

**Course Title/Code:** **Critical Appraisal and Evidence-based Approaches in Psychosis (MMPH6193)**

**Department:** Psychiatry

**Objective:** Essential for knowledge development, the skills required for critical appraisal of scientific evidence will be systematically covered in this module, with specific application to the field of psychosis. Participants are expected to develop capacities for weighing empirical information generated from research studies, and for adopting appropriate methodology to address questions encountered in real-life clinical situations. Approaches will include longitudinal studies, randomized controlled studies, surveys, and qualitative studies. We will cover skills in studying psychosis, including sampling methods, research design, determining of outcome variables and potential confounders, statistical analysis, data presentation, results interpretation and generalization. The importance and limitations of the evidence-based approach will also be discussed.

**Content:** **Critical appraisal and evidence-based medicine**

- Basics of critical appraisal
- Introduction of evidence-based medicine

**Research methodology in psychosis**

- Surveys
- Qualitative studies
- Case-control studies
- RCT
- Naturalistic study

**Getting the most out of a research report**

- Sources of bias
- Paper conference skills
- information on-line
- Designing a research proposal
- Research hypothesis
- Basics of methodology including power calculation

**Analyzing data: Etude I**

- Data analysis study I
- Basic concepts
- Descriptive statistics

**Analyzing data: Etude II**

- Inference statistics
- Measurement of association

**Critical appraisal group presentation: Etude III**

- Group presentation

**Designing a research project: Etude IV**

- Individual presentation on proposed research projects

**Learning outcomes:** On completion of the course, the students are expected to:

### **Knowledge**

- acquire understanding of basic research methodologies including survey, qualitative study, case-control study, cohort study, randomized control study
- understanding the applications and limitations of all the different research methodologies
- understand the difference of naturalistic and explanatory study design and their implications
- Be aware how research with different methodologies contribute to the accumulation of psychosis study and knowledge
- have basic understanding of the statistical analysis theory
- understanding the elements of evidence-base medicine and its importance
- appreciate the current practice in the field of psychosis, both clinical and service development which has been informed by evidence

### **Skills**

- acquire capacity and skills to critically review the empirical literature in psychosis, to derive information which could be applied in clinical settings
  - ability to identify different biases in the study
  - able to differentiate type I and type II errors
  - ability to appreciate the outcomes of different studies with local context (generalization)
- have basic skills in developing a research proposal.
  - ability to establish a hypothesis and able to apply a suitable research methodology
  - able to understand the power calculation
  - establish basic skill to develop research proposal with carefully designed methodology
  - ability to communicate their research proposal (presentation)
- acquire basic skills in data analysis and interpretation
  - able to categorize data set
  - ability to apply appropriate statistical analysis to test for the hypothesis
  - ability to interpret the results and appreciate the limitations

**Prerequisite:**

None

**Duration:**

1 semester; 2.5 hours/week; 24 contact hours

**Assessment**

Continuous assessments (40%)  
Written examinations 60%

**Remarks:**

Priority will be given to research postgraduate students those research projects is on a psychosis-related topic.