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EPIDEMIOLOGY OF PSYCHIATRIC DISORDERS ACROSS THE LIFESPAN

**M19-561 /MPHS: PSYCHIATRIC AND BEHAVIORAL HEALTH SCIENCES
CONCENTRATION**

Spring 2012

Dates: 1/20/12 – 5/4/12

Time: Friday, 1-4 pm

Location: CID Building, 4560 Clayton Avenue, Suite 1000 Large Conference Room

Coursemaster: Anne L. Glowinski, M.D., M.P.E.
Associate Professor of Psychiatry
Child and Adolescent Psychiatry Education and Training Director
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Office: 314-286-2217

Lecturers: Anne Glowinski MD, MPE; Rick Grucza PhD; Rumi Price PhD, MPE; Alexandre Todorov PhD; Ginger Nicol MD; Lauren Garfield PhD; Cynthia Rogers MD; Angela Reiersen MD.

Teaching Assistant: Ravikumar Chokalingam, M.D., M.P.H.
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Office Hours: By Appointment (Administrative Administrator: Brigitte Northrop:
northropb@psychiatry.wustl.edu)

Prerequisites: M21-560 Biostatistics I or coursemaster approval.

Course Credits: 3

Grading: Letter for MPHS Psychiatric and Behavioral Health Sciences Concentration students.
Choice of Letter or Pass/Fail for others.

Overview:

This course takes an integrated developmental approach to the epidemiology, etiology and evolving nosology of psychiatric disorders. The course is organized into four sections. Part I lays most of the conceptual groundwork needed to understand and plan research on psychiatric disorders and their risk factors in the general population. The next two sections mostly focus on the nosology, epidemiology and etiology of specific psychiatric disorders. Part II covers disorders that are traditionally considered child psychiatric disorders but have developmental consequences for adulthood and/or often persist chronically through adulthood. Part III covers psychiatric disorders more typical of adulthood as well as those that often emerge in adolescence or earlier but are more prevalent in adulthood. Finally Part IV will be devoted to special topics in psychiatric and developmental epidemiology. By the end of the course, students with sufficient statistical background will be expected to design and conduct basic analyses of existing psychiatric epidemiologic data and others will be expected to conduct a literature review on a topic of their choice. Alternatively, students will have the option to prepare a poster submission and poster to submit to a meeting of their choice. Notably, the American College of Epidemiology conference in September 2012 is inviting submissions for their poster sessions. The deadline for these posters is May 1 2012.

Reading materials (Books are on reserve at the library):

Tsuang MT, & Tohen, M (Eds.), Textbook in Psychiatric Epidemiology, 3rd Ed. Hoboken, NJ: John Wiley and Sons, 2011

American Psychiatric Association. DSM-IV. Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. Washington, DC: APA, 1994.

Susser, E. et al. Psychiatric Epidemiology: Searching for the Causes of Mental Disorders. Oxford University Press, 2006.

Links to supplementary reading material to be provided for each lecture

Course Format: The course will include reading, lectures, class discussions, participation (see below) , preparation of analytical or other project, project presentation

Competencies:

1. Develop a critical understanding of diagnostic criteria in psychiatry, their past, present and future.
2. Recognize the development, natural course, known risk factors, and public health burden of psychiatric disorders and related behaviors across the lifespan.
3. Understand co-morbidity patterns and some of the underlying hypotheses as to why psychiatric disorders co-occur.
4. Plan and design epidemiological analyses using existing data to address substantive questions raised by course material.
5. Evaluate quality and comparability of epidemiologic data.
6. Evaluate the quality, strengths, and limitations of inferences drawn from observational descriptive studies, genetic association studies, and longitudinal and quasi-experimental approaches
7. Identify the sources of random and systematic error implicit in psychiatric health surveys.
8. Draw inferences from epidemiologic data to inform practice guidelines.

Student Requirements for the course:

1. **Attendance** is required for all classes. Planned absences for reasons other than acute illness need to be excused in advance by coursemaster. Absences will typically be excused for reasons such as religious holidays, career development activities, or illness. Students who miss more than three classes, even for excused absences, may be expected to withdraw from the class.
2. **Readings** should be completed before each lecture. Articles or links to articles will be posted on blackboard in advance of each lecture.
3. **Participation** is expected of each student. Except before the first class of the course, each student should post (on blackboard) one thoughtful question related to each upcoming lecture and based on assigned readings.
4. **Final Project:** Each student will be expected to decide on a final project after discussion with his/her primary mentor. An outline for the final project will be due by the sixth class of the course (February 24th, 2012). Format for the final product can vary according to each student's career development needs, background, and goals. Acceptable final projects include: literature review paper, analytical project on topic of student's interest, or a poster.

