

A Framework for Determining Research Credibility

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The types of literature and research projects that one might need to develop an overall health intervention could include Literature reviews and Systematic reviews. This article will explore Literature reviews and Systematic reviews, research bias, types of bias, determining research credibility, and a proposed framework for determining research credibility.

Literature

Literature reviews normally consist of a single research topic and summarize information from various sources into one document.

Literature reviews

Summaries of information from various sources: Systematic reviews are similar to literature reviews, but are more thorough and the research criteria are narrower based on the quality and statistics. The conclusion is based on objective results from statistical analysis. Systematic reviews can include qualitative and quantitative data as well. A meta-synthesis and meta-analysis are types of systemic reviews. Meta-synthesis is a comprehensive gathering of qualitative research in a specific topic. A meta-analysis uses statistics to collect the information.

Systematic reviews

- a) Narrower research criteria and thoroughness compared to literature reviews
- b) Statistical analysis providing objective results
- c) Types: Meta-synthesis and meta-analysis

Other Subcategories of Research can Include

Subcategories

Primary sources (Primary sources are original documents or original works): Research studies, speeches, autobiographies, art, diaries, official records, novels, music.

Secondary sources (Secondary sources are documents that interpret or summarize information from a primary source:

Research reviews, biographies, textbooks, data from government websites. (But, be very careful about data from government websites because much of it has been infiltrated and subverted to disseminate propaganda and false data. Do your own research and go deeper). When working with research, keep in mind, bias may be present (as in my comment about government bias, propaganda, and falsified studies to push an agenda).

Research Bias

When you read research articles, having a critical eye is necessary to determine if bias is present. You become a sort of a detective as you comb through the evidence.

There are 3 types of bias identified which include:

- A. Pre-trial,
- B. Bias during the trial, and
- C. Post-trial.

Pre-trial research bias takes place prior to the study's implementation, which means the study design is faulty, and some form of selection bias or channeling bias is present. For example, you create a study seeking the reasons college students might want to quit smoking. You gather only demographic information about the college students who were smoking rather than their reasons for wanting to quit. This is a study flaw because the instrument did not include questions about the reasons for wanting to quit. If you collect data from college students who already stopped smoking, this is selection bias because your study focuses on those who currently smoke.

Channeling bias requires a different scenario because it mainly occurs in non-randomized drug trials. Channeling bias means the participant's illness dictates group membership in the study. For example, you have drug A and drug B. Drug B is a new and improved drug with no side effects, whereas drug A has the side effect of causing hypertension, or high blood pressure, in some people. When enrolling people in the study, one of the participants was previously diagnosed with hypertension. To avoid the possibility of increasing the participant's blood pressure even more, you have to put the participant in the group receiving drug B.



Other types of bias occurring during a trial could be all of the following: Interviewer bias, misclassification of exposure/outcome, recall bias, and performance bias. Interviewer bias is the methodical alteration between information asked, documented, or interpreted. Interviewer bias might occur like this: You are performing a phone survey of elderly people to assess their compliance in taking their hypertension pills daily. If the interviewer asks an elderly person over the phone, “Do you take your pills daily?” the response could be the sounds of “uhhuh” which is affirmative they do take their pills and “nuhuh” which is stating they do not. If misheard, the interviewer will interpret the response incorrectly and record the response incorrectly. In this example, the interviewer must ask if the person has hypertension to continue with the questions.

One person answers on the phone and responds she does not have hypertension, but she thinks hypertension and high blood pressure are two different diagnoses. This would be misclassification of an outcome. Recall bias is just as it sounds. It occurs when people have difficulty recalling or remembering information. For example, an elderly patient cannot remember if he took five pills or seven pills during the week. Performance bias takes place when participants are influenced to change their behaviors during the study. It could be for the better or the worse. For example, a five-week follow-up phone call is planned to see if participants improve in taking their high blood pressure pills. Pre knowledge of the follow-up phone call might cause participants to be more likely to take their medication regularly.

Finally, post-trial bias takes place during the analysis and publication stage of research. It normally takes the form of citation bias and confounding. Citation bias is when researchers do not publish their results because they are unfavorable. A confounding variable is associated with independent and dependent variables. For example, a positive relationship is found between ice cream consumption and road rage, but the confounding variable is the season of the year. During the summer, people consume more ice cream and people experience more road rage, but that does not mean ice cream causes road rage or road rage causes increased consumption of ice cream. Three types of bias may jeopardize the results of a research study. They may occur before, during, or after the study.

