How to conduct scoping reviews

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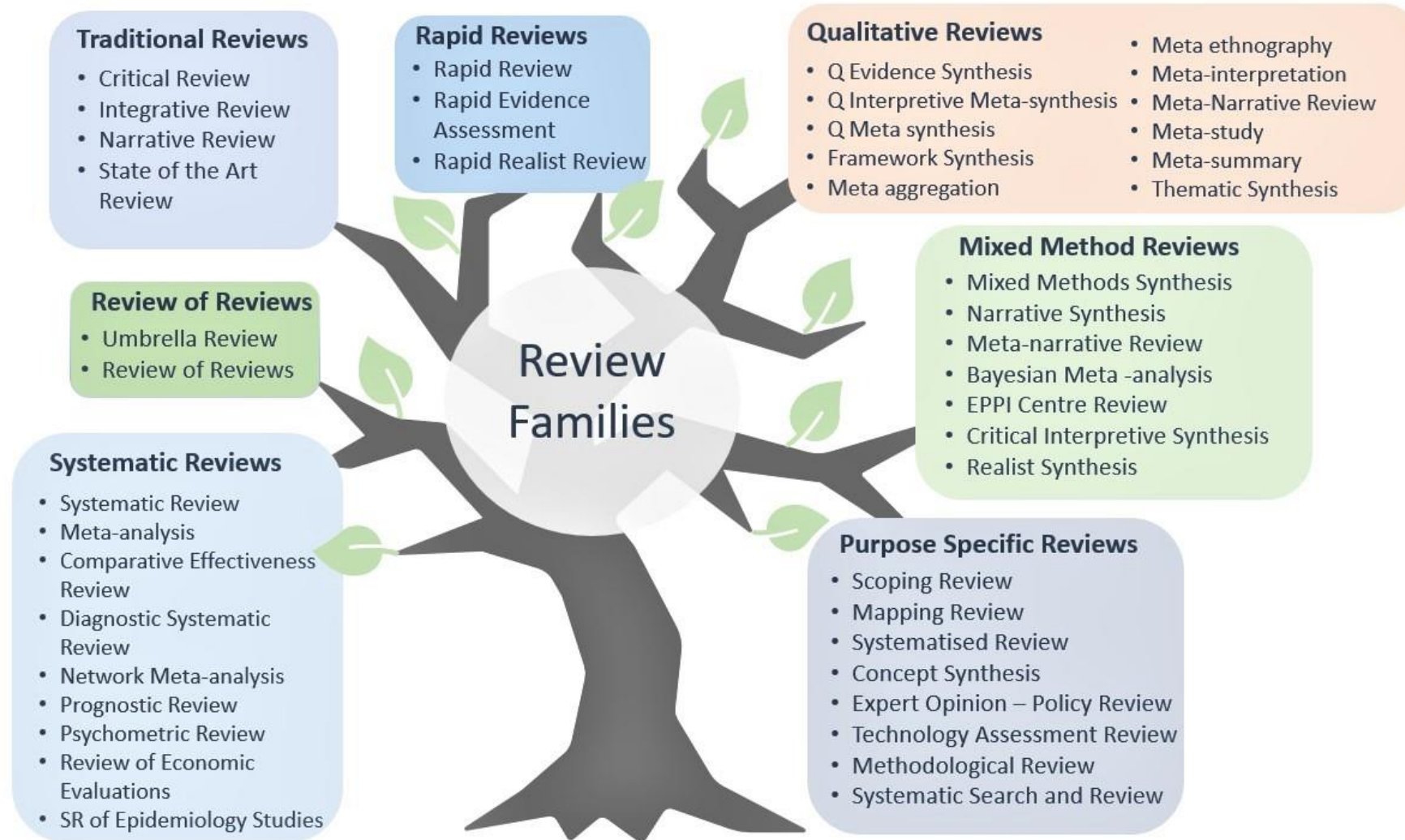
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Before we begin

