

Introduction to Research Methods in Mental Health

Introduction to Research Methods in Mental Health
Key concepts, designs, and practical considerations for studying psychological well-being, disorders, and treatment outcomes.

1. Why Research Methods Matter in Mental Health

Purpose	Example
Identify risk & protective factors	Longitudinal study of childhood trauma and adult depression
Test efficacy of interventions	Randomized Controlled Trial (RCT) of CBT vs. medication
Inform policy & service planning	Epidemiological survey of suicide rates across regions
Advance theory	Experimental manipulation of stress to examine cortisol response

2. Core Research Paradigms

Paradigm	Main Goal	Typical Designs	Strengths	Limitations
Quantitative	Measure variables & test hypotheses	RCTs, cohort studies, cross-sectional surveys, meta-analysis	Statistical power, generalizability	May miss nuanced lived experience
	Explore meaning & context	Interviews, focus groups, thematic analysis, grounded theory	Rich, in-depth insight	Smaller samples, limited statistical inference
Mixed Methods	Combine breadth & depth	Sequential explanatory, concurrent triangulation	Comprehensive picture	More complex logistics & analysis

3. Study Designs Frequently Used

3.1 Experimental Designs

Introduction to Research Methods in Mental Health

- **Randomized Controlled Trial (RCT)**
 - Participants randomly assigned to treatment vs. control/placebo.
 - Gold standard for efficacy; blinding reduces bias.
- **Factorial Designs**
 - Test interaction of two or more interventions (e.g., medication × psychotherapy).

3.2 Quasi-Experimental Designs

- **Non-randomized controlled trials**
- **Interrupted time-series**
- Useful when randomization is unethical or impractical (e.g., policy changes).

3.3 Observational Designs

Design	Timing	Key Feature
Cross-sectional	One point	Snapshot of prevalence, correlations
Case-control	Retrospective	Compare exposure histories of cases vs. matched controls
Cohort (prospective)	Follow-up	Incidence rates, temporal ordering
Longitudinal panel	Repeated measures	Change over time within same individuals

3.4 Qualitative Designs

- **Phenomenology** – explore lived experience of mental illness.
- **Narrative inquiry** – construct personal illness stories.
- **Ethnography** – observe mental health service cultures.

4. Key Methodological Steps

1. Formulate a Clear Research Question

- Use **PICO** (Population, Intervention, Comparison, Outcome) for quantitative work.

Introduction to Research Methods in Mental Health

- Use **SPIDER** (Sample, Phenomenon, Design, Evaluation, Research type) for qualitative work.

2. Literature Review

- Systematic search (databases: PubMed, PsycINFO, Embase).
- Identify gaps, theoretical frameworks, and measurement tools.

3. Select an Appropriate Design

- Match question, feasibility, ethical constraints, and resources.

4. Define Variables & Measures

- **Independent variables** (e.g., treatment type).
- **Dependent variables** (e.g., symptom severity).
- Use validated instruments (e.g., PHQ-9, PANSS, Beck Anxiety Inventory).
- Consider **biomarkers** (cortisol, neuroimaging) when relevant.

5. Sampling Strategy

- **Probability sampling** (simple random, stratified) ? enhances representativeness.
-