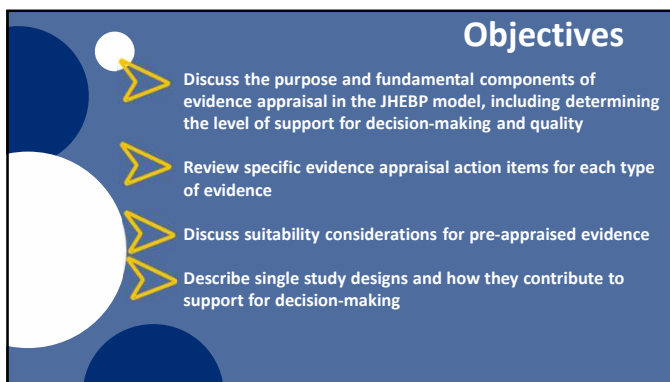
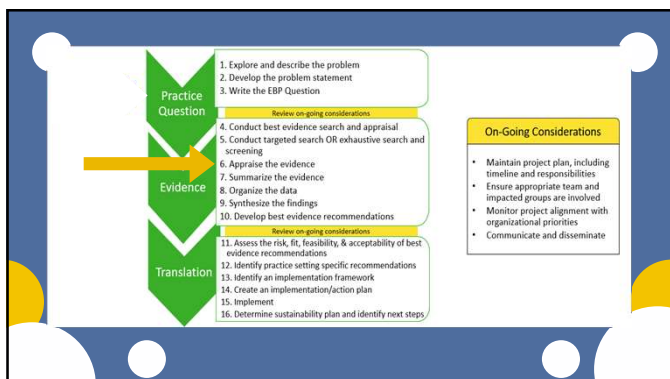




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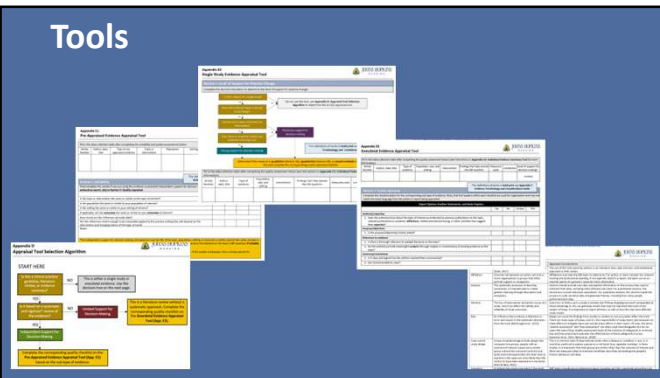
Appraisal

The process of formally assessing evidence to determine if and how it can contribute to practice recommendations.



4

Tools



5

Two components

1

Level of
support for
decision-
making

2

Quality
assessment

6

Support for Decision-Making

Pre-Appraised

Independent

Single Studies
(formal design)

Strong or Moderate

Anecdotal

Limited

7

Independent- stands alone (pre-appraised evidence)

Strong- provides high support in conjunction with others
(controlled trials with or without randomization)

Moderate- provides good support in conjunction with others
(interventional studies without control or randomization and
observational studies)

Limited- provides little support even in conjunction with others

8

Quality Appraisal



An assessment guided by a series of "yes" and "no" questions to critique the quality of information



Specific to the expectations of the type, design, and methods of evidence under review



This is based on not only how well the study or project was executed, but how well it was reported

