Obsessive-Compulsive Disorder
Current science and clinical practice

Editor Joseph Zohar

Obsessive-compulsive disorder (OCD) remains one of the most challenging disorders of the brain. Contemporary conceptualisation and therapeutic strategies are undergoing a revolution as a result of new insights derived from modern technological advances. This book was conceived in order to present this revolution to the reader. It covers current theories regarding the etiology of OCD, what is known about the genetics of this disorder, evidence from neuroimaging and a discussion of potential endophenotypes. There is an evaluation of current treatment approaches for the disorder, encompassing psychological, psychopharmacological and physical interventions, as well as a discussion of treatment resistance. The book considers methodological issues, plus reviews of OCD in paediatric populations. A summary chapter highlights some potential research avenues, in a discussion of the future directions in OCD.

Rather than provide comprehensive coverage, repeating material from standard psychiatry textbooks, this book focuses on recent information and its application, distinguishing it from other titles.

• If you work with children who have OCD,
• If you are interested in genetics, neurocognition or brain imaging,
• If you work with patients and would like to improve your assessment in OCD and OCD Spectrum disorders, to update your therapeutic strategies and to get a handle on cutting edge developments in this intriguing field,
• If you are planning a research project in OCD and would like to get some hints from people who are research leaders in this field and also learn about methodological issues specific to OCD research, then this book will be a valuable resource.

• A concise overview of the current state of the art in OCD assessment and treatment, including physical interventions and treatment resistance
• Focuses on scientific advances (including specific methodological issues) and how they can inform and benefit clinical practice
• Looks critically and broadly at the diagnostic classification, including the ongoing revision of the two major international systems
• Written by an A-list team of experts in the field who have a track record of being engaging authors
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Contents

List of Contributors xii
Introduction xvii

SECTION 1 ASSESSMENT AND TREATMENT

1 Assessment 3
Jose M. Menchon
Introduction 3
Detecting OCD 5
Screening in clinical interview 7
Structured interviews 8
Clinical assessment of obsessive-compulsive symptoms 9
Yale–brown obsessive-compulsive scale 10
Dimensional yale–brown obsessive-compulsive scale (DY–BOCS) 11
Leyton obsessional inventory (LOI) 12
Maudsley obsessional-compulsive inventory (MOCI) 13
Padua inventory (PI) 13
Obsessive compulsive inventory (OCI) 14
Insight 14
Rating insight 15
Assessment of the risk of suicide 17
Differential diagnosis, comorbidities and related disorders 18
Organic brain disorders 19
Schizophrenia 20
Depression 20
Hypochondriasis 20
Phobias 21
Tourette disorder and tic disorders 21
Obsessive-compulsive personality disorder (OCPD) 21
Body dysmorphic disorder (BDD) 21
Hoarding 22
Other disorders 22
Conclusions 22
References 23
2 Pharmacotherapy of obsessive-compulsive disorder

*Eric H. Decloedt and Dan J. Stein*

- Introduction 31
- Placebo-controlled studies of clomipramine 32
- Placebo-controlled studies of fluvoxamine 32
- Placebo-controlled studies of fluoxetine 33
- Placebo-controlled studies of paroxetine 34
- Placebo-controlled studies of sertraline 34
- Placebo-controlled studies of citalopram/escitalopram 34
- Placebo-controlled studies of venlafaxine 35
- Improving early response in OCD 35
- Special populations: children 36
  - Clomipramine 36
  - Fluvoxamine 36
  - Fluoxetine 36
  - Paroxetine 37
  - Sertraline 37
  - Citalopram 38
- Meta-analyses 38
- Tolerability of clomipramine and serotonin reuptake inhibitors 40
- Optimal dose of treatment 41
- Duration of treatment 42
- Refractory OCD 43
  - Increased dose of SSRI 43
  - Augmentation of SSRI treatment with antipsychotics 44
  - Other drugs 45
  - Alternative modes of administration of SSRIs 46
  - Combining SRIs 46
  - Switching SSRIs 46
  - Adding psychotherapy 47
- Future therapeutic options 47
- Conclusion 48
- References 48

3 Cognitive behavioural therapy in obsessive-compulsive disorder: state of the art

*Martin E. Franklin, Addie Goss and John S. March*

- Theoretical models 58
- Treatment 60
  - Exposure plus response prevention (ERP) 60
  - Cognitive therapies 63
  - ERP plus medication 63
- OCD protocols 64
  - Assessment 64
  - Adult ERP protocol 65
  - Paediatric ERP protocol 67
CONTENTS

