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PSYCHIATRY ACADEMY

Diagnosis and Assessment in Pediatric Psychopharmacology

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Disclosures

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She is the author of the book, "Is Your Child Bipolar" published May 2008, Bantam Books.
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Growth and Distribution of Child Psychiatrists in the United States: 2007–2016

Ryan K. McBain, PhD, MPH,[a] Aaron Kofner, MA, MS,[b] Bradley D. Stein, MD, PhD,[c] Jonathan H. Cantor, PhD,[d] William B. Vogt, PhD,[e] Hao Yu, PhD[f]

BACKGROUND: Historically, there has been a shortage of child psychiatrists in the United States, undermining access to care. This study updated trends in the growth and distribution of child

from 6590 to 7991, a 21.3% gain. The number of child psychiatrists per 100 000 children also grew from 8.01 to 9.75, connoting a 21.7% increase. County- and state-level growth varied widely, with 6 states observing a decline in the ratio of child psychiatrists (ID, IN, KS, ND, SC, and SD) and 6 states increasing by >50% (AK, AR, NH, NV, OK, and RI). Seventy percent of counties had no child psychiatrists in both 2007 and 2016. Child psychiatrists were significantly more likely to practice in high-income counties ($P < .001$), counties with higher levels of postsecondary education ($P < .001$), and metropolitan counties compared with those adjacent to metropolitan regions ($P < .05$).

CONCLUSIONS: Despite the increased ratio of child psychiatrists per 100 000 children in the United States over the past decade, there remains a dearth of child psychiatrists, particularly in parts of the United States with lower levels of income and education.

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McBain et al. *Pediatrics.* 2019; 144(6): e20191576.

The Potential of Neuroimaging to Predict Course

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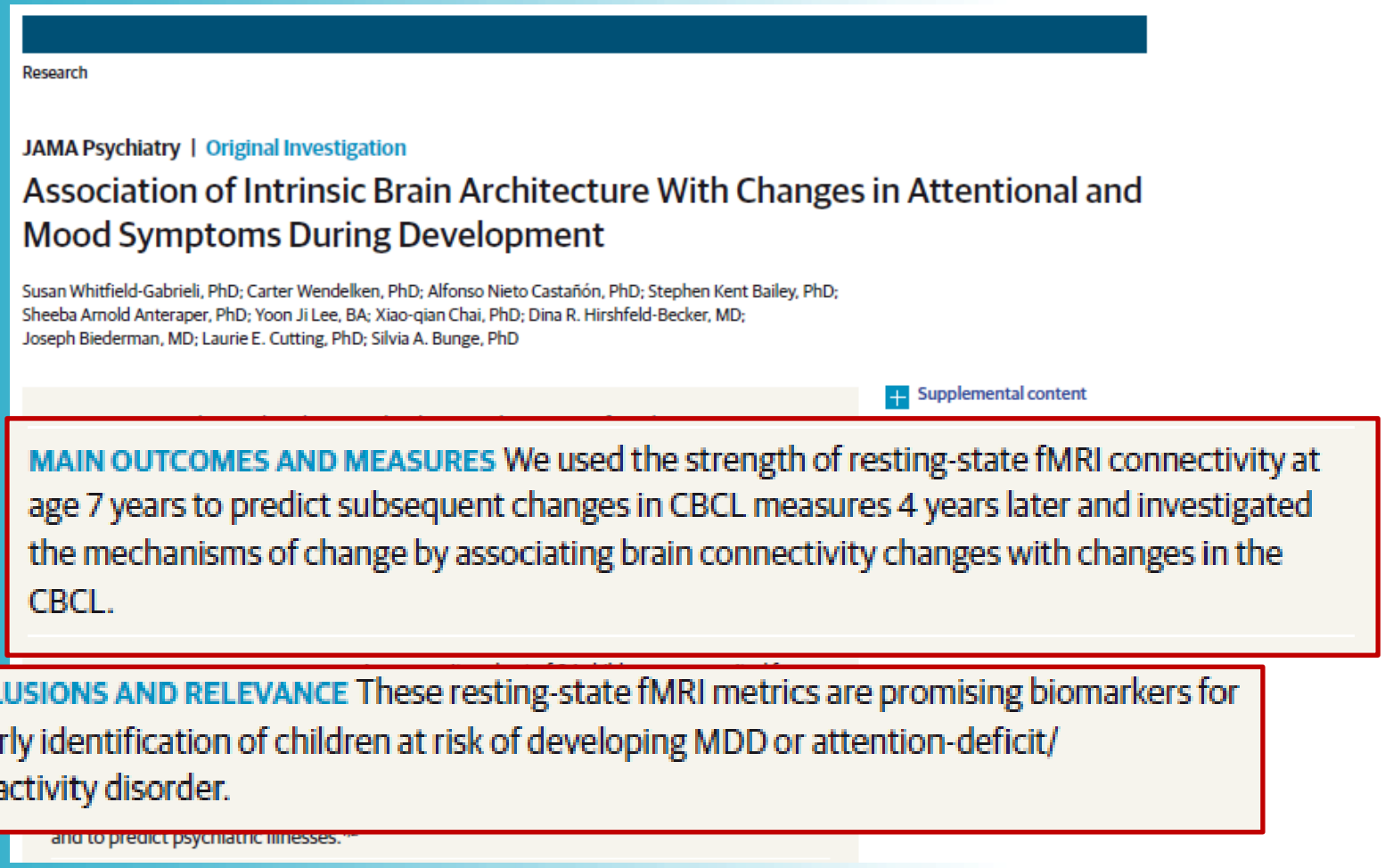