- Go to Mentimeter.com and put the code xxxxx
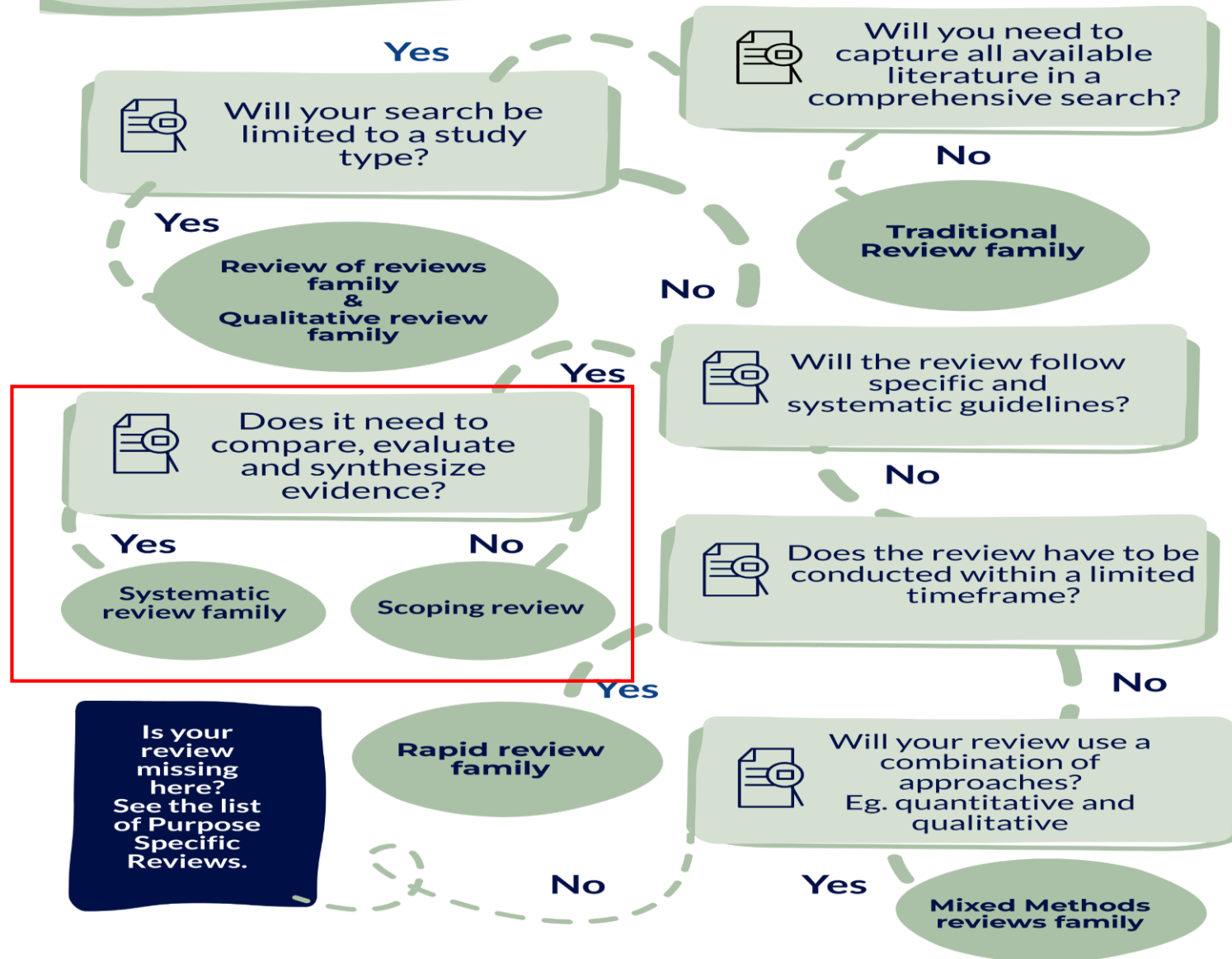
There are various types of 'reviews'

Traditional Reviews
- Critical Review
- Integrative Review
- Narrative Review
- State of the Art Review

