

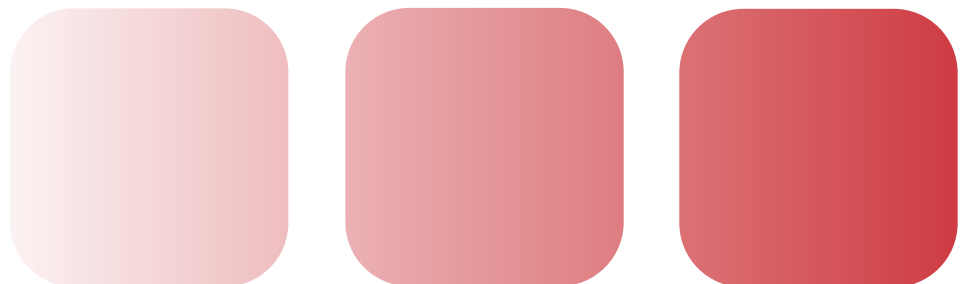


## **Joanna Briggs Institute**

Comprehensive Systematic  
Review - Training Programme

# CSRT **Study Guide**

The Systematic Review of Evidence  
Generated by Qualitative Research,  
Narrative and Text







**Joanna Briggs Institute**  
Comprehensive Systematic  
Review - Training Programme

## CSRTP **Study Guide**

The Systematic Review of Evidence Generated  
by Qualitative Research, Narrative and Text

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# Introduction

Welcome to the qualitative Module of the Joanna Briggs Institute Comprehensive Systematic Review Training Program. This module is designed to provide participants with skills in the systematic review of evidence generated by qualitative research and evidence embedded in opinion, text and discourse. The program has a hands-on orientation and includes computer laboratory sessions. Underpinning this approach is clearly defined content contained in extensive printed and electronic course material.

## Aim and Objectives

The aim of this module is to enable participants to develop a comprehensive understanding of the purposes and principles of appraising, extracting and pooling the results of qualitative studies and text.

The objectives of this module are to prepare participants to:

1. develop an understanding of the theoretical foundations of qualitative research;
2. be familiar with the methodologies and methods of qualitative research;
3. be conversant with meta-aggregation and meta-ethnography as approaches for qualitative synthesis;
4. be conversant with the JBI meta-aggregative approach to the synthesis of qualitative research and of narrative, text and opinion;
5. be conversant with the QARI and NOTARI software for the synthesis of qualitative research and narrative, text and opinion respectively;
6. have prepared and presented a draft protocol for a qualitative meta-synthesis; and
7. fully utilise the JBI- CReMS and JBI-QARI software programs.



## Content Outline

|                    |  |
|--------------------|--|
| <b>Session 1:</b>  | Introduction to Qualitative Evidence Synthesis |
| <b>Session 2:</b>  | The Systematic Review of Qualitative Evidence  |
| <b>Session 3:</b>  | Critical Appraisal of Qualitative Evidence     |
| <b>Session 4:</b>  | Data Extraction                                |
| <b>Session 5:</b>  | Data Analysis and Meta-synthesis               |
| <b>Session 6:</b>  | QARI Trial                                     |
| <b>Session 7:</b>  | Systematic review of Textual Opinion Papers    |
| <b>Session 8:</b>  | NOTARI Trial                                   |
| <b>Session 9:</b>  | Protocol Preparation                           |
| <b>Session 10:</b> | Protocol Presentations                         |
| <b>Session 11:</b> | Assessment and Summation                       |

## Recommended Readings:

### Textbooks:

Pearson, A., Robertson Malt, S. and Rittenmeyer, L. (2011) *Synthesising Qualitative Evidence*. Lippincott-Joanna Briggs Institute Synthesis Science in Healthcare Series: No 2. Philadelphia, Lippincott Williams & Wilkins.

Pearson, A. Field, J. & Jordan, Z. (2008), *Evidence-Based Clinical Practice in Nursing and Health Care: Assimilating Research, Experience and Expertise*, Blackwell Publishing Lit, Oxford.

The Joanna Briggs Institute (2011), *Reviewers' Manual 2011 edition*, The Joanna Briggs Institute Adelaide.

The Joanna Briggs Institute (2011), *SUMARI User Guide*, The Joanna Briggs Institute Adelaide.

### Articles

Chase S.K., Melloni M. & Savage A. (1997) A forever healing: the lived experience of venous ulcer disease. *Journal of Vascular Nursing* 15, 73–78.

Ebbeskog B. & Ekman S-L. (2001) Elderly persons' experiences of living with venous leg ulcer: living in a dialectal relationship between freedom and imprisonment. *Scandinavian Journal of Caring Sciences* 15(3), 235–243.

Hannes, K. Lockwood, C & Pearson, A. 2010, A comparative analysis of three online appraisal instruments' ability to assess validity in qualitative research, *Qualitative Health Research*, 20 (12), 1763-1743.

Hannes, K. and Lockwood, C., Pragmatism as the philosophical underpinning of the Joanna Briggs meta-aggregative approach to qualitative evidence synthesis, *Journal on Advanced Nursing*, in press.

## Assessment

Multiple choice question assessment of 30 minutes.

Presentation of a draft, preliminary review protocol.

## Program of Study

| DAY 1 |   |   |
|-------|---|---|
| Time  | Session   | Group Work  |
| 09.00 | Introductions and overview of Module 4                                  |   |
| 09.30 | Session 1: Introduction to Qualitative Evidence Synthesis               |   |
| 10.30 | Morning Tea   |   |
| 11.00 | Morning Tea<br>Session 2: The Systematic Review of Qualitative Evidence | Group Work 1: Paradigm, methodology and research question |
| 11.30 | Session 3: Critical Appraisal of Qualitative Evidence                   | Group Work 2: Critical Appraisal using JBI-QARI           |
| 12.30 | Lunch   |   |
| 13.30 | Session 4: Data Extraction  |   |
| 14.00 | Session 5: Data Analysis and Meta-synthesis                             |   |
| 14.30 | Afternoon Tea   |   |
| 15.00 | Session 6: QARI Trial   |   |
| 17.00 | End   |   |

| DAY 2 |  |                                  |
|-------|--|----------------------------------|
| Time  | Session  | Group Work                       |
| 09.00 | Overview of Day 1                                      |                                  |
| 09.15 | Session 7: Systematic review of Textual Opinion Papers | Group Work 3: Critical Appraisal |
| 10.30 | Morning Tea  |                                  |
| 11.00 | Session 8: NOTARI Trial                                |                                  |
| 12.00 | Session 9: Protocol Preparation                        |                                  |
| 12.30 | Lunch  |                                  |
| 13.30 | Session 10: Protocol Presentations                     |                                  |
| 16.45 | Session 11: Assessment and Summation                   |                                  |
| 17.00 | End  |                                  |



# Session 1:

## Introduction to Qualitative Evidence Synthesis

### Nature of qualitative research

There is increasing interest in the potential of qualitative evidence synthesis to inform complex decision-making processes in policy and practice (Hannes, Lockwood and Pearson, 2010). The strength of qualitative research lies in its ability to understand and explain how people make sense of their world when they, or someone they care about, is ill, confronted with a threat to their health, or interacting with health care providers (Flemming, 2007:45). Unlike quantitative research, the focus is not on controlling phenomena by establishing relationships between variable and testing these with statistics, but rather it is on 'description, understanding and empowerment' (Pearson, Field, Jordan, 2007: 42).

Qualitative research can play a significant role in understanding how individuals and communities perceive health, manage their own health and make decisions related to health service usage; it can play a major role in increasing our understandings of the culture of communities and of health units in relation to implementing change and overcoming barriers to the use of new knowledge and techniques; it can inform planners and providers in relation to how service users experience health and illness and the health system; and it can be used to evaluate components and activities of health services that cannot be measured in quantitative outcomes (such as health promotion and community development).

The word 'evidence' has become one of the most commonly used terms within the healthcare arena as it can be associated with nearly every aspect of healthcare from 'evidence-based' practice, guidelines, decision-making, policy making to evidence-informed patient choice (Rycroft-Malone et al 2004). In its most generic sense evidence is defined as a "ground belief; that which tends to prove or disprove something". In health care it can be described as "data or information used to decide whether or not a claim or view should be trusted" (Pearson 2005). The traditional, quantitative, scientific approach (aligned to a positivist paradigm ) to evidence generation has dominated the Western world's view of "trustworthy" evidence. This narrow perspective of science, knowledge and evidence has been challenged for some time and a broader, more balanced conceptualization of what constitutes systematic knowledge is rapidly emerging. There is now growing acceptance of knowledge elicited through alternative approaches such as those that examine the personal, social, political and cultural components of health, illness and health care

There are a diverse range of methodologies contained within the field of qualitative research, however, unlike quantitative research there is no hierarchy of research designs stemming down from the 'gold standard' of a RCT (Pearson, Wiechula, Court, Lockwood 2005). Rather, qualitative methodologies as well as data collection methods and analysis are informed all by the philosophical stance or paradigmatic stance from which the researcher works. The paradigmatic stance taken by researchers influences the choice of research methodology for a research study. Similarly, it follows that the methodological position adopted influences the way in which data are collected and the analysis undertaken.

It is JBI policy that all study types must be critically appraised before they are included in a JBI Systematic Review. A central focus of critical appraisal for qualitative research is on the rigor of the research design and quality of reporting. Therefore it is crucial for reviewers of qualitative evidence to have a strong understanding of the paradigms used in qualitative research and sound working knowledge of the associated methodologies and research methods. It is important that reviewers are able to assess whether or not there is congruity between the philosophical position adopted in a primary study and the study methodology, study methods, representation of the data as well as interpretation of the results.