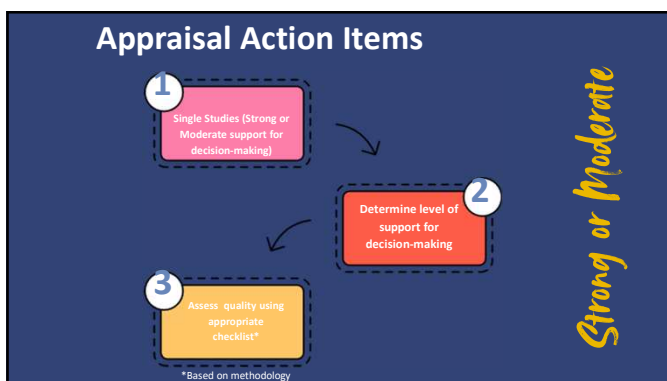
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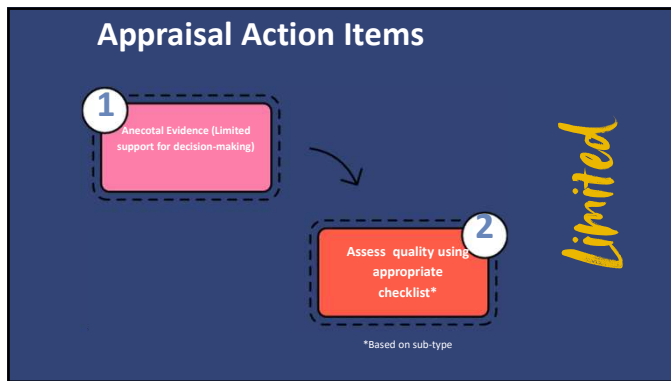
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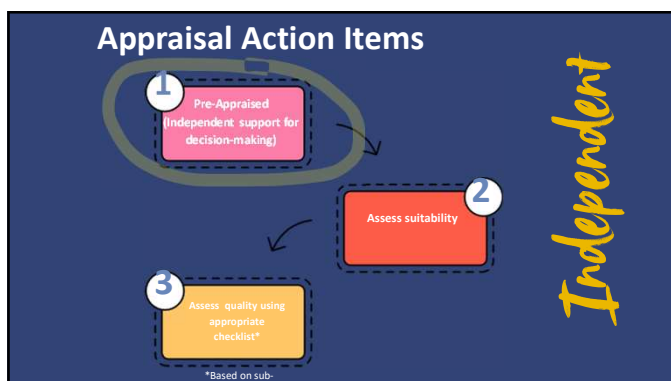
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Pre-appraised Evidence



Appendix E1
Pre-Appraised Evidence Appraisal Tool

Fill in this data collection table after completing the suitability and quality assessments below.

Article Number	Author(s)	Type of study	Topic or intervention	Population	Setting	Recommendations that answer the ESP question
Independent						

Section 1: Suitability

Only complete this section if you are using this evidence as potential independent support for decision making. If you gathered this evidence in an **advance search**, skip to **Section 2: Quality Appraisal**.

	Yes	No	Unclear	N/A
Is the topic or intervention the same or similar to the topic of interest?				
Is the population the same or similar to your population of interest?				
Is the setting the same or similar to your setting of interest?				
If applicable, are the outcomes the same or similar to your outcomes of interest?				
How recent are the references (provide date)?				
Are the references recent enough to be reasonably applied to the practice setting (this will depend on the intervention and changing nature of the topic at hand)?				

*For independent support for decision making, all responses must be YES. If the topic, population, setting, or outcome is similar, but not the same, include in this table section the reason(s) outside the box the provided information can be reasonably compared to the elements in the boxes' ESP question. **Available:** complete the corresponding quality assessment below.

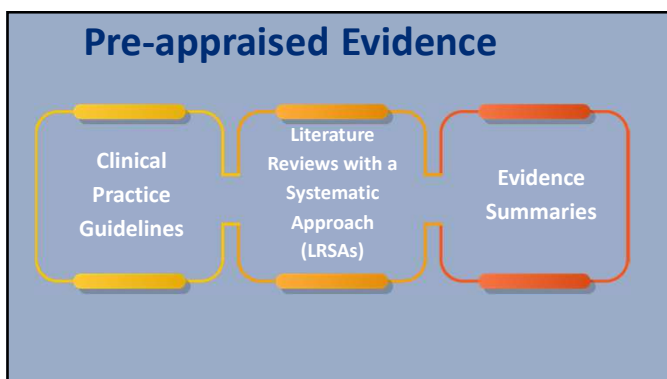
If the evidence is not fully suitable, but it informs the ESP question, incorporate the appraisal below. If the quality is adequate, this is strong support for decision making. Record this information on Appendix E2: The Individual Evidence Summary Tool.

