LITERATURE REVIEW

REVIEW
Simplified!

THE
CHECKLIST
EDITION

A CHECKLIST GUIDE TO LITERATURE REVIEW

Rafiq Muhammad, MD, MIHMEP, Ph.D.

LITERATURE REVIEW SIMPLIFIED – THE CHECKLIST EDITION

A CHECKLIST GUIDE TO LITERATURE REVIEW

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This book is part of the *Mastering Research: Design, Execution, and Publishing Made Simple* series—an essential collection authored by Dr. Rafiq Muhammad. This all-in-one series offers step-by-step guidance, real-world strategies, and practical tools tailored for each stage of the research process. The series includes: **1. Research Design Simplified**, **2. Literature Review Simplified**, **3. Research Proposal Writing Simplified**, **4. Write and Publish Scientific Paper**, **5. PhD Journey Simplified**, and **6. Qualitative Data Analysis with ChatGPT and QualCoder**.

Literature Review Simplified: A Practical Guide for Beginners (Mastering Rese...	Literature Review Simplified: A Practical Guide for Beginners Second Edition ...	Research Design Simplified: A Beginner's Guide to Qualitative, Quantitative, ...	Write and Publish Scientific Paper: A Step-By-Step Publication Guide For Begi...	Research Proposal Writing Simplified: A Step-by-Step Guide to Research Propos...	Qualitative Data Analysis With Chatgpt And Qualcoder: A Step-By-Step Guide To...
Buying Options	Buying Options	Buying Options	Buying Options	Buying Options	Buying Options
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A QUICK REFERENCE CHECKLIST TO THE LITERATURE REVIEW PROCESS

This short introductory checklist book serves as a quick introduction to literature review process for those who are planning to conduct the literature review soon and want to have an overview of the literature review process.

This book is "Checklist version" of the book "Literature Review Simplified: A Practical Guide for Beginners". It serves as a quick, accessible reference for those involved in the literature review process, ensuring that guidance is always at your fingertips, wherever and whenever you need it.

If you already have some ideas about the literature review and have decided to conduct the literature review, you can refer to a step-by-step guide below.

Literature Review Simplified: A Practical Guide for Beginners

By Rafiq Muhammad, MD, Ph.D.

4.4 ★★★★⯪ ⌄

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WHY DO WE NEED LITERATURE REVIEWS?

Key Points

- There is a need to synthesize evidence in this era of information overload
- The first step in research synthesis is to survey the field, synthesize and analyze the existing evidence
- A literature review maps out the current evidence to identify the research gap and provide evidence to practitioners
- Research synthesis combines results of multiple primary studies and tests the same hypothesis
- Research synthesis is the process of reviewing, assessing, and analyzing current literature to produce evidence
- A structured and standardized approach is needed to do research synthesis
- Research synthesis gives an outline of the available evidence base and knowledge gaps in a selected field
- Research synthesis helps identify inconsistencies and conflicts in the existing evidence base
- Research synthesis improves research methodology

TYPOLOGY OF LITERATURE REVIEWS

Key Points
- Different literature review types exist
- The type of literature review is determined by the scope, objectives, timeline, target audience, and availability of resources
- The skillset and competence of researchers also determine the literature review type
- Properly written protocol for a literature review is crucial to be able to conduct a high-quality literature review
- Lack of transparency in literature review methods compromises the credibility and replicability of literature reviews
- Selection bias and the use of inappropriate search strategies are concerns in literature reviews methodologies

