

# Research Methods in Health

About this Guide

Purpose of this is to write notes on research methods in health.

Research Methods

Why is Research Methodology Important

Writing the Proposal

How to Write the Background

What do we know

What do we not know

What do we add?

Aims and objectives

Research and Study Design

Different Types of Studies and Designs

Methods

Participants

Intervention or Exposure

Outcomes

Analyses

Different Types of Data

Nominal

Ordinal

Interval

Ratio

Plans of Analyses

Single variable analyses

Missing Data

Outliers

Basic statistics and probability

Probability

Probability Distribution Functions

Z-distribution, t-distribution, and f-distribution

t-Test

Pairwise t tests, and unpaired t tests

f-tests and chisquare distribution

Sampling

Sample Size

Linear Regression

Multivariate Regression

Logistic Regression

Survival Curves

Cox Proportional hazards model

Binomial and Poisson Processes

Writing the Research Report

Structural Equation Model

Longitudinal Data Analyses

Mixed Models

Epidemiological Study Designs

Randomized Controlled Trials

Cohort Studies

Case Control Studies

Cross Sectional Surveys

Single Case Studies

Questionnaire Design

Analysis of Questionnaires and Instruments

Face Validity

Content Validity

Construct Validity

Synthesis of Information

Systematic Reviews

Meta Analyses