Accordingly, the initial focus of Module 4 is on the nature of qualitative research and qualitative research paradigms, methodologies and methods. This is followed by a section on the importance of establishing the validity and reliability of qualitative research studies before they are included in a JBI Systematic Review.

However, before moving on to research paradigms and methodologies it is useful to note the tendency to refer to research as either qualitative or quantitative. An important distinction is that this terminology refers to data and method rather than overall broad approaches to research (Pearson, Field & Jordan, 2007). Nonetheless, the relative merits, and defining characteristics of both these forms of data are the subject of vigorous debate in the health system. While qualitative methods are seen to increase understanding of phenomena from a subjective perspective, they can be perceived as soft or biased science whereas quantitative methods, perceived to be objective, can be criticized as being too concerned with numbers and providing only 'half the story'. The reality, as will be discussed in the following section, is that both types of data may be useful to policy makers and practitioners.

## The Quantitative/ Qualitative Debate

In the 1970-1990s, in the English-speaking world, there was considerable debate about the different paradigms or traditions of research. On one side was the positivist paradigm (Kolkowski 1993) occupied by the "scientists" who sought to establish cause and effect in an objective "scientific" manner. On the other side was the naturalistic or hermeneutic paradigm (von Wright 1993) where context and meaning were crucial factors to be described and acknowledged – the side occupied by the human scientists. In the late 1990s, and since, there has been much greater acknowledgement of the value of both types of research approaches and indeed an acceptance that they can be complementary rather than adversarial. This change may also reflect the increase in qualitative research and the subsequent increase in numbers of papers appearing in health journals since 1996. The crucial issue is what are you trying to find out? If you want to know how many people smoke cigarettes within a particular population then qualitative methods are of no value. However, if you want to know what it is like to stop smoking then quantitative methods will be of limited value. Both types of data may be useful to policy makers and practitioners.

Qualitative research approaches were, at one time, dismissed as "subjective, or soft", they were the province of the anthropologist or social scientist, not the province of the health service clinician, epidemiologist or researcher who required "scientific", or "hard" data to convince colleagues and policy makers of the importance of research findings.

However, data derived from qualitative research may also be viewed as "rich and deep" (Bryman 1988) which suggests that the role of data is significantly different to the "objective and hard" terms applied to quantitative data. Qualitative data may help to bring understanding to areas of practice that quantitative studies may not, such as those associated with perspectives of patients or practitioners or examinations of social process or questioning of dominant positions or typologies. By their very nature these areas are not amenable to being researched using experimental methods but are valuable in contributing to an enhanced and holistic picture of health care.

Qualitative research is not concerned with numerical data (Strauss and Corbin 1990). Cresswell (1998) describes the concerns of qualitative research thus:

*Qualitative research is an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem.*

*The researcher builds a complex, holistic picture, analyses words, reports detailed views of informants, and conducts the study in a natural setting (p15)*



Qualitative research is seeking to capture data that can answer research questions that are framed in terms of how or what, rather than the why of cause-and-effect. It can seek to establish how health or social care interventions work, (feasibility) or what is the experience of being exposed to an intervention (meaningfulness), rather than why they work (efficacy) or which works best (effectiveness). Green and Thorogood (2004) characterise this as seeking answers to what, how and why of phenomenon rather than questions that ask how much or how many. The phenomenon of interest will of course depend on the researcher and their search for answers to questions that, on the whole, require oral or written textual data, rather than numerical data.

To the beginner, qualitative research can often appear confusing as a variety of different perspectives and terms are used. The perspectives and terms usually represent a range of different ontological (**the nature of being and living**), epistemological (**the nature and scope of knowing and knowledge claims**) and theoretical positions within the qualitative research tradition. Generally, qualitative research is often referred to as naturalistic (Lincoln and Guba, 1985); that is - phenomena are studied in (or related to) their natural setting. This emphasises that qualitative research is seeking knowledge of the experiences and meanings that individuals ascribe to actions and events within particular contexts. The manner in which such experiences and meanings are captured in research is one which will be explored throughout this workshop, from the phenomenological perspective of the individuals themselves, through to observations of the environment or context that is more fully captured in, for example, ethnography.

Whilst the ideal of quantitative research is for some element of generalizability and replicability (normothetic), qualitative research sets out to illuminate the experiences, behaviours and actions of individuals that, it is argued, are unique for each person (ideographic). However, whilst quantitative research may identify with a normothetic perspective and seek to build experiments that can refute or support existing knowledge and understanding, qualitative research, by its very nature, cannot be refuted in the same manner as it represents the 'personal knowledge' (Polanyi 1958) of the individuals. Whilst, the nature of qualitative research is ideographic it must also be remembered that the researcher themselves are a key part of the research and not, as is claimed in quantitative research, detached, distant and an outsider (Bryman 1988). The researcher in qualitative research is expected to be closer to subjects and more inside the process of the research from question development to data analysis and reporting. Such engagement brings with it both advantages and disadvantages, particularly when the researcher is expected to create some order from the work and apply theoretical analysis to the findings. The implication is that it is important to be able to see where the researcher is coming from (philosophically) and the manner in which they have gathered and interpreted data.

This type of engagement with the research highlights the question of qualitative research being part of an interpretative or critical paradigm (a paradigm being the values, models and beliefs that guide the development of knowledge, see Kuhn 1970). Qualitative research might also be considered relativist in orientation; that is, all outcomes are relative to the people and context that is being researched. Relativism could create a situation where there is no accord with the wider community and hence qualitative studies may only be viewed as isolated examples, rather than as contributions to knowledge and understanding. Silverman (2006:365) argues cogently that relativism can be overcome through contributions in three key areas of activity:

*Participating in debates about how organisations function;*

*Providing new opportunities for people to make their own choices, and*

*Offering a potentially new perspective to practitioners and clients.*

These three areas, from a general perspective, could encompass a breadth and depth of qualitative research activity that could make significant contributions to practice and policy in health care.

There are many sources of materials that address the qualitative research, one source can be found at <http://www.qualitativeresearch.uga.edu/QualPage/methods.html>

## Session 2:

# The Systematic Review of Qualitative Evidence

As with quantitative research, the results from a single study only should not be used to guide practice. The findings of qualitative research should be synthesised in order to develop recommendations for practice.

Qualitative research has an increasingly important role in ensuring that systematic reviews are of maximum value to policy, practice and consumer decision making, due to the way that qualitative studies can both explore the experience of those involved in providing and receiving interventions, as well as using multiple methods to evaluate factors which shape the processes of implementing interventions. Since the late 1980s qualitative researchers have developed a variety of methods to synthesise findings from qualitative research in order to inform practitioners and policy makers (Hannes & Lockwood, 2011).

Different methods of synthesis are aligned with different epistemological frameworks or paradigms and yet they still share some basic characteristics (Hannes and Lockwood, 2011). The similarities include a focus on the complexity of the interpretive or critical understandings of the phenomenon in question as well as a statement on the gap in the current research or research priority status to validate the purpose of the synthesis. Most syntheses require also a clear formulation of objectives and inclusion criteria, followed by a search for relevant studies, extraction of findings and a meaningful summary.

Synthesis approaches differ in the execution of the synthesis exercise. As evident in the table below some synthesis methods require critical appraisal while others oppose such a process; some focus on a very linear approach to synthesis while others such as meta-ethnography take a more iterative approach.



A number of these approaches are shown in the Table 1 below:

**Table 1**

|                             | Approach  |  |  |
|-----------------------------|---|--|--|
|                             | Narrative Synthesis                               | Metaethno-graphy   | Realist Synthesis  |
| <b>Purpose</b>              | To summarise two or more papers in narrative form | To generate new knowledge/ theory use processes of interpretation                        | To develop and test program theories                                       |
| <b>Evidence of Interest</b> | Generic   | Findings of qualitative research studies   | Generic; but more suited to qualitative research studies                   |
| <b>Search Strategy</b>      | Unspecified/Selective                             | Not comprehensive or exhaustive; seeks saturation – theoretical sampling                 | Not comprehensive or exhaustive; seeks saturation                          |
| <b>Critical Appraisal</b>   | Not specified                                     | Opposed; all studies included as each may provide insight into the phenomena of interest | Not specified  |
| <b>Data Extraction</b>      | Not Specified                                     | Extraction of key concepts   | Extracts positive and negative mechanisms/strategies that influence change |
| <b>Method of Synthesis</b>  | Unspecified                                       | Refutation-al synthesis;<br>Reciprocal translation;<br>Line of argument synthesis.       | Tacit testing of implicit theories; building theory.                       |
| <b>Outcome</b>              | Review article-type report                        | Higher order interpretation of study findings  | A transfer-able theory on “what works, for whom, in which circum-stances”  |
| <b>Software Available</b>   | NO  | NO<br>(Although QARI can be used)  | NO   |

**Table 1 (Cont.)**

|                             | Approach   |   |  |
|-----------------------------|--|---|--|
|                             | Thematic analysis  | Content analysis  | Meta-synthesis/<br>Meta-aggregation  |
| <b>Purpose</b>              | To aggregate findings of 2 or more studies                               | To analyse then summarise content of papers.; occurrences of each theme counted and tabulated   | To aggregate the findings of included studies  |
| <b>Evidence of Interest</b> | Findings of qualitative research studies                                 | Generic   | Findings of qualitative research studies   |
| <b>Search Strategy</b>      | Not comprehensive or exhaustive; seeks saturation – theoretical sampling | Usually comprehensive with predetermined search strategy  | Comprehensive; detailed search strategy at protocol stage required                           |
| <b>Critical Appraisal</b>   | Not specified  | Not specified   | Required, using standardised critical appraisal instrument                                   |
| <b>Data Extraction</b>      | Extracts of major/recurrent themes in literature                         | Content extracted then coded using extraction tool designed to aid reproducibility              | Extraction of findings PLUS data that gives rise to finding using data extraction instrument |
| <b>Method of Synthesis</b>  | Aggregation of themes/ metaphors/ categories                             | coded data categorised under thematic headings; also counted and tabulated                      | Aggregation of findings into categories; and of categories into synthesised findings         |
| <b>Outcome</b>              | A summary of findings of primary studies under thematic headings         | A summary of findings, and their rate of occurrence, of primary studies under thematic headings | Synthesised findings that inform practice or policy in the form of a standardised chart      |
| <b>Software Available</b>   | Thematic analysis  | Content analysis  | Meta-synthesis/<br>Meta-aggregation  |

The two dominant approaches of meta-synthesis are integration/aggregation and interpretation.

