Manic-depressive illness: Science, culture, and DSM

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Sources

Hannah Decker, The Making of DSM-III

Edward Shorter, Before Prozac

Nassir Ghaemi, On Depression

Ghaemi SN, Dalley S. The bipolar spectrum: Conceptions and misconceptions. Australian and New Zealand Journal of Psychiatry, 48: 314-324, 2014.

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Validators of Diagnosis: No Gold Standard

- Phenomenology
  - cross-sectional symptoms
  - DSM-IV criteria
- Family History - genetics
- Course
  - Age of onset, # episodes, outcome
- Treatment Response
  - Partial substitute for biological markers

Modified from Robins and Guze 1970

History of DSM

1980 – DSM-III

– Radical changes

– Initial scientific impetus – Research Diagnostic criteria – 16 diagnoses – 1978

– Political conclusion – 292 diagnoses

DSMis 91.0% unscientific

1994 – DSM-IV

– Minimal changes

– Explicit "pragmatic" criterion

More unscientific

– 365 diagnoses

2013 – DSM-5 – too afraid to change

History of DSM-III

- Viewed as neo-Kraepelinian
  - Narrow definition of schizophrenia
  - "Neo" means no biological etiology claimed
- Is equally neo-Leonhardian
  - Removes Kraepelinian broad MDI
  - Replaced with narrow Leonhardian bipolar disorder
  - Kraepelin's narrow melancholia concept is broadened into "major" depression

E Shorter, Before Prozac, 2009, Oxford University Press

E Shorter, Before Prozac, Oxford Univ Press, 2009

Ghaemi SN, Dalley S.. Australian and New Zealand J Psychiatry 48: 314-324, 2014.