Dissemination 67
Future research 69
Summary 69
References 70

4 Electroconvulsive therapy, transcranial magnetic stimulation and deep brain stimulation in OCD 75
Rianne M. Blom, Martijn Figee, Nienke Vulink and Damiaan Denys
Introduction 75
Electroconvulsive therapy 75
Transcranial magnetic stimulation 76
  Mechanism of action 77
  Efficacy of rTMS in OCD 77
  Side effects and safety 84
  Conclusion and future directions 85
Lesioning 85
Deep brain stimulation 86
  Efficacy of DBS in OCD 86
  Mechanism of action of DBS in OCD 92
  Side effects of DBS in OCD 92
  Follow-up treatment 94
  Conclusions: DBS 94
Conclusion 94
Acknowledgements 95
References 95

5 Approaches to treatment resistance 99
Stefano Pallanti, Giacomo Grassi and Andrea Cantisani
Terminological problems and operational definitions 100
Pharmacological strategies in resistant OCD 103
  Switching 103
  Infusion therapy 104
  Cognitive behavioural therapy 105
  Serotonergic agents 106
  Dopaminergic agents 108
  Glutamatergic agents 113
  Opioids 115
Physical therapies 115
  Electroconvulsive therapy (ECT) 115
  Repetitive transcranial magnetic stimulation (rTMS) 116
  Deep brain stimulation (DBS) 116
Family intervention 117
Conclusions and future perspectives 117
References 118
SECTION 2  CLINICAL SPOTLIGHTS

6  Subtypes and spectrum issues  
*Eric Hollander, Steven Poskar and Adriel Gerard*

The obsessive-compulsive spectrum  
- Introduction  
- Cluster approach  
- Compulsivity and impulsivity  
- Repetitive behaviour domain  
- Determining placement of proposed OCSDs using cross-cutting domains  
- Obsessive-compulsive spectrum nosology

OCD subtypes: understanding the heterogeneity of OCD  
- Dimensional approach  
- Associated symptom domains  
- Compulsive hoarding: OCPD, OCD subtype, dimension, OCSD or something else?

Conclusion  
References

7  Paediatric OCD: developmental aspects and treatment considerations  
*Daniel A. Geller, Alyssa L. Faro, Ashley R. Brown and Hannah C. Levy*

Introduction  
Epidemiology  
Aetiological considerations  
- Genetic factors  
- Non-genetic factors  
- Aetiology: summary  
Clinical features  
- Gender and age at onset  
- Elaboration of phenotypic dimensions  
- Comorbid conditions  
- Neuropsychological endophenotypes  
Clinical features: summary  
Clinical assessment  
Differential diagnosis  
- Normal development  
- Other psychiatric disorders  
Treatment  
- Pharmacotherapy  
- Moderating effect of comorbid conditions  
- Multimodal treatment  
- Medication augmentation strategies in treatment resistance  
Safety and tolerability  
Treatment: summary
CONTENTS ix

Course and prognosis 179
Conclusions and future research 179
Acknowledgements 180
References 180

SECTION 3 RESEARCH SPOTLIGHTS

8 Methodological issues for clinical treatment trials in obsessive-compulsive disorder 193
Samar Reghunandanan and Naomi A. Fineberg

Introduction 193
Randomized controlled trials 194
The rationale of placebo 196
Recruitment criteria 199
Diagnosis 199
OCD dimensions and subtypes 200
The problem of comorbidity 201
Rating scales for OCD trials 203
Evaluating anxiety and depression in OCD 204
Measuring response and remission 205
Relapse prevention 207
Treatment-resistant OCD 208
Psychological treatment trials 209
Integrated pharmacological and psychological treatments in OCD 210
Health-related quality of life 211
Summary 211
References 212

9 Serotonin and beyond: a neurotransmitter perspective of OCD 220
Anat Abudy, Alzbeta Juven-Wetzler, Rachel Sonnino and Joseph Zohar

Serotonin 221
Serotonin and metabolite concentrations in OCD – 30 years later 222
Pharmacological challenge tests 224
Pharmacotherapy 225
Animal models and the role of serotonin 226
Dopamine 227
Dopamine and metabolite concentrations in humans 227
Pharmacological challenge tests 228
Pharmacotherapy 229
Animal models and the role of dopamine 231
Glutamate 232
The glutamatergic influence 232
Glutamate and metabolite concentrations in humans 232
Animal models and the role of glutamate 233
Serotonin: is it the one to blame? 233
The puzzle of antipsychotics and OCD: Is dopamine the answer? 234
So, is it a question of location? (Or . . . location, location, location?) 234
References 235

