

Library Helpsheet No. 14

Resources for critical appraisal

What is critical appraisal?

The process of accessing and interpreting **research evidence** by systematically considering its **validity**, **reliability** and **relevance** before using it to inform a decision.

Validity

Assessed by looking at the methodologies of the study in more detail (not just jumping to the conclusions!)

- Are the methods robust?
- Did the study address a clearly focused issue?
- How were the participants of the study assigned?

Reliability

Look at the results in more detail – are they credible and repeatable?

- How was the data collected?
- What are the key findings?
- How significant are the results?

Relevance

Can the results be applied to my local health community?

- Were all important outcomes considered?
- Do you need further evidence before finding an answer to your question?

Levels of evidence

- Also called the 'hierarchy of evidence'
- Understanding levels of evidence will help you to answer the question, 'how far can I trust this article?'
- Lists different study types according to how robust they are



Source: Medical Research Library of Brooklyn
library.downstate.edu/EBM2/2100.htm

Benefits of critical appraisal

- Critical appraisal bridges the gap between research and practice (ultimately improving practice and quality)
- It is a systematic and objective way of assessing the usefulness of published research
- Keep up to date for your own professional development
- Improves the rigour of your own research and practice

Resources to help you with critical appraisal

Checklists

Checklists enable you to apply critical appraisal techniques in a systematic way. Select a checklist according to the study design (e.g. Randomised Control Trial, Systematic Review).

Critical Appraisal Skills Programme (CASP) appraisal tools:

<http://www.sph.nhs.uk/what-we-do/public-health-workforce/resources/critical-appraisals-skills-programme>

BestBETS Critical Appraisal Worksheets:

<http://www.bestbets.org/links/BET-CA-worksheets.php>

Centre for Evidence Based Medicine (CEBM) Critical Appraisal Guide:

<http://www.cebm.net/index.aspx?o=1157>

Additional Reading

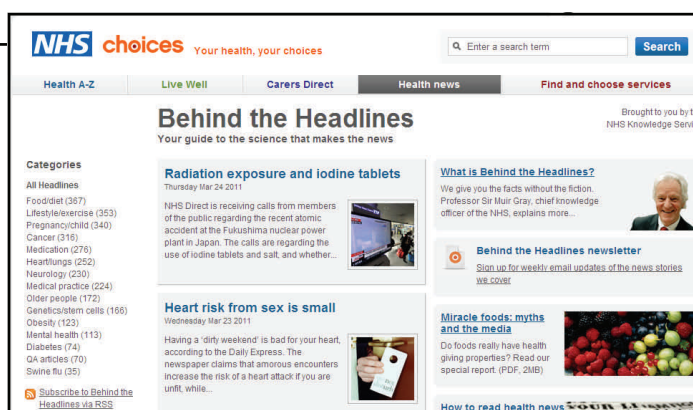
NHS Choices: Behind the Headlines
Appraises the evidence behind health news stories in the media

<http://www.nhs.uk/News>

BMJ How to read a paper series

Series of introductory critical appraisal articles

<http://resources.bmj.com/bmj/readers/how-to-read-a-paper/>



Glossaries

BMJ Clinical Evidence glossary

<http://clinicalevidence.bmj.com/cweb/resources/glossary.jsp>

Centre for Evidence Based Medicine glossary

<http://www.cebm.net/index.aspx?o=1116>

Bandolier Evidence Based Medicine glossary

<http://www.medicine.ox.ac.uk/bandolier/glossary.html>

Books in the library (on the shelf at 610.724)

How to read a paper by
Trisha Greenhalgh
(4th edition, 2010)

*The pocket guide to
critical appraisal* by
Iain K. Crombie
(1996)

and many more...



Bandolier 'What is...?' series

Aims to demystify some of the terminology, techniques and practices used to assess evidence in healthcare, e.g. 'What is a systematic review?' and 'What are confidence intervals and p values?'

<http://www.whatisseries.co.uk/whatis/>

Visit the Integrated Library Service webpages at www.whnt.nhs.uk/library