

Questions for Critical Appraisal of a Research Design

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1. Does the title of the study tell you what and who the research is about?

Is the subject of the research in the title?

Is the type of people the research is about (i.e. the population) referred to in the title?

Is the approach to the research referred to in the title?

2. Is (are) the reason(s) for the study clearly stated?

Is it clear what the study is about?

Is the rationale for doing the study stated?

Are the objectives of the research questions and/or hypotheses stated clearly?

3. Is the review of the literature comprehensive?

Is the literature cited in the review up-to-date?

Does the literature identify clearly the need for the research study?

Are any important references you know of omitted?

4. Is the sample appropriate?

Is the type of people the research is about, i.e. the population, adequately described?

If a sample is used, is there a description of how the sample was selected?

Is the way the sample was selected and the sample size appropriate?

5. Are the measurements and/or data collection likely to be reliable and valid?

Is (are) the data collection method(s) appropriate given the objectives of the study?

Are there operational definitions for all key terms?

Was a pilot study done to demonstrate the reliability and validity of the data collection tools and process?

6. Is there a description of any statistical methods used?

Do the statistics seem appropriate for the measurements of data being collected and the study objectives?

Do any tables, graphs or diagrams help understanding of the findings?

Questions for Critical Appraisal of the Conduct of the Research

1. Did the study proceed as planned?

If not, did unplanned situations have an effect on the results?
Are these explained? Are any flaws or inconsistencies in the data presented?

2. Were the findings of the research described adequately?

Are the findings presented clearly, in a logical fashion and in sufficient detail?
Are any key data missing or inadequately described?

3. Are the calculations correct?

Do any numbers add up?
Were any statistical tests performed correctly?

4. For quantitative research, was the statistical significance tested?

How precise were the results, that is, what were the confidence intervals?
Were the statistical methods appropriate?

5. Were ethical considerations planned for and followed?

Were any ethics issues in the research identified and handled appropriately?

Questions for Critical Appraisal of the Outcomes of the Research

1. What do the main findings mean?

Do the results fulfil the aims of the study?
Are the findings explained?
Is the clinical significance of the findings explained?

2. For quantitative research, how are the hypotheses interpreted?

Has (have) the hypothesis (hypotheses) been proven?
Are there any alternative explanations for the findings?

3. Are the conclusions justified?

Are the conclusions linked to the study objectives?
Are the arguments sensible given your experience?

4. How do the findings compare with what others have found?

Are they consistent?
Do the results confirm findings of other studies or do they suggest new findings?
Are any differences from other studies explained?

5. Application of findings?

Could the findings and conclusions apply to your patients?
Could the results be generalised to other settings?
Should the findings be acted upon? Do any benefits equal or outweigh any new risks or costs?

Amended from: NHS Executive – Achieving Effective Practice: a Clinical Effectiveness and Research Information Pack for Nurses, Midwives and Health Visitors.