The Art of Scholarly Synthesis: A Panoramic View of Different Literature Review Strategies.

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Organizational information

Organizational information 1/4

Reminder: attendance and participation is key! Please try to arrive to class on time and email as specified in the first lecture if you are absent (check the slides if you do not remember how to do this).

Organizational information 2/4

The outputs of the course are twofold in nature:

1. The paper for you other class (this is mainly for your convenience and hope you appreciate that).
2. However, the specific outputs of this course relate to your ability to articulate a topic on different questions and hypotheses, different research designs and data collections.

Organizational information 3/4

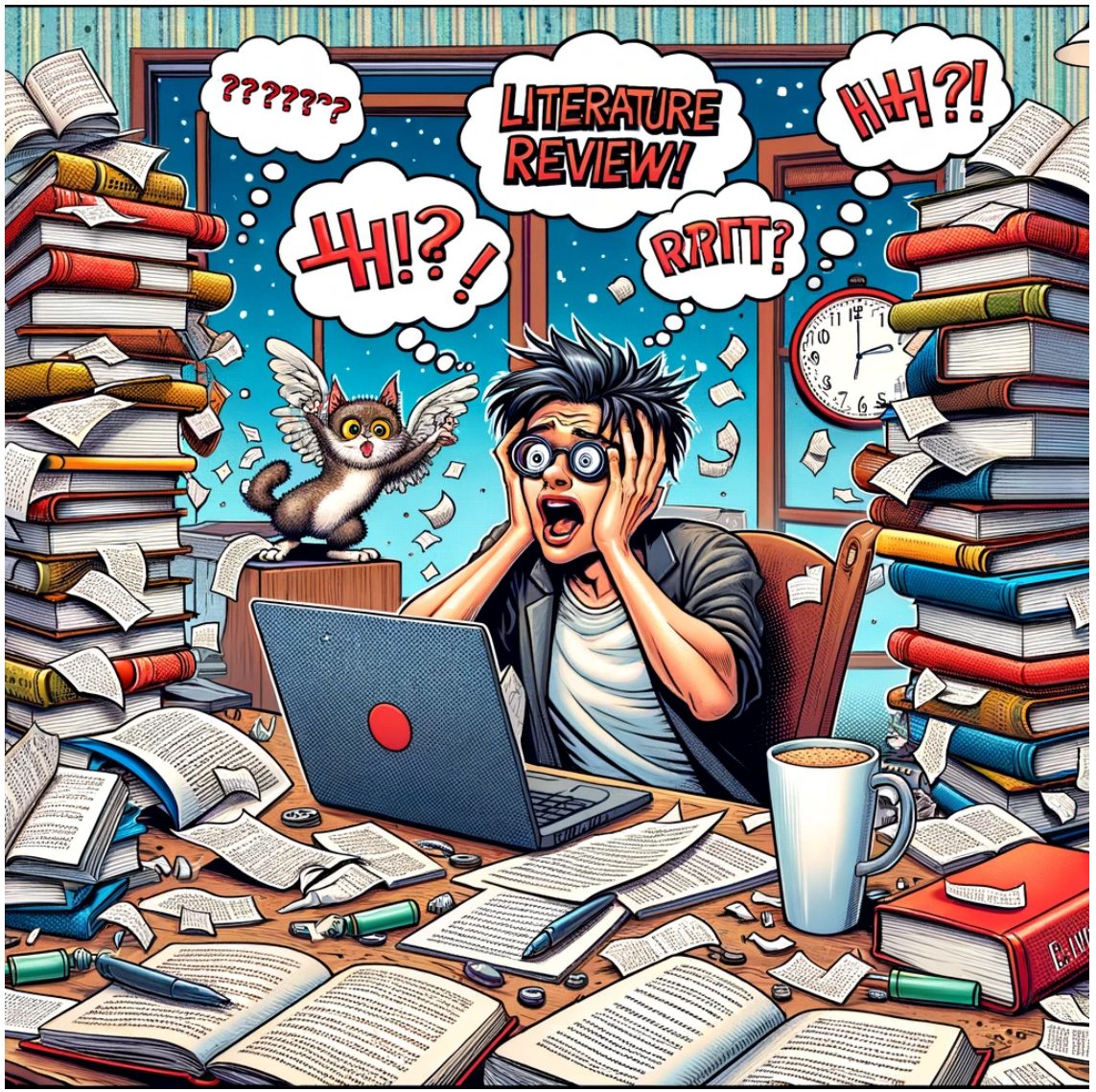
- During the course I will give you exercises to do, which will focus on articulating your topic on different questions, hypotheses, research designs and data collection procedures.
- I will provide a rating of 1 to 5 (Austrian standard) to these exercises to guide your work.
  - **Grading.** I expect all the exercises delivered on time and excellent (between 4 and 5).
    - If this is indeed the case (as I hope) I will not provide a formal grade but only feedback (the grade would not have much impact anyway).
    - Should I find exercises done poorly, we will discuss together how to weight this grade on the final course grade.