10 **Brain imaging** 244
*David R. Rosenberg, Phillip C. Easter and Georgia Michalopoulou*

- Neuroimaging modalities 244
- Structural assessment 244
- Functional neurochemical assessment 245

**Structural assessment of OCD** 246
- Total brain volume/ventricles 246
- Basal ganglia 246
- Prefrontal cortex 248
- Medial temporal-limbic cortex 252
- Pituitary 253
- Supramarginal gyrus 253
- White matter 254

**Functional neuroimaging studies of OCD** 255
- Neurochemistry 258
  - Serotonin 258
  - N-acetyl-aspartate 258
  - Choline 259
  - Creatine/phosphocreatine 262
  - Glutamate 262
- Conclusion 266
- Acknowledgements 267
- References 268

11 **The genetics of obsessive-compulsive disorder: current status** 277
*David L. Pauls*

**Introduction** 277
- Twin studies 277
- Family studies 279
  - Family history studies 280
  - Family interview studies 280
- Segregation analyses 284
- Candidate gene studies 285
- Genetic linkage studies 290
- Future work 291
- Acknowledgements 292
- References 292

12 **Neurocognitive angle: the search for endophenotypes** 300
*Samuel R. Chamberlain and Lara Menzies*

**Introduction** 300
- Heritability of OCD 301
CONTENTS

The concept of an endophenotype 302
Applying the endophenotype construct to OCD 305
Domains of interest in hierarchical modelling of OCD 307
  Cognition 307
  Neuroimaging 308
Searching for endophenotypes of OCD 311
  Cognition 311
  Neuroimaging 313
  Other potential endophenotypes 316
Summary 317
Acknowledgements and disclosures 319
References 320

13 Conclusion and future directions 327
  Joseph Zohar
  References 329

Index 331
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Introduction

During my career, I have witnessed two revolutions in obsessive-compulsive disorder (OCD).

As a resident in psychiatry (in the late 1970s), I asked my supervisor for advice, having examined a patient with OCD; his response was that there was very little that could be done for these rare cases. He was right; at that time, OCD was considered a rare disorder of psychological origin, and refractory to treatment. The first revolution in OCD overturned all three of these conceptions. The seminal work of M.M. Weissman reported a lifetime prevalence of about 2%. Pioneering double-blind, placebo-controlled work at the National Institute of Mental Health (NIMH) raised the curtain on the specific response to serotonergic medication, highlighted the serotonergic basis and gave initial hints for the relevant brain regions involved in OCD.

The second revolution in OCD is taking place right now. It is composed of building blocks such as neurocognitive endophenotypes (see Chapter 12), genetics (Chapter 11), sophisticated brain imaging (Chapter 10), daring conceptual challenges (Chapter 6), and venturing beyond the conventional serotonin hypothesis (Chapter 9).

To help us build these new, improved, contemporary understandings of OCD and OC spectrum disorders, we use better assessment tools (Chapter 1), and utilize much more sophisticated methodological techniques (Chapter 8). All of this provides us with sharper pharmacological tools (Chapter 2) and psychological interventions (Chapter 3), for adult patients as well as for children (Chapter 7). Moreover, it enables us to embark on new therapeutic approaches (Chapter 5), including new physical interventions (Chapter 4).

This book is a sort of celebration of the emergence of the second revolution in OCD, and I hope that the reader will feel the enthusiasm shared by all the contributors about the promising present and the bright future of OCD.

Joseph Zohar
2012
SECTION 1

Assessment and Treatment
CHAPTER 1

Assessment

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INTRODUCTION

Many people have some obsessions during their lives: it is estimated that more than one-quarter of people experience obsessions or compulsions at some time [1], and a substantial proportion of them will meet the criteria for obsessive-compulsive disorder (OCD). The lifetime prevalence of OCD is about 2–2.5%, and the annual prevalence is 1–2% among the general population [1,2]. The male to female ratio is approximately unity, with some studies finding a slightly higher prevalence in women, while in the child and adolescent populations males show a higher prevalence.