Outline of the literature review types

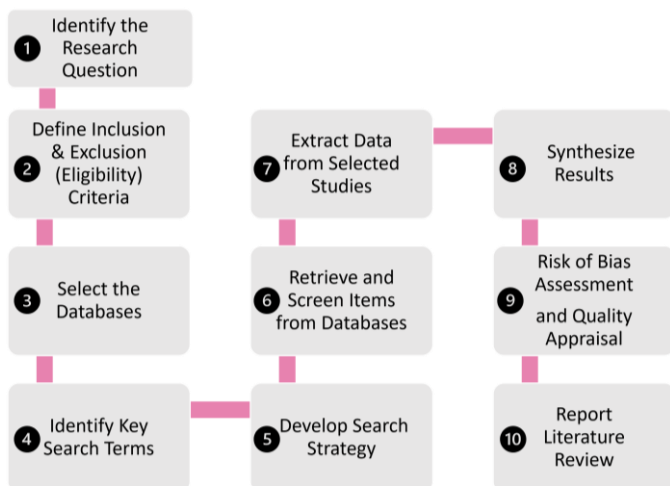| Type of review	Description	Aim & objective	Synthesis	Analysis
Literature review	Provides an outline of the recent or current literature published on a particular topic.	Covers a wide range of subject areas, and may or not include comprehensive search	Narrative synthesis (primarily the use of words and text to summarize findings)	Thematic or conceptual analysis
Systematic literature review	Systematically search available literature, appraise research evidence based on guidelines.	Aims to answer a specific research question through comprehensive databases search.	Narrative synthesis with tabular/quantitative analysis	Recommendations for practitioners and policy makers
Critical review	Critically evaluate quality of the existing literature in an extensive manner.	Present, analyze and synthesize literature material from multiple diverse sources and critically evaluate the evidence.	Narrative synthesis	Highlight conceptual contribution to the existing evidence or develop new theory.
Mapping review	Identify and categorize the current literature on a specific topic.	Find out research gaps for subsequent review.	Tabular analysis with graphical synthesis	Determine the scope and quality of existing literature to identify research needs
Scoping review	Conduct the initial evaluation of likely scope and size of the current scientific literature.	Primarily conducted to assess and inform policy makers whether a full-blown systematic literature review is required in a specific research area or not.	Narrative synthesis with tabular analysis	Determine the scope and quality of the existing literature

Rapid review	conduct Rapid Evidence Assessment to inform policy makers for evidence-based decisions.	Performed within a limited time frame for policy decision making.	Tabular and narrative synthesis	Determine quality of the existing literature and map current landscape of the existing evidence
Qualitative systematic review	To analyze or compare the finding from the qualitative studies.	often results in the development of new theories on the basis of analyzing the themes in qualitative studies.	Qualitative narrative synthesis	Thematic analysis with theory and model development
Meta-analysis	advanced form literature review intended to statistically combine the results of quantitative studies on a specific topic.	This way the result of the meta-analysis presents precise effects of the quantitative results in the individual studies eligible for the meta-analysis.	Tabular analysis with narrative synthesis	Statistical analysis of quantitative measures

Comparison of literature reviews

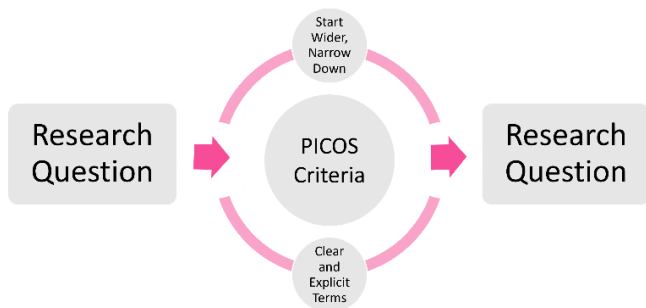|	Systematic literature review	Literature review	Scoping review
Description	Systematically look for, synthesize and appraise scientific evidence.	Provides an outline of the current literature in generic way	identify the type and scope of scientific evidence in a broader manner.
Search strategy	Exhaustive and comprehensive search strategy	Comprehensive or non-comprehensive search strategy	Search strategy is determined by the field of study, scope and time
Quality appraisal	Quality appraisal is conducted which determines the inclusion or exclusion of the articles for analysis	May or may not include quality appraisal	Typically, no quality appraisal is done
Synthesis	Narrative synthesis with tabulation	Narrative synthesis	Narrative synthesis

STEPS IN CONDUCTING LITERATURE REVIEWS

Below is a step-by-step process to conducting literature reviews.

1. Identify the Research Question
2. Define Inclusion & Exclusion (Eligibility) Criteria
3. Select the Databases
4. Identify Key Search Terms
5. Develop Search Strategy
6. Retrieve and Screen Items from Databases
7. Extract Data from Selected Studies
8. Synthesize Results
9. Risk of Bias Assessment and Quality Appraisal
10. Report Literature Review

STEP 1. IDENTIFY THE RESEARCH QUESTION

The first step in conducting a literature review is to identify the research question. There are standard criteria to formulate the research question, and one of such well known and highly recommended approach is to use Population, Intervention, Comparison, and Outcome (PICOS) criteria. PICOS criteria is a common approach to establish a research question in any field of research. P also stands for Problem, and C also represents control or comparator.
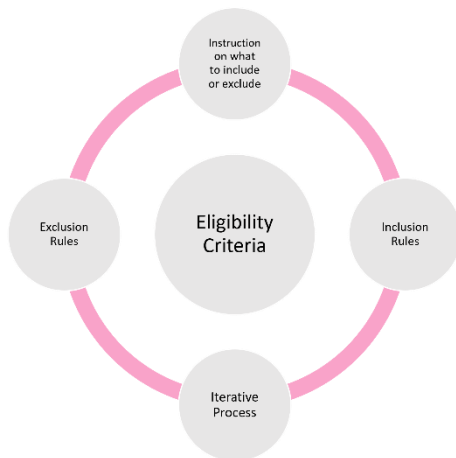
Key Points