Organizational information 4/4

- To organize the exercises on Moodle I need the names of the participants in the groups and the names of the groups. Please update the Google Drive file with the group names as soon as we finish the lecture on literature reviews.

Literature Review - Introduction

Introduction



Representation by DALL·E OpenAI of a student dealing with literature review

Introduction

- In this lesson we consider the topic of literature review. In particular, we consider three types of literature review: narrative, systematic, and scoping literature review.
- In addition, we consider the PRISMA framework for systematic literature reviews.
- As always, please read the readings indicated in the syllabus. Also, search Google Scholar or u:search for examples of literature reviews in publications in the top scientific journals in the field.

What is a Literature Review?

- The literature review is a comprehensive overview of research studies and theoretical arguments regarding your object of study.
- A literature review should always be **comprehensive**, meaning that the evidence regarding your object of study should be carefully considered, but it can be **more or less systematic and complete**.

Narrative, Systematic, and Scoping Review

- While there are many different terms to refer to different types of literature review, we can use “**narrative literature review**” for the less systematic type and “**systematic literature review**” for the more systematic. Somewhere in between there is the “**scoping review**”.
  - The narrative review is a typical literature review as you can find in a scientific paper. It frames the topic and set the stage for the research questions or hypotheses.
  - A systematic (or scoping) literature review is a research design in itself, and a scientific literature genre (you can write and publish a paper which is a literature review).

Narrative Review

Narrative Review

- Although **narrative literature review** is rather unsystematic, it does not mean that the researcher carries it out based on a systematic and comprehensive knowledge of the literature. The “narrative” character especially concerns the way the review is presented.
- This kind of review does not aim to systematically describe the field of study, but is geared toward creating “a story” that supports (arguments) some points.
- A review of this type is generally found in the “literature review” or “related works” section of the papers, but not as a stand-alone paper.

Narrative Review

- **Definition.** A narrative review is a qualitative synthesis of literature on a broad topic, relying on the author's expertise for study selection and analysis. It is used to summarize and discuss theories or frameworks, often representing the typical literature review in research papers.
- **Objective.** The researcher summarize studies dealing with its research topic, usually to make a point and justify and frame hypotheses and research question.
- **Method.** It is not systematic as there are no pre-defined criteria guiding the review. It lacks a predefined strategy for literature search and selection. The author's expertise and judgment guide the selection of studies.

Narrative Review

Literature review and research questions

The widely recognized risks of misinformed citizens for healthy democracies brought a cohort of scholars to tackle this issue from a range of different perspectives. The deeply and still undergoing transformations of contemporary media ecologies led to a renewed interest in this topic resulting in a rapidly growing body of interdisciplinary scholarly works published during the last few years. While the topic has seen a recent surge of academic interest, many studies build on the long-existing field of automatic detection of problematic content or actors.

Rather than attempting to provide a systematic review of all these studies, the following paragraphs highlight the essential literature that frames our approach, clarify the terminology used and lead to our research questions.

A first necessary step is to highlight the results and limits of existing approaches to detect bad information and malicious actors. Then we describe the media manipulation frame and the concepts of amplification and problematic information. Finally, we analyze the concept of 'coordinated inauthentic behavior' and pinpoint its potential roots in the existing literature.