DSM-III:
MDI vs Bipolar/MDD

Manic-depressive illness → Bipolar disorder, MDD

Melancholia → MDD

Neurotic Depression → MDD

Bipolar disorder

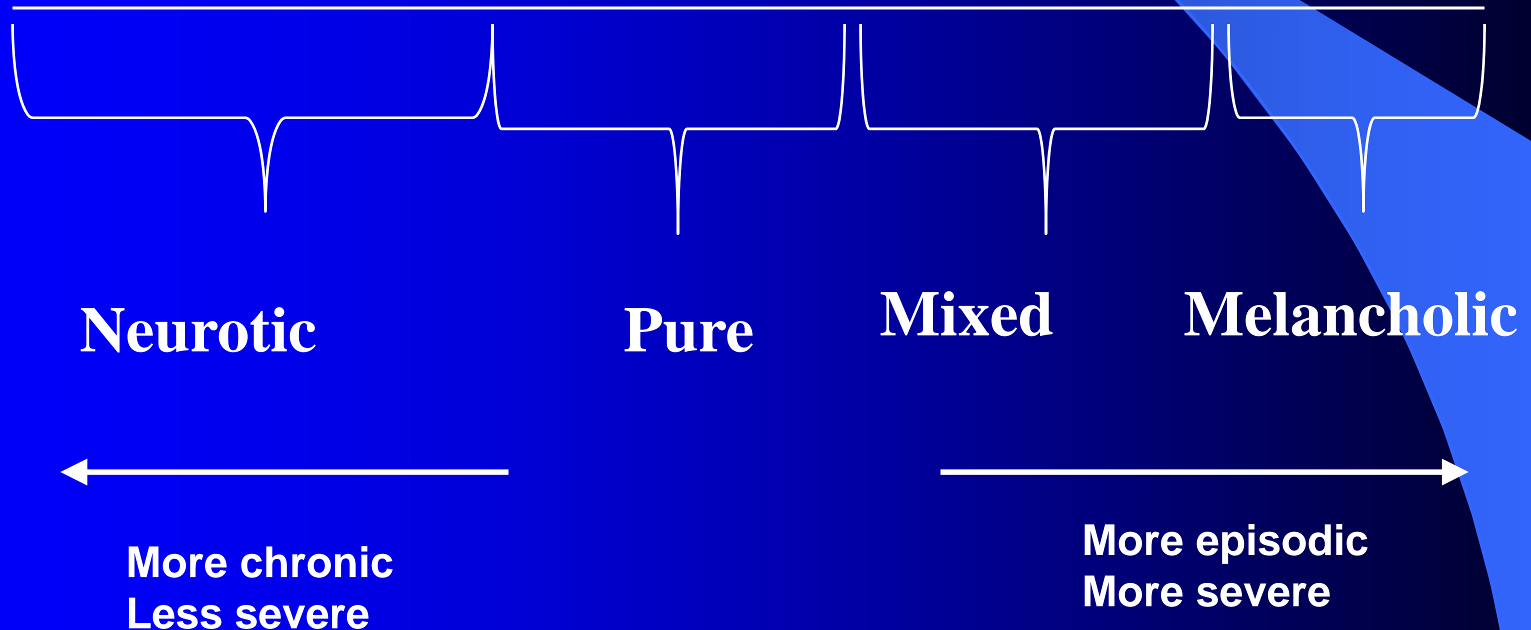
MDD

DSM-III-IV

Result: MDD epidemic

The MDD Spectrum

SN Ghaemi, PA Vohringer, D Vergne:
The varieties of depressive experience: Diagnosing depression
Psychiatric Clinics of North America, 2012



Ghaemi SN, Vohringer PA, Vergne D. Psych Clinics North Am 2012;35(1):73-86.

The philosophy of DSM-III and IV (and 5)

- "Pragmatism"
  - What do the DSM committees think is the best outcome?
    - Outcome ≠ Treatment benefit
    - Outcome = benefit for the profession, for society
    - Pure utilitarianism
- Postmodernism
  - All diagnoses are arbitrary
    - There is no "Truth"
    - Diseases either don't exist or are unknown
