

Assignment 2: Evidence of Risk Factors - Smoking

Background

In class we have been talking about causes of diseases and injuries and how we identify something as a “risk factor” for a certain health condition. A risk factor is something that increases the likelihood of experiencing a particular health condition or poor health outcome. The purpose of this assignment is to practice locating and synthesizing scientific evidence supporting or refuting the idea that a given factor is associated with increased risk of a given health condition.

Assignment

For this assignment, keep imagining that you work for the Maryland Department of Health and I am still your supervisor. Based on your report on the descriptive epidemiology of smoking in Maryland, I have recommended to the state health director that we make reducing the incidence of smoking-related lung disease a priority for Maryland.

To make the best use of our resources, we want to target known risk factors for lung disease (things that the existing scientific evidence shows increase the likelihood of developing lung disease) and not duplicate our current smoking prevention efforts. My counterparts in other states are talking a lot about exposure to second-hand smoke as a risk factor for lung disease. While my counterparts are nice people, I am not just going to take their word for it—I have to show the epidemiological evidence to my boss along with my recommendation or I will get fired.

So, I need to determine what the existing evidence reveals about an association between exposure to second-hand smoke and lung disease. Because there is a lot of published research on the causes of lung disease, I need your help sorting through it all. I need to know what studies have been done and what their findings were regarding an association between exposure to second-hand smoke and lung disease. I am specifically asking you to do three things:

1. Conduct a literature search to find scientific studies that have examined the association between exposure to second-hand smoke and lung disease
2. Create an annotated bibliography containing the key points of the most pertinent studies
3. State your overall conclusion about an association (or lack of association) between exposure to second-hand smoke and lung disease, based on your analysis and synthesis of the studies in your annotated bibliography

Each of these tasks is described below.

1. Literature Search/Search Strategy

Conduct a search of the scientific literature using PubMed and/or Academic Search Ultimate to identify studies examining a possible association between exposure to second-hand smoke and lung disease.

Try a few different search strategies to capture all of the most pertinent studies. Do not limit your search to studies providing data for Maryland—you won't find many of those. Studies done elsewhere in the United States or even in similar countries are completely acceptable.

Document your search strategy by recording the following for each search you do:

- Which database did you use for this search?
- What combination of search terms and restrictions did you ultimately use for this search (assuming you tried a few other combinations before finding the “sweet spot” yielding the most relevant papers without producing an overwhelming number of hits)?
- How many hits did this search yield?

2. Article Selection

Examine the titles and abstracts of the references you found in these searches and select the 10-12 references that appear to be most relevant. In other words, out of all the references you found, which ones are most likely to provide credible evidence about an association (or lack of association) between exposure to second-hand smoke and lung disease?

The most credible evidence is likely to come from the peer-reviewed literature—specifically, these study designs, in this order:

- Systematic reviews – most credible evidence
- Cohort studies – good
- Case-control studies – good
- Cross-sectional studies – ok, but least credible

Technical reports (which are not peer-reviewed) could be useful if they are from a credible source such as CDC.

Make a bibliography of these 10-12 references. Use complete citations formatted according to AMA style.

3. Annotated Bibliography (Short List of References with Summaries)

Look at the full articles for the 10-12 references you selected in #2. From these 10-12 articles, select the 5 articles that provide the most credible epidemiologic evidence regarding the presence or absence of an association between exposure to second-hand smoke and lung disease.

Create an annotated bibliography for the 5 articles you selected.

An annotated bibliography is basically what it sounds like: a list of references with notes about each article. For each of the 5 papers you selected:

- Provide a complete citation
- Write a brief summary of the study design and main findings in your own words (you may use bullet points for organization, but write complete sentences)
- Note anything important about the way the study was done that might affect your interpretation of the findings (for example, “This study included only children, so the findings might not apply to adults”)

Organization

- Your annotated bibliography should be well organized and easy to read
- Choose a structure that presents the evidence in a way that makes sense to you – for example, alphabetically by author, chronologically by publication date, or in order of the most credible to least credible evidence
- You may number the references in your annotated bibliography if you want to, but you do not need to

4. Overall Conclusions

In one paragraph, give your overall assessment of the evidence as a whole.

Looking at all the papers you annotated, does the evidence, overall, support an association between exposure to second-hand smoke and lung disease or not? Explain.

Consider things such as:

- Are the findings of the studies you annotated consistent with each other or do the findings conflict? If they conflict, do *most* of the studies agree with each other?
- If there are studies that found an association, how strong was the association? In other words, how large were the **relative risks** or differences?

AS.280.101 – Introduction to Public Health

- Which papers carry the most “weight” in your assessment? Why? Some reasons to give a paper more weight might include, for example:
 - The research used a strong study design
 - The research was conducted recently
 - The research was conducted in a population very similar to my population of interest

Other Specifications

This is an individual assignment. The product you submit must be your own written work. Assignments must be submitted via Canvas by the assignment due date and time. Please single-space your assignment and use the American Medical Association (AMA) style for formatting your references. For online sources, please also include the source’s URL and the date you accessed it. You can access the AMA Manual of Style through the Sheridan Libraries web site, under the research guide for public health: <https://guides.library.jhu.edu/c.php?g=202470&p=1461530>

Module 5 and our class on Library Resources on October 4th will help you complete this assignment

Rubric

Grade	Criterion
Satisfactory (100%)	All of the following: <ul style="list-style-type: none">• Includes all components specified in the assignment instructions• Literature search strategy is appropriate, attempts to be comprehensive yet targeted• Literature search strategy is documented clearly and in sufficient detail that the search could be replicated• References are from credible sources• References are relevant to the question• References are cited properly• Articles are summarized clearly and succinctly• Article summaries are written using the student’s own words• Conclusions follow logically from the evidence presented• Statements are supported by specific evidence or examples• Document is well organized and presented clearly
Needs Improvement (0%)	Any of the following: <ul style="list-style-type: none">• One or more components is missing• Literature search strategy is seriously flawed – off target, way too broad, or way too narrow• Literature search strategy is not well documented, search could not be replicated• One or more references is from a source that is inappropriate or not credible• One or more references is irrelevant to the question

AS.280.101 – Introduction to Public Health

	<ul style="list-style-type: none">• One or more references is not cited properly• One or more article summaries is unclear or incoherent• Excessive use of direct quotations from the article• Conclusions are inconsistent with the evidence presented• Statements are unsupported• Document is not well organized/ not presented clearly
--	---