

Writing a Systematic Literature Review for Publication

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ABSTRACT

Conducting a systematic literature review is a great way to learn more about a specific topic, and it can be publishable. It is not considered science on its own, but it is considered as the precursor of the science to come.

WHAT IS A SYSTEMATIC REVIEW?

“A research literature review is a systematic, explicit, and reproducible method for identifying, evaluating, and synthesizing the existing body of completed and recorded work produced by researchers, scholars, and practitioners” [1], p. 2. It is performed to understand what is currently known about a topic. It is the first step of research and can lead to a grant, a study, or thesis/dissertation. High quality reviews are comprehensive, and reproducible.

BE SYSTEMATIC IN APPROACH

It should not be done in one sitting. It should take 1-2 months of steady, systematic work. Work in stages. There are at least seven stages in a quality review: Select a topic, conduct initial research, develop your objective, conduct your search with inclusion and exclusion criteria, summarize the observations from the articles reviewed, provide some synthesis of the data that can lead to inferences about frequency, barriers to adoption, or general themes.

PRISMA, 2009

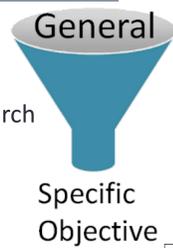
Use the PRISMA (2009) standard to frame out your review [2].

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria; participants; and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I ² for each meta-analysis).	

- Fink, A. (2013). *Conducting Research Literature Reviews: From the Internet to Paper: From the Internet to Paper*. Sage Publications.
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Annals of internal medicine*, 151(4), 264-269.

TOPIC & INITIAL RESEARCH

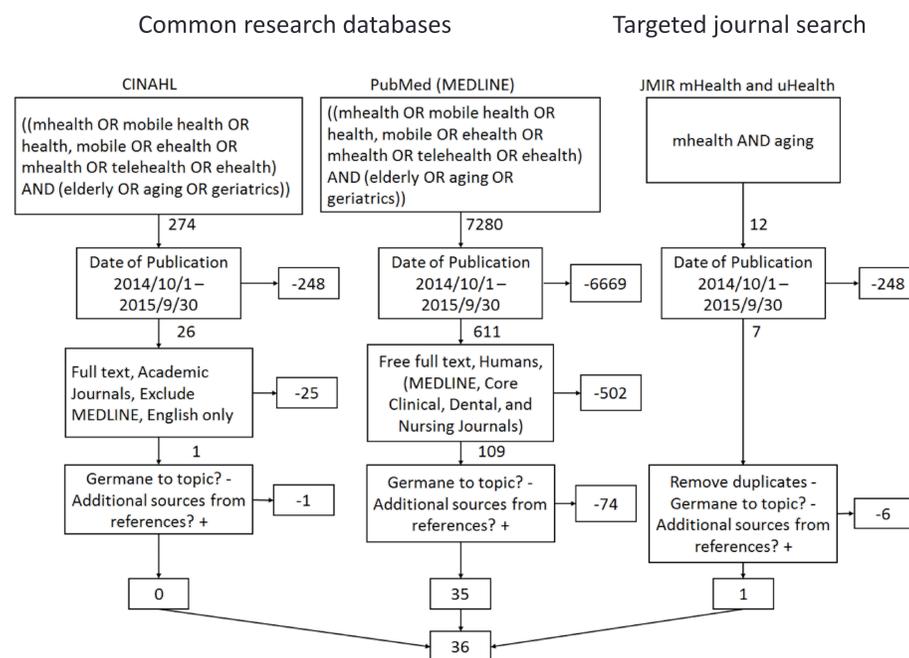
- Choose your topic; e.g. Electronic health record adoption
- Conduct some initial research for more information about it
 - Create a basic literature matrix to collect a record of research
- Begin with broad searches & define your terms
- Narrow your topic down to something specific to examine
- The last paragraph of the introduction should list an objective
 - e.g. Facilitators and barriers to adoption of the EHR in the U.S.