  - Science is arbitrary
  - Don't believe the experts

SN Ghaemi, Couch-pragmatism, Psychiatric Times, November 2010

The Secret of DSM

Pragmatism

"Disorder"

– Severe symptoms plus functional impairment

Clinical pictures – *Zustandbilden*

Disease processes - *Krankheitprozesen*

E Boestroem, Zustandbild und Krankheit in der Psichatrie, Klinische Wochenschrift, 1923, 37/38: 1728-1731

Overdiagnosis: Problem of false positives

- DSM solution: High severity and functional impairment thresholds
- Make diagnoses narrow
  - Increase specificity
  - Sacrifice sensitivity
- Avoid broadening of diagnoses to mild symptoms
- Opposes spectrum concepts

Examples

The MDD Spectrum

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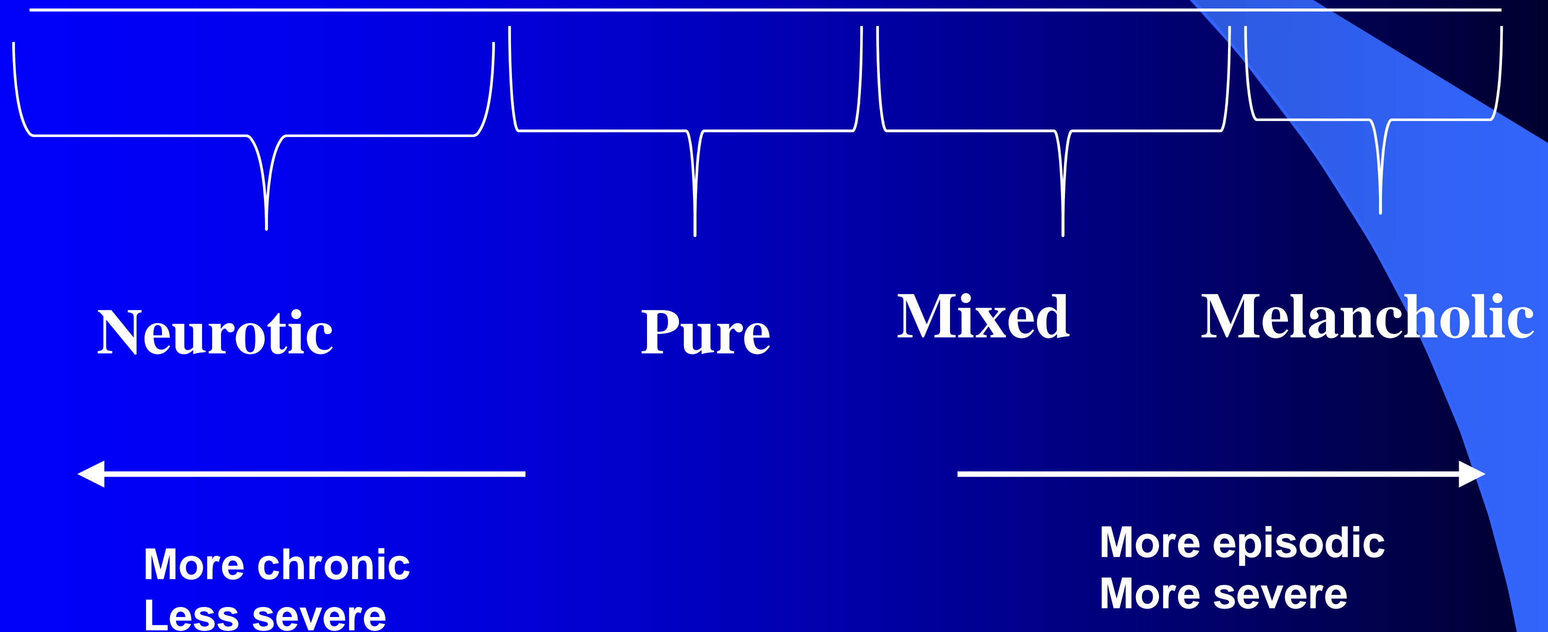