Research

JAMA Psychiatry | Original Investigation

Association of Intrinsic Brain Architecture With Changes in Attentional and Mood Symptoms During Development

Susan Whitfield-Gabrieli, PhD; Carter Wendelken, PhD; Alfonso Nieto Castañón, PhD; Stephen Kent Bailey, PhD; Sheeba Arnold Anteraper, PhD; Yoon Ji Lee, BA; Xiao-qian Chai, PhD; Dina R. Hirshfeld-Becker, MD; Joseph Biederman, MD; Laurie E. Cutting, PhD; Silvia A. Bunge, PhD

Supplemental content

MAIN OUTCOMES AND MEASURES We used the strength of resting-state fMRI connectivity at age 7 years to predict subsequent changes in CBCL measures 4 years later and investigated the mechanisms of change by associating brain connectivity changes with changes in the CBCL.

CONCLUSIONS AND RELEVANCE These resting-state fMRI metrics are promising biomarkers for the early identification of children at risk of developing MDD or attention-deficit/hyperactivity disorder.

and to predict psychiatric illnesses.[...]

Whitfield-Gabrieli et al. *JAMA Psych* 2019. doi: 10.1001/jamapsychiatry.2019.4208

Problem: Prejudices and Misconceptions

- Pervasiveness of psychosocial and psychological hypotheses to explain childhood mental disorders
- Poor public acceptance for using pharmacotherapy in children
  - Bad Press
  - Frequent “alarming statistics” on the use of psychotropics in children
  - Diagnostic Conundrums (i.e., DSM-V Temper Dysregulation Disorder)
  - Diagnostic biases in the medical community (mental illnesses do not exist; they are accounted by other conditions; their treatment not necessary; “cosmetic” pharmacotherapy)
  - Absence of FDA approval which is not synonymous with proscription of use

Black Box Fatigue

- Cardiovascular risk/sudden death for stimulants
- Suicidality/activation for antidepressants and anticonvulsants
- Metabolic syndrome/ TD for neuroleptics
- General uncertainties about long-term effects of psychotropics

General Principles

- The use of psychotropics should follow a careful evaluation of the child and the family
- Before beginning treatment, the family and the child need to be familiarized with the risks and benefits of such an intervention
- The risks of ‘not treating’ should be included
- Initiating a treatment is a ‘shared decision’ with the patient and/or patient’s guardians/parents