16

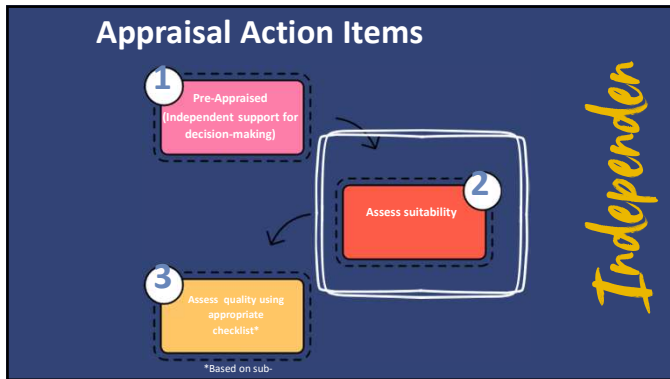
Pre-appraised Evidence

- Pre-appraised evidence also referred to as “filtered” or “secondary” literature describes a group of individual studies that have undergone a methodical process for collection and critical evaluation (filtering) by teams of investigators and content experts for quality and clinical utility (Polit & Beck, 2021).
- Can provide independent support for decision-making

17



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19

Pre-appraised Evidence

Section I: Suitability

Only complete this section if you are using this evidence as potential independent support for decision making. If you gathered this evidence in an exhaustive search, skip to Section II: Quality Appraisal.

	Yes	No	Unclear	N/A
Is the topic or intervention the same or similar to the topic of interest?				
Is the population the same or similar to your population of interest?				
Is the setting the same or similar to your setting of interest?				
If applicable, are the outcomes the same or similar to your outcomes of interest?				
How recent are the references (provide date)?				
Are the references recent enough to be reasonably applied to the practice setting (this will depend on the intervention and changing nature of the topic at hand)?				

Notes:

*For independent support for decision-making, all responses must be YES. If the topic, population, setting, or outcome is similar, but not the same, include in the notes section the team's rationale for how the provided information can be reasonably compared to the elements in the team's EBP question. If suitable, complete the corresponding quality assessment below.

If the evidence is not fully suitable, but it informs the EBP question, complete the appraisal below. If the quality is adequate, this is strong support for decision-making; record the information on Appendix G2: The Individual Evidence Summary Tool.

20

Pre-appraised Evidence

- If the evidence is suitable, the team can move to the next step, quality assessment
- If the evidence is not suitable, but still value-added, this is considered strong support for decision-making, but not independently actionable.
- Complete the quality assessment
- Continue with an exhaustive search
- Record information from the report in the Individual Evidence Summary (Appendix G2 in the next step)

21

Single Studies with a Formal Design

- Publications of original research or other reports of formal study designs that use systematic inquiry to answer questions or solve problems.

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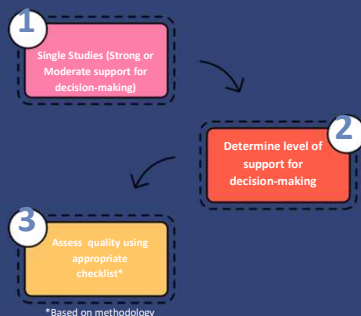
Single Studies with a Formal Design

Formal Study Design

- Pre-planned (prior to investigators initiating intervention or data collection)
- Received ethical review (by the institutional review board)
- Formal and systematic data collection and data analysis
- Specific qualitative and/or quantitative information gathered for the purposes of the investigation
- Researchers are not participants in the intervention
- Has a clear aim, reproducible methods, results and discussion
- Do not only recount the authors' personal, organizational or literature-based experience.

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Appraisal Action Items



Strong or Moderate

27

Control Group



Participants in an experimental study who do not receive the intervention and typically receive "usual care."

31

Randomization



The assignment of participants to groups in the study in a manner determined by chance alone. Subjects have equal chance of being in each group.

32

Intervention



In experimental research, the treatment or modification being introduced and tested.

33

Independent Variable



The intervention that is believed to cause or influence the dependent variable in a study.

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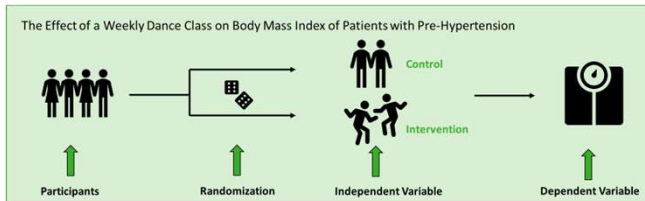
Dependent Variable



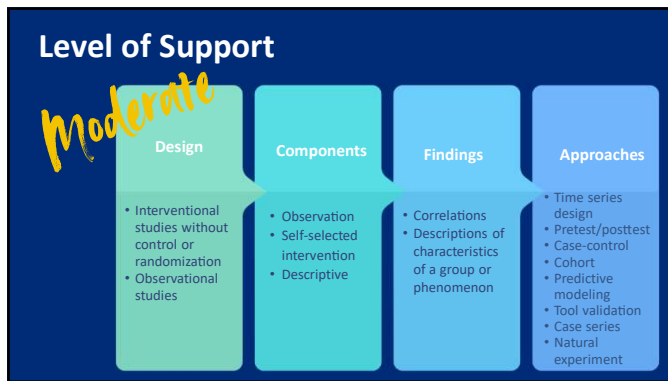
The variable hypothesized to depend on, or be caused by another variable (the independent variable). This is usually the outcome of interest in a study.