Ghaemi SN, Vohringer PA, Vergne D. Psych Clinics North Am 2012;35(1):73-86.

Duration of hypomania

Angst: Zurich cohort, n about 500, 30 year follow-up, 1-3 days equal to longer duration in suicide attempts, bipolar genetics, and recurrence rates

Benazzi: n = 65 unipolar vs 103 bipolar type II, typical duration 2-3 days: lower age of onset, more recurrences, more atypical features

Wicki and Angst 2001,
F Benazzi Eur Arch Psych Clin Neuroscience, 2001, 251: 32-34.
Benazzi and Akiskal, 2206, JAD, 96: 189-195

BRIDGE study

N = 5635 with clinical depression

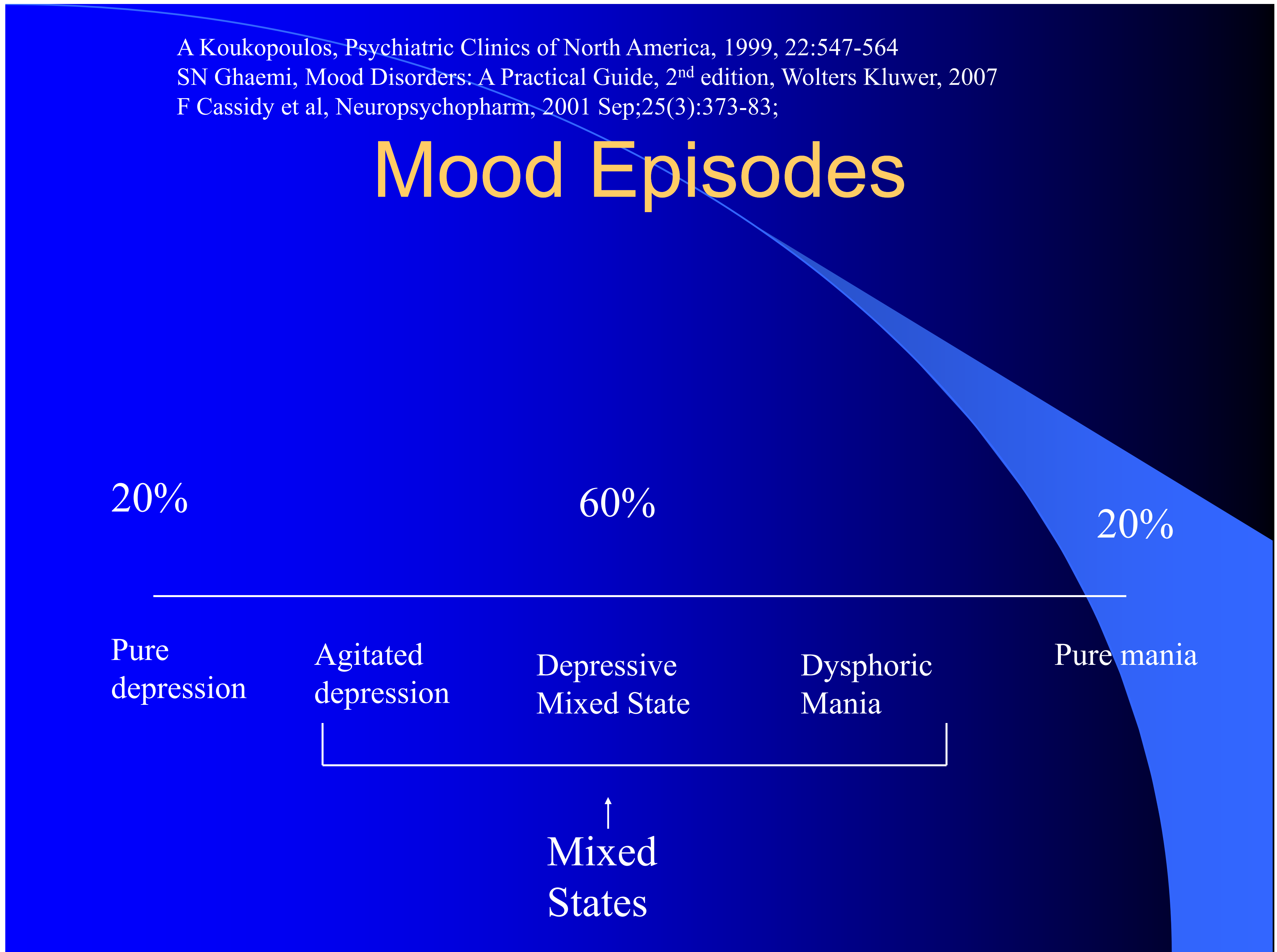
DSM-IV criteria for BD = 16.0%

Bipolarity specifier = 47.0%

- 3 or more manic symptoms
- No duration criterion
- Marked impairment of functioning or unequivocal and observable change from usual behavior

Bipolarity specifier highly associated with AD-induced mania (OR=9.5) and FH BD (OR=3.8)

J Angst et al, Arch Gen Psych, 2011


A Koukopoulos, Psychiatric Clinics of North America, 1999, 22:547-564
SN Ghaemi, Mood Disorders: A Practical Guide, 2nd edition, Wolters Kluwer, 2007
F Cassidy et al, Neuropsychopharm, 2001 Sep;25(3):373-83;
Mood Episodes
20%
60%
20%
Pure depression
Agitated depression
Depressive Mixed State
Dysphoric Mania
Pure mania
Mixed States

Antidepressant-induced mania

- STAR*D: Manic switch rate: 2/4041 = 0.05%
- STEP-BD: about 350 randomized patients = 10%
- RR = 200
  - RR for cigarettes and lung cancer = 10
  - RR for AD efficacy = 2