Rapid Reviews
- Rapid Review
- Rapid Evidence Assessment
- Rapid Realist Review

Qualitative Reviews
- Q Evidence Synthesis
- Q Interpretive Meta-synthesis
- Q Meta synthesis
- Framework Synthesis
- Meta aggregation
- Meta ethnography
- Meta-interpretation
- Meta-Narrative Review
- Meta-study
- Meta-summary
- Thematic Synthesis

Review of Reviews
- Umbrella Review
- Review of Reviews

Mixed Method Reviews
- Mixed Methods Synthesis
- Narrative Synthesis
- Meta-narrative Review
- Bayesian Meta -analysis
- EPPI Centre Review
- Critical Interpretive Synthesis
- Realist Synthesis

Systematic Reviews
- Systematic Review
- Meta-analysis
- Comparative Effectiveness Review
- Diagnostic Systematic Review
- Network Meta-analysis
- Prognostic Review
- Psychometric Review
- Review of Economic Evaluations
- SR of Epidemiology Studies

Review Families

Purpose Specific Reviews
- Scoping Review
- Mapping Review
- Systematised Review
- Concept Synthesis
- Expert Opinion – Policy Review
- Technology Assessment Review
- Methodological Review
- Systematic Search and Review

Graphic and guide based on the work of Sutton et al., (2019) on 'Review Families'.

Which Review ?

A tool to guide your review choice

Will you need to capture all available literature in a comprehensive search?

Yes

Will your search be limited to a study type?

No

Traditional Review family

Yes

Review of reviews family & Qualitative review family

No

Will the review follow specific and systematic guidelines?

Yes

Does it need to compare, evaluate and synthesize evidence?

No

Yes

Systematic review family

No

Scoping review

Does the review have to be conducted within a limited timeframe?

Is your review missing here? See the list of Purpose Specific Reviews.

Yes

Rapid review family

No

Will your review use a combination of approaches? Eg. quantitative and qualitative

No

Yes

Mixed Methods reviews family

What are scoping reviews?

- "exploratory projects that systematically map the literature available on a topic, identifying key concepts, theories, sources of evidence and gaps in the research."

Why a scoping review?

As a precursor to a systematic review.

To identify the types of available evidence in a given field.

To identify and analyse knowledge gaps.

To clarify key concepts/ definitions in the literature.

To examine how research is conducted on a certain topic or field.

To identify key characteristics or factors related to a concept (Munn et al. 2018a)

Most common reasons for conducting a scoping review*, N = 494	Count (%)
Explore breadth/extent of evidence	336 (68%)
Map and summarize evidence	177 (36%)
Inform future research	103 (21%)
Identify knowledge gaps	84 (17%)
Address knowledge gaps	55 (11%)
Implications for practice and policy	41 (8%)
Advance knowledge/awareness	28 (6%)
Identify key themes	22 (4%)
Develop a conceptual framework/map	15 (3%)
Not reported	22(4.4%)

* Note, categories are not mutually exclusive.

Tricco et al., 2016. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4746911/

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What about critical appraisal? Quality assessment?

Not relevant.

Scoping reviews do not aim to determine the quality of includes sources but aim to provide an overview or map of the evidence.

Due to this, an assessment of methodological limitations or risk of 'bias' is generally not performed

Defining characteristics of traditional literature reviews, scoping reviews and systematic reviews

	Traditional Literature Reviews	Scoping reviews	Systematic reviews
A priori review protocol	No	Yes (some)	Yes
PROSPERO registration of the review protocol	No	No*	Yes
Explicit, transparent, peer reviewed search strategy	No	Yes	Yes
Standardized data extraction forms	No	Yes	Yes
Mandatory Critical Appraisal (Risk of Bias Assessment)	No	No**	Yes
Synthesis of findings from individual studies and the generation of 'summary' findings***	No	No	Yes

Examples of scoping review questions

- "What quality of life questionnaires are available for paediatric patients following tonsillectomies with or without adenoidectomies for chronic infections or sleep disordered breathing?"