Medication Management: General Principles

- Medication treatment should be started at the lowest possible dose with frequent reevaluation during the initial phase of treatment
- Following a sufficient period of *clinical stabilization* (i.e.... 6-12 months) it is prudent to reevaluate via shared decision the need for continued psychopharmacologic intervention
- Tapering involves risks which need to be discussed as there is no guarantee of easy re-stabilization

Components of the Diagnostic Process

- Psychiatric Assessment
- Cognitive Assessment
- Assessment of School Functioning
- Psychosocial Assessment
- Laboratory Assessments (when indicated)

Psychiatric Assessment

- Note comorbidity and consider differential diagnoses
- Most children are affected with multiple disorders
- Some disorders can complicate the management of other disorders
- **Prioritize: the most serious disorder should be addressed first**

Patterns of Comorbidity in Consecutive Referrals to the MGH Child Psychiatry Clinic (N=500 Youth)

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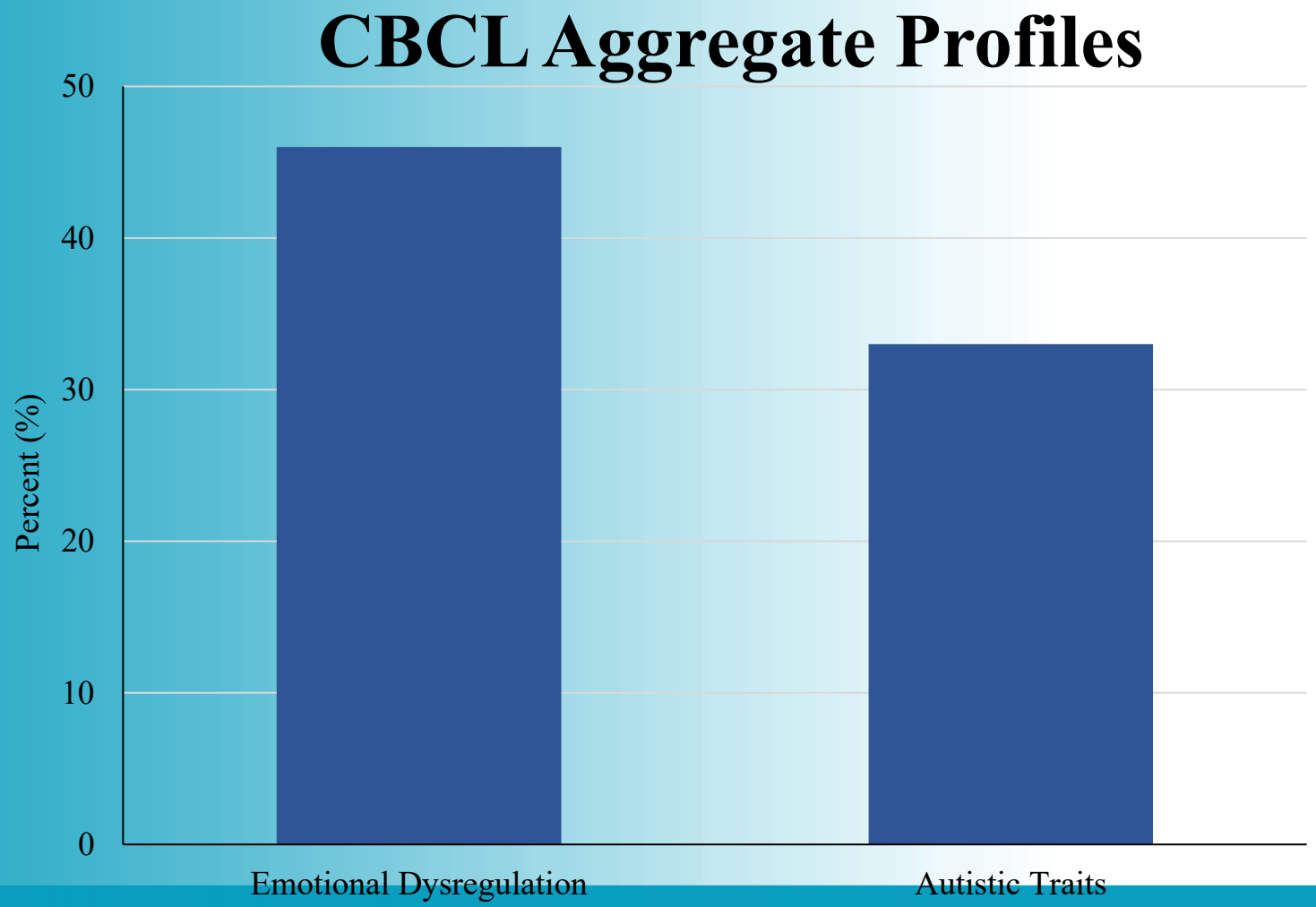

