Epidemiology of Psychiatric Disorders across the Lifespan - Course Syllabus 2011-2012

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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

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

Readings:
- Susser, Chapters 1,2,3,4,5,6,7,8, 23
- Tsuang, Chapters 2, 7

WEEK 2: Jan 27th, 2012
Lecturer: Anne Glowinski, M.D., M.P.E.,
Overview of Psychiatric Epidemiology Data
  o Register data
  o Landmark studies and findings
  o Overview of instruments used in psychiatric epidemiology research
  o Publicly available data sets relevant to psychiatric and behavioral health
  o Discussion: strengths and weaknesses of common psychiatric epidemiologic designs

Readings:
- Tsuang, Chapter 8: 8.1, 8.2 and 8.7; Chapters 13 and 14

WEEK 3: Feb 3rd, 2012
Lecturer: Rick Grucza, Ph.D.
Epistemology
  o Regression models
  o Confounding,
  o 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


Week 7: March 2\textsuperscript{nd}, 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

Week 8: March 9\textsuperscript{th}, 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

Week 9: March 16\textsuperscript{th}, 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

**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

**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

**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

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

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

Week 15: April 27th, 2012
Lecturer: TBA
Geriatric Psychiatry
  o Epidemiology
  o Historical Trends
  o Current and expected burden in US society
  o Health services data
  o 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.
  o Health considerations among persons with psychiatric disorders
  o Side-effects of psychiatric medications
  o The burden of psychiatric comorbidity in medical illness.
  o Daycare and socio-emotional development
  o Psychiatric health among adopted children
  o Socioeconomic disparities and mental health
  o Discussion: POSTER SESSION!

Readings:
  ▪ TBA

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