Contents

List of Contributors, xi

1 Introduction to epidemiologic research methods, 1
   Glyn Lewis
   1.1 What is epidemiology? 1
   1.2 Causation in medicine, 2
   1.3 Causal inference, 6
   1.4 The future for psychiatric epidemiology, 7
   References, 7

2 Analysis of categorical data: The odds ratio as a measure of association and beyond, 9
   Garrett M. Fitzmaurice and Caitlin Ravichandran
   2.1 Introduction, 9
   2.2 Inference for a single proportion, 10
   2.3 Analysis of 2 × 2 contingency tables, 11
   2.4 Analysis of sets of 2 × 2 contingency tables, 16
   2.5 Logistic regression, 18
   2.6 Advanced topics, 25
   2.7 Concluding remarks, 29
   2.8 Further reading, 29
   References, 29

3 Genetic epidemiology, 31
   Stephen V. Faraone, Stephen J. Glatt and Ming T. Tsuang
   3.1 Introduction, 31
   3.2 The chain of psychiatric genetic research, 31
   3.3 Psychiatric genetics and psychiatric epidemiology, 44
   Acknowledgements, 45
   References, 45
   Further reading, 47

4 Examining gene–environment interplay in psychiatric disorders, 53
   Judith Allardyce and Jim van Os
   4.1 Introduction, 53
   4.2 The process of genetic epidemiology, 54
   4.3 Gene–environment interplay takes different forms, 55
   4.4 Gene–environment correlation, 55
   4.5 Gene–environment interaction, 58
   4.6 Measurement of genotype, environmental exposure and pathological phenotype, 58
   4.7 Models of GxE, 60
   4.8 Which scale should we use to measure GxE? 61
   4.9 Study designs for the detection of GxE, 62
   4.10 Threats to the validity of epidemiological GxE studies, 65
   4.11 Epigenetic mechanisms, 67
   References, 67

5 Reliability, 73
   Patrick E. Shrout
   5.1 Introduction, 73
   5.2 The reliability coefficient, 73
   5.3 Designs for estimating reliability, 74
   5.4 Statistical remedies for low reliability, 76
   5.5 Reliability theory and binary judgements, 77
   5.6 Reliability statistics: General, 78
   5.7 Other reliability statistics, 82
   5.8 Summary and conclusions, 83
   References, 83
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Authors</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Moderators and mediators: Towards the genetic and environmental bases of psychiatric disorders</td>
<td>Helena Chmura Kraemer</td>
<td>87-96</td>
</tr>
<tr>
<td>7</td>
<td>Validity: Definitions and applications to psychiatric research</td>
<td>Jill M. Goldstein, Sara Cherkrezian and John C. Simpson</td>
<td>99-113</td>
</tr>
<tr>
<td>8</td>
<td>Use of register data for psychiatric epidemiology in the Nordic countries</td>
<td>Jouko Miettunen, Jaana Suvisaari, Jari Haukka and Matti Isohanni</td>
<td>117-127</td>
</tr>
<tr>
<td>9</td>
<td>An introduction to mental health services research</td>
<td>Anna Fernández, Alejandra Pinto-Meza, Antoni Serrano-Blanco, Jordi Alonso and Josep Maria Haro</td>
<td>133-135</td>
</tr>
<tr>
<td>10</td>
<td>The pharmacoepidemiology of psychiatric medications</td>
<td>Philip S. Wang, Alan M. Brookhart, Christine Ulbricht and Sebastian Schneeweiss</td>
<td>155-163</td>
</tr>
<tr>
<td>11</td>
<td>Peering into the future of psychiatric epidemiology</td>
<td>Michaeleine Bresnahan, Ezra Susser, Dana March and Bruce Link</td>
<td>167-179</td>
</tr>
<tr>
<td>12</td>
<td>Studying the natural history of psychopathology</td>
<td>William W. Eaton</td>
<td>183-195</td>
</tr>
</tbody>
</table>
13 Symptom scales and diagnostic schedules in adult psychiatry, 199