Integrative/aggregative synthesis, the JBI meta-aggregation approach, involves assembling the conclusions of primary studies (variously reported as themes, metaphors, categories etc) and pooling these findings through further aggregation based on similarity in meaning.

The aim is to summarise findings from studies where concepts are assumed to be largely secure and well specified. Aggregation produces theories of causality, in addition to claims about generalisability. Opponents of this approach argue that synthesis does not represent “new knowledge” – aggregation is therefore said to not be synthesis.

By contrast, interpretive synthesis involves both induction and interpretation. It is not concerned with prediction but to ‘anticipate’ what might be involved in analogous situations and to understand how things connect and interact. These two dominant approaches to synthesise findings from qualitative research are discussed in more detail below.

## Meta-aggregation and meta-ethnography

### Meta-aggregation

The integrative/aggregative approach used by JBI was developed by a group led by Pearson (2004) as a method of synthesis designed to mirror the Cochrane process of systematic reviews of effectiveness whilst being sensitive to the contextual nature of qualitative research and its traditions. Implicit in its development is recognition of the valuable role qualitative research/evidence can play in bolstering evidence-based healthcare.

This particular method is the only approach to explicitly align itself with the philosophy of pragmatism in order to deliver readily usable synthesised findings, based on the voices of relevant stakeholders, to inform decision making at the clinical or policy level (Hannes & Lockwood, 2011). As such the JBI meta-aggregative approach moves beyond the production of theory to produce declaratory statements in the form of ‘lines of action’ which are close to recommendations. By contrast, many other qualitative synthesis methods only suggest implications for action that can be drawn or inferred from the synthesis exercise.

Unfortunately aggregation has at times been associated with negative connotations where critics have assumed that the process is linear and mechanistic – a mere process of ‘adding’ together the findings of two or more studies on a particular question. However, as we shall see, meta-aggregation does involve interpretation, but attempts to direct the range of reviewer interpretation and to make such interpretive steps transparent.

Meta-aggregation is a structured, process driven approach to synthesising qualitative research findings. The approach takes an inclusive approach to searching and selecting studies however it stresses the importance of the methodological quality of studies to be included, arguing that methodological flaws in a study could have a negative impact on the resulting synthesis and increase the risk of bias (Hannes & Lockwood, 2011).

All systematic reviews using meta-aggregation follow a similar structured process. Having explored the different dimensions of the chosen topic area, reviewers would develop a rigorous proposal or protocol setting a predetermined plan that:

- Explicitly states the review question;
- Sets out criteria that will be used to select literature;
- Details a search strategy to identify all relevant literature (published and unpublished) within an agreed timeframe;
- Critically appraises the studies to meet the inclusion criteria;
- Extracts conclusions from primary research regarding the participants, the intervention and the key findings; and
- Pools the findings of 2 or more studies

These steps constitute set criteria for the review process: the need for a protocol; the requirement to undertake an exhaustive search to identify all relevant literature; and the use of critical appraisal.

## Meta-ethnography

Meta ethnography was conceived by Noblit and Hare (1988) as a method of synthesis whereby interpretations could be constructed from two or more ethnographic studies; its parallel in quantitative research is meta-analysis (not systematic reviews). It arose from the critique of a series of ethnographic studies examining desegregation in 5 schools in North America, where traditional synthesis attempts had been criticised as lacking in theoretical depth, explanatory detail and the ability to provide types of answers sought by policy makers.

Meta ethnography arose within the social sciences from the interpretivist paradigm, seeking to give meaning to a set of texts, much the same way ethnography does in primary qualitative research – meta ethnography seeks to generate new, inductive interpretations, not present a summary (aggregative or pooled) (Noblit and Hare 1988).

Doyle (2003) describes meta ethnography as being intended to reconceptualise research findings into new contributions to the human discourse. It draws on the findings and interpretations of qualitative research using a purposive sampling method, and the analysis is a process of iterative construction of emic interpretations with the goal of producing new theoretical understandings

Studies are purposively selected – some (Dixon-Woods, Bonas et al. 2006) advocate for maximal variation sampling to ensure diverse views are not lost. Undertaking an inventory of studies is used to determine which will be included in the analysis. The choice of particular cases is conceptually driven rather than representative and may be driven by studies that provide thickness or richness of description. There is though, no consensus on where to start reading (Munro, Lewin et al. 2007).

The process of meta ethnography was originally described by Noblit and Hare (1988) as consisting of 7 phases:

1. Identification of a research interest  
Positioned within the domain of interest where “how” or “why type questions can be raised and answered.
2. Deciding which studies to include  
With translation, not generalisation as the goal, there was no intent that searching be systematic, comprehensive or exhaustive. Noblit and Hare (1988) argue that there is no legitimate basis for such searching in ME. Rather they advocate consideration of the target audience information needs.
3. Reading the studies  
Reading and notation of metaphors occurs concurrently and recursively, steps 3 and 4 are therefore not truly separate steps and researchers move between them several times.
4. Determining how the studies are related  
Collating lists of metaphors from included papers and juxtaposing them to identify the relationship between studies
5. Translating the studies in to each other  
This is first order synthesis. Treating accounts as analogies “..this one is like that one except...” although Noblit and Hare (1988) insist that the richness of each account not be lost, nor the link between metaphors within an account be lost.
6. Synthesising the translations  
This is second order synthesis. The process is to review each of the themes or metaphors from translation that can be encompassed by other themes or metaphors. Synthesis may be reciprocal, refutational or line of argument

**Reciprocal translation** is where it is considered appropriate to bring together the metaphors of one paper within the metaphors of another paper or papers.

**Refutational translation** is more problematic as it must take into consideration “the relationship” between competing explanations or discourses, description on how to do this are scarce (Munro, Lewin et al. 2007). Munro, Lewin et al (2007) also suggest that refutations are rarely clear in their relationship to the themes or metaphors of the alternate paper/papers included in the refutation.

**Line of argument translation** is more concerned with inference – it asks the question what do the parts of the concept under examination say about the whole of the concept? It is this aspect of meta ethnography that most resembles grounded theory (Glasner and Strauss 1967), Noblit and Hare (1988) suggest either clinical inference or grounded theory as an appropriate method of analysis for line of argument synthesis.



## 7. Expressing the Synthesis

Noblit and Hare describe meta-ethnographic synthesis as the synthesis of interpretive explanations that are assumed to be metaphoric in essence, and hence are abstract. The goal of such synthesis is, as with all forms of synthesis, to represent in reduced form the complex whole. This process of metaphoric reduction seeks to achieve abstraction while maintaining complexity and create translations that maintain the relationships between concepts (1988:37).

Two meta-ethnographies tend to dominate the literature in terms of published examples that have been subject to some critique (Britten, Campbell et al. 2002; Munro, Lewin et al. 2007). The meta ethnography by Britten, Campbell, Pope, Donovan, Morgan, and Phil (2002) has been criticised for systematically de-contextualising the studies, giving privilege to specific themes above others, and for reducing thick descriptions to thin variants in the write up. Savin-Baden and Major (2007) suggest this is at odds with Noblit and Hare's (1988) argument that meta ethnography should recover both the social and theoretical context of research.

## Conclusion

The qualitative researcher, in analysing qualitative data, is involved in synthesising the worlds of participants or the text of observation notes through categorizing and developing descriptors in the form of themes or other groupings.

Meta-synthesis, as a "higher order form of synthesis" is a process of combining the findings of individual studies (that is, cases) to create summary statements that authentically describe the meaning of these themes (or cross-case generalizations).

Meta synthesis is an interpretive process but requires transparency of process. There are many different approaches to meta-synthesis.

The integrative/aggregative approach used by JBI was developed as a method of synthesis designed to mirror the Cochrane process of systematic reviews of effectiveness whilst being sensitive to the contextual nature of qualitative research and its traditions. Implicit in its development is recognition of the valuable role qualitative research/evidence can play in bolstering evidence-based healthcare.

The JBI meta-aggregative approach moves beyond the production of theory to produce declamatory statements in the form of 'lines of action' which are close to recommendations. By contrast, many other qualitative synthesis methods only suggest implications for action that can be drawn or inferred from the synthesis exercise.