Challenges of problematic information detection

While unanimously recognizing misinformation as detrimental for healthy democracies, the existing literature is fragmented when it comes to defining the object of study. The lack of a shared, consistent and operationalizable definition undermines both the attempt to estimate its prevalence over legitimate information (Lazer et al., 2018) and measure the impact of misinformation on citizens' opinions or behavior (Benkler,

Fabio Giglietto, Nicola Righetti, Luca Rossi & Giada Marino (2020): It takes a village to manipulate the media: coordinated link sharing behavior during 2018 and 2019 Italian elections, Information, Communication & Society.

Systematic Review

Systematic Review

- **Definition.** A systematic review is a methodical and comprehensive synthesis of research studies on a specific question, employing stringent protocols for study selection, data extraction, and analysis, to minimize bias and provide reliable findings.
- **Objective.** The primary objective is to offer a comprehensive synthesis of relevant studies on a specific research question, summarizing the evidence through systematic search, critical appraisal, and synthesis of findings.
- **Method.** Involves a structured and predefined protocol, including a comprehensive literature search, explicit inclusion and exclusion criteria for studies, systematic data extraction, and a critical appraisal of study quality (see PRISMA).

Main Elements of a Systematic Review (1/2)

- **Protocol and Registration**: Details any prior protocol registration, outlining the review's rationale, hypothesis, and planned methods.
- **Information Sources and Search Strategy**: Details the information sources (databases, registries) and the search strategy used, including any limits applied.
- **Eligibility Criteria**: Describes the inclusion and exclusion criteria for studies.
- **Study Selection Process**: Describes the process of selecting studies from the search results.
- **Data Collection Process**: Outlines the process for extracting data from the studies.

Main Elements of a Systematic Review (2/2)

- **Data Items**: Lists the types of data extracted from the studies.
- **Risk of Bias in Individual Studies**: Describes the method used to assess the risk of bias in individual studies (particularly for quantitative reviews).
- **Summary Measures and Synthesis of Results**: Specifies the principal summary measures and the method of data synthesis (quantitative).
- **Risk of Bias Across Studies**: Outlines how bias across studies will be assessed (quantitative).
- **Additional Analyses**: Details any additional analyses (e.g., subgroup or sensitivity analyses, quantitative).

Systematic Review (database query)

Table 1. Boolean query expressions for combined facets of difficult heritage and social network sites.

Facet A: Difficult heritage	
Contested heritage	'contested heritage' OR 'dissonant heritage' OR 'difficult heritage' OR 'troubled heritage' OR 'challenging heritage' OR 'disputed heritage' OR 'uncomfortable heritage'
Contested past	'dissonant past' OR 'contested past' OR 'disputed past'
Excluded heritage	'subaltern heritage' OR 'excluded heritage' OR 'marginalized heritage' OR 'marginalised heritage'
Trauma heritage	'trauma heritage' OR 'Holocaust heritage' OR 'conflict heritage' OR 'genocide heritage' OR 'dark heritage' OR 'war heritage'
Facet B: Social network platforms	
Facebook	'Facebook post' OR 'Facebook posts' OR 'Facebook groups' OR 'Facebook pages' OR 'Facebook group' OR 'Facebook users'
Instagram	'Instagram feeds' OR 'Instagram photos' OR 'Instagram photo' OR 'Instagram posts' OR 'Instagram post' OR 'Instagram users' OR 'Instagram photographs'
Twitter	tweet OR tweets OR 'Twitter hashtag' OR 'Twitter hashtags' OR tweeting OR 'Twitter user' OR 'Twitter users'
YouTube	'YouTube videos' OR 'YouTube video' OR 'YouTube channel' OR 'YouTube channels'
Social network sites	'social network site' OR 'social networking site' OR 'social network sites' OR 'social networking sites' OR SNS

Kelpšienė, I., Armakauskaitė, D., Denisenko, V., Kirtiklis, K., Laužikas, R., Stonytė, R., ... & Dallas, C. (2023). Difficult heritage on social network sites: An integrative review. New Media & Society, 25(11), 3137-3164.