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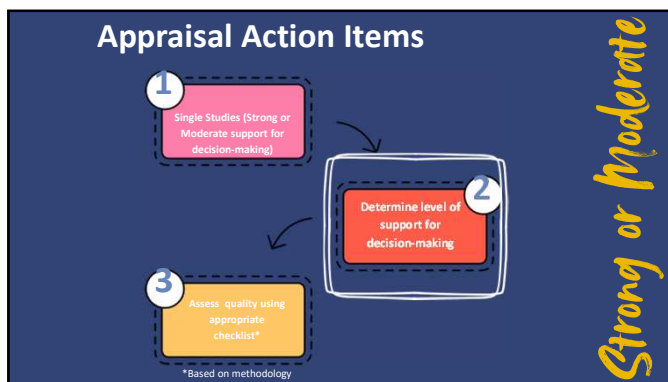
Example



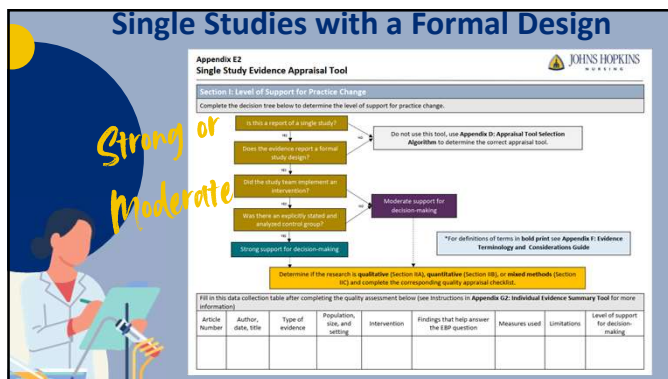
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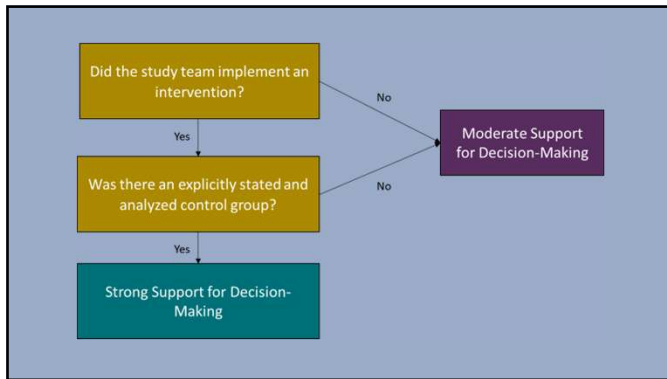
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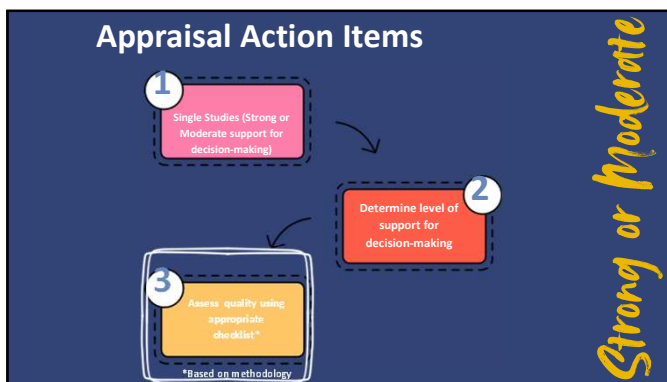
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Section 1: Quantitative Evidence

Background/Introduction

1. Is a logical background and rationale for the study explained using current literature?
2. Is the purpose/objective of the study clear?

Methods

3. Is the study design clearly stated?
4. Is the study setting clearly described (including location, dates, and other important details) to enhance generalizability?
5. Is the process for recruiting participants (sampling) explained clearly and does it match with the study aim?
6. Do eligibility criteria (rules for who can join the study) make sense and are they easy to understand?
7. Is the sample size powered adequately (is it possible or other explanation for how the authors decided how many participants or observations to include)?
8. Did the authors clearly state what they wanted to measure?