## Session 3:

# The critical appraisal of qualitative studies

The critical appraisal of identified papers is a key stage in the process of conducting a qualitative synthesis using meta-aggregation. Critical appraisal is sometimes described as quality assessment and basically involves using a tool(s) to evaluate the quality of a given study. As you will have noted, critical appraisal is not a necessary stage in some approaches to qualitative synthesis – meta-ethnography for example – indeed, the practice remains contentious. Garratt and Hodkinson (1998:515) argue that “it is both illogical and pointless to attempt to predetermine a definitive set of criteria against which all qualitative research should be judged.” Nonetheless, in recent years the number of critical appraisal and quality assessment tools have increased rapidly (see Spencer, Ritchie et al. 2004).

### Validity, reliability and generalisability in qualitative research

Qualitative research has been recognised as making a valuable contribution to healthcare for improving healthcare practice and policy. However, the appropriate means of judging the quality of qualitative research remains deeply contested, in part reflecting some of the tensions in the field of qualitative research itself (Dixon-Woods, Sutton et al. 2005). Traditionally the terms used to measure the quality/rigour of research are reliability and validity. Generally, reliability is the extent to which the results of a study or a measure are repeatable in different circumstances whereas validity refers to the degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure.

Some argue that validity and reliability are important in qualitative research (Patton 2002; Collingridge and Gantt 2008), others argue that the concept of reliability is misleading in qualitative research (Stenbacka 2001; Flick 2006). The quality of a study should be judged within a framework appropriate to its paradigm (Healy and Perry 2000). For example, while the terms reliability and validity are essential criteria for quality in quantitative paradigms, in qualitative paradigms the terms credibility, dependability and transferability are more suitable for judging quality (Lincoln and Guba 1985). Lincoln and Guba argue that their criteria better reflects the underlying assumptions involved in much qualitative research. Their proposed criteria and the “analogous” quantitative criteria are listed in the table below. It is worth noting however, that the translation and development of criteria to assess the quality of qualitative research is a contested issue (Atkins, Lewin et al. 2008) .

**REVIEWS icon:** Reviews are the projects that Studies, Extractions and Findings are related to. If the Reviews icon is clicked, the following screen will appear.

| Quantitative Research | Qualitative Research |
|-----------------------|----------------------|
| reliability           | dependability        |
| internal validity     | credibility          |
| external validity     | transferability      |

### Reliability/dependability

In qualitative research, the concept of reliability typically refers to adopting research methods that are accepted by the research community as legitimate ways of collecting and analysing data (Collingridge and Gantt 2008). According to Lincoln & Guba (1985) and (Seale 1999) the term dependability in qualitative research closely corresponds to the notion of reliability in quantitative research. The qualitative studies that adopt reliable qualitative methodology, methods and conduct their analyses in a competent manner (see validity) are expected to generate results that enrich our understanding of the meanings that people attach to social phenomena (Collingridge and Gantt 2008). In qualitative research, the aim of reliability differs from the quantitative understanding in that the focus is not on obtaining exactly the same results time and again, but rather on achieving consistent similarity in the quality of the results. To maintain reliability/dependability, the qualitative research process should be logical, traceable and clearly documented.



## Internal validity/credibility

In general, validity concerns the degree to which an account is accurate. In qualitative research, validity concerns the degree to which a finding is judged to have been interpreted in a correct way. In quantitative research the subcategories of validity are commonly referred to as the following:

Construct validity: reflects a concern with whether we are truly assessing an underlying construct such as emotional well-being, physical comfort, or pain;

Content validity: reflects a concern with whether our measurement tools (e.g. interviews, observation etc.) provide an adequate measure of the construct of interest; and

Criterion validity: refers to the strength of the relationship between our measurement tools and other measures of the same phenomenon. (Collingridge and Gantt 2008)

Although internal validity is treated separately in quantitative studies, these terms are not viewed separately in qualitative research. The credibility of qualitative research depends on the ability and effort of the researcher to address the issue of 'fit' between respondents' views and the researcher's representation of them. Credibility is demonstrated through a number of strategies: member checks (returning to the participants following data analysis), peer debriefing/peer checking (using a panel of experts or an experienced colleague to re-analyse some of the data), prolonged engagement, persistent observation and audit trails (Rolfe 2006).

## External validity/ transferability

External validity/ transferability refers to the degree to which the results of qualitative research can be generalized or transferred to other contexts or settings. The question as to whether qualitative results are generalisable in the same way that quantitative results are generalisable is a matter of ongoing debate. Collingridge & Gantt (2008) argue that studies that build on existing theoretical concepts through comprehensive literature reviews, employ theory-based sampling procedures, follow well-defined data analysis procedures, clearly define how the findings apply to other contexts, and integrate results into existing research in a coherent fashion produce results that can be generalised with a greater degree of confidence. Consensus appears to be emerging that for qualitative researchers generalisability is best thought of as a matter of the "fit" between the situation studied and others to which one might be interested in applying the concepts and conclusions of that study; this is sometimes referred to as cross-case generalisations.

## Discussion

There is a tendency to classify research as quantitative or qualitative. Just as our description of three prevailing paradigms are classifications of approaches to research, so too is the quantitative/qualitative terminology.

As far as this module is concerned, we prefer to use the terms qualitative and quantitative in relation to data and method. While the positivist paradigm essentially focuses on quantification, this does not exclude quantifying qualitative data. For example, a survey of opinions on an issue (which would consist of qualitative data) can be analysed by counting how many times particular opinions are expressed and then applying statistical tests. Similarly, quantitative data may be appropriate in critical research.

In discussing the quantitative/qualitative debate we are therefore confining our thoughts to quantitative/qualitative data and wish to avoid using these terms to describe overall, broad approaches to research.

Qualitative data is collected in order to derive understanding of phenomena from an emic (culture meaning) perspective. The focus is on description, understanding and empowerment. Where theory is developed it is based on inductive reasoning and is grounded in the reality as it is perceived and experienced by the participants involved (Connors, 1988:34).

Conversely, quantitative data is collected in order to control phenomena. The focus is on theory testing and prediction and control. Theory derived from previous research is used to formulate a hypothesis or testable idea. Based on the process of deduction, the hypothesis is then tested using objective methods.

The relative merits of both of these forms of data are the subject of much heated debate in the health care system. On the one hand, qualitative methods are seen to most certainly increase understanding but they are often criticised as 'biased' and subjected to the question '...well, now that we understand, so what'? On the other hand, quantitative methods are seen to give an apparently unbiased, objective picture of a situation or phenomenon, but they are often criticised as being 'only half the story' or of being overly concerned with numbers and statistics.

Central to the debate must be, however, the paradigmatic stance from which the researcher works, and the consumer of research reads. As long as the method is consistent with, or true to, the paradigm that underpins the research, and as long as it is an appropriate method to address the research question, in theory the debate becomes redundant. However, the debate still continues to rage largely because of deeply entrenched allegiances to a particular paradigm.

You may have already been familiar with this debate before enrolling in this module, or it may never have been an issue for you until now. In many health care settings, however, the two sides have become almost competitors. You may have concluded that both exist and are of importance in themselves; that they are different and should be separated out from each other; that one leads to the other; or that you favor one to the other. At this stage, we hope that you are somewhat tentative in your views — so if you draw no conclusions from this group work, that is fine!

However, regardless of the paradigm, it is important that the research is seen as reliable. In qualitative research, the aim of reliability differs from the quantitative understanding in that the focus is not on obtaining exactly the same results time and again, but rather on achieving consistent similarity in the quality of the results. To maintain reliability/dependability, the qualitative research process should be logical, traceable and clearly documented.

Qualitative research must also be seen as credible, i.e. that the researcher has the ability to address the issue of 'fit' between respondents' views and the researcher's representation of them

The focus of critical appraisal therefore is on the rigour of the research design and quality of reporting. Qualitative approaches are located in diverse understandings of knowledge; they do not distance the researcher from the researched; and the data analysis is legitimately influenced by the researcher when they interpret the data. Critical appraisal therefore focuses on:

1. Congruity between philosophical position adopted in the study, study methodology, study methods, representation of the data and the interpretation of the results;
2. The degree to which the biases of the researcher are made explicit; and
3. The relationship between what the participants are reported to have said and the conclusions drawn in analysis.

## **The JBI approach to critical appraisal of qualitative evidence**

JBI takes the view that conscientious readers always assess the quality of papers they read, but that this is often done informally. Using a checklist helps formalize and systematize the process, providing an audit trail for the assessments made. Critical appraisal is viewed as a means of engaging with a paper.

The focus of critical appraisal of qualitative research is on the rigour of the research design and quality of reporting. Qualitative approaches are located in diverse understandings of knowledge; they do not distance the researcher from the researched. Furthermore, the data analysis is legitimately influenced by researchers when they interpret the data. Consequently, critical appraisal focuses on:

1. Congruity between philosophical position adopted by the study and, study methodology; study methods; representation of the data; and interpretation of the results;
2. The degree to which the biases of the researcher are made explicit; and
3. The relationship between what the participants are reported to have said and the conclusions drawn in analysis.



## **The Critical Appraisal Criteria**

### **1. Congruity between the stated philosophical perspective and the research methodology**

Does the report clearly state the philosophical or theoretical premises on which the study is based? Does the report clearly state the methodological approach adopted on which the study is based? Is there congruence between the two? For example: a report may state that the study adopted a critical perspective and participatory action research methodology was followed. There is congruence between a critical view (focusing on knowledge arising out of critique, action and reflection) and action research (an approach that focuses on working with groups to reflect on issues or practices; to consider how they could be different; acting to change; and identifying new knowledge arising out of the action taken); a report may state that the study adopted an interpretive perspective and survey methodology was followed. There is incongruence between an interpretive view (focusing on knowledge arising out of studying what phenomena mean to individuals or groups) and surveys (an approach that focuses on asking standard questions to a defined study population); a report may state that the study was qualitative or used qualitative methodology (such statements do not demonstrate rigour in design) or make no statement on philosophical orientation or methodology.