- Use Population, Intervention, Comparison, and Outcome (PICOS) criteria to formulate a research question
- Use clear and explicit terms in the research question
- Use a broader definition and narrow down
- Research question can be broad or narrow
- Formulating research question is an iterative process
- Having the right research question from the outset is important

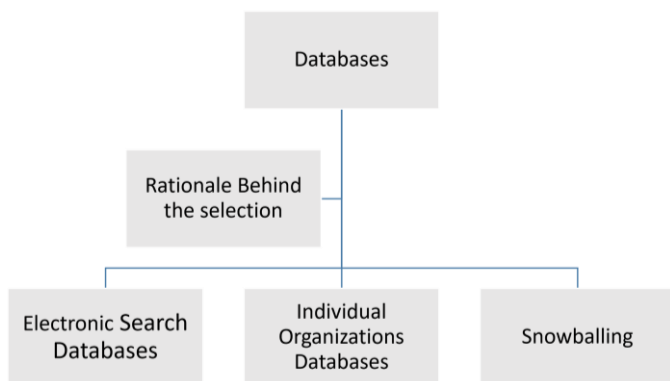# STEP 2. DEFINE INCLUSION AND EXCLUSION (ELIGIBILITY) CRITERIA

The second stage in conducting literature review is to define the inclusion and exclusion (eligibility) criteria for the publications to be incorporated in the literature review (Figure 5.3). Inclusion criteria entail a set of rules or items that you should follow to include studies in the literature review. Similarly, the exclusion criteria entail a set of rules or items that you should follow to exclude studies from the literature review.

Key Points

- Eligibility (Inclusion and exclusion) criteria define what to include and not to include in the review
- Inclusion criteria list a set of rules or items that is included in the literature review
- Exclusion criteria list a set of rules or items that is excluded from the literature review
- Eligibility criteria is guided by the research question
- Eligibility criteria specify characteristics of the studies to include in the literature review
- Clearly defined eligibility criteria increase transparency and enable other researchers to replicate the literature review
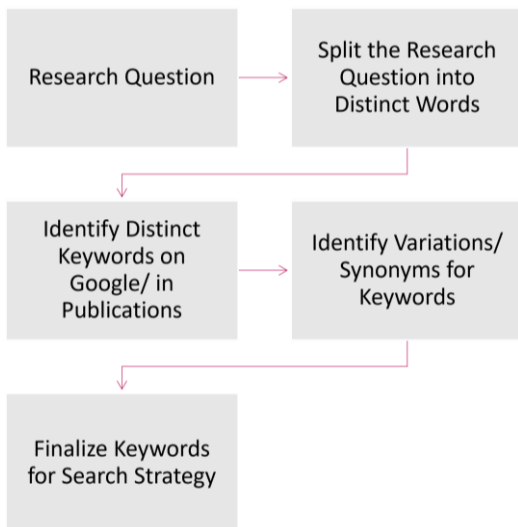
STEP 3. SELECT THE DATABASES

Key Points
- Identify different sources for evidence retrieval
- Every field has specific electronic search databases
- Provide a rationale for selection of the database
- Besides electronic databases, retrieve grey literature, white papers, and unpublished work
- Snowball articles that are retrieved from databases for evidence by manually searching through their references
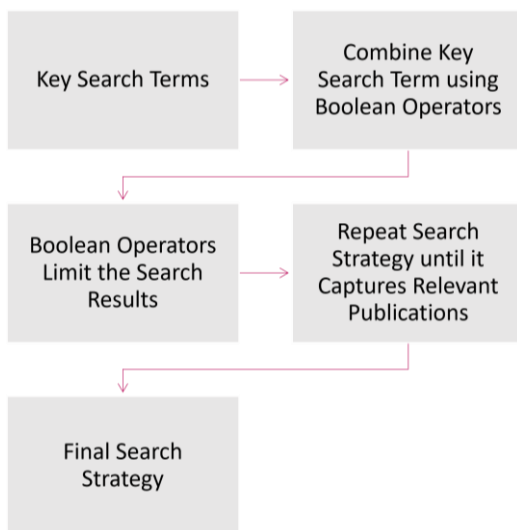
STEP 4. IDENTIFY KEY SEARCH TERMS

