

Clinical Research

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2 categories:-

■ **EXPERIMENTAL RESEARCH:-**

1. randomized controlled trial=gold standard of clinical research
2. nonrandomized controlled trial

■ **OBSERVATIONAL RESEARCH:-**

1. analytical studies: with comparison or control groups

a) cohort studies : assign exposures, then look forward to the outcomes (incidence or risk)

b) case-control studies: measure outcomes, then look back to the exposures. Provide odds ratio (not incidence rate)

c) cross-sectional studies: determine exposures and outcomes at the same time

2. descriptive studies: without comparison or control groups

a) case reports

b) case series reports

c) cross-sectional (prevalence) studies:

- describe health of populations
- = case-control analogue of a population cohort study with exposures and outcomes at the same time

d) surveillance: watchfulness over community

e) ecological correlational studies:

- for associations between exposures and outcomes in populations rather than in individuals

- **Exposures** = treatments or experimentation assigned
- **Outcomes** = objective measurable effects caused by the exposures quantified by rate, ratio etc
- **Measures of association:-**
 - eg. relative risk (risk ratio) = outcome/exposure
 - eg. relative odds (odds ratio) = odds of exposures in treated group/odds of exposures in control group
(ratio 1 = no effect; ratio > 1 = increase risk; ratio <1 = protective effect)
- **Confidence intervals**