Jane M. Murphy

13.1 Introduction, 199
13.2 North American instruments for epidemiological research, 202
13.3 North American instruments for psychiatric services and primary care, 205
13.4 European instruments for psychiatric services and primary care, 206
13.5 European instruments for epidemiological research, 208
13.6 Summary, 210

Acknowledgements, 212
References, 212

14 The National Comorbidity Survey (NCS) and its extensions, 221

Ronald C. Kessler

14.1 Introduction, 221
14.2 The baseline NCS, 221
14.3 The NCS follow-up survey (NCS-2), 227
14.4 The NCS replication survey (NCS-R), 229
14.5 The NCS-R adolescent supplement (NCS-A), 233
14.6 The WHO WMH Surveys, 234
14.7 Overview, 236

Acknowledgements, 237
References, 237

15 Experimental epidemiology, 243

John R. Geddes

15.1 Introduction, 243
15.2 Limitations of non-randomised evidence, 243
15.3 RCTs: The translation of the experimental design into the real world, 245
15.4 Importance and control of systematic error or bias, 245
15.5 Importance and control of random error and noise, 248
15.6 Reporting the results of clinical trials—the CONSORT statement, 248
15.7 Different clinical questions will prioritise control of different threats to validity and confidence, 248
15.8 The classification of RCTs, 251
15.9 Effectiveness trials in schizophrenia, 255
15.10 Department of Veterans Affairs co-operative study on the cost-effectiveness of Olanzapine (Rosenheck), 255
15.11 The clinical antipsychotic trials of intervention effectiveness (CATIE) study, 257
15.12 Cost utility of the latest antipsychotic drugs in schizophrenia study (CUtLASS 1), 257
15.13 European first-episode schizophrenia trial (EUFEST), 258
15.14 The size and cost of experimental studies in psychiatry, 259
15.15 Clinical trials in the future, 259

References, 259

16 Epidemiology of Schizophrenia, 263

William W. Eaton, Chuan-Yu Chen and Evelyn J. Bromet

16.1 Introduction, 263
16.2 Methods, 263
16.3 The burden of schizophrenia, 264
16.4 Natural history, 265
16.5 Demographic correlates, 268
16.6 Social risk factors, 269
16.7 Biological risk factors, 272
16.8 Prevention, 279
16.9 Discussion, 280