Types of Bias Include

Pre-trial bias

- Takes place prior to the study’s implementation (which means the study design is faulty and some form of selection bias or channeling bias is present).
- Selection bias.
- Channeling bias (mainly occurs in non-randomized drug trials, channeling bias means the participants’ illness dictates group membership in the study).

Bias during trial

All of these types of bias are very common in government propaganda “studies” and Big Pharma pharmaceutical “studies”

and so-called “research.”

- Interviewer bias
- Misclassification of exposure/outcome
- Recall bias
- Performance bias

Post trial bias

All of these types of bias are also very common in government propaganda and Big Pharma “research.” In fact, both of these groups tend to cite their own false studies, cite each other, and cite their own subversive government agents who have falsified other studies. So, as I always say, go deep when you are researching and do not stop at government and Big Pharma “research” as the definitive Truth because most often those citations and “research” studies are falsified purposefully.

- Occurs during analysis and publication stage
- Citation bias
- Confounding variable

As you start practicing as a health educator, you will need to find information promptly, effectively, and efficiently.

Determining Research Credibility

As you can see, a system of stepping stones is needed to accomplish your goals. One of the stepping stones in research is data collection. I will discuss what data are and how to collect data for research. As a health educator, you must be able to decipher research and determine if it is credible. How do you achieve this? Reflect on the following questions.

- What criteria do you use to determine if a research study is credible? Develop a framework showing your criteria and how you use it.
- Once you have developed your framework, review what others in the field are doing with an Internet search and reflect on the various methods of determining the credibility of research.

My Framework for Determining Research Credibility

- Where is the information published?
- Are the peer-reviewed scientific journals respected, trustworthy, real science, real news, real information, and real data? (Adams [1]; Cahalan [2]; Kaplan [3]; Seife [4]).
- Is new information supported by already known and credible studies?
- Do the studies found support other studies or findings that are credible?
- One should seek out multiple studies on the topic, one should read the pros and cons, advocates and proponents versus the opponents to assess what is credible, what is truthful, what is real science versus propaganda (Adams [1]; Cahalan [2]; Kaplan [3]; Seife [4]).



f) Look for who is paying or funding the study (Adams [1]; Cahalan [2]; Kaplan [3]; Seife [4]).

g) Look for who the study cites and supports, defends, or debates.

h) Look at the names of the researchers, where are they from, who are they, where have they worked, where are they working now, what is their political leaning, what is their background, who funds them, what is their credibility, what are their credentials, who are they citing and why. Go deep in these areas because there are MANY charlatans schlepping their political leanings for a fee, an agenda, and using fake science, fake research, and cite other agenda-driven fake studies (Adams [1]; Cahalan [2]; Kaplan [3]; Seife [4]).

i) Look for bias by the researcher, bias by the funders, and bias by the institutions or agencies that are supporting the claims. Yes, even government agencies and institutions have an agenda and bias! And, yes, government agencies and institutions DO falsify studies ALL the time for their nefarious agenda studies (Adams [1]; Cahalan [2]; Kaplan [3]; Seife [4]).

j) Do the funders of the research have anything to gain from the results? If this is the case, the research may not be credible due to bias. In fact, the research may have been specifically commissioned to purposefully put out fake science into the public domain for covert psychological operations, psychological warfare also known as "Psyops." I see this all the time when I'm researching for various projects I'm working on.

k) Television, news, magazines, brochures, CNN, Fox News, MSNBC, CBS, NBC, BBC, local broadcast news, websites, wikis, Huffington Post, New York Times, and the like are NOT credible or REAL sources of news, research, or information whatsoever. ALL fake news. In addition, whoever these fake news groups are citing is ALSO fake and not credible whatsoever. So, that part is very easy to follow and recognize. But, these groups are a very good source for what fake agendas are being pushed into the public domain.

l) The Internet is a great tool for searching for real studies, real research, and rooting out the fakery and bias. But caution here as well, because covert, nefarious agendas exist all over the Internet as well to trap and fool people.

m) Typically, people have been brainwashed by the public school system and the fake TV news over generations to trust all government agencies. We have learned we cannot trust so easily and one should vet government propaganda disguised as "research" very carefully.

n) Gov and edu sites cannot be trusted with disseminating Truth to the public. If you blindly trust Gov and edu sites you are not doing the research and not going deep enough.

A student I worked with in the past once made this statement about credible research from government sources and below is my response to her...