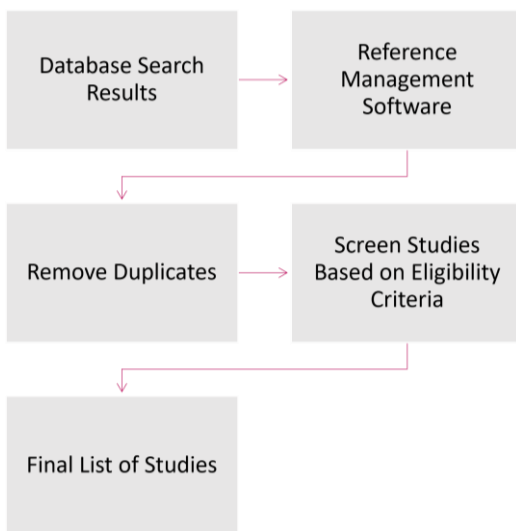| Key Points |
|---|
| **Key Points**
• Identifying key search terms is vital to developing a search strategy and identifying literature in the databases
• Identify key search terms by splitting the research question into distinct words
• Identify variations, synonyms and abbreviations of the key terms
• Searching for relevant articles on the internet and collecting the "keywords" listed in the studies help identify the first key search terms |

STEP 5. DEVELOP SEARCH STRATEGY FOR SELECTED DATABASES

Key Search Terms	→	Combine Key Search Term using Boolean Operators

Boolean Operators Limit the Search Results	→	Repeat Search Strategy until it Captures Relevant Publications

Final Search Strategy

Key Points
- A search strategy is a set of keywords arranged in a unique fashion united by the Boolean operators, i.e., "AND", "OR", and "NOT"
- A "search strategy" is developed by combining the list of search terms according to rules specific to each database
- The search strategy is repeatedly modified until it captures the desired literature in the database
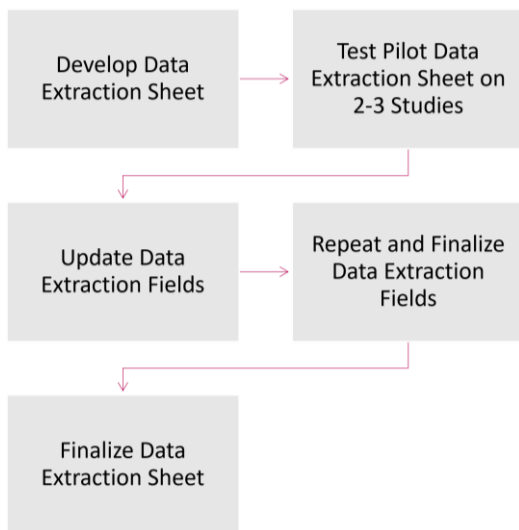
STEP 6. RETRIEVE AND SCREEN SEARCH ITEMS FROM DATABASES

Key Points
- Retrieve database search results into a reference management software
- Remove duplicates from search results retrieved from the databases
- Screen items based on eligibility criteria according to steps in the PRISMA flow diagram
- Screening process results should reflect in the PRISMA flow diagram
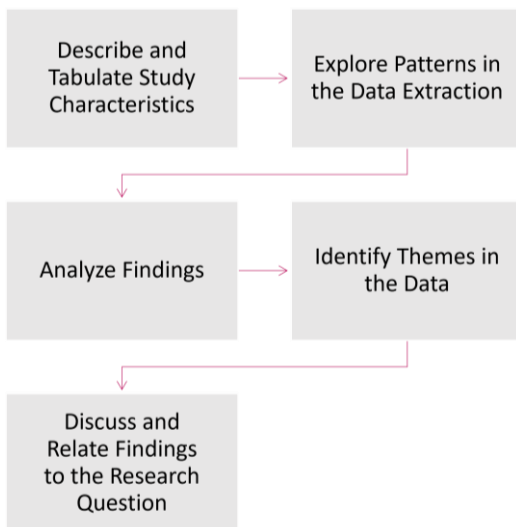- Finalize the list of articles included in the literature review