References, 280

17 Epidemiology of depressive disorders, 289

Deborah S. Hasin, Miriam C. Fenton and Myrna M. Weissman

17.1 Introduction, 289
17.2 Major depression, 290
17.3 Dysthymia, 302
17.4 Summary, 304

Appendix 17.A Measurement of major depression in the NLAES and NESARC, 304

References, 305

18 Epidemiology of anxiety disorders, 311

Ewald Horwath, Felicia Gould and Myrna M. Weissman

18.1 Introduction, 311
18.2 Anxiety disorders, 311
18.3 Panic disorder, 313
18.4 Agoraphobia, 316
18.5 Social phobia, 317
18.6 Generalised anxiety disorder, 318
18.7 Obsessive–compulsive disorder, 319
18.8 Anxiety and affective disorders and mass disasters, 320
18.9 Future developments, 323
Acknowledgements, 323
References, 323
Further reading, 326
19 Epidemiology of bipolar disorder in adults and children, 329
Kathleen R. Merikangas and Mauricio Tohen
19.1 Introduction, 329
19.2 Epidemiology of bipolar disorder, 329
19.3 Patterns of comorbidity of bipolar disorder, 333
19.4 Risk Factors, 334
19.5 Future directions, 336
19.6 Summary, 338
References, 338
20 Epidemiology of eating disorders, 343
Tracey D. Wade, Anna Keski-Rahkonen and James I. Hudson
20.1 Introduction, 343
20.2 Case definition, 343
20.3 Major prevalence studies, 345
20.4 Incidence studies, 351
20.5 Comorbidity, 351
20.6 Mortality from eating disorders, 352
20.7 Risk factors, 352
20.8 Future directions, 355
References, 356
21 Epidemiology of alcohol use, abuse and dependence, 361
Deborah A. Dawson, Ralph W. Hingson and Bridget F. Grant
21.1 Introduction, 361
21.2 Population estimates of per capita consumption, 361
21.3 Survey-based estimates of the prevalence of drinking, 362
21.4 Alcohol-related mortality and morbidity, 365
21.5 Alcohol and injury, 365
21.6 Alcohol and chronic disease, 366
21.7 Diagnostic classification of alcohol use disorders, 367
21.8 Population estimates, prevalence, incidence and natural course of alcohol use disorders, 368
21.9 Comorbidity of DSM-IV alcohol use disorders and other psychiatric disorders, 371
21.10 Summary, 374
Acknowledgements, 375
References, 375
22 Epidemiology of illicit drug use disorders, 381
Wilson M. Compton, Marsha F. Lopez, Kevin P. Conway and Yonette F. Thomas
22.1 Introduction, 381
22.2 Drug consumption, 381
22.3 Definitions, 384
22.4 Rates of DSM-IV abuse and dependence, 384
22.5 Global rates of drug use disorders, 387
22.6 Comorbidities with psychiatric conditions, 388
22.7 Genetic epidemiology, 391
22.8 Future opportunities, 391
22.9 Conclusions, 394
22.10 Disclaimer, 394
References, 394
23 The epidemiology of personality disorders: Findings, methods and concepts, 401
Michael J. Lyons, Beth A. Jerskey and Margo R. Genderson
23.1 Introduction, 401
23.2 Substantive findings, 402
23.3 Course, prognosis and developmental issues, 404
23.4 Treated prevalence, 406
23.5 Prevalence of specific personality disorders, 407
23.6 Antisocial personality disorder, 410
23.7 Conceptual issues, 419
23.8 Models of personality disorder, 419
23.9 Methodological issues, 422
23.10 Future directions, 427
References, 428
30 Recent epidemiological studies of psychiatric disorders in Japan, 559
Masayoshi Kawai, Kenji J. Tsuchiya and Nori Takei
30.1 Introduction, 559
30.2 Schizophrenia, 560
30.3 Affective disorders, 566
30.4 Autism and autism spectrum disorder, 569
30.5 Summary, 572
References, 573

31 Epidemiology of migration and serious mental illness: The example of migrants to Europe, 579
Monica Charalambides, Craig Morgan and Robin M. Murray
31.1 Introduction, 579
31.2 Defining the constructs, 579
31.3 High rates of psychosis in migrants: A genuine finding or methodological artefact?, 581
31.4 Possible explanations, 584
31.5 Biological considerations, 585
31.6 Cannabis use, 586
31.7 Adverse social experiences, 586
31.8 Mechanisms, 589
31.9 Implications, 590
References, 573

32 Epidemiology of migration substance use disorder in Latin American populations and migration to the United States, 595
Maria Elena Medina-Mora, Guilherme Borges, Tania Real and Jorge Villatoro
32.1 Introduction, 595
32.2 Definitions: What do we understand by migration?, 595
32.3 Countries of origin: Social, political and other reasons that trigger migration, 597
32.4 Living conditions of migrants in the United States, 599
32.5 Alcohol and drug use in countries of origin and receiving communities, 600
32.6 Dependence and treatment rates, 604
32.7 The process of migrating, 606
32.8 Migration, substance use and access to services, 608
32.9 Returning migrants and families left behind, 611
32.10 Conclusions, 611
References, 611

33 Early detection and intervention as approaches for preventing schizophrenia, 617
Ming T. Tsuang, William S. Stone, Margo Genderson and Michael Lyons
33.1 Introduction, 617
33.2 Modelling genetic and phenotypic heterogeneity, 618
33.3 Defining a syndrome of liability using cognitive and clinical characteristics of relatives, 620
33.4 Gene-based vs. genome-based research, 624
33.5 Future directions, 626
33.6 Clinical implications, 627
Acknowledgements, 627
References, 628

Index, 633