Hello Sally Student,

You stated, "Internet – most credible information comes from recognized experts/websites. If the website has a .gov or .edu, usually it is a credible site". Actually, I have the exact opposite belief. The government and its propaganda covert agents are the biggest disseminators of lies and fake research. I will go to .gov or .edu sites to see what is being disseminated, then I seek out a great deal more research from credible researchers not paid to report biased agendas (Adams [1]; Cahalan [2]; Kaplan [3]; Seife [4]). The government is the last source I trust for anything truthful. But as I stated, I do research what agendas the government is behind on a regular basis when researching any topic, writing my books, and developing my studies.

I'm very good at rooting out fake science disguised as credible and I'm very good at finding the funding and agenda behind the fakery as well. I'm also very good at identifying "researchers" with a nefarious agenda. Once one is fully awake, it's easy to see everywhere. But, one must know what the lies are before one is able to identify the fake "research" and the fake "experts." Most people don't know what the lies are so they are easily fooled. Remember the Flint Water Crisis? The government not only knew about the lead pipes, the government and city officials put the pipes in. The Flint Water Crisis was no accident and not a mistake. It was purposefully designed and executed by the government. There are MANY situations like this and many people are simply not aware of what the government is doing.

According to Adams [1]:

If you've ever wanted to read large collections of fake news, look no further than medical science journals such as The Lancet or the British Medical Journal. Almost everything they publish is "bogus," explains science writer Richard Harris, who writes for NPR, and the result is billions of dollars in fraud, waste and unnecessary expenditures on Big Pharma drugs that simple don't work (p. 1).

According to Cahalan [2]:

How many times have you encountered a study-on, say, weight loss-that trumpeted one fad, only to see another study discrediting it a week later? That's because many medical studies are junk. It's an open secret in the research community, and it even has a name: "the reproducibility crisis." For any study to have legitimacy, it must be replicated, yet only half of medical studies celebrated in newspapers hold water under serious follow-up scrutiny-and about two-thirds of the "sexiest" cutting-edge reports, including the discovery of new genes linked to obesity or mental illness, are later "disconfirmed" (p. 1).

Another comment I made to a student...

Hello Sammy Student,

You stated, "When was the study performed and where? Nothing makes me more upset than finding a great article, but then seeing that it is over 10 years old and/or the study not being performed in the US. When I took a needs assessment class in college, our professor always had us change the search settings to articles



within the last 7-10 years and limit the search to articles within the United States. A lot of this is due to the rapid changes in technology that we see and also because other countries have different sources of technology, factors that can affect health, etc.”

I actually use studies from various international academic and medical journals all the time. I am also a peer-reviewer for many international journals as well. The reason? There are many studies and researchers doing work that is purposefully blocked, blacked-out, and banned by the USA government such as naturopathy studies, cancer, diabetes, healing remedies, healing plants, essential oils, vaccine damage, psychotropic drugs damage, psychiatric damage, and so on. Narrowing your searches to only USA studies is a very limited, myopic perspective and you may not find very important research you should be aware of. In addition, I have published in international journals as well because it's a nice way to brand yourself as a researcher on a global scale and get your research out into the entire world. There is so much fake research in the USA today purposefully pushing nefarious agendas and purposefully blocking important research we should know about (Adams [1]; Cahalan [2]; Kaplan [3]; Seife [4]). I always stress we do our due diligence and read for depth and width concerning any topic we are researching. In fact, this is a requirement and expectation when working on a master's thesis or a PhD dissertation. If you merely go by a limited vantage point, you will miss the real research and the real facts. Go deep, that's my tip on everything. For a college professor to tell you to limit your search to only USA studies that was an odd, biased, misconception for him or her to make. As a university professor, a scholarly peer-reviewed author, a peer-reviewer, a health and wellness book author, and a researcher, I would never advise in that manner. Not only was that professor wrong, he or she certainly has a bias, an agenda, or is simply VERY

unknowledgeable about research. There is a wealth of important information being studied everywhere, look for it in every area and on every topic. Be a researcher warrior and a Truth seeker!

Conclusion

Health education is more than teaching individuals and groups; it is about disseminating healthy outcomes, healthy habits, and reliable research. Honesty and trustworthy research is essential to health education pursuits. This article highlights various concepts to help health educators, researchers, and students to successfully inform target populations using evidence-based support. Knowing the correct information and accessing the right information are of paramount importance. Part of the research process is determining if studies are biased and whether they have proved reliability and validity. A working knowledge of how to interpret results from research studies is essential when choosing a study design and a data collection method most suitable for your population. Excellent studies are conducted globally and published in many international journals and open access journals as well. As an educator, researcher, and author, I always advice to go deep seeking for breadth and width when researching any topic of interest. Happy researching!

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