

GLOSSARY

Adjusted analysis¹: when groups differ on baseline characteristics (eg, age), analyses of outcome data are statistically modified to account for these differences.

Cohort study: a group of people with a common characteristic or set of characteristics are followed up for a specified period of time to determine the incidence of some outcome; there is no comparison group.

Confidence interval (CI): quantifies the uncertainty in measurement; usually reported as 95% CI, which is the range of values within which we can be 95% sure that the true value for the whole population lies.

Confounder²: a variable that affects the observed relation between 2 other variables (eg, alcohol is related to lung cancer, but does not cause the disease; instead, both alcohol and lung cancer are related to smoking, and it is the smoking that causes lung cancer).

Constant comparison³: a procedure used in qualitative research wherein newly collected data are compared in an ongoing fashion with data obtained earlier to refine theoretically relevant categories.

Contamination: study participants in the control group accidentally receive the experimental intervention, thereby minimising potential differences in outcomes between groups.

Data saturation (saturation, redundancy)³: process of collecting data in a qualitative research study to the point where no new themes are generated.

Double blind: occurs in an experimental study in which neither the patient nor the study staff (responsible for patient care and data collection) are aware of the group to which the patient has been assigned.

Efficacy: extent to which an intervention does more good than harm for participants who receive the intervention *under optimal conditions* (eg, complete compliance with treatment). It answers the question *can it work?*

Fixed effects model⁴: gives a summary estimate of the magnitude of effect in meta-analysis. It takes into account within study variation but not between study variation and hence is usually not used if there is significant heterogeneity.

Grounded theory³: an approach to collecting and analysing qualitative data with the aim of developing theories grounded in real world observations.

Hazard function¹: the probability that a person will die in a certain time interval, given that the person has lived until the beginning of the interval.

Heterogeneity⁴: the degree to which the effect estimates of individual studies in a meta-analysis differ significantly.

Inception cohort: a defined, representative sample of patients is assembled for a study at a common (ideally early) point in their disease or condition and followed up over time.

Life years saved: difference (in years) in life expectancy with an intervention (eg, smokers who receive a smoking cessation programme and stop smoking) and without an intervention (eg, smokers who do not receive the programme and continue smoking).

Meta-analysis¹: a method for combining the results of several independent studies that measure the same outcomes so that an overall summary statistic can be calculated.

Median: the middle value of a series of values (eg, for the series 1, 5, 7, 8, 9, the median is 7).

Number needed to treat (NNT): number of patients who need to be treated to prevent 1 additional negative event: calculated as 1/absolute risk reduction (rounded to the next whole number), accompanied by the 95% confidence interval.

Odds ratio (OR): describes the odds of a patient in the experimental group having an event divided by the odds of a patient in the control group having the event *or* the odds that a patient was exposed to a given risk factor divided by the odds that a control patient was exposed to the risk factor.

p Value: a statistical value which relates the probability that the obtained results are due to chance alone (type I error); a p value <0.05 means that there is less than a 1 in 20 probability of that result occurring by chance.

Phenomenology³: an approach to inquiry that emphasises the complexity of human experience and the need to understand that experience holistically as it is actually lived.

Quasi-randomised study: participants are not randomly allocated to groups, but some other form of allocation is used (eg, day of the week, month of birth).

Randomised controlled trial (randomised clinical trial, randomised trial) (RCT): study in which individuals are randomly allocated to receive alternative preventive, therapeutic, or diagnostic interventions and then followed up to determine the effect of the interventions (one of the alternatives might be no intervention).

Relative risk (RR): risk of adverse effects with a treatment relative to risk for those who do not receive treatment.

Relative risk increase (RRI): the proportional increase in bad outcomes between experimental and control participants; reported as a percentage (%).

Relative risk reduction (RRR): the proportional reduction in outcome rates between experimental and control participants; reported as a percentage (%).

Sensitivity analysis: tests the robustness of the observed results relative to sensible modifications in important variables.

Stratified randomisation⁴: used in trials to ensure that equal numbers of participants with a particular characteristic (eg age) are allocated to each comparison group.

Trend: approaches a predefined level of statistical significance.

Weighted: statistical analysis accounts for differences in certain important variables.

1 Dawson-Saunders B, Trapp RG. *Basic and clinical biostatistics*. Norwalk: Appleton and Lange, 1994.

2 Crombie IK. *The pocket guide to critical appraisal: a handbook for healthcare professionals*. London: BMJ Publishing Group, 1996.

3 Polit DE, Hungler BP. *Nursing research: principles and methods*. Philadelphia: Lippincott, 1995.

4 Mulrow CD, Oxman AD, editors. *Cochrane Collaboration handbook* (updated September 1997). In: *Cochrane Library*. Oxford: Update Software.