Section 2: Qualitative Evidence

Background/Introduction

1. Is a logical background and rationale for the study explained using current literature?
2. Is the purpose/objective of the study clear?

Methods

3. Is the study design clearly stated?
4. Is the study setting clearly described (including location, dates, and other important details) to enhance generalizability?
5. Is the process for recruiting participants (sampling) explained clearly and does it match with the study aim?
6. Do eligibility criteria (rules for who can join the study) make sense and are they easy to understand?
7. Is the sample size adequate?
8. For the qualitative portion (this includes instances of data saturation):
 - a. For the qualitative portion (this includes instances of data saturation), or other explanation for how the authors decided how many participants or observations to include?
9. Did the authors clearly state what they wanted to measure?
10. Did the authors address reflexivity (how their background or experience might have affected the study)?
11. If applicable, are the inter-rater reliability clearly stated?
12. Are the data collection methods clear and appropriate (this includes how they gathered and recorded the information)?
13. If applicable, were all the data relevant?

Section 3: Mixed Methods Evidence

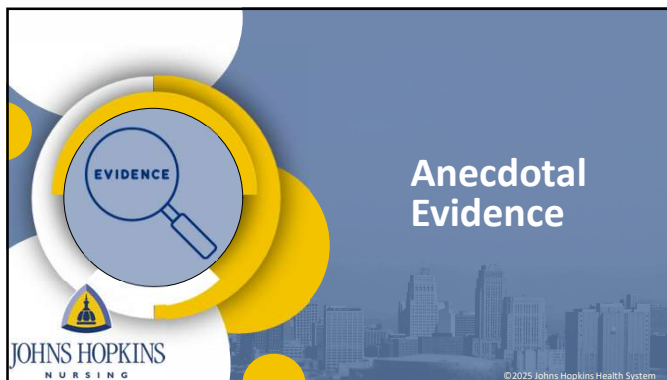
Background/Introduction

1. Is a logical background and rationale for the study explained using current literature?
2. Is the purpose/objective of the study clear?

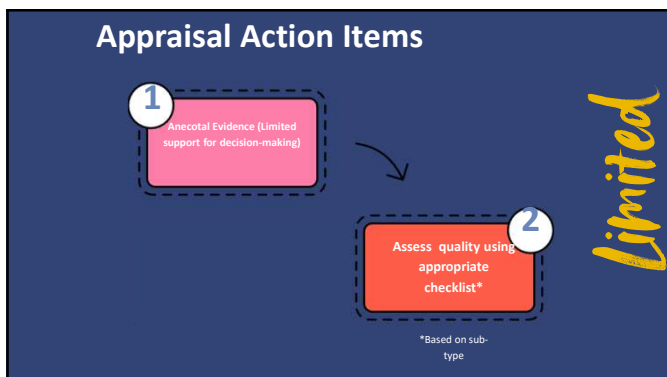
Methods

3. Is the study design clearly stated?
4. Is the study setting clearly described (including location, dates, and other important details) to enhance generalizability?
5. Is the process for recruiting participants (sampling) explained clearly and does it match with the study aim?
6. Do eligibility criteria (rules for who can join the study) make sense and are they easy to understand?
7. Is the sample size adequate?
8. For the qualitative portion (this includes instances of data saturation):
 - a. For the qualitative portion (this includes instances of data saturation), or other explanation for how the authors decided how many participants or observations to include?
9. Did the authors clearly state what they wanted to measure?
10. Did the authors address reflexivity (how their background or experience might have affected the study)?
11. If applicable, are the inter-rater reliability clearly stated?
12. Are the data collection methods clear and appropriate (this includes how they gathered and recorded the information)?
13. If applicable, were all the data relevant?

