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Schizophrenia

DAVID J. CASTLE
PETER F. BUCKLEY

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Schizophrenia

Second edition: revised and updated

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Foreword

This slim volume will be a welcome addition to the shelves of anyone in the mental health field. It provides a succinct and up-to-date overview of schizophrenia using a question-and-answer format. This makes it easily accessible and a ready quick reference guide. It is clearly written, and not just presents the received wisdom but also tackles some of the more controversial issues pertinent to schizophrenia in a balanced manner.

Part 1 addresses classification, clinical features, epidemiology, aetiological factors, brain abnormalities, and neurochemistry; Part 2 turns to management, covering service models, and biological, psychological, and social aspects of treatment. The text is liberally augmented with tables, figures, and fact boxes, enhancing the ease of reading.

Part 3 is a stand-alone section of patient/carer information regarding medications used in psychiatry, tips about dealing with side effects and enhancing adherence, and information about looking after physical health. This section will be particularly useful for clinicians who wish to provide their patients with materials which are balanced and 'user friendly'.

Drs Castle and Buckley are well recognized for their research and teaching regarding schizophrenia. Their joint experience spans the United Kingdom, Ireland, the United States, and Australia and gives the book an international perspective; its excellence reflects the breadth of their joint knowledge, their sound clinical base, and their familiarity with the literature. I strongly recommend their book to clinicians, teachers, researchers, and students with an interest in that still so-elusive disorder we know as schizophrenia.

Robin M. Murray
May, 2008

Preface

This is an updated version of what has been a very successful little book. We have been gratified by the strong sales and positive feedback we have received on the first edition and trust that this second edition will be equally well supported.

In revising the book, we have kept the format of the original but updated both text and references to encompass recent advances in the field. We have included DSM-5 criteria for schizophrenia and related disorders, albeit still referencing earlier editions of the Manual where appropriate. Newer treatment options have been a specific area of attention in this new edition and we have also added sections to encompass the recovery framework.

As Professor Murray alludes to in his kind Foreword, this book reflects the knowledge and clinical experience of the authors who have worked on several continents. Accordingly, the book contains information on several medications that may be available in one country but not another. It is important to check medication availability, dosage, and prescribing information with local regulatory and pharmaceutical sources. Additionally, information about medications often changes over time, so readers should consult other sources to verify information or clarify details. Finally, books are only one source of information and cannot substitute for the skill and advice of an experienced doctor.

It is our hope that this book will be an aid to people who care for, or live with, people who have this illness. However, it is not intended to be an alternative to the sound advice of a doctor who knows the patient's situation. Please bear in mind these considerations as you use this book.

David J. Castle and Peter Buckley

Abbreviations

ACT	assertive community treatment
CDS	Calgary Depression Scale
CATEGO	computerized algorithm
CATIE	Clinical Antipsychotic Trials of Intervention Effectiveness
CB_1	cannabinoid receptor 1
CBT	cognitive behaviour therapy
CDS	Calgary Depression Scale
CNV	copy number variant
COMT	catechol-*O*-methyltransferase
CT	computed tomography
CTJ	collaborative treatment journal
CUtLASS	Cost Utility of the Latest Antipsychotic Drugs in Schizophrenia Studies
DSM	*Diagnostic and Statistical Manual of Mental Disorders*
DUP	duration of untreated psychosis
ECT	electroconvulsive therapy
EE	expressed emotion
EPSE	extrapyramidal side effect
FEP	first-episode psychosis
fMRI	functional magnetic resonance imaging
H_1	histaminergic receptor
5-HIAA	5-hydroxyindole acetic acid
ICD	International Classification of Diseases
IgG	immunoglobulin G
IgM	immunoglobulin M
IPSS	International Pilot Study of Schizophrenia
LSD	lysergic acid diethylamide
MRS	magnetic resonance spectroscopy
M_1	muscarinic receptor
NAA	*N*-acetyl-aspartate
NaRIs	noradrenaline reuptake inhibitors
NaSSAs	noradrenaline and specific serotonin antagonists
NC	neutrophil count
NIDS	neurolept-induced deficit syndrome

NMDA	*N*-methyl-D-aspartate
NMS	neuroleptic malignant syndrome
OC	obsessive–compulsive
OCD	obsessive–compulsive disorder
PBCs	pregnancy and birth complications
PCP	phencyclidine
PET	positron emission tomography
PT	personal therapy
RCBF	regional cerebral blood flow
SAD	social anxiety disorder
SANS	Scales for the Assessment of Negative Symptoms
SAPS	Scales for the Assessment of Positive Symptoms
SDS	Schedule for the Deficit Syndrome
SPD	schizotypal personality disorder
SPECT	single-photon emission tomography
SRI	serotonergic antidepressant
SUD	substance use disorder
TCA	tricyclic antidepressant
TD	tardive dyskinesia
THC	delta-9-tetrahydrocannabinol
TMS	transcranial magnetic stimulation
VBR	ventricular brain ratio
WBC	white blood cell
WHO	World Health Organization

Contents

Part 1

The Myths and the Science

Chapter 1

Diagnosis and classification

Key points

- The schizophrenia concept has a long and changing history, and our modern constructs still lack external validity.
- There are no pathognomonic symptoms, signs, or laboratory tests for schizophrenia.
- There are a number of competing subtypologies of schizophrenia, based either on symptom profiles and/or on putative aetiological parameters.
- A schizophrenia-like psychosis can onset at pretty much any age, though certain clinical features are more or less common depending on age at onset.