STEP 7. EXTRACT DATA FROM SELECTED STUDIES

```
Develop Data          →    Test Pilot Data
Extraction Sheet           Extraction Sheet on
                           2-3 Studies

         ↓                          ↓

Update Data           →    Repeat and Finalize
Extraction Fields          Data Extraction
                           Fields

         ↓

Finalize Data
Extraction Sheet
```

Key Points

- Develop a data extraction sheet to retrieve data from the final list of articles included in the literature review
- Data extraction sheet contains fields related to studies' characteristics that are relevant to the topic of interest and the identified themes
- Develop the data extraction sheet in iterations: add the first data fields by reading a few articles and then add on more data fields
- Once the data extraction sheet has all the necessary fields, pilot, and validate it by extracting data from a few articles
- Extract data for all the studies
- You can develop the data extraction sheet in Excel or NVIVO

STEP 8. SYNTHESIZE RESULTS

Key Points

- The results synthesis may include qualitative or quantitative analysis
- Results synthesis involves an interpretation of the identified articles and their characteristics
- Analyze the findings from the articles in the form of either identified themes or concerning the specific objectives of the research question
- Results synthesis aims to identify patterns in the findings and relationships between the findings
- Explore the strengths and weaknesses of the findings in the synthesis of the results

STEP 9. BIAS RISK ASSESSMENT AND QUALITY APPRAISAL

Key Points
- Risk of bias assessment and a quality appraisal is crucial for transparency and generalizability of literature reviews
- Individual studies included in the literature review may have biases and study design flaws
- Quality appraisal evaluates whether the studies address a focused research question, have valid methods and findings
- Critical quality appraisal ensures the robustness, value, and trustworthiness of the literature review
- Mention ethical considerations during the process of literature review

STEP 10. REPORTING LITERATURE REVIEWS

The final stage in literature review is to report the entire methodology and findings of the literature review for dissemination to the relevant stakeholders or the target readers. Clearly and concisely present the literature review findings, and report them based on the structure proposed by the PRISMA guidelines (Page et al., 2021).

Table: PRISMA Checklist

Section and Topic	Item #	Checklist item	Page No
TITLE			
Title	1	Highlight the report as a literature review	
ABSTRACT			
Abstract	2	A structured summary	
INTRODUCTION			
Rationale	3	Rationale for the literature review	
Objectives	4	Explicitly state question(s) or objective(s)	
METHODS			
Eligibility criteria	5	Exclusion and inclusion criteria of literature review	
Information sources	6	Electronic databases, websites, organisations, registers, reference lists etc., (with dates last searched)	
Search strategy	7	List the full search strategy for each database, registers and websites, including any filters and limits used.	
Selection process	8	Details about how studies fulfilled the exclusion and inclusion criteria of the literature review	
Data collection process	9	How data was collected from studies (including how reviewers were involved)	
Data items	10 a	Elements for which data were sought	
	10 b	Elements for which data were extracted	
Study risk of bias assessment	11	Assessment of bias risk	
Effect measures	12	Highlight for each variable the effect measure(s) used in the results synthesis	
RESULTS			
Study selection	13 a	Search results and process of selection (records using PRISMA flow	

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Section and Topic	Item #	Checklist item	Page No
		chart diagram)	
	13b	Cite studies meeting inclusion criteria	
Study characteristics	14	Study characteristics.	
Results of syntheses	15	Summarise characteristics and risk of bias	
Reporting biases	16	Bias risk assessment for each synthesis	
Certainty of evidence	17	Confidence in the body of evidence	
DISCUSSION			
Discussion	18	Explanation of the results in in relation to other literature	
	19	Weaknesses of the evidence	
	20	Limitations of processes used in literature review	
	21	Discussion practical, policy and research implications of results	

Key Points
- Report the overall process and findings from the literature review clearly and concisely
- Generate the literature review report according to PRISMA guidelines
- You can modify the structure and items in PRISMA guidelines as required
- Describes a transparent, comprehensive, and accurate description of the literature review process and its findings in the report
- A typical literature review report consists of sections on title, abstract, introduction, methodology, results, discussion, and conclusions

REFERENCES

Page, M. J., Moher, D., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … McKenzie, J. E. (2021). PRISMA 2020 explanation and elaboration: updated guidance and exemplars for reporting systematic reviews. *BMJ*, n160. https://doi.org/10.1136/bmj.n160

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Buying Options	Buying Options	Buying Options	Buying Options	Buying Options	Buying Options
★★★★☆ 32	★★★★☆ 17	★★★★★ 64	★★★★☆ 10	★★★★★ 7	★★★★☆ 14

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