### **2. Congruity between the research methodology and the research question or objectives**

Is the study methodology appropriate for addressing the research question? For example:

A report may state that the research question was to seek understandings of the meaning of pain in a group of people with rheumatoid arthritis and that a phenomenological approach was taken. Here, there is congruity between this question and the methodology. A report may state that the research question was to establish the effects of counseling on the severity of pain experience and that an ethnographic approach was pursued. A question that tries to establish cause-and-effect cannot be addressed by using an ethnographic approach (as ethnography sets out to develop understandings of cultural practices) and thus, this would be incongruent.

### **3. Congruity between the research methodology and the methods used to collect data**

Are the data collection methods appropriate to the methodology? For example:

A report may state that the study pursued a phenomenological approach and data was collected through phenomenological interviews. There is congruence between the methodology and data collection; a report may state that the study pursued a phenomenological approach and data was collected through a postal questionnaire. There is incongruence between the methodology and data collection here as phenomenology seeks to elicit rich descriptions of the experience of a phenomena that cannot be achieved through seeking written responses to standardised questions. There is congruity between the research methodology and the representation and analysis of data.

### **4. Congruity between the research methodology and the representation and analysis of data**

Are the data analysed and represented in ways that are congruent with the stated methodological position? For example:

A report may state that the study pursued a phenomenological approach to explore people's experience of grief by asking participants to describe their experiences of grief. If the text generated from asking these questions is searched to establish the meaning of grief to participants; and the meanings of all participants are included in the report findings, then this represents congruity; the same report may, however, focus only on those meanings that were common to all participants and discard single reported meanings. This would not be appropriate in phenomenological work.

### **5. There is congruence between the research methodology and the interpretation of results.**

Are the results interpreted in ways that are appropriate to the methodology? For example:

A report may state that the study pursued a phenomenological approach to explore people's experience of facial disfigurement and the results are used to inform practitioners about accommodating individual differences in care. There is congruence between the methodology and this approach to interpretation; a report may state that the study pursued a phenomenological approach to explore people's experience of facial disfigurement and the results are used to generate practice checklists for assessment. There is incongruence between the methodology and this approach to interpretation as phenomenology seeks to understand the meaning of phenomena for the study participants and cannot be interpreted to suggest that this can be generalised to total populations to a degree where standardised assessments will have relevance across a population.

### **6. Locating the researcher culturally or theoretically**

Are the beliefs and values, and their potential influence on the study declared? The researcher plays a substantial role in the qualitative research process and it is important, in appraising evidence that is generated in this way, to know the researcher's cultural and theoretical orientation. A high quality report will include a statement that clarifies this.

### **7. Influence of the researcher on the research, and vice-versa, is addressed**

Is the potential for the researcher to influence the study and for the potential of the research process itself to influence the researcher and her/his interpretations acknowledged and addressed? For example:

Is the relationship between the researcher and the study participants addressed? Does the researcher critically examine her/his own role and potential influence during data collection? Is it reported how the researcher responded to events that arose during the study?

### **8. Representation of participants and their voices**

Generally, reports should provide illustrations from the data to show the basis of their conclusions and to ensure that participants are represented in the report.

### **9. Ethical approval by an appropriate body**

A statement on the ethical approval process followed should be in the report.

### **10. Relationship of conclusions to analysis, or interpretation of the data**

This criterion concerns the relationship between the findings reported and the views or words of study participants. In appraising, paper appraisers seek to satisfy themselves that the conclusions drawn by the research are based on the data collected; data being the text generated through observation, interviews or other processes.

## **The Qualitative Assessment and Review Instrument - JBI-QARI**

QARI (the Qualitative Assessment and Review Instrument) is an online system that provides a step-by-step approach for a meta-synthesis of qualitative evidence. The JBI approach to the meta-synthesis is embodied in QARI and helps reviewers to mine or "dig for" evidence. QARI was developed to provide a structured process mirroring that taken for systematic reviews of quantitative research whilst being sensitive to the nature of qualitative data.

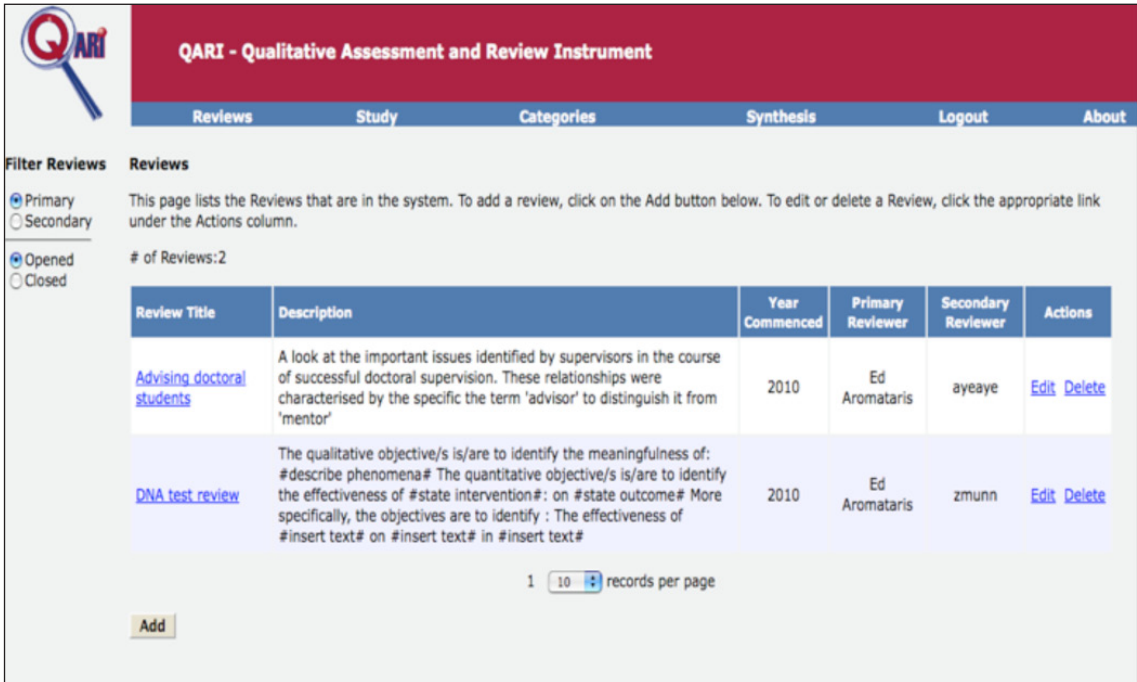
The JBI regards qualitative research as a rich source of evidence for practice. JBI seeks to systematically review this kind of evidence with a rigour that equals that of the systematic review if evidence of effectiveness but rigour in this area of inquiry differs from criteria applied to the randomised controlled trial.

The JBI developed the Qualitative Assessment and Review Instrument (JBI-QARI) in an attempt to recognise the results of qualitative research as legitimate evidence for health care practitioners. Over a period of two years, a project that used participatory processes at three consensus workshops explored the review of qualitative evidence and the outcomes of this project led to the development of JBI-QARI. JBI-QARI has been designed to enable reviewers to systematically review the findings of qualitative research. The underlying premise of the development of JBI-QARI was to design a system that would enable health scientists and health practitioners to review evidence from an inclusive position.



The purpose of this developmental process was to determine how evidence generated through qualitative research could be systematically reviewed, and to identify how evidence of appropriateness, meaningfulness and feasibility can augment evidence of effectiveness in evidence based health care. An in-depth discussion of the premises on which JBI-QARI is based; how JBI-QARI was developed; and the processes of the critical appraisal, extraction and synthesis of qualitative data using JBI-QARI are presented in the publication “Balancing the Evidence: Incorporating the synthesis of qualitative data into systematic reviews”. The JBI-QARI software is designed to manage, appraise, analyse and synthesise the findings of studies that utilise any qualitative approach as part of a systematic review of evidence. The JBI-QARI Instrument has been designed as a web-based database and incorporates a critical appraisal scale; data extraction forms; a data synthesis function; and a reporting function. The software was developed by a group of Australian academics and has been internationally peer reviewed.

## Starting QARI



The screenshot shows the QARI web interface. At the top, there is a red header with the QARI logo and the title "QARI - Qualitative Assessment and Review Instrument". Below the header is a blue navigation bar with links for "Reviews", "Study", "Categories", "Synthesis", "Logout", and "About".

On the left side, there is a "Filter Reviews" section with radio buttons for "Primary" (selected), "Secondary", "Opened" (selected), and "Closed".

The main content area displays a list of reviews. The first review is titled "Advising doctoral students" and the second is "DNA test review". Each review entry includes a description, the year commenced (2010), the primary reviewer (Ed Aromataris), the secondary reviewer (ayeaye for the first, zmun for the second), and action links for "Edit" and "Delete".

