Conducting a systematic review from a limited resourced countries: the Namibian case

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Scope of the presentation

• What type of review should I conduct
• Process of systematic review
• Protocols
• Stages of systematic review protocol and completion of review
• Defining research question
• Inclusion and exclusion criteria
• Searching literature
**Systematic, scoping or systematic reviews?**

<table>
<thead>
<tr>
<th><strong>Narrative</strong></th>
<th><strong>Systematic</strong></th>
<th><strong>Scoping</strong></th>
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<tbody>
<tr>
<td>Summary of research on a topic</td>
<td>Answer a focused question</td>
<td>Exploratory research questions</td>
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<tr>
<td>Informal methods of identifying and</td>
<td>Identifies, select, synthesizes and appraises a high-quality research</td>
<td>Aims to identify themes, trends and gaps in literatures</td>
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<tr>
<td>selecting</td>
<td>evidence</td>
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<tr>
<td>Mainly search only one database/</td>
<td>Quality assessment of studies/ specific types of study chosen</td>
<td>Not focused on a specific intervention</td>
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<td>not defined</td>
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<td>Cherry picking</td>
<td>Confirm current practice, identify new practices/examine conflict results</td>
<td>Current state of understanding, overview</td>
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<tr>
<td>General topic</td>
<td>Situated in practice or policy context</td>
<td>Key concepts and main sources of evidence on a topic</td>
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<tr>
<td></td>
<td></td>
<td>Set within practice and policy context</td>
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<td></td>
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<td>All types and study design are eligible</td>
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The steps for implementing a systematic review include

• (i) correctly formulating the clinical question to answer (PICO)
• (ii) developing a protocol (inclusion and exclusion criteria)
• (iii) performing a detailed and broad literature search
• (iv) screening the abstracts of the studies identified in the search and subsequently of the selected complete texts (PRISMA)
Why having a Systematic Review protocol

• Protocols are pre-defined plan of all steps to be followed during the review
  • Increase transparent and
  • Reduce risks of bias
  • Guide the reviews decision/action

• PRISMA-P checklist: https://www.prisma-statement.org/prisma-2020-checklist

• NIRO-Systematic review checklist https://niro-sr.netlify.app/

• PROSPERO

• The JBI journal JBI Evidence Synthesis is one avenue for publishing scoping review 210 protocols (and their subsequent reviews)

• Social sciences review can use sources such as Figshare, Open Science Framework, ResearchGate, Research Square or similar so that it is freely available
Key stages of a review protocols and completion of a review

Pollok and Perge (2017)
Defining research questions

• The systematic reviews often aim to find answers to individual questions, or test a single hypothesis,

• Model for establishing your research questions: PICO, PCC

• Example: what are the effects of overparenting on emerging adult development (developing countries)

Or Is there gender differences on the effects of overparenting on emerging adult development (developing countries)?

• P: emerging adult  P: Emerging adult
• I: overparenting  C: Overparenting
• C: non-parenting  C: Developing countries
• O: development
Inclusion and exclusion criteria

Two categories of eligibility criteria

- the characteristics of the study regard issues concerning the population
  - Description of the target population
  - What are the effect and the related variables: psychological development, career development etc
  - the study design e.g cross-sectional study, longitudinal study etc, quantitative/qualitative study

- Eligibility criteria referring to the characteristics of the publication
  - Year of publication
  - Language
  - the type e.g peer reviewed publication, grey literature
  - Managing and reporting systematic review processes
Example of inclusion and exclusion criteria

• Inclusion
  • emerging adults, aged between 17 and 29
  • studies included at least one measure of overparenting of emerging adult children and one measure of emerging adult developmental outcomes.
  • Studies should include both gender in their discussion
  • both quantitative and qualitative studies (cross sectional or longitudinal study design)
  • Publications in English, published between 2003 and 2023

• Exclusion:
  • Publications prior to 2003
  • Publication discussing one gender e.g. male only
  • Publication discussing behavioural parenting
  • Publication in other languages
Literature searching

- Which databases and search engines will be searched for the literature:
  - Subject specific and multidisciplinary database e.g. international or local or regional databases
  - Pre-print archives/repositories: OSF Preprints
- The searching of literature should be based on the PICOC research question(s), inclusion and exclusion criteria.
  - Peer reviewed published materials or grey literature
  - Date scope
  - Context
  - Use the subject heading, key concepts their synonyms to develop a search strategy
Literature searching

- Constructing a search strategy can be complex and required a thorough discussion between the librarian and the researcher (McGowan et al. 2016).
  - Translation of the research question
  - Identify subject terms and free text searching concepts
  - Boolean/proximity operators
  - define limiters and filters to be used
  - Review

- PRESS Guideline includes recommendations for evaluating electronic search methodologies.
  - formalize the peer-review process for librarians and provide a second set of expert (McGowan et al. 2016).
  - Yale MeSH analzer used pubmed ID of publications to aggregate the Medical Subject Heading (MeSH) terms https://mesh.med.yale.edu/
  - PRESS Forum for search strategy review: https://pressforum.pbworks.com/w/session/login
  - PRISMA
Screening literaures

- Step 1: abstract/title screening to remove studies that are clearly not related to your topic.
- Step 2: Full text screening
- Informed by inclusion/exclusion criteria
- Usually, two or more independent reviewers screen all studies, resolving areas of disagreement by consensus.
Managing literature during the screening

• Different AI tools exists to support management of systematic review:
  • EPPi Reviewer
  • DistillerSR
  • Rayyan
  • CADIMA
  • Covidence to manage review: free under 500 documents
• Reference management to manage literature for systematic review
• Mendeley or Zotero or endnote
  • Have import and export features that allows you to import literature from different data bases
  • Folders and sub-folders to allocate literatures according inclusion and exclusion decision made.
  • De-duplicating of literature
  • Tags and notes that allows you to record review action of publications
Sorting and organising review data

- Synthesizing and interpreting data
- Organizing by key issues and themes
- Basic descriptive (scoping review)
- Should align with the systematic review research question:
  - Population
  - Country of origin
  - Research method
  - Aims and themes
  - Key findings
Reporting

• The reliability, validity and reproducibility of systematic reviews is based in consistent and systematic recording of review processes.

• Equator Network: guideline by discipline

• MARS APA guideline for meta analysis


• Use ESHackathon [https://estech.shinyapps.io/prisma_flowdiagram/_w_de6c696e/#tab-6099-2](https://estech.shinyapps.io/prisma_flowdiagram/_w_de6c696e/#tab-6099-2)

• Journal guidelines
Matthew J Page et al. BMJ 2021;372:bmj.n71
How can Librarians help

- Advice on review type
- Guide establishing systematic review question
- Guide on developing inclusion and exclusion criteria
- Establishing search concepts and search syntax
- Support in systematic review references management
- Guide to resources available for conducting systematic review
- Training and promote awareness on different reviews
- The Equator Network have developed the Librarian action plan for supporting systematic review
Key challenges in conducting systematic review in a limited resources

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<tr>
<td>Difficulty in getting grey literature</td>
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<td>Language barrier</td>
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<td>Limited skills and capacity for conducting systematic review</td>
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<tr>
<td>Confusion of systematic review with narrative literature review and systematic searching of literatures</td>
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</tbody>
</table>
References


- Equator network protocol guideline https://www.equator-network.org/librarians/

- Press guideline for evaluating search methodology: PRESS Forum for search strategy review: https://pressforum.pbworks.com/w/session/login


THANK YOU

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