Systematic Review (PRIMA flowchart)

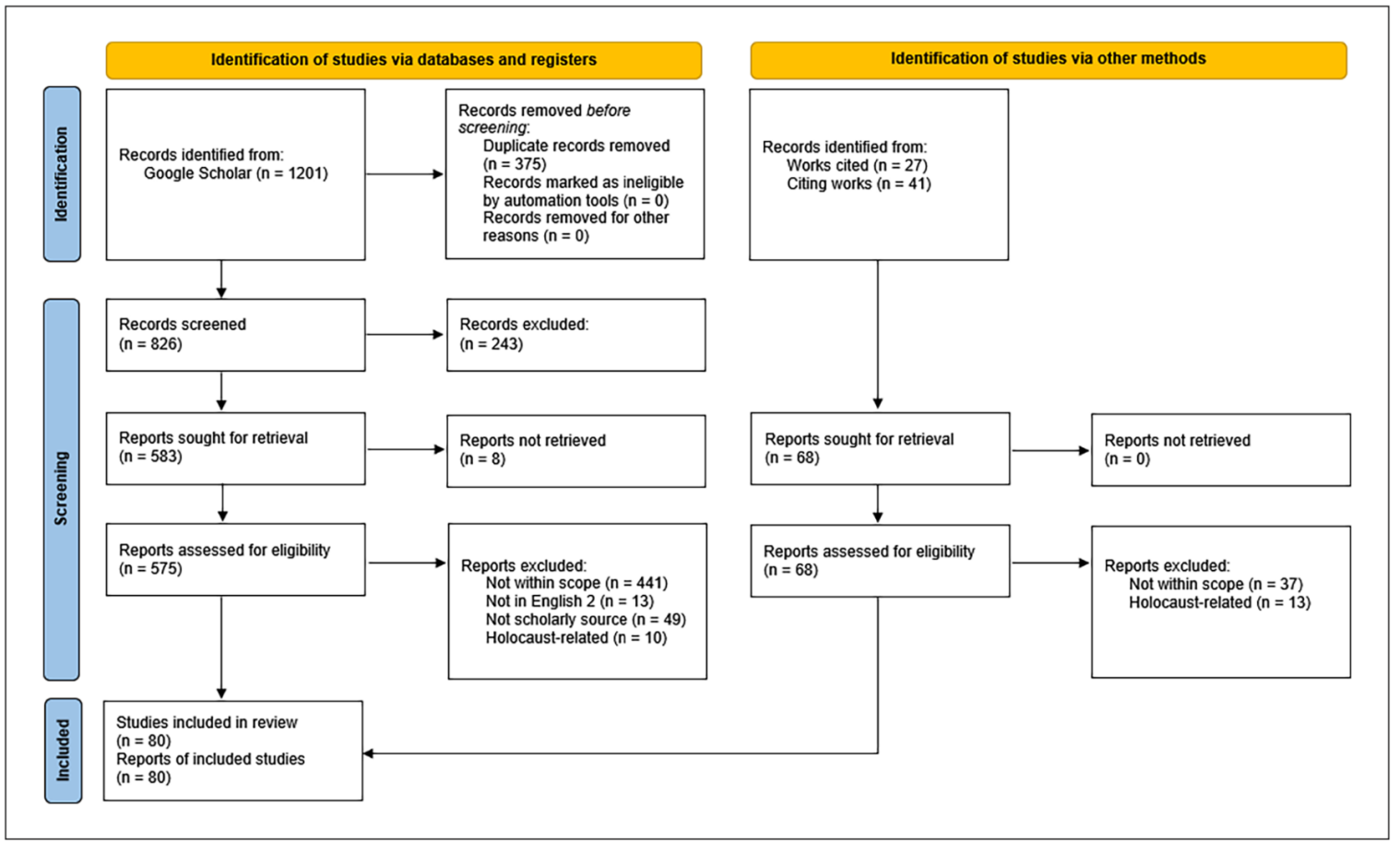


Figure 1. PRISMA-P literature selection flow diagram.

Kelpšienė, I., Armakauskaitė, D., Denisenko, V., Kirtiklis, K., Laužikas, R., Stonytė, R., ... & Dallas, C. (2023). Difficult heritage on social network sites: An integrative review. New Media & Society, 25(11), 3137-3164.