At the bottom of the list, there is a pagination control showing "1" records per page and a dropdown menu set to "10 records per page". An "Add" button is located at the bottom left of the review list area.

| Review Title                               | Description   | Year Commenced | Primary Reviewer | Secondary Reviewer | Actions                                     |
|--|---|----------------|------------------|--------------------|---|
| <a href="#">Advising doctoral students</a> | A look at the important issues identified by supervisors in the course of successful doctoral supervision. These relationships were characterised by the specific the term 'advisor' to distinguish it from 'mentor'  | 2010           | Ed Aromataris    | ayeaye             | <a href="#">Edit</a> <a href="#">Delete</a> |
| <a href="#">DNA test review</a>            | The qualitative objective/s is/are to identify the meaningfulness of: #describe phenomena# The quantitative objective/s is/are to identify the effectiveness of #state intervention#: on #state outcome# More specifically, the objectives are to identify : The effectiveness of #insert text# on #insert text# in #insert text# | 2010           | Ed Aromataris    | zmun               | <a href="#">Edit</a> <a href="#">Delete</a> |

This picture is a front page of the QARI program. The main menu is located at the top of the screen: Reviews, Studies, Categories, Synthesis, Logout, About, Secondary and Closed.

**REVIEWS icon:** Reviews are the projects that Studies, Extractions and Findings are related to. If the Reviews icon is clicked, the following screen will appear.

**QARI - Qualitative Assessment and Review Instrument**

Reviews    Study    Categories    Synthesis

Review Title: Advising doctoral students

Review Question: A look at the important issues identified by supervisors in the course of successful doctoral supervision. These relationships were characterised by the specific the term 'advisor' to distinguish it from 'mentor'

Year commenced: 2010

Primary Reviewer: Ed Aromataris

Secondary Reviewer: ayeye

Review Status: Studies

Non JBI Review: No

The Review page lists the Reviews that are in the system. This page is used to add new, edit existing or cancel Reviews. Each entered review has a primary and secondary reviewer. When “secondary” appears on the menu bar, this means that the user logged-on is viewing the reviews for which she or he is the Primary reviewer. The user logged-on’s name will automatically be entered as Primary Reviewer. Select the secondary reviewer from the drop down box titled <Secondary Reviewer>.

To view reviews where you are a secondary reviewer, click on “Secondary”. A Primary Reviewer leads the review and has rights to add, edit or delete Reviews. Before a Reviewer can work on a project they must be assigned to the Review, either when the Review is first created or later by editing the Review. A Secondary Reviewer assesses every paper selected for critical appraisal, and assists the Primary Reviewer in conducting the review.

To open an existing review, click on the review title. Review details will appear.

To add a new review click on ADD.

\* Note that only registered users can be used as reviewers.

## Inserting Studies

**QARI - Qualitative Assessment and Review Instrument**

Reviews Study Categories Synthesis Logout About

**Studies in "Advising doctoral students"**

This page is used to manage the retrieved Studies. From this page, Studies can be selected to perform assessment and extraction and to develop Findings. The drop down box can be used to filter studies as new, included, excluded, extraction or finished.

All filter

# of Citations: 2

| Author  | Title   | Journal              | Year | Status     | Assessment | Actions  |
|---|---|----------------------|------|------------|------------|--|
| <a href="#">Barnes, BJ &amp; Austin AE</a>                      | The role of doctoral advisors: A look at advising from the advisor's perspective      | Innov High Educ      | 2009 | Extraction | Complete   | <a href="#">Edit</a><br><a href="#">Delete</a> |
| <a href="#">Knox, S., Schlosser, LZ, Pruitt, NT and Hill CE</a> | A qualitative examination of graduate advising relationships: The advisor perspective | Counsel Psychologist | 2006 | Extraction | Complete   | <a href="#">Edit</a><br><a href="#">Delete</a> |

1 records per page

Add

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**STUDIES** (on the top menu bar): A Study is related to a Review. Extractions and Findings are written for a single Study. Clicking on <Studies> on the top toolbar opens the studies page. The Study page allows users to view, add, edit and delete Studies. The column on the right describes the stage reached for specific studies in the review. A Study goes through a process of being Assessed, Extracted then has Findings made against it. Assessment of a Study determines whether a Study is to be "included" or "excluded".

In JBI-SUMARI, of which JBI-CReMS and JBI-QARI are components, users are able to export studies entered into JBI-CReMS across to JBI-QARI automatically.

Users who do not access CReMS need to enter studies manually. To enter new studies manually, users click on the <Add> button in the bottom left hand corner of the screen.

**QARI - Qualitative Assessment and Review Instrument**

Reviews Study Categories

**Study Details**

Author: Barnes, BJ & Austin AE

Title: The role of doctoral advisors: A lo

Journal: Innov High Educ

Year: 2009

Volume: 33

Issue: 17

Page No: 297-315

Status: Extraction

Update Undo Cancel

Manual entry of the relevant information occurs on this page. Pressing <Update> adds and saves the information and returns the user to the Studies page.


## Critical appraisal

For a study to be used in the Review it must be assessed (critically appraised). QARI incorporates a checklist to appraise rigour generically. The assessment process is performed online by both the Primary and secondary reviewer independently.

The major aim in critically appraising experimental or quantifiable data is to limit bias and thus establish the validity of a study. From a quantitative perspective, sources of bias include selection bias, performance bias and attrition bias. Validity is assessed by establishing the extent to which a study design and conduct addresses potential bias.

This focus on limiting bias to establish validity is antithetical to the philosophical foundations of qualitative approaches to inquiry. The focus of critical appraisal is on the rigour of the research design and quality of reporting. Qualitative approaches are located in diverse understandings of knowledge; they do not distance the researcher from the researched; and the data analysis is legitimately influenced by the researcher when they interpret the data. Critical appraisal therefore focuses on:

1. Congruity between philosophical position adopted in the study, study methodology, study methods, representation of the data and the interpretation of the results;
2. The degree to which the biases of the researcher are made explicit; and
3. The relationship between what the participants are reported to have said and the conclusions drawn in analysis.

|  <b>QARI - Qualitative Assessment and Review Instrument</b> |  |            |   |
|---|--|------------|---|
| Reviews   | Study  | Categories | Synthesis   |
| Select<br>Detail<br>Assessment<br>Extraction<br>Findings  | <b>Assessment for: Barnes, BJ &amp; Austin AE - Innov HIgh Educ (2009)</b>   |            |   |
|   | <b>Primary Assessment</b><br>User = Ed Aromataris<br>Included = Yes<br>Reason = No reason given<br><input type="button" value="Edit Primary"/> |            | <b>Secondary Assessment</b><br>User = ayeaye<br>Assessment Complete |
|   | <b>Final Assessment</b><br>User = Ed Aromataris<br>Included = Yes<br>Reason = No reason given<br><input type="button" value="Edit Final"/>     |            |   |
| Version 5.0 Copyright © Joanna Briggs Institute 2011.   |  |            |   |

When a study is selected, clicking on <Assessment> in the dialogue box on the left will open the assessment page. The assessment page describes the assessment progress for the selected study. There is no order to the first appraisal of any study, it can be done by either the primary or secondary reviewer. When both reviewers have completed the appraisal of a selected paper, the Primary reviewer considers both appraisals and finalises the appraisal.

**QARI - Qualitative Assessment and Review Instrument**

Reviews Study Categories Synthesis Logout About

Assessment for : Barnes, BJ & Austin AE - Innov High Educ (2009)

Type: Primary  
User: Ed Aromataris

| Criteria   | Yes                              | No                    | Unclear               | Not Applicable        | Comment |
|--|----------------------------------|-----------------------|-----------------------|-----------------------|---------|
| 1) There is congruity between the stated philosophical perspective and the research methodology.   | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |         |
| 2) There is congruity between the research methodology and the research question or objectives.  | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |         |
| 3) There is congruity between the research methodology and the methods used to collect data.   | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |         |
| 4) There is congruity between the research methodology and the representation and analysis of data.  | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |         |
| 5) There is congruity between the research methodology and the interpretation of results.  | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |         |
| 6) There is a statement locating the researcher culturally or theoretically.   | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |         |
| 7) The influence of the researcher on the research, and vice-versa, is addressed.  | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |         |
| 8) Participants, and their voices, are adequately represented.   | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |         |
| 9) The research is ethical according to current criteria or, for recent studies, there is evidence of ethical approval by an appropriate body. | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |         |
| 10) Conclusions drawn in the research report do appear to flow from the analysis, or interpretation, of the data.                              | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |         |

Include: Yes  
Reason: Undefined  
Update Undo Cancel

Drawing from the literature and input from a panel of experts, a critical appraisal instrument (developed and extensively piloted and refined) is incorporated into the QARI software. Based on the standard approach promoted by the Cochrane Collaboration and adopted by the Joanna Briggs Institute, two reviewers are expected to independently critically appraise data, and to then confer.

The Assessment of Study can result in a Study being either “included” or “excluded” from the Review by either reviewer. If a Study is found to be “excluded” there needs to be a reason stated for the exclusion. During this process the Primary Reviewer would review each Study to determine a final Assessment status. If a Study’s Assessment status is in conflict the Primary Reviewer would need to resolve these conflicts. In the case of both Assessments on the Study being “excluded” there would need to be a final exclusion reason created. This reason would default to the original exclusion reason given by the Primary Reviewer but could be modified before being saved.

One of the difficulties in appraising qualitative papers is that the aspects you want to examine are not reported in a standardized way – one often has to read the entire paper to cover each item in the checklist. Another key point to bear in mind when undertaking critical appraisal – of any study type – is that you are actually appraising the quality of the reporting of the study, and only indirectly appraising the quality of the study itself. Critical appraisal checklists for qualitative research abound and they can serve as a useful tool in engaging with the text.

