Abstract  Objectives  To describe lifetime prevalence rates, course and comorbidity of obsessive-compulsive disorder (OCD), obsessive-compulsive syndromes (OCS) and OC-symptoms (OC-sx) up to age 41. Methods  In the Zurich community cohort study 591 subjects were selected after screening at the age of 19 and studied prospectively by 6 interviews from 20 to 40; they represent 1599 subjects of the normal population. The diagnoses of OCD met DSM-IV criteria. Course was assessed by graphic illustrations and prospective data. Results  The lifetime prevalence rate was 3.5 % for OCD (males 1.7 %, females 5.4 %) and 8.7 % for OCS (males 9.9 %, females 7.5 %). The onset of OC-sx was 18 years (median); and in 70 % before age 20. OCD was treated in one third of cases, OCS in 6.1 %. The course of symptoms was chronic in 60 %, but OCD and OCS showed in most cases considerable improvements over time. OCD reduced quality of life mostly in the subject’s psychological well-being and at work but to a considerable extent also in other social roles. Comorbidity was prominent with bipolar disorder, panic disorder and social phobia and also significant with bulimia, binge eating, generalized anxiety disorder and suicide attempts; there was no association with substance abuse/dependence. Conclusion  OCD and OCS are manifestations of a wide spectrum of severity with high prevalence and strong clinical validity. The long-term course is better than generally assumed.

Key words  obsessive-compulsive disorder · obsessive-compulsive spectrum · prevalence · comorbidity · course

Introduction  In recent years, a number of epidemiological studies have examined the prevalence and psychopathological correlates of obsessive-compulsive spectrum disorders.

In late adolescence, obsessive-compulsive disorders (OCD) have a lifetime prevalence of 2 to 3 % (Maina et al. 1999; Zohar 1999). In adulthood, the 6-month prevalence rates range from 0.7 to 2.1 % with more female (1.5 %) than male (1 %) sufferers, according to a review of nine population surveys of adults using the Diagnostic Interview Schedule (DIS) (Bebbington 1998; Sasson et al. 1997). A cross-national analysis of seven studies found lifetime prevalence rates of DSM-III OCD between 1.9 and 2.5 % with the exception of Taiwan, where the rate was only 0.7 % (Horwath and Weissman 2000). The National Survey of Psychiatric Morbidity in the United Kingdom (Heyman et al. 2001; Jenkins et al. 1997) found a prevalence of 1.5 % in females and 1 % in males. A telephone survey among 2261 Canadians conducted by lay interviewers identified 3.1 % and, after clinical reappraisal, 0.6 % OCD cases (Stein et al. 1997).

On a lower diagnostic level, the lifetime prevalence rates are considerably higher. High rates of OC-symptoms (OC-sx) were found in studies in adolescents, for instance 43.1 % in Egypt (Okasha et al. 2001) but also, on the defined symptom and syndromal level (OCS). Uncontrollable OC-sx was found in 6.1 % of 3062 women in the Ontario questionnaire survey (Frise et al. 2002); there was an age-related decrease of the prevalence. Maina et al. (1999) identified 12.3 % of OCS among 1883 Italian army recruits. Bebbington et al. (1998) found a prevalence of OCS of 7 % in men and 15 % in women and Bijl et al. (1998) 0.9 % with almost equal gender rates. In the Zurich study (Degonda et al. 1993), we found OCS in 5.5 % of males and 5.9 % of females (M + F 5.7 %) up to
age 30. Applying DSM-IV (American Psychiatric Association 1994) criteria and the Composite Diagnostic Interview Schedule (M-CIDI) modified by Wittchen et al. (1995, 2001) to a sample of 4093 subjects from the community, Grabe et al. (2000) found a lifetime prevalence of 0.5% for OCD and 2% for subclinical OCD (OCS); the 12-month prevalence rates were only slightly lower (0.39% and 1.6%, respectively); rates among women were higher than among men.

In contrast to the documentation of prevalence rates of OCD and OCS by numerous rigorous studies, there is a relative paucity of available data on the prevalence, correlates, and adult outcomes associated with OC spectrum disorders in the community largely because previous studies of the longitudinal epidemiology of OC spectrum disorders were limited to younger age groups (for a review see Valleri-Basile et al. 1996). Finally, there are clinical reports suggesting that the course and phenomenology of OC may vary, especially in later years, indicating the importance of collecting prospective data.