Systematic Review and Meta-Analysis

- A systematic review leading to the statistical analysis of findings identified in other published studies, what is called Meta-Analysis.
- Meta-analysis is a **statistical technique** used in research to combine and analyze data from multiple studies addressing the same question.
- By aggregating data, a meta-analysis can provide more precise estimates of effects, uncover patterns, or resolve uncertainties when individual studies disagree.
- Example: Matthes, J., Knoll, J., Valenzuela, S., Hopmann, D. N., & Von Sikorski, C. (2019). A meta-analysis of the effects of cross-cutting exposure on political participation. *Political Communication*, *36*(4), 523-542

Scoping Review

Scoping Review

Definition. A scoping review is a type of research synthesis used to map the literature on a broad topic, identifying key concepts, evidence types, and research gaps, characterized by a **systematic but flexible** approach in literature search and study inclusion, without detailed data synthesis or quality assessment.

Method. Combines a systematic approach with flexibility. Involves a broad literature search to identify relevant studies, with more inclusive selection criteria. Focuses on mapping the literature rather than appraising study quality or synthesizing findings in detail. A more rigorous PRISMA extension for scoping reviews has also been published: http://www.prisma-statement.org/Extensions/ScopingReviews

PRISMA

PRISMA

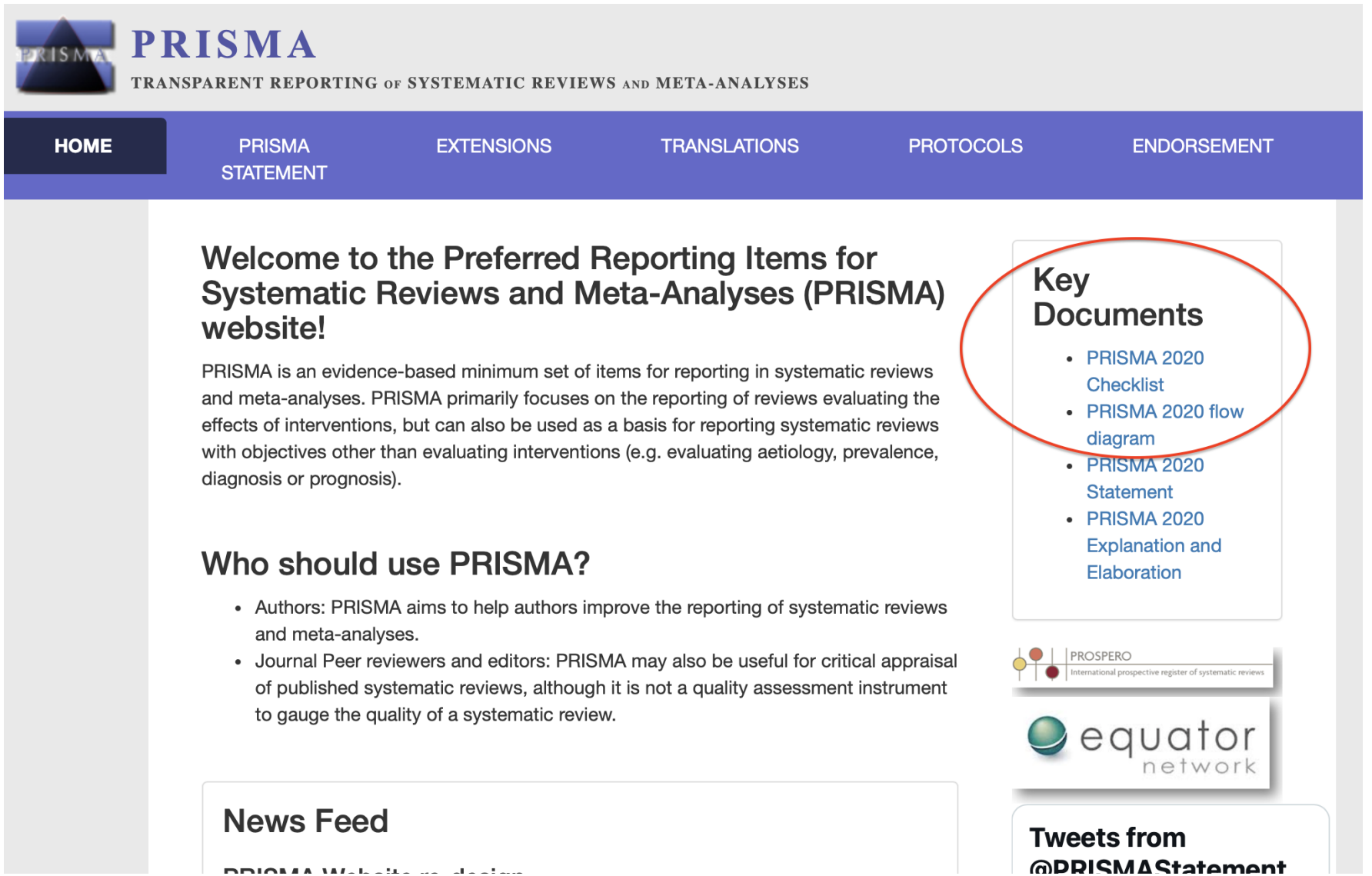
PRIMSA is the acronym for **Preferred Reporting Items for Systematic Reviews and Meta-Analyses.**

