Evidence confidence

Iriss

Structure of the session

1.Evidence worries

2. Values in evidence

3. Uncovering biases

4. Quality and trustworthines

5. Evaluating evidence

6. Reflections

Evidence worries

Articulate your evidence worries in ways in that are specific to you and your own experiences of evidence.

It's important to acknowledge them and think of ways to address them.

Evaluating Evidence

As a reader, it is often challenging to evaluate evidence.

Today I want us to consider three ways in which we can evaluate evidence:

1. **by considering our evidence values**
2. **by exploring our biases and**
3. **by considering the trustworthiness or quality of a source**

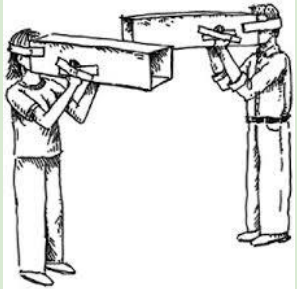
1. Evidence Values

Let’s start by looking internally, at our professional values.

When you're evaluating evidence, think about what results matter to you professionally, what are your professional values. Your profession might come with assumptions about what is good and useful evidence. To find out what kind of evidence we value let's do a quick quiz!

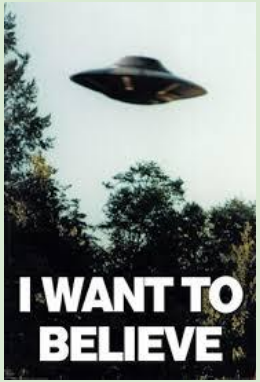
2. Bias in evidence

The second aspect we should consider when evaluating evidence is bias.
'Bias' - on one hand refers to prejudiced attitudes towards individuals based on their gender, their nationality, class and many others.
On the other hand, there are more subtle kinds of cognitive biases that all of us practise every day. They derive from the process of how we make sense of the world by drawing inferences or adopting beliefs that are not rational.
Cognitive biases are ways of sense making given time and other constraints - rules of thumb. They are not design flaws but design features.
They are functional in that they help us make quick decisions based on limited information (Hasselton et al. 2005). These cognitive biases shape how we make sense of information - especially information difficult to process. When it comes evidence the following biases will affect how we search and make sense of information:



1. A bias blind spot is seeing yourself as less susceptible to biases than other people. You should always be aware of this when searching and writing about evidence. Think about your own biases when you're reading something.

2. Confirmation bias is collecting and evaluating evidence that confirms the theory you are testing. This is particularly challenging when searching for evidence so make sure you are not only including sources that confirm your world view. Try and challenge your evidence values we discussed earlier!



3. Anchoring is relying too heavily on the first piece of information considered when making a judgment (Morowedge, 2015). Are you ever guilty of this when searching for evidence?

Reporter bias	Researchers might have their own biases and assumptions which inform their interpretations and how they present the evidence (Galdas 2017)
Funding bias	Evidence can focus on those findings that appease the funder or support the funder's interest - not necessarily conscious, the author might feel a sense of obligation to produce results that support their employer (Laxachin 2012)
Referencing bias	Fully available text gets referenced more (Ahmed et al. 2011)
Publication bias	Dwan et al. (2008) suggests that publications with positive or significant results are more likely to be published.

3. Quality and trustworthiness

With our newfound understanding of bias and values, let us unpack notions of quality and trustworthiness in evidence. Efforts to ensure the quality and trustworthiness of evidence often are about reducing the impact of bias and of personal values on the evidence produced.
Most academic studies should, in theory, subscribe to academic standards of quality and trustworthiness which focus broadly on issues of consistency, transparency and to some extend self-reflection.

Credibility	Are you convinced the evidence reflects what is happening or is just one side of the story? The study might use different methods to make sure this is addressed.
Transferability	Are you convinced that the claims the evidence makes can extend the claim to other populations?
Dependability or reliability	Do you as a reader have enough information to recreate this study/intervention? Does it details the steps taken to do collect information, data or evidence?
Confirmability/neutrality/not biased/	Does the author acknowledge or reflect on their own biases and limitations of the study?

Evaluating Evaluations

It is not always easy to apply these criteria when it comes to reports and evaluations.

You should still consider (whenever possible):

- Whether the report or evaluation contains enough information about how the data was collected and interpreted. Is there enough information there for you to recreate the process?
- Does the author reflect on the limitations of their work or potential gaps?

You can and should still consider evidence that might not seem very transparent consistent or reflexive , but highlight these limitations in your writing. Let's consider some examples of evidence.