R Perlis et al, Arch General Psychiatry, 2011
GS Sachs et al, NEJM, 2007

Increase in diagnosis of BD in youth

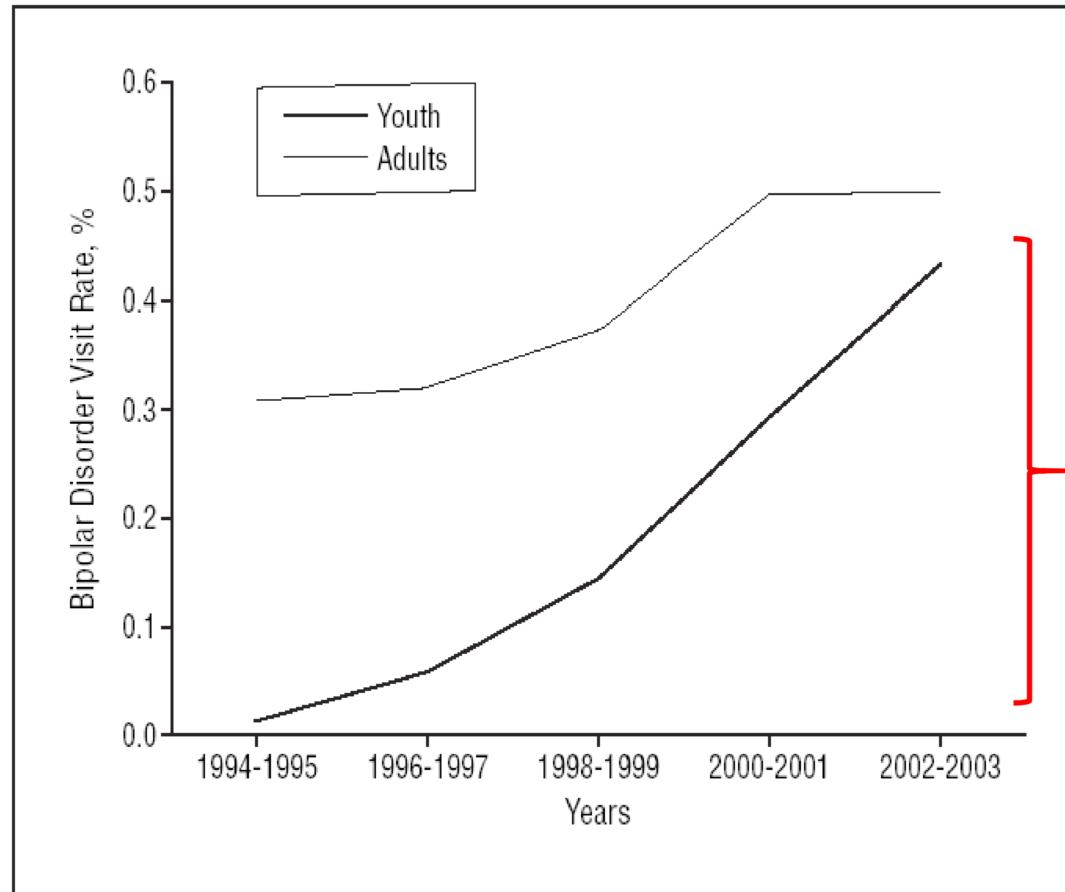


Figure. National trends in visits with a diagnosis of bipolar disorder as a percentage of total office-based visits by youth (aged 0-19 years) and adults (aged ≥20 years).

40-fold increase in rate of dx

Moreno et al., 2007

Disruptive Mood Dysregulation Disorder

- Work from one group at NIMH – not replicated
- No follow-up into adulthood for claim that DMDD does not become bipolar illness
- No empirical data on prevalence and correlates before DSM-5 diagnosis published
- First empirical study after DSM-5:
  - Huge "comorbidity" with depressive diagnoses: OR = 9.9-23.5
  - Huge "comorbidity" with ODD: OR = 52.9-103