> PRISMA is an evidence-based minimum set of items for reporting in systematic reviews and meta-analyses. PRISMA primarily focuses on the reporting of reviews evaluating the effects of interventions, but can also be used as a basis for reporting systematic reviews with objectives other than evaluating interventions (e.g. evaluating aetiology, prevalence, diagnosis or prognosis).

PRISMA was developed in the medical field (evidence-based medicine) but can be applied to other fields as well.

Website and materials: http://www.prisma-statement.org

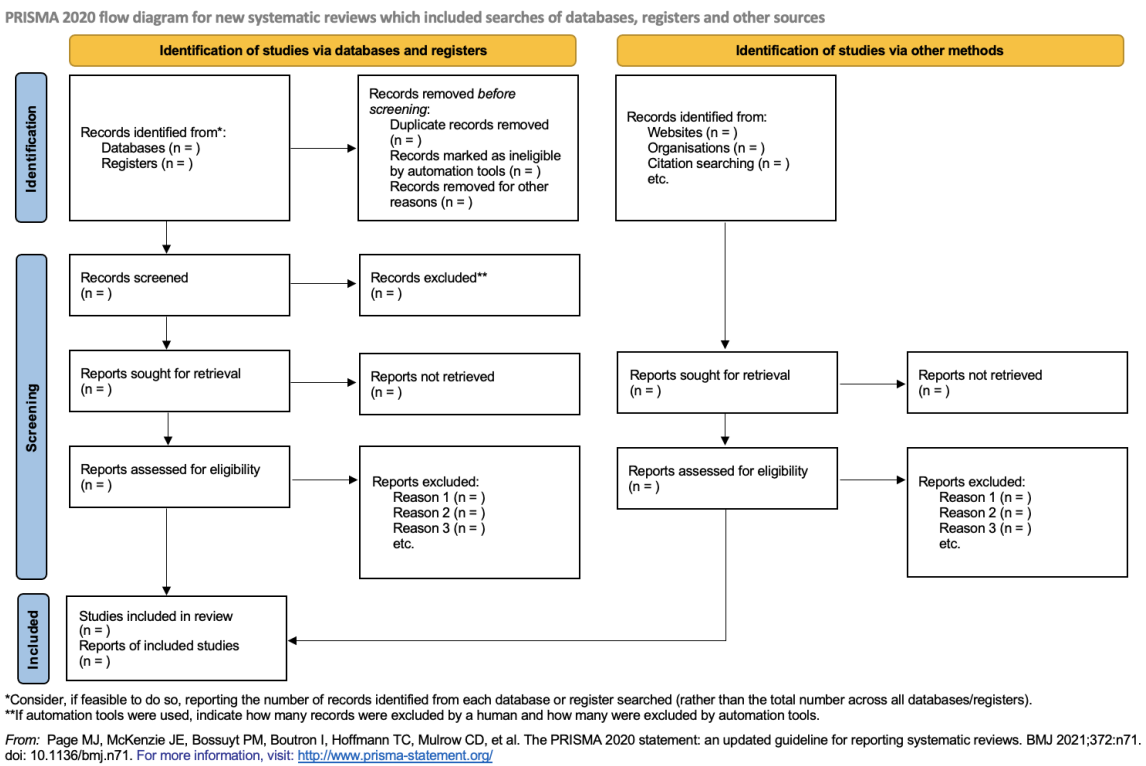
PRISMA materials: Flowchart and Checklist