Evaluation

- 10% Attendance
- 30% Participation
- 15% Final project outline/plans due February 24th, 2012
- 45% Final Project: Poster, Literature review paper or analytical project on topic of student's interest due last class 5/04/2012

Grading Scale: TBA

COURSE OUTLINE

SECTION I: Conceptual framework (Weeks 1,2,3,4,5,6,8)

SECTION II: Psychiatric Disorders Usually First Diagnosed in Childhood (Weeks 6,7,8, 9,10)

SECTION III: Adult Psychiatric Disorders and their Childhood Antecedents (Weeks 11, 12 & 13)

SECTION IV: Special Topics (Weeks 14, 15, & 16)

WEEK 1: Jan 20th, 2012

Lecturer: Anne Glowinski, M.D., M.P.E.,

Introduction to Psychiatric Epidemiology

- Class and expectations overview
- History of psychiatric epidemiology research
- Evolution of psychiatric diagnosis
- Basic methods to identify risk factors for mental disorders
- Special methodological considerations
- Discussion: nosology and measurement

Readings:

- Susser, Chapters 1,2,3,4,5,6,7,8, 23
- Tsuang, Chapters 2, 7
- Copeland, Shanahan, Costello, Angold. Cumulative prevalence of psychiatric disorders by young adulthood: a prospective cohort analysis from the Great Smoky Mountains Study. JAACAP, 2011;50:252-61.
- Angold and Costello, Nosology and Measurement in Child and Adolescent Psychiatry, 2009. JCPP, 50:9-15

WEEK 2: Jan 27th, 2012

Lecturer: Anne Glowinski, M.D., M.P.E.,

Overview of Psychiatric Epidemiology Data

- Register data
- Landmark studies and findings
- Overview of instruments used in psychiatric epidemiology research
- Publicly available data sets relevant to psychiatric and behavioral health
- Discussion: strengths and weaknesses of common psychiatric epidemiologic designs

Readings:

- Tsuang, Chapter 8: 8.1, 8.2 and 8.7; Chapters 13 and 14
- Tohen, Bromet, Murphy, Tsuang. Psychiatric epidemiology. Harv Rev Psychiatry. 2000; 8:111-25.
- Munk-Jørgensen and Østergaard. Register-based studies of mental disorders. Scand J Public Health. 2011;39:170-4.

WEEK 3: Feb 3rd, 2012

Lecturer: Rick Grucza, Ph.D.

Epistemology

- Regression models
- Confounding,
- Distinguishing between endogenous and exogenous variables

- Natural experiments and econometric methods
- Longitudinal studies
- Discussion:

Readings:

- Susser, Chapters 11, 12, 34
- Tsuang, Chapter 6

Week 4: Feb 10th, 2012

Lecturer: Alexandre Todorov, Ph.D.

Introduction to psychiatric genetic methods

- Brief overview of family, twin and molecular approaches
- Landmark genetic epidemiologic studies and their historical importance for nosology
- Psychiatric comorbidity and structural analyses for psychiatric phenotypes
- Conceptualization of the development of psychopathology
- Discussion:

Readings:

- Susser, Chapters 28, 29, 30, 31, 32, 33
- Tsuang, Chapters 3 and 4

WEEK 5: Feb 17th, 2012

Lecturer: Rick Grucza, Ph.D.

Precursors of personality and personality disorders

- Continuity of personality and temperament across the lifespan
- Prediction of psychopathology from early life personality and temperament.
- Overlap between standard personality measures, personality disorder, and psychopathology
- Discussion:

Readings:

- Tsuang, Chapter 23

WEEK 6: Feb 24th, 2012

Lecturer: Anne Glowinski, M.D., M.P.E.,

Global Public Mental Health Perspectives on Child Psychiatric Epidemiology

- Global burden of illness worldwide
- Global burden of illness in US
- Common and less-common disorders
- Inference of need/under-service
- Discussion: Rose's paradox

Readings:

- Susser, Chapter 1
- Kessler, Avenevoli, Costello, Georgiades, Green, Gruber, He JP, et al.
Prevalence, Persistence, and Sociodemographic Correlates of DSM-IV Disorders

in the National Comorbidity Survey Replication Adolescent Supplement. Arch Gen Psychiatry. 2011.

- Merikangas, Nakamura and Kessler. Epidemiology of Mental Disorders in Children and Adolescents. Dialogues Clin Neurosciences 2009, 11: 7-20
- John. Why the prevention paradox is a paradox, and why we should solve it: a philosophical view. Prev Med. 2011. 53: 250-2.

Week 7: March 2nd, 2012

Lecturer: Anne Glowinski, M.D., M.P.E.,

Attention Deficit Hyperactivity Disorder

- Epidemiology of Attention Deficit Hyperactivity Disorder
- Historical perspectives on ADHD diagnosis
- Complexity and comorbidity with other disorders of childhood
- Experimental and psychometric measures in ADHD
- Discussion: ADHD in adulthood

Readings:

- Tsuang, Chapter 25
- Simon, Czobor, Bálint, Mészáros, Bitter. Prevalence and correlates of adult attention-deficit hyperactivity disorder: meta-analysis. The British Journal of Psychiatry, 2009. 194, 204–211

Week 8: March 9th, 2012

Lecturers: Ginger Nicol, M.D., and Lauren Garfield, Ph.D.