- What evidence is available around the palliative care ecosystem in Thailand?
  - How does the palliative care available influence the quality of life, care and death of people living with life-limiting conditions and their families?
  - How does the initiation or Advance Care Planning influence the quality of life, care and death of people living with life-limiting conditions and their families?
  - What are the facilitators and barriers that influence the

Examples of scoping review questions

Varying Research Questions by Review Types

Here is an example of how you might think differently about your research question based on the type of review you want to conduct.

Systematic Review	Scoping Review	Umbrella Review
Are animal-assisted therapies as effective as traditional cognitive behavioral therapies in treating people with depressive disorders?	What is known from the literature about the use of animal-assisted therapies in people with mood disorders?	Have the methodologies in studies related to therapies for people with mood disorders been sound enough to validate their effectiveness?

Questions?

How to conduct a scoping review

- There are several guidance on how to conduct a scoping review (Arksey & O'Malley 2006), (Levac et al. (2010). This session will follow JBI's guidance (Peters et al. 2015, 2017, 2020):
  - Defining and aligning the objective/s and question/s
  - Developing and aligning the inclusion criteria with the objective/s and question/s
  - Describing the planned approach to evidence searching, selection, data extraction, and presentation of the evidence.
  - Searching for the evidence
  - Selecting the evidence
  - Extracting the evidence
  - Presentation of the results
  - Summarizing the evidence in relation to the purpose of the review, making conclusions and noting any

PRISMA-ScR

- An extension of the PRISMA statement called the PRISMA-ScR is now available (Tricco et al. 2018).

Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	Click here to enter text.
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	Click here to enter text.
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	Click here to enter text.
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to	Click here to enter text.

Development of a scoping review protocol

- To pre-define the objectives, methods, and reporting of the review and transparency of the process.
- The protocol should:
  - Detail the inclusion/exclusion criteria
  - Exclude sources of evidence
  - Identify what data is relevant
  - Explain how the data will be extracted and presented.

  Any deviations of the scoping review from the protocol should be clearly highlighted and explained in the scoping review.

Title

- Clear and informative
- Include the phrase 'scoping review' for easy identification
- Example:
  - "Paediatric tonsillectomy quality of life assessment instruments: a scoping review protocol"

Review question (s)

- The PCC mnemonic is recommended to construct the title and review questions:
  - **P**opulation
  - **C**oncept
  - **C**ontext
- There should be congruence between the title, review question/s, and inclusion criteria
- "What quality of life questionnaires are available for paediatric patients following tonsillectomies with or without adenoidectomies for chronic infections or sleep disordered breathing?"

Review question (s)

- You can add sub review questions as needed:
  - "What are the ages of the paediatric patients where quality of life questionnaires have been or could be used within the sources of evidence identified for the primary review question?"
  - "In what geographical (i.e. countries) and clinical (i.e. primary care, acute care, etc.) contexts have the quality of life instruments included for the primary review question been used?"

Developing and aligning the inclusion criteria with the objectives and questions

- There **must** be clear congruence between the tile, question/s, and inclusion criteria of a scoping review.

- Participants – who are they? Age? Other relevant criteria?

- Concepts – Phenomena of interest? Interventions? Relevant outcomes?

- Contexts – Geographical locations, context of care, gender, sociocultural factors etc
  - E.g., LMICs/Thailand, ICUs