Date of pub	Authors	Study	Journal

METHODS AND FIGURE 1

- Your Methods section is a recipe that you are creating in a way that makes your literature review reproducible. Describe your key terms, which should come from MeSH. Provide a copy of your search string. Use Boolean operators. Define your inclusion and exclusion criteria. Create a figure to illustrate your method of selection.
- Once you have your set of articles to review, clearly identify what you (and your team) will be looking for. Discuss how you all agreed on this.
- Divide the articles into groups that show overlap; you want to be able to report that at least one reviewer read every article. Keep detailed notes from each reviewer. This will enable you to calculate a kappa statistic that shows agreement between reviewers.



RESULTS

- The results section should report and summarize your findings. Combine the notes from each reviewer into a spreadsheet and format that into a table for your review.
- Can you identify any common themes between the articles? Hopefully you can, because that is what will make your work publishable. You want to be able to say something about these works that tie them together, differentiate them from another, or that could lead to a study.

Authors	Facilitators	Themes	Barriers	Themes
Matthews JT, Lingler JH, Campbell GB, Hunsaker AE, Hu L, Pires BR, et al [14]	<ul style="list-style-type: none"> Reveal daily caregiving challenges to health care providers. Patients with dementia are willing to wear it. Making life easy, convenient, and comfortable. Easy to wear 	<ul style="list-style-type: none"> visibility acceptance quality of life convenient 	<ul style="list-style-type: none"> invasion of privacy cumbersome, obtrusive, Cost, security 	<ul style="list-style-type: none"> invasive cumbersome inconvenient cost security
Greenhalgh T, Procter R, Wherton J, Sugarhood P, Hinder S, Rouncefield M [15]	<ul style="list-style-type: none"> Technologies can extend the existing support provided by the family or professional careers, 	<ul style="list-style-type: none"> family and physician extenders 	<ul style="list-style-type: none"> interoperability, need skilled human work, Must be customized, Cost, low level of organizational readiness for the tech, Not designed well 	<ul style="list-style-type: none"> interoperability complex set up cost org not ready clunky
Moffet H, Toussignant M, Nadeau S, Mérette C, Boissy P, Corriveau H, et al [16]	<ul style="list-style-type: none"> Cost savings of delivering through telecare, Reduction in cost of equipment for home use, Enables home care which is preferred by patients enables more independent living 	<ul style="list-style-type: none"> reduction in cost of equipment Acceptance independence 	<ul style="list-style-type: none"> Although costs are down, they are significant enough to create a digital divide between classes 	<ul style="list-style-type: none"> exclusive
Shet A, De Costa A, Kumarasamy N, Rodrigues R, Rewari BB, Ashorn P, et al [49]	<ul style="list-style-type: none"> customized phone reminders could potentially improve adherence to therapy 	<ul style="list-style-type: none"> outcomes 	<ul style="list-style-type: none"> no statistical significance between groups was observed 	<ul style="list-style-type: none"> ineffective

Scott
Yes = 1 No = 0

MikeYes = 1 No = 0

48	0	48	rm1
0	62	62	rm2
48	62	110	n
			1 % agreement

Kappa = $\frac{0.891}{1.055} = 0.845$

Facilitator	Occurrences		
independence	21,24,26,27,29,32,36,38,40,47,48	11	18%
understanding	17,20,29,35,41,42,46,48	8	13%
visibility	14,18,25,27,29,30,33,34	8	13%
effective	29,30,36,39,44,46	6	10%
outcomes	18,30,36,37,47,49	6	10%
communicative	19,21,28,31,36,45	6	10%
quality of life	14,21,22,29,43	5	8%
cost	16,27,37	3	5%
acceptance	14,16,43	3	5%
access	31,37,46	3	5%
convenient	14	1	2%
		60	

Barrier	Occurrences		
complex / org not ready	*15,17,20,35-37,41,42	9	21%
limited by users	22-24,28,34	5	12%
cost	14,15,19,33,43	5	12%
ineffective	30,32,48,49	4	9%
exclusive	16,21,30,46	4	9%
privacy / security / invasive	*14,25,33	4	9%
unmarketed / cumbersome / inconvenient	*14,36	3	7%
misunderstood / rejection	19,31,36	3	7%
diffusion	36,37	2	5%
unproven	27,39	2	5%
inefficient / long set up	15,45	2	5%
		43	

*multiple occurrences in same article

CONCLUSIONS