WE Copeland et al, AM J Psychiatry, 170: 173-179

Solutions

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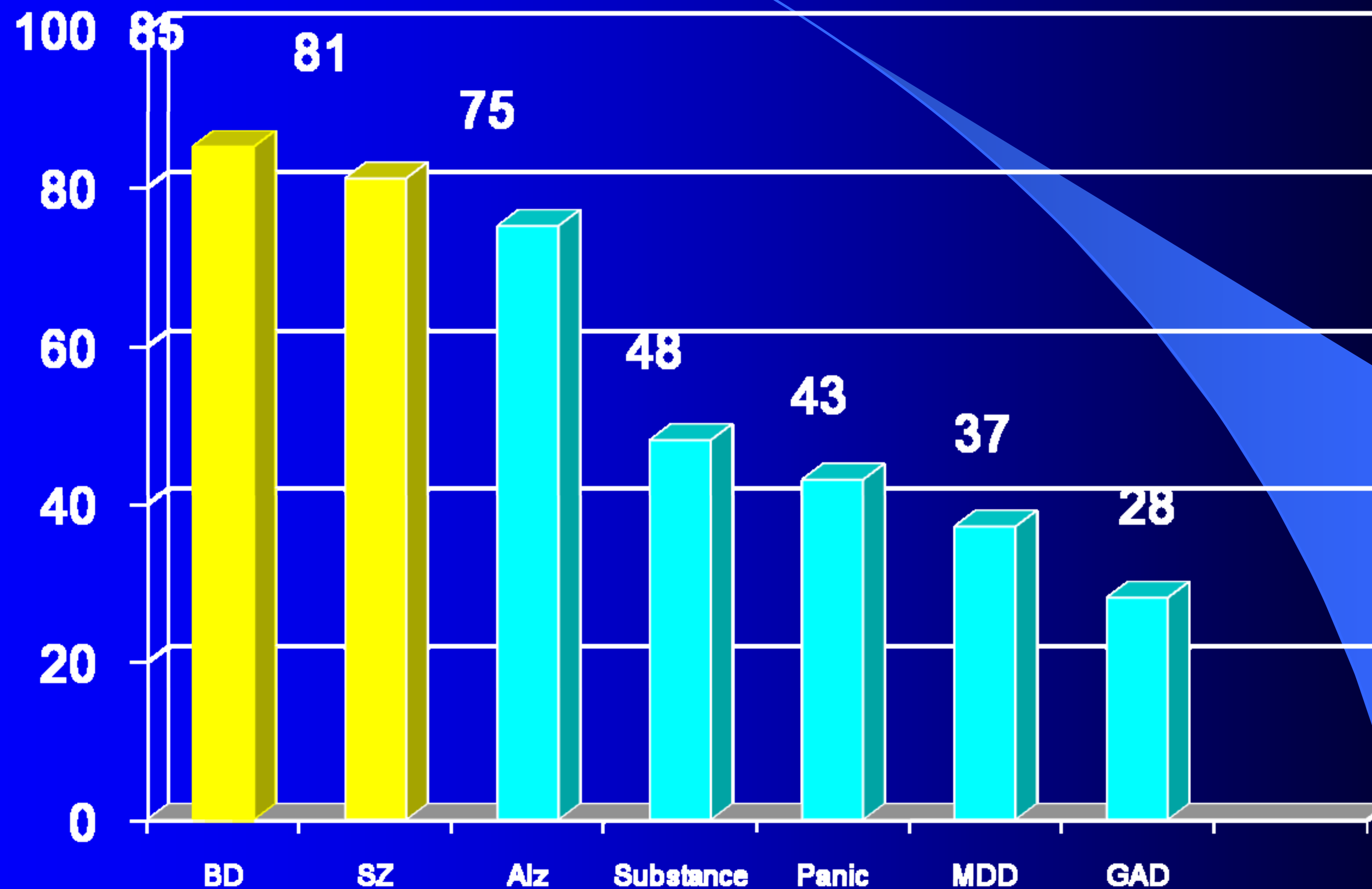
Modified from Robins and Guze 1970

Heirarchy: Not Comorbidity

- Mood Disorders
  - Bipolar
  - Unipolar
- Psychotic Disorders
  - Schizoaffective
  - Schizophrenia
- Anxiety Disorders
- Other
  - Personality Disorders
  - ADHD

PG Surtees, RE Kendell. Br J Psych, 1979, 135:438-443

Heritability: Disease vs Non-Disease*



OJ Bienvenu et al, 2010, in press

*Heritability is not necessarily purely genetics: GE interactions, epigenetics

DSM-Neurosyphilis: Symptoms

- Mood lability, impulsiveness, forgetfulness, depression alternating with euphoria and grandiosity.
- Later stages: psychosis, dementia, paralysis
  - Specific neurological signs only in late stages
- Bimodal subtypes
  - Classic type: manic-psychotic
  - Simple type: depressive-demented

MF Gliatto, SN Caroff, Neurosyphilis: A history and clinical review, Psychiatric Annals, 2001, 31: 153-161

DSM-postmodernism

Science relies on the truth of our diagnoses

DSM diagnoses are *consciously invented* to guess at the best clinical outcomes, not reality of diagnoses

Science is *blocked* by our diagnostic system

- Our current system guarantees no or very little progress
  - Biological research
  - Genetic research
  - Treatment research

Result: By being "pragmatic", DSM produces poor practical results

Science and Sisyphus

The example of Jules Angst

- 1960-70s: data used for radical change in DSM-III of rejection of Kraeplin's unified MDI into bipolar disorder versus MDD
- 1980s-2010s: data rejected for much smaller changes in hypomania duration or mixed episode definitions

Why?

- Raising the threshold of scientific evidence over time - Conservatism

Aubrey Lewis - 1938

Aubrey Lewis, BMJ, 1938, 2: 875-78. Reprinted Inquiries in Psychiatry, 1967, NY: Science House

Predicts the vicious pragmatism of DSM-IV

A nosology should be both "useful and valid"

- It might seem that validity is here merely a synonym for usefulness. But classifications may be useful for the wrong ends: they may be used to separate off cases which are regarded – wrongly – as hopeless, or as needing a particular type of treatment; the clinician may never come to see how vicious are the uses to which he has been, contentedly, putting his classification.
- A valid classification is one which is not only useful, but useful for sound medical or scientific ends.