Table 1 Inclusion and exclusion criteria

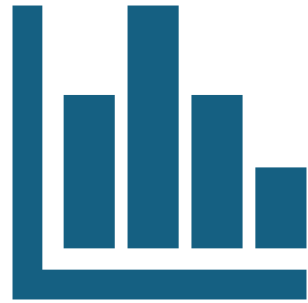|	Inclusion criteria	Exclusion criteria
Population	▶ Individuals living with any conditions and receive any implicitly or explicitly stated palliative care ▶ Age >18	▶ Individuals who do not receive any implicitly or explicitly stated palliative care ▶ Children (age <18)
Concept	Any studies discussing individuals': ▶ Quality of life ▶ Quality of care ▶ Quality of death	Any studies discussing and other topics beyond the: ▶ Quality of life ▶ Quality of care ▶ Quality of death
Context	▶ Any healthcare settings such as: ▶ Community and primary care ▶ Long-term care facilities ▶ Acute hospitals ▶ Palliative care specialists units	▶ Articles that discuss paediatric palliative care in any settings
Type of evidence sources	▶ Articles published between 2013 and 2023 ▶ Articles published in English or Thai ▶ Empirical studies of any design (quantitative, qualitative, mixed method) ▶ Reviews ▶ Grey literature	▶ Articles published before 2013 ▶ Articles published in other languages apart from English or Thai

Type of evidence sources

Where will you look for evidence? Why?

Will you include grey literature? Why or why not?

Search strategy

Be as comprehensive as possible.

Get help from an academic librarian early on

- First, an initial limited search of at least two appropriate online databases relevant to the topic should be conducted.
  - MEDLINE (PubMed) and CINAHL would be appropriate for a scoping review on quality of life assessment tools.
  - Look at **title and abstract** of retrieved papers (stage one)
  - Then look at the full papers e.g., full-texts screening (stage two)
- Second, use all identified keywords and index terms should then be undertaken across all included databases.

- Third, the reference list of identified reports and articles should be searched for additional sources.
  - This stage may examine the reference lists of all identified sources or examine solely the reference lists of the sources that have been selected from full-text and/or included in the review.

Search strategy

- Language (s) included in the review? Why?

Source of evidence selection

- Selection is performed based on inclusion criteria pre-specified in the review protocol.
  - Source selection (both at title/abstract screening and full-text screening) is usually performed by two or more reviewers, independently.
    - Any disagreements are solved by consensus or by the decision of a third reviewer.
- JBI recommends doing a pilot testing first
  - Random sample of 25 titles/abstracts is selected
  - The entire team screens these using the eligibility criteria
  - Team meets to discuss discrepancies
  - Team only starts screening when 75% (or greater) agreement is achieved

Data extraction/ data charting

- These are modifiable, based on the review questions and included sources
- Some key information are:
1. Author(s)
2. Year of publication
3. Origin/country of origin (where the source was published or conducted)
4. Aims/purpose
5. Population and sample size within the source of evidence (if applicable)
6. Methodology / methods
7. Intervention type, comparator and details of these (e.g. duration of the intervention) (if applicable). Duration of the intervention (if applicable)
8. Outcomes and details of these (e.g. how measured) (if applicable)

Analysis of the evidence

- 'It depends' – on the objectives and review questions:
  - Descriptively
  - Narratively
  - Thematically
  - Content analysis, frequency counts
  - etc
- The most important things are:
  - Answer the questions
  - Be transparent with your judgement and explain why

Presentation of the results

- Start with the general characteristics of the included sources

- Add PRISMA-ScR diagram

- Do you need to use charts? Tables? All of them?