### Group Work 2

Read through readings and then undertake critical appraisal of the papers using the JBI Critical Appraisal Checklist for Interpretive and Critical Research. Following some discussion this information should then be entered into the JBI QARI online system.

## Session 4: Data Extraction

Data extraction serves the same purpose across evidence types - extraction aims to reduce the findings of many studies into a single document.

Qualitative data extraction involves transferring findings from the original paper using an approach agreed upon and standardised for the specific review. Thus, an agreed format is essential to minimise error, provide an historical record of decisions made about the data in terms of the review, and to become the data set for categorisation and synthesis. Drawing on the literature and input from a panel of experts, a data extraction instrument (developed and extensively piloted and refined) is incorporated into the QARI software.

**QARI - Qualitative Assessment and Review Instrument**

Reviews Study Categories Synthesis

Select Detail Assessment Extraction Findings

**Extraction Details: Barnes, BJ & Austin AE - Innov High Educ (2009)**

\* denotes field which will appear in report appendix

|                          |   |
|--------------------------|---|
| Methodology:             | Constructivist                                |
| Method: *                | in depth, open ended, interview               |
| Phenomena of Interest: * | successful HDR supervision                    |
| Setting:                 | Public, research extensive Uni                |
| Geographical:            | USA   |
| Cultural:                | USA   |
| Participants: *          | 25 advisors from 3 disciplines                |
| Data Analysis:           | open and axial coding                         |
| Authors Conclusion: *    | deepens knowledge about advising relationship |
| Reviewers Comments: *    | Identifies many issues                        |
| Complete                 | Yes   |

Update Undo Cancel

This picture above shows the first level QARI Extraction fields.

### Methodology

A methodology usually covers the theoretical underpinnings of the research. In a review, it is useful to add further detail such as the particular perspective or approach of the author/s such as “Critical” or “Feminist” ethnography.

### Method

The method is the way that the data was collected; multiple methods of data collection may be used in a single paper, these should all be stated. Be sure to specify, if for example you choose interview, what type of interview - open-ended, semi-structured, face-to-face, telephone.



## Phenomena of Interest/Intervention

Phenomena of interest are more likely to be the focus in a QARI review. This refers to the experience, event or process that is occurring, such as response to pain or coping with breast cancer. An intervention is a planned change made to the research situation by the researcher as part of the research project. Qualitative research does not rely on interventions as they are traditionally understood in quantitative research, hence the focus at this point of the methods is the phenomena of interest.

## Setting

The Setting describes where the research was conducted - the specific location. For example: at home; in a nursing home; in a hospital; in a dementia specific ward in a sub-acute hospital. Some research will have no setting at all (e.g. discourse analysis).

## Geographical Context

The Geographical Context is the location of the research, it is useful to be as specific as possible in describing the geography, by including not just the country, but whether it was a rural or metropolitan setting.

## Cultural Context

Cultural Context seeks to describe the cultural features in the study setting such as, but not limited to, time period (16th century); ethnic groupings (indigenous people); age groupings (older people living in the community); or socioeconomic groups (working class). When entering information be as specific as possible. This data should identify cultural features such as employment, lifestyle, ethnicity, age, gender, socioeconomic class, and location of and time.

## Participants

Information entered in this field should be related to the inclusion and exclusion criteria of the research, and include (but not be limited to) descriptions of age, gender, number of included subjects, ethnicity, level of functionality, and cultural background. Included in this section should be definitions of terms used to group people that may be ambiguous or unclear, for example, if the paper includes role definitions.

## Data Analysis

The techniques used to analyse the data are stated in the Data Analysis field; a list, (though not exhaustive) of examples is provided below:

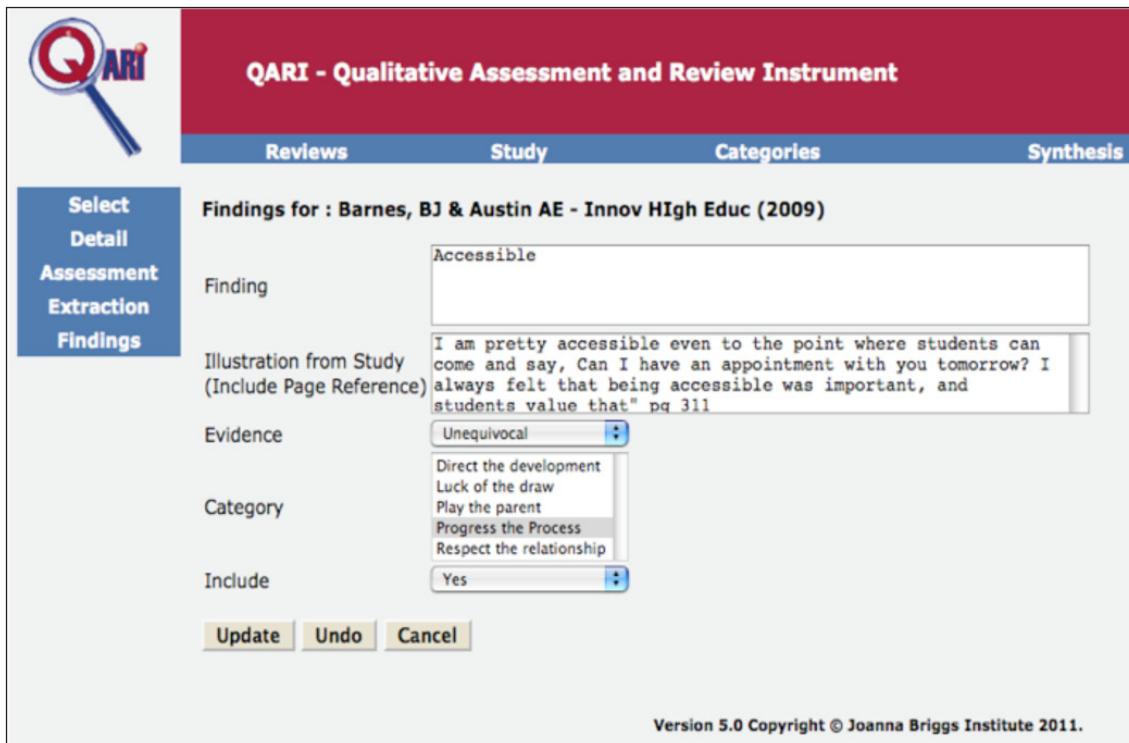
- Named software programs
- Contextual analysis
- Comparative analysis
- Thematic analysis
- Discourse analysis
- Content analysis

It is important to stress that our interest is in evidence for practice; many qualitative studies explore - quite legitimately - issues and questions that are not directly relevant. When, however, there is qualitative evidence of direct relevance to practice (for example, studies of the experience of specific illnesses; the experience of phenomena such as pain etc) it is appropriate to include such evidence in reviews.

## Extracting Findings

The units of extraction in this process are specific findings and illustrations from the text that demonstrate the origins of the findings. In QARI a finding is defined as:

A conclusion reached by the researcher(s) and often presented as themes or metaphors.



**QARI - Qualitative Assessment and Review Instrument**

Reviews Study Categories Synthesis

Select  
Detail  
Assessment  
Extraction  
Findings

Findings for : Barnes, BJ & Austin AE - Innov HIgh Educ (2009)

Finding: Accessible

Illustration from Study (Include Page Reference): I am pretty accessible even to the point where students can come and say, Can I have an appointment with you tomorrow? I always felt that being accessible was important, and students value that" pg 311

Evidence: Unequivocal

Category: Direct the development, Luck of the draw, Play the parent, Progress the Process, Respect the relationship

Include: Yes

Update Undo Cancel

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As this slide shows, the FINDING is an interpretation of the researcher (NOT THE REVIEWER) - presented in the form of a statement, a theme or a metaphor. To identify findings, reviewers need to read the paper through carefully, and to then read it closely and identify the findings and enter them into JBI-QARI. Each finding is extracted and textual data that illustrates or supports the finding is also extracted and inserted in the <Illustration from Publication> field.

In other words, the reviewer searches the paper to locate the DATA - in the form of a direct quotation, an observation or a statement - that gave rise to the finding. This is an important step in data extraction as it requires the reviewer to establish the degree to which the finding authentically represents the data.

Note also that the process of meta-synthesis focuses on FINDINGS rather than DATA.

A Reviewer adds Findings to a Study, but only after an Extraction is completed on that Study. If a Study's status changes to "excluded" then the related Findings will be also excluded (but not deleted).



## Assigning a Level of Credibility to Qualitative Evidence

Assigning qualitative evidence a “level of evidence” rating does not - as in the case of quantitative evidence - relate to study design; but to the CREDIBILITY of study findings in terms of the degree of their authenticity. Therefore, the credibility of every finding is assessed at the point of data extraction. The presentation of a finding and an illustration of its source below it on the Findings screen in QARI enables the reviewer to look at both and determine the degree to which the interpretation of the researcher is credible.

JBI Levels of Credibility- Qualitative Studies:

- **Unequivocal** - relates to evidence beyond reasonable doubt which may include findings that are matter of fact, directly reported/observed and not open to challenge
- **Credible** - those that are, albeit interpretations, plausible in light of data and theoretical framework. They can be logically inferred from the data. Because the findings are interpretive they can be challenged.
- **Not Supported** - when 1 nor 2 apply and when most notably findings are not supported by the data

Thus, the reviewer is required to determine if, when comparing the DATA (illustration from the text) with the FINDING (statement, theme, metaphor) the FINDING represents evidence that is: Unequivocal, Credible or Unsupported.