The Epidemiology and Pharmaco-epidemiology of Disruptive Disorders

- Introduction to Psychopharmaco-epidemiology (PPE)
- Seminal PPE studies
- Disruptive Disorders: Epidemiology and Outcomes
- Disruptive Disorders through an imperfect PPE lens
- Discussion: Design challenges in PPE

Readings:

- Tsuang, Chapter 10
- Robins and Price. Adult disorders predicted by childhood conduct problems: results from the NIMH Epidemiologic Catchment Area project. Psychiatry, 1991.

Week 9: March 16th, 2012

Lecturer: Cynthia Rogers, M.D.

Child Maltreatment and Psychiatric Outcomes

- Global burden, mortality and morbidity related to child maltreatment
- Epidemiology
- Methodological issues related to the study of child maltreatment
- Adverse outcomes with a focus on psychiatric disorders
- Limitations of the PTSD diagnosis
- Discussion:

Readings:

- Tsuang, Chapter 27, Sections 27.5 and 27.9
- Gilbert et al. Child maltreatment: variation in trends and policies in six developed countries. Lancet. 2011
- Keyes et al. Child maltreatment and the structure of common psychiatric disorders. Br J Psychiatry. 2011
- McCrory et al. The impact of childhood maltreatment: a review of neurobiological and genetic factors. Frontiers in Child and Neurodevelopmental Psychiatry. 2011.

Week 10: March 23rd, 2012**Autism Spectrum Disorders****Lecturer: TBA**

- Assessment of autism for epidemiological studies.
- Categorical and dimensional views of Autism
- Prevalence estimates and challenges in assessment across historical periods
- Emerging international prevalence data
- Comorbidity with MR/DD.
- Development of rapid screening instruments for autism spectrum disorders
- Discussion: perspectives on increasing rates of autism and the autism-vaccine link fallacy.

Readings:

- Tsuang, Chapter 26
- Constantino. The quantitative nature of autistic social impairment. Pediatr Res. 2011.
- Lazzof et al. Prevalence of pervasive developmental disorders among children at the English Montreal School Board. Can J Psych. 2010.

Week 11: March 30th, 2012**Lecturer: Angela Reiersen, M.D., M.P.E.****Schizophrenia**

- Epidemiology
- Risk factors for Youth vs. Adult Onset Schizophrenia
- Precursors and prodromes in the general population
- Migration studies
- Discussion: Marijuana use and its impact on the development and course of schizophrenia

Readings:

- Tsuang, Chapters 16 and 31
- Rossler et al. Linking substance use with symptoms of sub-clinical psychosis in a community cohort over 30 years. Addiction. 2011.

Week 12: April 6th, 2012**Lecturer: Anne L. Glowinski, M.D., M.P.E.****Mood and Anxiety disorders**

- Mood and anxiety disorders across the lifespan
- Informants in psychiatric epidemiology: the case of youth depression

- Youth Bipolar disorder and controversies
- Genetic epidemiology of depressive and anxiety disorders
- Family Studies of bipolar disorder
- Discussion: public health impact of a diagnosis on the rise, the case of juvenile bipolar disorder

Readings:

- Tsuang, Chapters 17, 18, 19 and 24
- Glowinski et al: Genetic Epidemiology of Self Reported Lifetime DSM-IV Major Depressive Disorder in a Population Based Twin Sample of Female Adolescents. *Journal of Child Psychology and Psychiatry and Allied disciplines* 2003; 44: 988-996
- Duffy et al. Findings from bipolar offspring studies: methodology matters. *Earl Interv Psych.* 2011.

Week 13: April 13th, 2012

Lecturer: TBA

Eating disorders and Obesity

- Anorexia, Bulimia and Binge eating disorder
- Obesity epidemic in US
- Regional variations and global trends
- Cultural influences on eating disorders
- Discussion: Lost Paradise in Fiji

Readings:

- Tsuang, Chapter 20
- Becker et al. Social network media exposure and adolescent eating pathology in Fiji. *Br J Psychiatry.* 2011

Week 14: April 20th, 2012

Lecturer: Rumi Price

Suicide and Suicidality

Global trends and cohort effects
 Epidemiology across the lifespan
 Risk factors and models of suicide diathesis
 Prevention and mixed results

Discussion:

Readings:

- Tsuang, Chapter 28
- Page et al. Effectiveness of Australian youth suicide prevention initiatives. *Br J Psychiatry.* 2011
- Becker et al. Social network media exposure and adolescent eating pathology in Fiji. *Br J Psychiatry.* 2011

Week 15: April 27th, 2012

Lecturer: TBA

Geriatric Psychiatry

- Epidemiology
- Historical Trends
- Current and expected burden in US society
- Health services data
- Discussion:

Readings:

- Tsuang, Chapter 29

Week 16: May 4th, 2012

Lecturer: Anne Glowinski, M.D., M.P.E.,

Contemporary topics (choice will be finalized by students), e.g.

- Health considerations among persons with psychiatric disorders
- Side-effects of psychiatric medications
- The burden of psychiatric comorbidity in medical illness.
- Daycare and socio-emotional development
- Psychiatric health among adopted children
- Socioeconomic disparities and mental health
- Discussion: POSTER SESSION!

Readings:

- TBA

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