Solution: Research Diagnostic Criteria (RDC)

DSM-5: Pragmatic – practice, economic, insurance, pharmaceutical, research

- Research and science are not the most important factors

RDoC: Research Domain Criteria; based on biological resaerch

RDC: Research Diagnostic Criteria; based on clinical research

Ionnaidis: Why most published research results are false

Nonrandomized – 80%

Small meta-analyses – 60%

Randomized studies – 25%

Large best randomized studies – 10%

Opinion >90% false

- Example: Most DSM criteria (Spitzer, Frances)
  - Empirical diagnosis studies cannot be randomized and thus will be > 80%

John Ioannidis, PLOS Medicine, 2005, Volume 2, e124

Planck's Law of Generations

Max Planck: Scientific revolutions happen, not by the changing of minds, but by the changing of generations

Ionnadis: Average duration of time from definitive scientific refutation of a false belief until removal of false beliefs from the scientific literature = 20 years

20 years = one generation

A Tatsioni et al, Persistence of contradicted claims in the literature. JAMA 2007, 298: 2517-2526

A First Rate Madness:
MDI and Leadership

- Inverse Law of Sanity
  - Crisis: Mental illness useful
  - Non-crisis: Mental health useful
- Goldilocks Principle
  - Mild to moderate, not severe, symptoms
  - Temperament
- Positive aspects of mood illness
  - Realism, Empathy, Creativity, Resilience
  - Limitations of mental health (Reverse stigma): Conformism

JF Galvez, SB Thommi, SN Ghaemi, J Affective Disorders, 2011, 128-185-190

Temperaments

- Dysthymia
- Cyclothymia
- Hyperthymia
- Schizothymia (Schizotypal)
- Introduced by Kahlbaum, extended by Kretschmer, revised by Akiskal
- Relates to extremes of normal personality traits
  - – Eysenck/Cloninger: Neuroticism, Extraversion, Openness to Experience (Novelty-seeking)

Temperament ≠ Illness

Reverse Stigma – Positive benefits of mental illness and limitations of mental health

JF Galvez, SB Thommi, SN Ghaemi, J Affective Disorders, 2011, 128-185-190

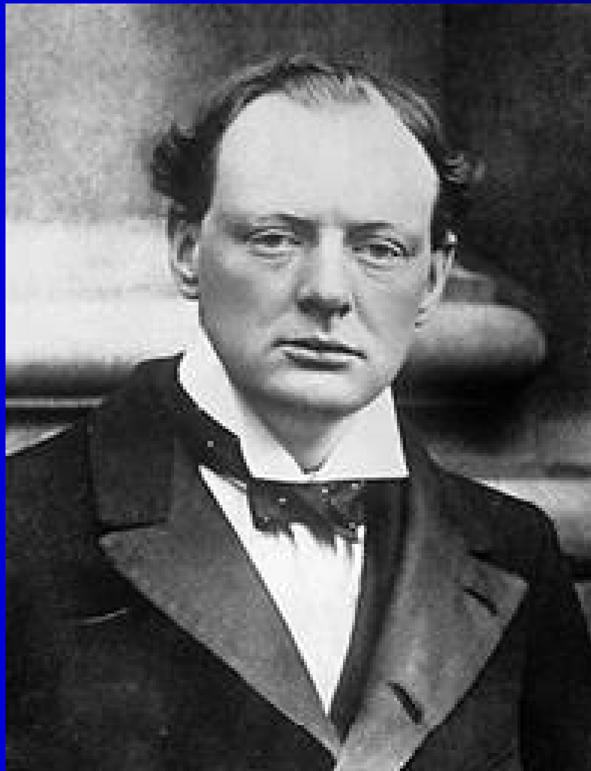
Hyperthymic temperament - Charisma

- Creativity
- Sociability
- Energy and Productivity
- Resilience to trauma – medical, psychological, social

SN Ghaemi, A First-Rate Madness: Exploring the Links Between Mental Illness and Stigma, 2011

New Psychohistory

- Scientific not speculative
  - – Not psychoanalytic – Freud/Erikson
  - – Documentation: 50 year rule
- Symptoms
- Genetics (Family History)
- Course
- Treatment
  - – Severity of symptoms
  - – Effects



Ted Turner

JFK

Nuremberg Nazi leaders