
AFRO E	107	146	**428**	**428**
AMRO A	50	81	**204**	**204**
AMRO B	118	130	**548**	**548**
AMRO D	112	125	**85**	**85**
EMRO B	114	151	**184**	**184**
EMRO D	112	145	**177**	**177**
EURO A	57	68	**257**	**257**
EURO B1	109	133	**201**	**201**
EURO B2	113	145	**66**	**66**
EURO C	107	123	**284**	**284**
SEARO B	44	71	**225**	**225**
SEARO D	55	77	**886**	**886**
WPRO A	34	47	**61**	**61**
WPRO B1	39	58	**655**	**655**
WPRO B2	43	64	**76**	**76**
WPRO B3	40	60	**3**	**3**
World	67	90	**4,761**	**4,761**

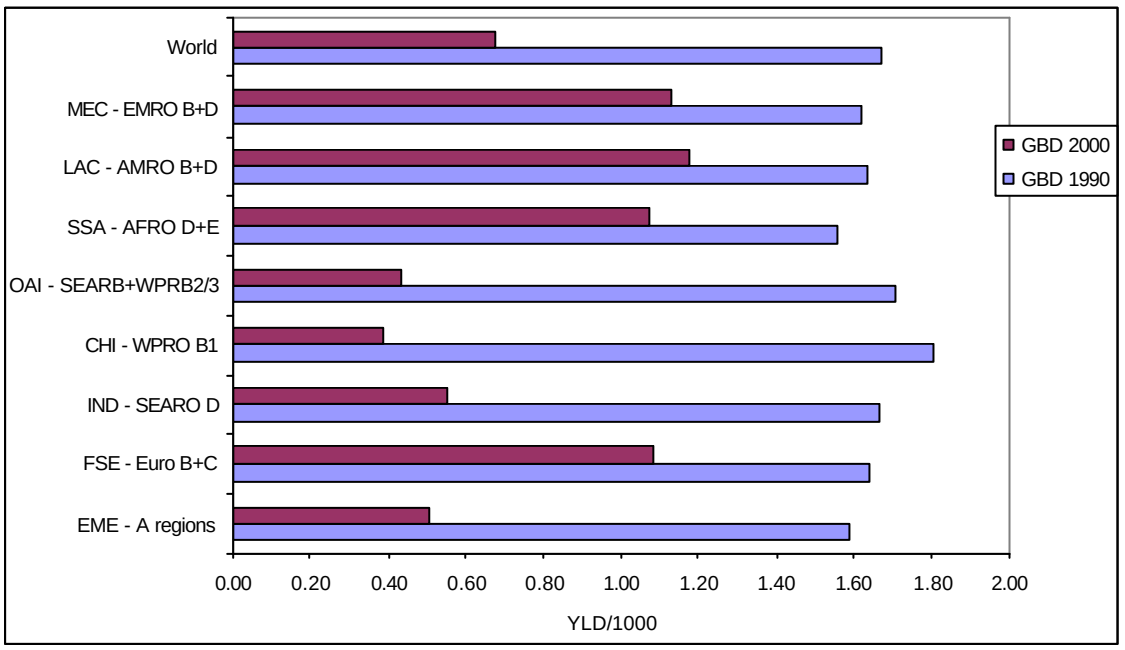

Figure 2. Obsessive-compulsive disorder:male YLD rates, broad regions, 1990 and 2000.

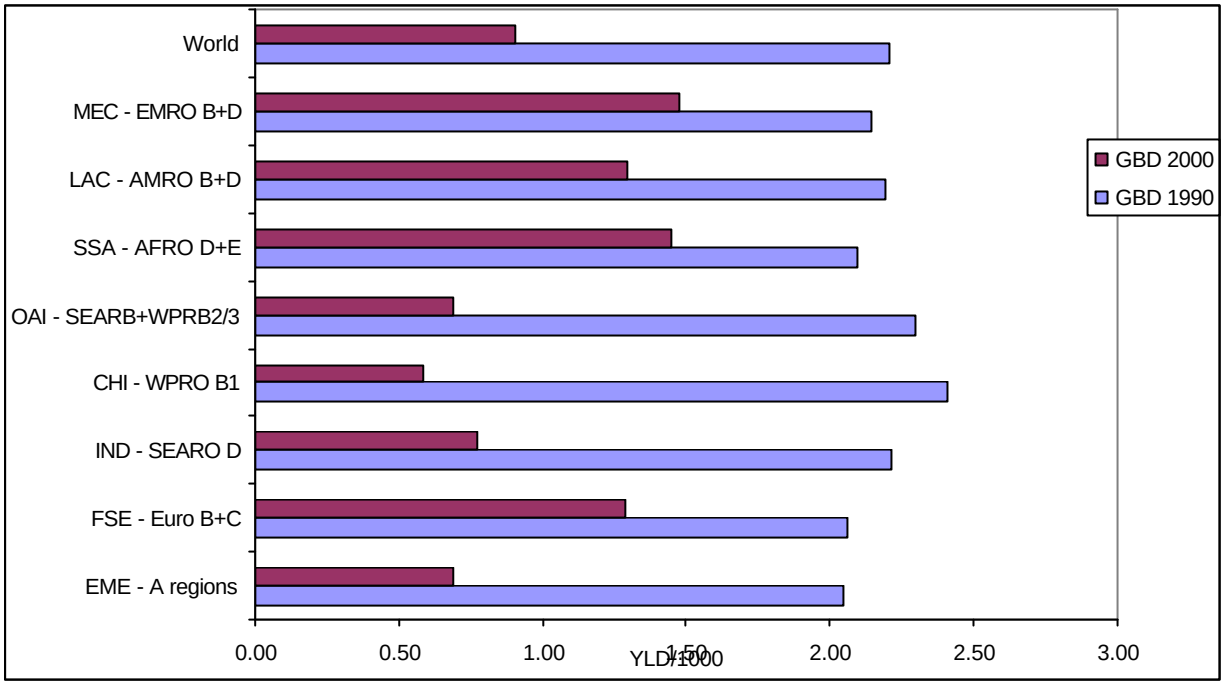

Figure 3. Obsessive-compulsive disorder:male YLD rates, broad regions, 1990 and 2000.

8. Uncertainty analysis

General methods for uncertainty analysis of estimates for the Global Burden of Disease 2000 are outlined elsewhere (24). Uncertainty analysis for obsessive-compulsive 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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