In order to begin to address this gap, the current study will present newly updated findings of the Zurich cohort followed-up for another ten years to age 40, in order to provide longitudinal data on prevalence, comorbidity, and correlates of OC spectrum disorders.

Methods

Sample

The Zurich study is comprised of a cohort of 4,547 subjects (m = 2201; f = 2346) representative of the canton of Zurich in Switzerland, who were screened in 1978 with the Symptom Checklist 90-R (Derogatis 1977) and a questionnaire for socio-demographic data. The men were randomly selected at age 19 among male conscripts into the Swiss army. The women were selected at age 20 from the list of voters provided by all local communities. In order to increase the probability of inclusion from all local communities, a sub-sample of 591 subjects was selected for interview, with two-thirds consisting of high scorers (defined by the 85th percentile or more of the SCL-90) and a random sample of those with scores below the 85th percentile; the following mean item cut-off scores were applied: 1.57 for males and 1.89 for females (Angst et al. 1984).

So far six interview waves have been conducted as follows: 1) 1979 (M 20yrs/F 21yrs); 2) 1981 (M 22yrs/F 23yrs); 3) 1986 (M 27yrs/F 28yrs); 4) 1988 (M 29yrs/F 30yrs); 5) 1993 (M 34yrs/F 35yrs); and 6) 1999 (M 40yrs/F 41yrs).

An analysis of the impact of the attrition over 20 years was published recently (Eich et al. 2003). The overall design of the study is shown in Fig. 1.

Interviews

The Structured Psychopathological Interview and Rating of the Social Consequences for Epidemiology (SPIKE) was administered in the subjects’ homes by psychiatric residents and clinical psychologists with extensive clinical training. Psychopathology, including the obsessive-compulsive spectrum, was assessed for the 12 months prior to each interview. In addition, symptoms were also assessed for each calendar year between the interviews but not taken into account for the diagnoses; the latter refer strictly to the pre-interview year.

Diagnoses

Three categories of OC manifestations were defined:

1. **OCD** a) the presence of 1 of 9 criterial OC-symptoms of DSM-IV plus b) significant distress (>49 on an analogue scale [0–100]) or work impairment or impairment in other activities plus c) the symptoms were subjectively not pleasurable or unreasonable plus d) they could not be suppressed.

2. **OCS** an obsessive-compulsive syndrome defined by criteria a) and b) but distress needed only to be moderate (29–49 on the analogue scale [0–100]). Criteria c) and d) were not required.

3. **OC-sx: OC-symptoms** We distinguished a group suffering from symptoms during the twelve months prior to an interview from a group suffering from symptoms only during the years between the interviews.

Other psychiatric diagnoses were made by algorithms according to the following criteria: anxiety states (generalized anxiety and panic disorder); DSM III: major depression, dysthymia and bulimia; DSM-III-R: phobias, substance abuse/dependence: DSM-IV; neurasthenia, recurrent brief depression: ICD-10. A Zurich diagnosis of minor depression required 3–4 of 9 DSM-III-R criterial symptoms, with a minimum duration of 2 weeks. Uni- and bipolar disorders were diagnosed according to the criteria described recently in detail (Angst et al. 2003a). Different versions of the diagnostic manuals were used to define diagnoses, the aim consistently being to approximate as closely as possible to the criteria of the most recent editions. This aim could not always be achieved in the study whose inception (1979) predates the publication of DSM-III (1980) by one year and DSM-IV (1994) by 15 years.

Course and consequences of the OC spectrum

The course pattern of OC manifestations was assessed by presenting interviewees with graphic illustrations distinguishing single episodes from recurrent and chronic courses (Fig. 2). In addition, SCL-90 R measures including the obsessicalonality subscale were taken 8 times: at the screening, at each interview, and in the year between the first and second interview. The obsessicalonality scale includes the following ten items (abbreviated): 3) repeated unpleasant thoughts, 9) trouble remembering things, 10) worried about sloppiness, 28) feeling blocked in getting things done, 38) having to do things very slowly, 45) having to double check whether you do, 46) difficulty making decisions, 51) your mind going blank, 55) trouble concentrating, 65) having to repeat the same actions.

Subjective quality of life was assessed at the age of 34/35 across 8