EPIDEMIOLOGY OF PSYCHIATRIC DISORDERS ACROSS THE LIFESPAN

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

Fall 2016

Dates: 8/29/16– 12/12/16
Time: Friday, 1-4 pm
Location: TAB 132
Coursemasters: Anne L. Glowinski, MD, MPE
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Child and Adolescent Psychiatry Education and Training Director
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Kathleen K. Bucholz, PhD, MPH, MPE
Professor of Psychiatry
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Lecturers: Kathy Bucholz, Anne Glowinski and Rumi Price

Office Hours: By Appointment (Administrative Administrator: Brigitte Northrop: northropb@psychiatry.wustl.edu)

Prerequisites: M21-560 Biostatistics I or Coursemasters’ 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 psychiatric disorders as illuminated by key epidemiological studies. 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 to a meeting of their choice.

Reading References (we have asked library to put books on reserve):

Tsuang MT, & Tohen, M (Eds.), Textbook in Psychiatric Epidemiology, 3rd Ed. Hoboken, NJ: John Wiley and Sons, 2011
Prince M et al. Practical Psychiatric Epidemiology, Oxford University Press, 2003

Links to supplementary reading or viewing material to be provided for each lecture

Course Format: The course will include review of material for each class, 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.
9. Appreciate ethical issues unique to psychiatric epidemiology research

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 or to negotiate an arrangement to make up for the missed lectures.

2. **Readings or other material review** should be completed before each lecture. Articles or links to articles or other material will be posted on blackboard in advance of each lecture.

3. **Participation** is expected of each student. One hour of each course session will be devoted to student-led discussions/presentations. This will consist of either informal roundtable discussions, motivated by the readings, or presentations by students as indicated by the instructor for the session.

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 or October 2\textsuperscript{nd}, 2015 and will be presented during class for feedback. 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
- 40% Participation
- 10% Final project outline/plans due October 2\textsuperscript{nd}, 2015 (will be presented in class that day)
- 40% Final Project: Poster, Literature review paper or analytical project on topic of student’s interest due last class 12/12/16

**Grading Scale:** TBA
WEEK 1: September 2nd, 2016
Lecturers: Anne L. Glowinski, MD, MPE
Introduction to Psychiatric Epidemiology
- Class and expectations overview
- History of psychiatric epidemiology research
- Evolution of psychiatric diagnosis
- DSM vs. RDOC
- Basic methods to identify risk factors for mental disorders
- Special ethical considerations
- Discussion: nosology and measurement -general

Readings:
- Susser, Chapters 1,2,3,4,5,6,7,8, 23 (Recommended)

WEEK 2: September 9th, 2016
Lecturer: Kathy Bucholz, PhD, MPH, MPE
Overview of Psychiatric Epidemiology Data
- Register data
- What constitutes a landmark study?
- Overview of instruments used in psychiatric epidemiology research
- Publicly available data sets relevant to psychiatric and behavioral health
- Common designs in psychiatric epidemiologic studies
- Discussion: strengths and weaknesses of common psychiatric epidemiologic designs

Readings:
- Tsuang, Chapter 8, 13 and 14 (Recommended)

WEEK 3: Sept 16th, 2016
Lecturer: Anne L. Glowinski, MD, MPE
Psychiatric epidemiology: The Big Picture
Burden of illness in the U.S. and worldwide
Commonly occurring mental disorders: prevalence and course across the lifespan
Landmark Psychiatric Epidemiology Contributions
Comorbidity
Discussion: Sept 11, 2001 and Sequelae

Readings:
- Gadermann AM et al. Comorbidity and disease burden in the NCS-R. Depression and anxiety 2012; 29: 797-806
- Global Burden of Disease 2010 studies: Read Vos, Lim and Murray OPTIONAL
- Vos T et al. Years lived with disability (YLFs) for 1160 sequelae of 289 diseases and injuries 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010. Lancet 2012; 380:2163-2196, ***READ***

WEEK 4: September 23rd, 2016
Lecturer: Anne L. Glowinski, MD, MPE
Public Mental Health Perspectives on Child Psychiatric Epidemiology
Burden of illness worldwide
Burden of illness in US
Landmark Child Studies
Common and less-common disorders
Inference of need/under-service
Discussion: Rose’s paradox

Readings:
WEEK 5: September 30th, 2016  
Lecturer: Kathleen Buchoz, PhD, MPH, MPE  
Introduction to psychiatric genetics  
o Brief overview of family, twin and molecular approaches  
o Genetic epidemiologic studies and psychiatric nosology  
o Psychiatric comorbidity and structural analyses for psychiatric phenotypes  
o Conceptualization of the development of psychopathology  
o **Data analysis – begin analysis using SDA for NCS-1**