- (Optional) you can report and discuss preliminary findings with stakeholders and incorporate their inputs with your findings section
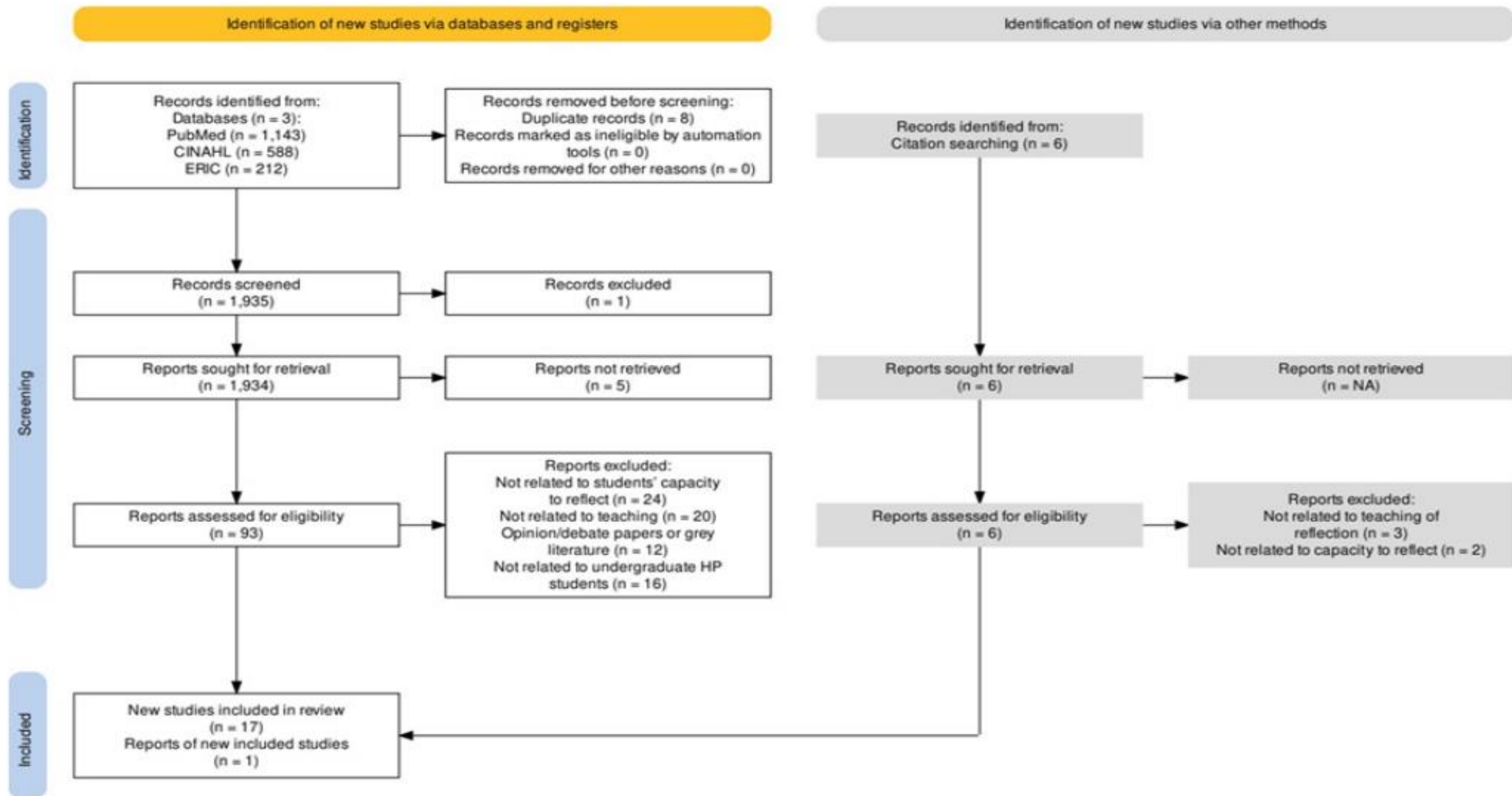
Figure 1. PRISMA flow diagram.

Identification of new studies via databases and registers

Identification

Records identified from:
Databases (n = 3):
PubMed (n = 1,143)
CINAHL (n = 588)
ERIC (n = 212)

→ Records removed before screening:
Duplicate records (n = 8)
Records marked as ineligible by automation tools (n = 0)
Records removed for other reasons (n = 0)

Screening

Records screened
(n = 1,935)

→ Records excluded
(n = 1)

Reports sought for retrieval
(n = 1,934)

→ Reports not retrieved
(n = 5)

Reports assessed for eligibility
(n = 93)

→ Reports excluded:
Not related to students' capacity to reflect (n = 24)
Not related to teaching (n = 20)
Opinion/debate papers or grey literature (n = 12)
Not related to undergraduate HP students (n = 16)

Identification of new studies via other methods

Records identified from:
Citation searching (n = 6)

Reports sought for retrieval
(n = 6)