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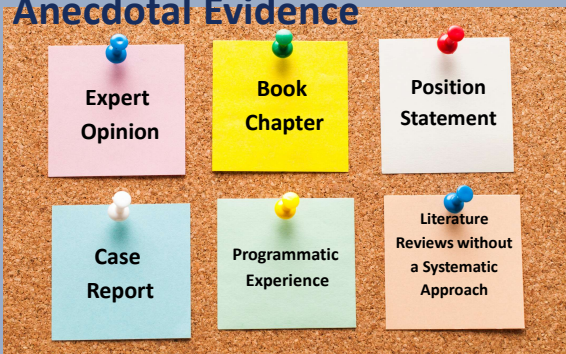
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Anecdotal Evidence

- Published information that was not generated from a research study but rather personal, professional or clinical experience.
- Can provide limited support for decision-making

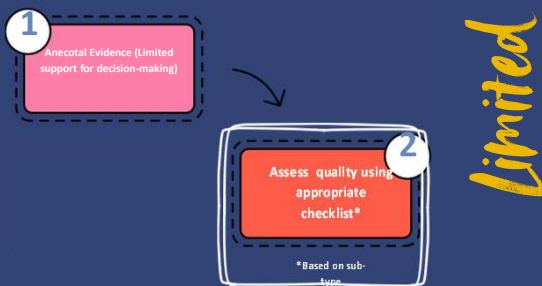
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Anecdotal Evidence



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Appraisal Action Items



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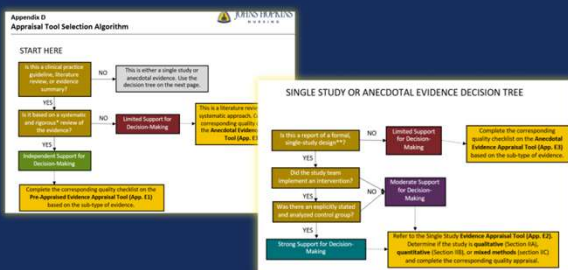
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Summary

- Appendices D, E1, E2, E3, and F help you with the evidence appraisal process
- There are 4 levels of support for decision-making in the Johns Hopkins EBP Model 5th edition, independent, strong, moderate, and limited
- Evidence appraisal has two essential components, determining the level of support for decision-making and assessing quality. Pre-appraised evidence also undergoes a suitability assessment
- The design of a single study determines if it can provide strong or moderate support for decision-making.
- For pre-appraised and anecdotal evidence, the team assesses the quality of the evidence based on the sub-type of evidence. For single studies, the team assesses the quality of the evidence based on the methods used to generate it (quantitative, qualitative, or mixed methods)

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Helpful Hints



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Appendix F Evidence Terminology and Considerations		
Term	Definition*	Appraisal Considerations
AMSTAR II	A critical appraisal tool for systematic reviews (Shea, 2017).	The use of this instrument by authors is an indication they used a formal, well-established approach to their review.
Affiliation	A formal link between an author and one or more organizations or groups that often provide support or recognition.	Affiliations may help the EBP team to determine if an author or team member has relevant training and professional standing. If not explicitly listed in a report, the team can do an internet search of a person's name for more information.
Analysis	The systematic processes to describe, summarize, or evaluate data to create greater meaning through description and evaluation.	Authors should provide very clear and explicit information on the process they used to interpret their data, including what software was used. For quantitative analysis, this should also include statistical calculations. For qualitative analysis, this should include the process to code narrative data and generate themes, including how many people performed each step.
Attrition	The loss of participants during the course of a study, which can affect the validity and reliability of study outcomes.	Some loss to follow-up in a study is normal, but if those dropping out aren't comparable to those remaining in, this can generate results that may not represent the truth of the subject of study. It is important to report attrition, as well as how this may have affected study results.
Bias	An influence that produces a distortion or error and results in the systematic alteration from the truth (McDonough et al., 2023).	Biases can cause the findings from studies or reviews to not accurately reflect the truth. There are many types of biases, and it is the responsibility of study teams and reviewers to make efforts to mitigate them and include these efforts in their report. Of note, the terms "quality assessment" and "bias assessment" are often used interchangeably but do not mean the same thing. Quality assessment looks at the inclusion of safeguards to minimize bias and bias assessment evaluates the effectiveness of those safeguards (Funayama-Kanamori et al., 2021; Band et al., 2018).
Case-control study design	A type of epidemiological study design that compares two groups, people with an outcome of interest (cases) and a similar group without the outcome (controls) and looks back (retrospectively) into their lives to examine if the cases are more likely than the control to have been exposed to a risk factor (Pohl & Beck, 2021).	This is a common type of observational study when a disease or condition is rare, or it would be unethical to expose a group to a risk factor (e.g., cigarette smoking). In these studies, it is important that both groups are similar other than the outcome of interest and there are measures taken to minimize recall bias since they are looking into people's historic behaviors and data.
Causation	A relationship where one event is the result	EBP teams should ensure statements about causation are fully supported and authors are

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Thank You

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