**Readings:**
- Susser, Chapters 28, 29, 31
- Tsuang, Chapters 3 and 4
- OPTIONAL: Susser, Chapters 30, 32, 33

WEEK 6: October 7th, 2016  
Lecturer: Kathleen K. Bucholz, Ph.D., MPH, MPE  
Mental health services and barriers to treatment  
Methodological Issues related to the study of minority samples and individuals  
Overview of mental health services data  
Barriers to treatment: from simple to complex  
Examples of innovative approaches  
Discussion: TBA  
**Readings:** Tsuang et al, Ch 9

WEEK 7: October 14th, 2016  
Lecturer: Anne Glowinski, MD, MPE  
Attention Deficit Hyperactivity Disorder, Conduct Disorder, and Oppositional Defiant Disorder (aka “Disruptive Disorders” or “Childhood Externalizing Disorders”)  
o Historical perspectives on ADHD diagnosis  
o Epidemiology of Attention Deficit Hyperactivity Disorder  
o Complexity and comorbidity with other disorders of childhood  
o Other disruptive disorders: Conduct disorder, Oppositional Defiant Disorder - Epidemiology, Risk Factors, Comorbidity, Treatment  
o **Discussion:** ADHD and disruptive disorders as precursors to addiction

**Readings:**


WEEK 8: October 21st, 2016
Lecturer: Anne L. Glowinski MD, MPE

Epidemiology of Precursors of personality and personality disorders

- Continuity of personality and temperament across the lifespan
- Prediction of psychopathology from early life personality and temperament
- General population outcomes of different personality traits
- Overlap between standard personality measures, personality disorder, and psychopathology

Discussion: the relationship between temperament, personality and psychopathology

Readings:

- Goldberg, Lewis R. The structure of Phenotypic Personality traits, American Psychologist, Jan1993, Vol. 48 Issue 1, p26, 9p

WEEK 9: October 28th, 2016
Lecturer: Kathleen K. Bucholz, Ph.D., MPH, MPE

Developmental Epidemiology of Addiction

- Nosology and epidemiology
- Addiction across the lifespan
- Comorbidity: independent and induced
- Drug harms
- Global burden of disease

Discussion: Students to present their project outlines for the class

Readings:

- Commentaries on Caulkins: Addiction 1022; 107: 872-877
WEEK 10: November 4th, 2016
Lecturer: Kathleen K. Bucholz, Ph.D., MPH, MPE
Eating disorders and Obesity
   o Anorexia, Bulimia and Binge eating disorder: Epidemiology, risk factors, comorbidity, treatment
   o Obesity epidemic in US
   o Concept of food addiction
   o Regional variations and global trends
   o Cultural influences on eating disorders
   o Discussion: the case for food addiction

Readings:
   ▪ Tsuang, Chapter 20

WEEK 11: November 11th, 2016
Lecturer: Anne L. Glowinski, MD, MPE
Epidemiology of Schizophrenia, Psychotic Disorders and Autism
   o Historical Perspective on schizophrenia population based research
   o Precursors and prodromes in the general population
   o Assessment of autism for epidemiological studies.
   o Categorical and dimensional views of Autism
   o Autism Prevalence estimates and challenges in assessment across historical periods
   o Autism Emerging international prevalence data
   o Discussion: the cannabis-psychosis link

Readings:
   ▪ Tsuang, Chapters 16, 26, 29 and 31 (optional)


WEEK 12: Nov 18th, 2016
Lecturer: Anne L. Glowinski, MD, MPE
Mood and Anxiety disorders
- Mood and anxiety disorders across the lifespan
- Informants in psychiatric epidemiology of youth internalizing disorders
- Youth Bipolar disorder and controversies
- Genetic epidemiology of depressive and anxiety disorders
- Family Studies of bipolar disorder
  - Discussion: The case of juvenile bipolar disorder

Readings:
- Tsuang, Chapters 17, 18, 19 and 24 (Optional)

THANKSGIVING BREAK

WEEK 14: Dec 2nd, 2016
Lecturer: Kathleen K. Bucholz, Ph.D., MPH, MPE
Epidemiological Studies of Psychiatric Disorders in Geriatric Populations
- Global and US trends in aging
- Epidemiological insights on end of life course of psychiatric illness
- Dementia: epidemiological perspectives
  - Discussion: planning for an aging US population

Readings:

WEEK 15: December 9th, 2016
Lecturer: Rumi Price PhD, MPE
Suicide and Suicidality
Global trends and cohort effects
Epidemiology across the lifespan
Risk factors and models of suicide diathesis
Prevention and mixed results

Discussion: Based on readings

Readings:
- Tsuang, Chapter 28 (optional)
- Fu et al. A twin study of genetic and environmental influences on suicidality in men (optional)

WEEK 16: December 16th, 2016
CLASS FROM 1-4 PM INCLUDING POSTER OR PRESENTATION SESSION
Final presentations – each student to have 20 min for presentation followed by 10 minutes Q&A for each presentation