Biederman et al 2020

Diagnostic Process: Pre-Assessment Scales

- CBCL: assessing psychopathology
- BRIEF: assessing EF
- SRS: assessing ASD symptoms
- Quality of Life
- Demographic information
- Treatment Hx

Diagnostic Process: Cognitive Assessment

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- Estimates of IQ (Wechsler)
- Estimates of EFDs (i.e, working memory deficits, processing speed deficits) (Wechsler) (BRIEF)
- Estimates of academic performance: Achievement
- Search for discrepancies between expected and actual functioning
  - Example: a brilliant child that is performing averagely in school may be underachieving

Diagnostic Process: Psychosocial Evaluation

Evaluation of the family environment

- Marital discord
- Parenting difficulties
- Separation and divorce
- Custodial parent
- Guardianship
- Potential issues of abuse and neglect
- Stress of raising a difficult to raise child and the burden the symptoms place on the couple and siblings

Rutter's Indices of Psychosocial Adversity

- Low SES (poverty)
- Family conflict
- Single parent homes
- Parental psychopathology

Diagnostic Process: Psychosocial Evaluation

Social Functioning

- Relationship with peers
- Relationship with parents
- Use of leisure time

Diagnostic Process: School Functioning

School Functioning

- School and grade placement
- Teacher information
- Parent-based school information

Indices of school dysfunction

- Repeated grades
- Placement in special classes
- Need for Tutoring

Indications for Major Drug Classes

- Stimulants
- Antidepressants
- Antipsychotics
- Mood stabilizers
- Anxiolytics
- Alpha adrenergic compounds
- Beta blockers

Indications for Major Drug Classes

Stimulants

- ADHD
- Narcolepsy
- Tx resistant depression

Indications for Major Drug Classes

Antidepressants

- Depressive disorders
- Anxiety disorders
- OCD (serotonergic)
- ADHD (noradrenergic, dopaminergic)
- Enuresis (TCAs)

Indications for Major Drug Classes

Antipsychotics (SGAs)

- Psychotic disorders
- Tourette's disorder
- Bipolar disorder
- Augmentation of antidepressants

Indications for Major Drug Classes

Mood stabilizers

- Bipolar disorder
- Tx refractory depression

Indications for Major Drug Classes

Anxiolytics (Buspirone and BZDs)

- Anxiety disorders
- Augmentation of treatments for other disorders (BPD, MDD)
- Severe situational anxiety
- Tourette's syndrome (high potency BZDs)
- Stimulant induced anxiety
- Insomnia

Indications for Major Drug Classes

Alpha Adrenergic Compounds (clonidine, guanfacine)

- TS/Tics
- ADHD
- Dyscontrol
- SIB
- Augmentation
- Treatment emergent adverse effects (I.e., stimulant-induced insomnia

Indications for Major Drug Classes

Beta Blockers

- Akathisia
- Stage fright
- Tremor
- Dyscontrol
- SIB

Indications for Combined Pharmacotherapy

- Comorbidity
- Treatment resistant cases: Augmentation
- Treatment emergent adverse effects
- Poor tolerability with therapeutic doses of individual medicines

Wilens et al. JAACAP. 1995 Jan;34(1):110-2

The unknown unknowns

- “Because as we know, there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns—the ones we don't know we don't know”

Rumsfeld during a Pentagon news briefing in February 2002