→ Reports not retrieved
(n = NA)

Reports assessed for eligibility
(n = 6)

→ Reports excluded:
Not related to teaching of reflection (n = 3)
Not related to capacity to reflect (n = 2)

Included

New studies included in review
(n = 17)
Reports of new included studies
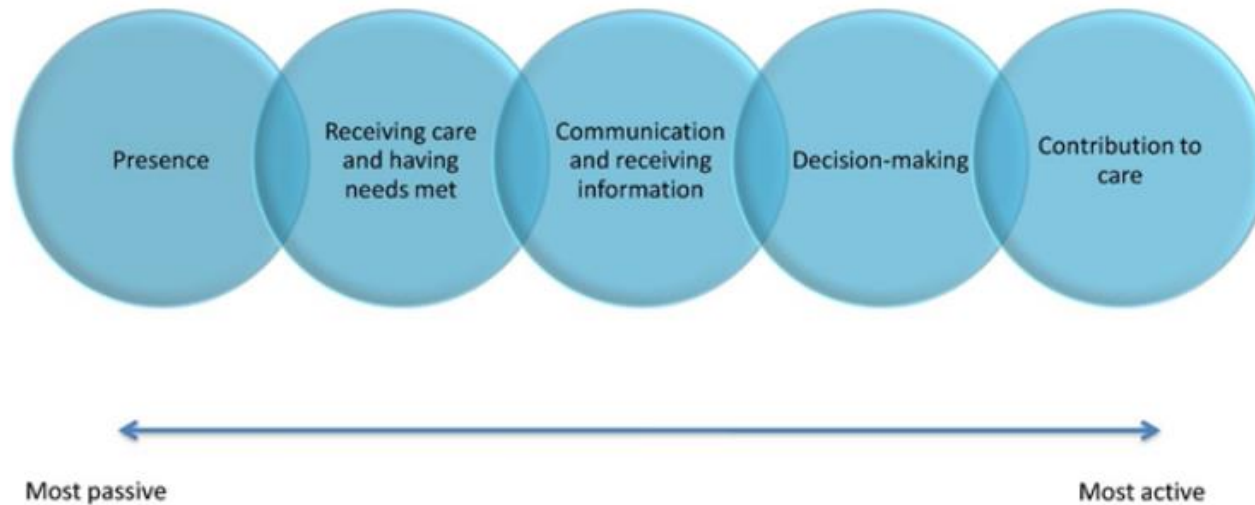(n = 1)