The hallmark of OCD is the presence of either obsessions or compulsions. According to the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision (DSM-IV-TR) [3] diagnostic criteria, the obsessions are defined by the following four criteria:

1. Recurrent and persistent thoughts, impulses or images that are experienced, at some time during the disturbance, as intrusive and inappropriate and that cause marked anxiety or distress.
2. The thoughts, impulses or images are not simply excessive worries about real-life problems.
3. The person attempts to ignore or suppress such thoughts, impulses or images, or to neutralize them with some other thought or action.
4. The person recognizes that the obsessional thoughts, impulses or images are a product of his or her own mind (not imposed from without as in thought insertion).
Compulsions are defined as: '1) repetitive behaviors (e.g., hand washing, ordering, checking) or mental acts (e.g., praying, counting, repeating words silently) that the person feels driven to perform in response to an obsession, or according to rules that must be applied rigidly, and 2) the behaviors or mental acts are aimed at preventing or reducing distress or preventing some dreaded event or situation; however, these behaviors or mental acts either are not connected in a realistic way with what they are designed to neutralize or prevent or are clearly excessive.' Hence, obsessions and compulsions are repetitive, unpleasant and intrusive (although recognized as own thoughts), and usually the individual considers that the obsessions or compulsions are excessive or irrational, demonstrated by the subject’s attempts to resist them. While obsessions are considered phenomena that increase anxiety or discomfort, compulsions are behaviours that are aimed at reducing it.

Obsessions and compulsions are very diverse and have been grouped into various types. Table 1.1 shows the percentage of obsessions and compulsions in adult OCD samples reported in several studies. Such diversity in the clinical manifestations of OCD has led researchers to examine whether the different obsessions and compulsions seen in patients could be related and grouped into a few subtypes or dimensions; for instance, a recent meta-analysis [10] has derived four main factors: symmetry, forbidden thoughts, cleaning and hoarding. Apart from its descriptive utility, this kind of approach has heuristic value since it allows examination of the possible heterogeneity of OCD in terms of neurobiology, genetics or

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<td>43</td>
<td>72</td>
<td>69</td>
<td>73</td>
<td>47</td>
</tr>
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<td>Repeating rituals</td>
<td>42</td>
<td>58</td>
<td>56</td>
<td>52</td>
<td>31</td>
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<td>36</td>
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Numbers in brackets refer to the relevant reference.
The assessment of OCD includes the usual elements involved in the psychiatric assessment of mental disorders, although there are also specific issues related to this condition. Relevant issues in the OCD assessment are (Table 1.2):

- the instruments for detecting and diagnosing the disorder;
- the examination of the obsessive-compulsive (OC) symptoms: the severity and type of symptoms, the level of insight, cognitive biases and behavioural analysis;
• the assessment of the suicide risk;
• the appraisal of neuropsychological functions;
• differential diagnosis;
• the presence of comorbid and related/spectrum disorders;
• the review of the course of the disorder: age of onset of OC symptoms, age at which the subject met diagnostic criteria for OCD, type of course of the disorder (e.g. episodic, chronic with or without fluctuations, progressive worsening);
• the analysis of the response to previous treatments, including both clinical outcome and degree of disability of the patient’s functioning.

Given that some of the components of the assessment are examined in other chapters, the present review will focus on the detection of OCD, the clinical rating of OC symptoms, the assessment of insight and the suicide risk, the differential diagnosis, and OC related and spectrum disorders.

DETECTING OCD

Many OCD sufferers experience shame about their symptoms or think that these will be misunderstood as ‘madness’, while others may even be afraid that their symptoms do actually mean that they are becoming ‘mad’. For some patients these symptoms may be stigmatizing while others do not view their symptoms as a disorder, lacking insight of their morbid nature; others may think that they do not require treatment. All these beliefs and attitudes reduce the likelihood of disclosing their OCD symptoms to their physicians. A study of attitudes towards OCD symptoms [12] showed that the attitudes may vary across the different symptoms of the disorder, finding that obsessions related to harm were the most feared and unacceptable, followed by the washing behaviour, and then the checking behaviour. Therefore, fear of the meaning of the obsessions/compulsions, embarrassment about reporting them, viewing them as stigmatizing, or lacking insight into their nature, may all delay seeking help for them. This delay was evident in the study by Pinto et al. [7], which found that the time elapsed between the first symptoms and the first treatment was 17 years, and that between meeting the diagnostic criteria for OCD and the first treatment was 11 years.

