

Critical Appraisal 101: Evidence Appraisal for the Non-Researcher

Test your knowledge

1. Critical appraisal is essential for evidence-informed decision making because:
 - a. it allows you to find clinical trials that will support the decision you're making
 - b. only a small percentage of new research is of high quality and clinically relevant
 - c. it will always give you the right answer.
2. Which methodology is generally considered to give the highest level of evidence?
 - a. cohort study
 - b. randomized controlled trial
 - c. retrospective study
 - d. systematic review
3. A useful way of structuring a research question is:
 - a. PICO – patient, intervention, comparator, outcome
 - b. STAR – subject, treatment, analysis, randomization
 - c. PICO – participant, intervention, confounders, odds ratio
4. For most well-designed clinical trials, three hallmark criteria that reflect the highest methodological quality include:
 - a. blinding, using regression analysis for results, limiting demographic characteristics of subjects
 - b. control group, randomization, blinding
 - c. follow-up, adverse events monitoring, randomization
 - d. none of the above.
5. If a clinical trial is said to have internal validity, this means that:
 - a. the investigators have minimized bias and confounding
 - b. the results are true within the investigators' institution only
 - c. the trial had an adequate sample size for the outcome being measured
6. If a clinical trial is said to have external validity, this means that:
 - a. the p value was < 0.05
 - b. the results are true in more than one practice setting
 - c. the study population represents the population to which the results will be applied
 - d. none of the above.
7. A control group is important because:
 - a. it is a group of people who oversee the clinical trial
 - b. it gives the clinical trial adequate power to detect a significant difference between groups

- c. it helps minimize the likelihood that the results are due to chance or some other confounding factor.
 - d. none of the above.
- 8. Blinding is important because:
 - a. assessors may rate patients as “doing better” if they believe they are getting a better treatment
 - b. it gives the clinical trial more power
 - c. concealing treatment allocation helps ensure that participants are randomized appropriately
 - d. all of the above.
- 9. Publication bias is:
 - a. the inclusion of grey literature sources in a systematic review or clinical practice guideline
 - b. a risk of excluding important data because only studies showing a positive outcome have been published
 - c. the desire to publish clinical trials only in high-impact journals
 - d. both (a) and (b).