Examples on how to present results

Figure 11:2: Example of data presentation (types of family involvements in intensive care units and level of involvement from passive to active). (Olding et al. 2016)
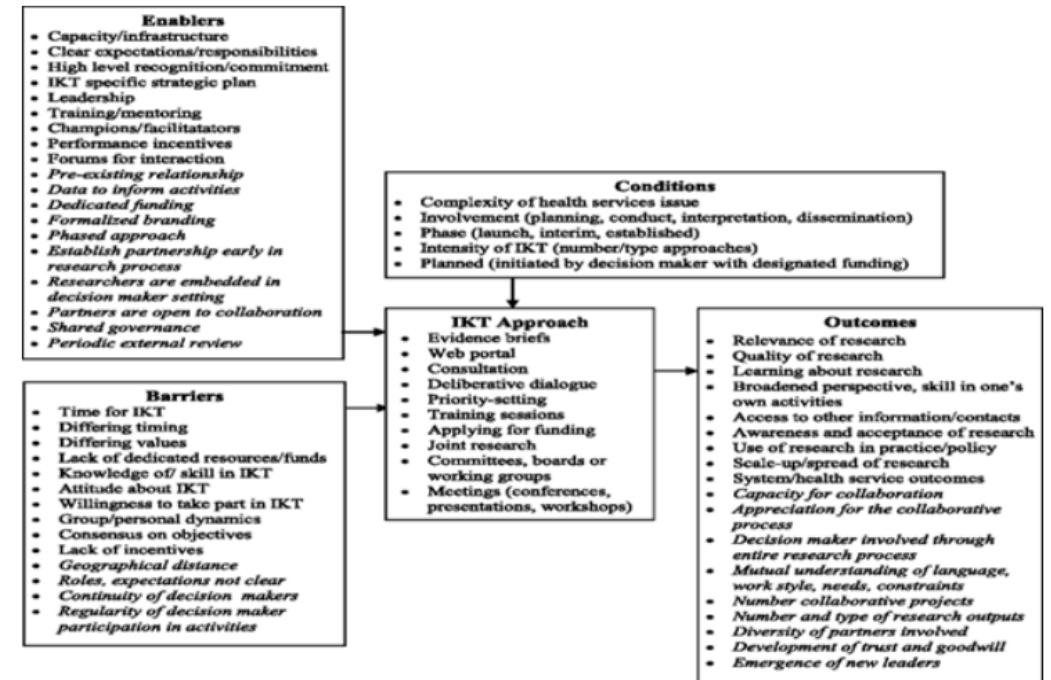
Figure 11.3: Example of data presentation (IKT approaches or strategies, enablers, barriers, and outcomes). (Gagliardi et al. 2015)
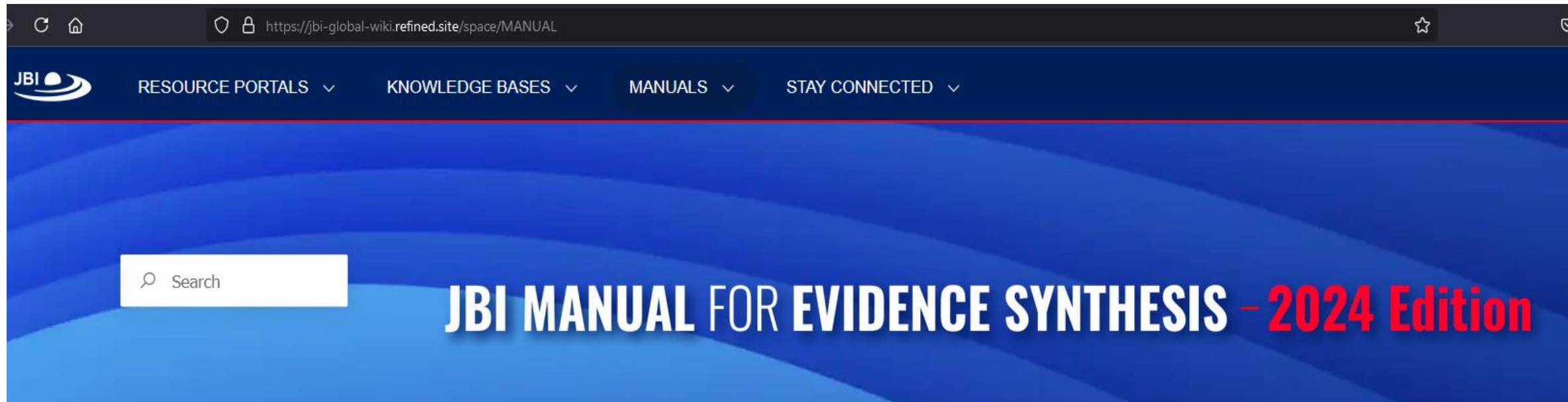
Towards the end

- Conclusions
- Implication of the findings for research?
- Implications of the findings for practice?

Conclusions

- Scoping reviews are conducted to map the literature available on a topic in a **systematic way.**

- Scoping reviews are useful when an area of research is new or **emerging, heterogeneous and/or complex**

For in-depth instructions, go to JBI website

Questions?

Exercise (10 minutes)

- Create your scoping review question (s). Either individually or with the person next to you
  - You can use the PCC or other frameworks to frame your questions
- Population
  - E.g., patient group?
- Concept
  - What do you want to focus on? Phenomena of interest?
- Context
  - Where is the context?
- Share what you have created. You can use them for your future scoping review.

References

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