The importance of adequate recognition of OCD is reflected in a study in which only 30.9% of severe OCD cases received a specific OCD treatment [1], although 93% of the patients reported that they were receiving mental health treatment in some kind of health setting (general medical, mental health settings, human services or complementary/alternative medicine). The data were more striking in patients with moderate OCD, since only 2.9% of this group of patients were on specific OCD treatment while 25.6% of this group were receiving mental health treatment.
These data regarding attitudes to OCD symptoms, and therefore the delay in both receiving an OCD diagnosis and starting an adequate treatment, emphasize the importance of the strategies to detect OCD.

Screening in clinical interview

Some patients with OCD will describe their symptoms quite well, and diagnosing OCD will not be difficult provided that the physician knows the disorder. However, other patients will display other symptoms that may not be so apparently related to OCD, thereby making it more difficult to reach the diagnosis. For instance, some patients may describe general complaints of anxiety or depression, avoidance of specific situations, or excessive concerns about illnesses. In some cases, the presence of hand dermatitis may suggest repetitive hand washing due to contamination obsessions. Indeed, it is not unusual that patients see non-psychiatrist doctors such as dermatologists for dermatitis or trichotillomania, neurologists for tics, plastic surgeons for concerns about appearance (typically in body dysmorphic disorder), or other physicians for fear of cancer or HIV infection [13]. Therefore, it is useful to have some easy screening questions to detect OCD if the doctor suspects it during the clinical interview.

One of the most useful sets of screening questions are those derived from the Zohar–Fineberg Obsessive Compulsive Screen (ZF-OCS) [14], which are also recommended by the National Institute for Health and Clinical Excellence (NICE) guideline [15]:

1. Do you wash or clean a lot?
2. Do you check things a lot?
3. Is there any thought that keeps bothering you that you’d like to get rid of but can’t?
4. Do your daily activities take a long time to finish?
5. Are you concerned about orderliness and symmetry?
6. Do these problems trouble you?

These questions have good sensitivity and specificity for detecting OCD. Using the Mini International Neuropsychiatric Interview (MINI, see below for full description) as the criterion, the five first questions showed a sensitivity of 94.4% and a specificity of 85.1%, with a kappa agreement of 0.66, in a sample of 92 referred dermatology patients [14].

Several OCD guidelines propose similar questions to detect OCD. The American Psychiatric Association guideline [16] suggests the following screening questions to detect OCD:

- Do you have unpleasant thoughts you can’t get rid of?
- Do you worry that you might impulsively harm someone?
Do you have to count things, or wash your hands, or check things over and over? Do you worry a lot about whether you performed religious rituals correctly or have been immoral? Do you have troubling thoughts about sexual matters? Do you need things arranged symmetrically or in a very exact order? Do you have trouble discarding things, so that your house is quite cluttered? Do these worries and behaviours interfere with your functioning at work, with your family, or in social activities?

The Canadian Psychiatric Association [17] recommends essentially two questions to detect obsessions and compulsions:

- **Obsessions**: Do you experience disturbing thoughts, images or urges that keep coming back to you and that you have trouble putting out of your head? For example, being contaminated by something, something terrible happening to you or someone you care about, or of doing something terrible?
- **Compulsions**: Do you ever have to perform a behaviour or repeat some action that doesn’t make sense to you or that you don’t want to do? For example, washing or cleaning excessively, checking things over and over, counting things repeatedly?

When a doctor in a clinical setting suspects OCD all these screening questions may be very useful since they are quick and easy to ask.

**Structured interviews**

Apart from screening questions, OCD diagnosis may also be examined through more formal clinical interviews. In fact, the most widely used structured clinical interviews contain some questions or a section for the diagnosis of OCD. The structured clinical interviews most used for diagnosing OCD are the following.

- **Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV)**. The ADIS provides information about the presence or absence of a given diagnosis, as well as information about subthreshold symptom levels or the severity of the disorder. The ADIS-IV [18] is a semi-structured interview designed to assess the DSM anxiety disorders and other often comorbid DSM-IV disorders as well as disorders that are usually screened in research trials. The ADIS should be administered by trained clinicians. There are lifetime and child versions. With regard to OCD, it provides more information than the SCID (see below), since it assesses severity of obsessive-compulsive symptoms, insight, resistance and avoidance. It has good psychometric properties but it is time-consuming, being more used in research than in clinical practice.
Structured Clinical Interview for DSM-IV-TR Axis I Disorders (SCID-I). The SCID-I [19,20] is a semi-structured interview that provides a broad assessment of major DSM Axis I disorders. Like the ADIS, it should be administered by experienced clinicians or trained mental health professionals. In general, SCID has good psychometric properties although the data specifically for OCD are more moderate. For instance, reliability studies (including studies for both DSM-III-R and DSM-IV) selected in the SCID website show coefficients ranging from 0.40 to 0.70 [21].