http://www.prisma-statement.org

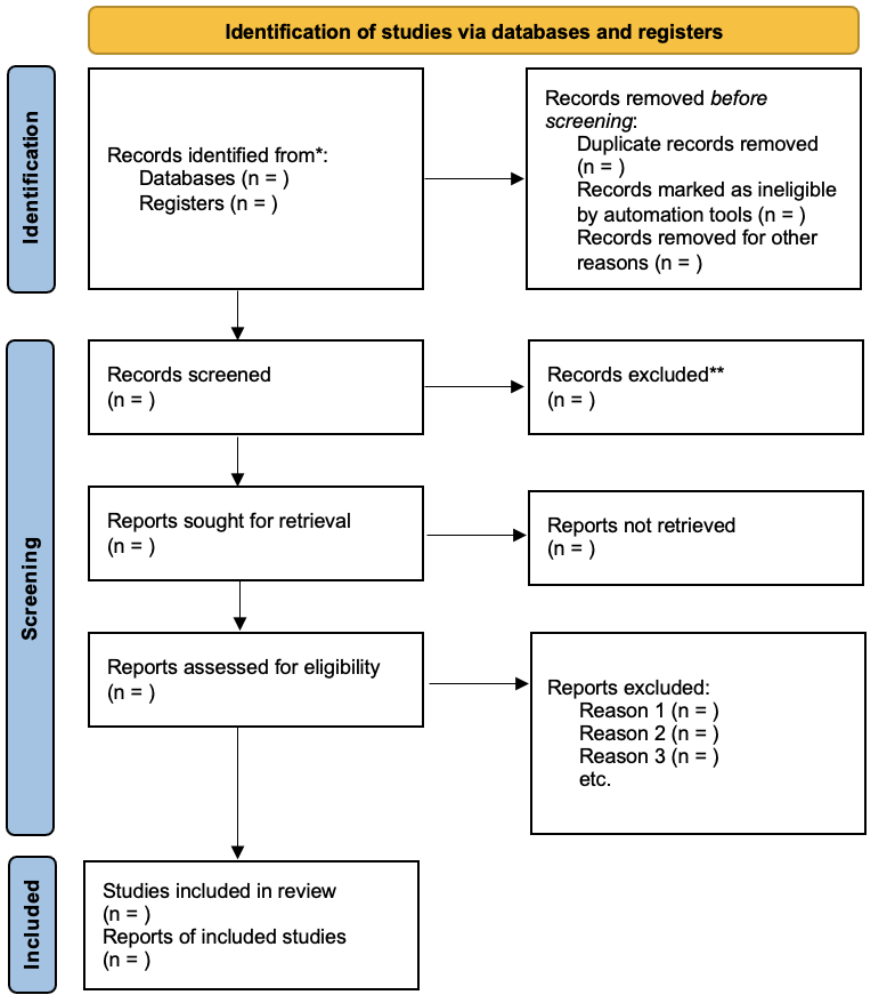
PRISMA Flowchart

The PRISMA flowchart is particularly useful to organize and document the systematic literature review process.



PRISMA 2020 flow diagram for new systematic reviews which included searches of databases, registers and other sources. Template available: http://www.prisma-statement.org/PRISMAStatement/FlowDiagram

PRISMA Flowchart



PRISMA 2020 flow diagram for new systematic reviews which included searches of databases and registers only. Template available: http://www.prisma-statement.org/PRISMAStatement/FlowDiagram

Reproducibility and Pre-Registration

The checklist provides further details on how to conduct and write the systematic literature review. Even without strictly adhering to this checklist, planning and detailing each step of the systematic literature review is crucial. The goal is to ensure **reproducibility**. **Pre-registration** of the research protocol is also used.

Reproducibility. A systematic literature review should be reproducible, implying that another researcher should ideally obtain the exact same results by following the methodology's described steps. Often, to ensure reproducibility, manual content analysis, when necessary, is conducted by at least two trained coders whose inter-rater reliability has been established.

P**re-registration.** A systematic review protocol states your hypothesis, rationale, and methodology. It is recommended to register your