1.1 What is it?

Inevitably, our first question asks what we are actually talking about when we refer to 'schizophrenia'. Thomas Szasz' ironic 'sacred symbol of psychiatry', schizophrenia, remains an enigma, though enhanced understanding of the causes, consequences, and potential treatments are bringing light to the subject. What remains problematic for the field, however, is a lack of agreement about what precisely this putative entity is. Whilst the US *Diagnostic and Statistical Manual of Mental Disorders* (DSM), now in its 5th edition, and the World Health Organization's *International Classification of Diseases* (ICD) 10th edition (see Table 1.1) have provided a reasonably reliable set of criteria for 'schizophrenia', the validity of the construct remains elusive, and clinicians and researchers need to be wary about accepting these as the definitive constructs. Indeed, schizophrenia remains a clinical diagnosis, based on certain signs and symptoms, and none of these is pathognomonic; there is also no laboratory or radiological test for the disorder as such. Among the schizophrenia research community, there is great interest in seeking a biomarker that would assist in the diagnosis and/or treatment of schizophrenia.

To see the current conception of schizophrenia in proper context, we need to trace the history of the construct, and understand the ways in which nomenclature, nosology, and definition have changed over time. Box 1.1 provides an overview of early contributions to thinking about schizophrenia, although, as German Berrios has pointed out, there is actually no clear linkage or continuity across these concepts, over time. Furthermore, the meaning of 'dementia' changed over time, such that to Benedict Augustin Morel it did not have any connotation of irreversibility. In any event, it was Emil Kraepelin's contribution to the delineation of what he called 'dementia praecox', which has been most enduring. In fact, his description was of an illness with a male excess, and early onset (usually below the age of 25 years), and an almost inevitably poor longitudinal course. Kraepelin did not use the label 'dementia' inadvisedly, believing it to be a brain disorder for which the underlying biological basis would eventually

Table 1.1 DSM and ICD diagnoses of schizophrenia

DSM-5	ICD-10
Symptoms Two or more of the following for at least 1 month (unless successfully treated): • Delusions • Hallucinations • Disorganized speech • Disorganized or catatonic behaviour • Negative symptoms	*Symptoms* At least one of: • Thought echo, insertion, withdrawal, broadcast • Passivity phenomena or delusional perception • Third-person conversing or running commentary hallucinations. At least two of: • Persistent hallucinations in any modality, with delusions • Disorganized speech • Catatonia • Negative symptoms (must be 'primary')
Social/occupational dysfunction • Work • Interpersonal relations • Self-care	
Duration 6 months at least (may include prodromal/residual symptoms).	Duration 1 month at least.
Exclusions • Schizoaffective disorder • Bipolar disorder • General medical • Substance induced	*Exclusions* • Mood disorder • Organic brain disease • Alcohol/drug-related intoxication

be found. His differentiation of dementia praecox from manic depressive psychosis was based largely on contrasting outcomes, with the latter usually showing an episodic course with good inter-morbid functioning.

What is not so well publicized is that Kraepelin understood that these were not the only psychotic illnesses, defining also a later-onset paranoid psychosis with a course intermediate between dementia praecox and manic depressive psychosis; he termed this 'paraphrenia', and alluded to other types of psychosis as well. Also, the time of Kraepelin was one where a number of infectious causes of psychotic disorders were highly prevalent, syphilis (the 'great mimicker') being perhaps the most troublesome in clouding and corrupting clinical diagnoses.

Box 1.1 The historical antecedents of the modern schizophrenia concept

- Benedict Augustin Morel (1809–1873): 'demence precoce'
- Karl Kahlbaum (1828–1899): 'catatonia'
- Ewald Hecker (1843–1909): 'hebephrenia'
- Emil Kraepelin (1856–1926): 'dementia praecox' aggregates catatonia, hebephrenia, and 'dementia paranoides'
- Eugen Bleuler (1857–1939): 'the group of schizophrenias'
- Kasanin (1933): 'schizoaffective' disorder
- Kurt Schneider (1887–1967): 'first-rank' symptoms
- Karl Leonhard (1960): 'cycloid psychoses'.