Composite International Diagnostic Interview (CIDI). The CIDI is a comprehensive, fully structured interview designed to be used by trained lay interviewers for the assessment of mental disorders according to the definitions and criteria of the International Classification of Diseases, Tenth Revision (ICD-10) and DSM-IV. It is intended for use in large epidemiological and cross-cultural studies as well as for clinical and research purposes [22]. The CIDI is an expansion of the Diagnostic Interview Schedule (DIS) that was developed under the auspices of the World Health Organization (WHO) to address the problem that DIS diagnoses were exclusively based on the definitions and criteria of the DSM, and therefore to generate diagnoses based on the definitions and criteria of the WHO ICD. This is a very lengthy interview since it can take an average of approximately 2 hours to administer. Therefore, using CIDI to detect OCD requires administration specifically of the module with OCD.

Mini International Neuropsychiatric Interview (MINI). The MINI was designed as a structured interview for the major Axis I psychiatric disorders in DSM-IV and ICD-10. The administration of the MINI usually takes 15–20 minutes. Although its administration is short, the MINI covers the following disorders: panic disorder, agoraphobia, social phobia, OCD, specific phobia, generalized anxiety disorder (GAD), posttraumatic stress disorder (PTSD), major depressive disorder, dysthymic disorder, suicidality, mania, alcohol dependence, alcohol abuse, drug dependence (non-alcohol), drug abuse (non-alcohol), psychotic disorder, anorexia nervosa, bulimia and antisocial personality disorder. The MINI has been shown to have good concordance with other diagnostic measures [23]. The MINI also has good interrater reliability, with \( \kappa \) coefficients ranging between 0.88 and 1.0, and good test-retest reliability, with coefficients ranging between 0.76 and 0.93 [24,25].

CLINICAL ASSESSMENT OF OBSESSIVE-COMPULSIVE SYMPTOMS

The assessment and rating of OCD symptoms to establish the severity of the disorder has been complex due to the nature of the disorder. For instance, the severity of the disorder could be interpreted differently depending on whether the assessment
is based on the number of obsessions or compulsions, or the distress that they cause, or the degree of interference associated with them. Some subjects may have many obsessions and compulsions without these being too disabling, while other subjects with notably fewer obsessions may experience them as much more distressing or as severely interfering with their daily functioning. There are also many types of obsessions and compulsions, which are not always specified in the rating scales and which may be very particular to a given individual. In other subjects, the obsessions may not have all their usual characteristics, for instance in subjects lacking insight into their symptoms. As a result, many different scales that try to capture the severity of the OC symptoms have been developed and used for the assessment of OCD. Those used most widely are described below.

Yale–Brown Obsessive-Compulsive Scale

The Yale–Brown Obsessive-Compulsive Scale (Y–BOCS) [26,27] is probably the most widely used scale for measuring the severity of obsessive-compulsive symptoms and has become the ‘gold standard’ for OCD assessment. The scale was designed to assess OCD severity independently of the number and type of the obsessive and compulsive symptoms.

The Y–BOCS includes two primary sections: the Symptom Checklist and the Severity Scale. The Symptom Checklist examines the current (within the past week) and past presence of 64 obsessions and compulsions. These obsessions and compulsions are arranged into 13 specific (plus two miscellaneous) categories. Within the obsessions, the following categories are examined: aggressive, contamination, sexual, hoarding/saving, religious, need for symmetry or exactness, somatic and miscellaneous obsessions. The categories examined for compulsions are: cleaning/washing, checking, repeating rituals, counting, ordering/arranging, hoarding/collecting and miscellaneous compulsions. A substantial number of studies on its factor structure have been carried out providing solutions with between three and five factors. A recent meta-analysis of 21 factor analytic studies [10] yielded four main factors: hoarding, symmetry, forbidden thoughts and cleaning.

The Severity Scale is a semi-structured clinician-administered scale that assesses the presence and severity of obsessive-compulsive symptoms over the past week. It contains 10 items that assess separately several features of the obsessions (five items) and compulsions (five items). The five items for obsessions and compulsions are similar: time occupied by obsessive thoughts or compulsions; interference due to obsessions or compulsions; distress related to obsessions or not performing compulsions; efforts to resist obsessions or compulsions; and degree of control over obsessions or compulsions.

In addition to these sections, there is a target symptom list and a number of supplemental items that assess symptoms or behaviours that may be present but