# Session 5:

## Data Analysis and Meta-Synthesis

The analysis and synthesis of qualitative studies is commonly termed meta-synthesis, and like meta-analysis of quantitative studies, it is based on processed data. The aim of meta-synthesis is to assemble findings; categorise these findings into groups on the basis of similarity in meaning; and to aggregate these to generate a set of statements that adequately represent that aggregation. These statements are referred to as synthesised findings - and they can be used as a basis for evidence based practice.

The JBI-QARI meta-aggregative approach to meta-synthesis requires reviewers to identify and extract the findings from papers included in the review; to categorise these study findings; and to aggregate these categories to develop synthesised findings. It is important to note here that JBI-QARI does not involve a reconsideration and analysis of the data in papers reviewed as if it were primary data. JBI-QARI focuses only on the combination of study findings. For a more detailed description of meta-aggregation the Book by Pearson et al (2011) on synthesizing qualitative evidence is recommended.

The most complex problem in synthesising textual data is agreeing on and communicating techniques to compare the findings of each study. The JBI-QARI approach to the meta-synthesis of qualitative research findings involves categorising and re-categorising the findings of two or more studies to develop SYNTHESISED FINDINGS.

Data Synthesis involves the following three-step approach:

Step 1: Identifying findings

Step 2: Grouping findings into categories; and

Step 3: Grouping categories into synthesised findings

In order to pursue this, reviewers, before carrying out data synthesis, need to establish their own rules on:

how to assign findings to categories; and

how to aggregate categories into synthesised findings.

Reviewers need to document these decisions and their rationale in the systematic review report.

When engaging in the JBI meta-aggregation of the results of qualitative studies, note that:

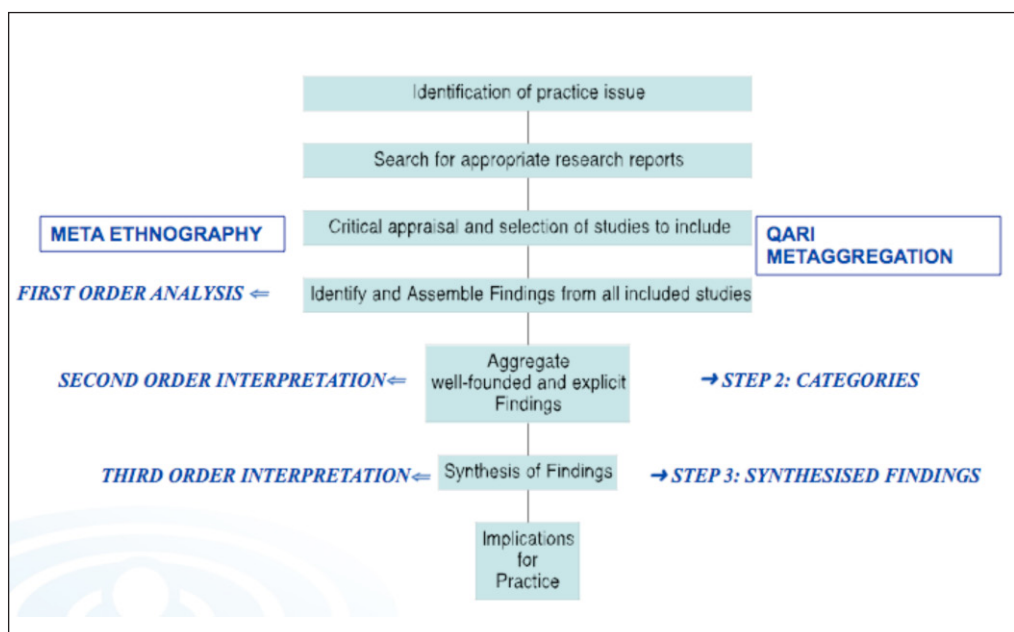
Differing research methods, such as phenomenology, ethnography or grounded theory, can be mixed in a single synthesis of qualitative studies because the synthesis is of findings and not data. This is a critical assumption of the QARI process. QARI meta-synthesis does not involve a reconsideration and synthesis of primary data-it is restricted to the combination of **findings**.

As has been emphasised earlier, the JBI approach to meta-synthesis focuses on study FINDINGS not study DATA. Therefore, as long as two or more studies focus on the same phenomena of interest, their findings can be pooled regardless of the study methodology.



As qualitative studies differ from RCTs, meta-synthesis also utilises an approach that is markedly different from that used during meta-analysis. At the conclusion of both these approaches, the product of the synthesis provides an understanding that is based on a range of populations, settings and circumstances. This broad base for generation of evidence on a phenomenon allows for greater confidence in the evidence. However, unlike meta-analysis, meta-synthesis deals in multiple realities and so provides but one interpretation of the phenomenon.

### Executing meta-synthesis using QARI



In step 1, reviewers may identify 32 findings from 15 phenomenological studies included in the review; 41 findings from 7 ethnographic studies included in the review; and 38 findings from 11 discourse analyses - a total of 111 findings from 33 included studies;

In step two, where the findings are categorised on the basis of similarity in meaning, the 32 findings from 15 phenomenological studies have been aggregated to generate 9 categories; the 41 findings from 7 ethnographic studies have been aggregated to generate 4 categories; and the 38 findings from 11 discourse analyses have been aggregated to generate 7 categories - a total of 20 categories:

Note that findings are not categorised on the basis of the study types, but on the basis of similarity in meaning, therefore findings from a diverse range of study types can be categorised together.

In step 3 the 20 categories have been synthesised to generate 10 synthesised findings.

**QARI - Qualitative Assessment and Review Instrument**

Reviews Study Categories Synthesis Logout Abn

Select Detail Assessment Extraction Findings

**Findings for : Barnes, BJ & Austin AE - Innov High Educ (2009)**

All Findings filter

| Illustration from Study  | Evidence    | Actions     |
|--|-------------|-------------|
| I try to support my advisees in whatever ways I can&My advisees know that they can do those kinds of things because they know that I will support them" pg 310   | Unequivocal | Edit Delete |
| Well, I have to be honest with them. I can't pull punches and say this is good when it is not, but I try to be positive. I don't say this is&[terrible]. I will try to say, wow, you have put in a lot of work into this." pg 311  | Unequivocal | Edit Delete |
| I am pretty accessible even to the point where students can come and say, Can I have an appointment with you tomorrow? I always felt that being accessible was important, and students value that" pg 311  | Unequivocal | Edit Delete |
| a) "It's a very complicated sort of multifaceted role that I play [as an advisor] and&the extent to which [each] facet is in front will be dependent on who that student is and what they need from me. Some students need for me to sit behind them and kick them in the rear to keep them moving. Other students don't need for me to do that, but they need me to help build their professional confidence&everybody needs something different, and you need to assess what those needs are and meet them." pg 305 b)I also need to provide some clear directions and not let the student flounder for too long. A little floundering is okay for the first three, four, or five weeks; but by the sixth or seventh week they better be moving in a direction that seems to lead to a conclusion; otherwise they are going to get lost, and they are going to get frustrated, and then you could lose them" pg 306 c)Sometimes I will have a student come to me and say, I want to do this [dissertation] project, and then I have to tell them&that this won't work because it is not a good project&my role is to get them to develop a project, which they are crazy about and that they are in love with, but it has to be reasonable and doable" pg 306 d)I think [a] critical role I have as an advisor is to helpmy students cope with failure. Helping students understand that [they have not failed] because their result is&unfavorable&. So helping students to cope with unexpected results so that they don't get demoralized or disenchant are [sic] some of my biggest responsibilities" pg 306 | Unequivocal | Edit Delete |
| Once people begin to think about their proposal&the next major role is trying to&bolster their thoughts about themselves as a researcher&I spend a lot of time&trying to help them sort out their ideas into a researchable question&, and then I am spending a huge amount of time trying to help them own their ideas and getting them to see themselves as very credible researchers" pg 307  | Unequivocal | Edit Delete |
| The bottom line is I need to make them employable. I want them to have vitas that distinguish them from all of the other doctoral students&.I want them to have personal styles that speak of leadership..." pg 307 In theory I think&the most critical responsibility that I have is to make sure that they are doing what is meaningful to them. I would say that is what I give my heart to. I want students working in their course work   | Unequivocal | Edit Delete |

Once all of the information on a Review is collected in the form of Findings and Extractions, the Findings can be allocated to user-defined categories. To do this, the reviewer needs to read all of the findings on the findings screen. This shows the findings, their illustrations from the text and the level of credibility. Categorising moves from a focus on individual studies to the findings as a whole.

### Creating Categories

On the menu bar select <Categorise>, this opens the Categories page.

Click on <Categories> in the menu on the LEFT of your screen:

**QARI - Qualitative Assessment and Review Instrument**

Reviews Study Categories Synthesis Logout Abn

Categories Findings

**Categories for: Advising doctoral students**


This page allows categories to be managed.

| Name                                     | Summary  | Actions     |
|--|--|-------------|
| <a href="#">Progress the Process</a>     | Help the student through necessities and requirements of research, their project, and the inevitable highs and lows towards making them a success. These are the tangible obligations of a good advisor. The amount of help and the specific needs will differ | Edit Delete |
| <a href="#">Direct the development</a>   | The end product should always be kept in mind and should be more than the sum of its parts. Students will produce a thesis, the tangible, physical outcome. They should leave with a lot more than that.   | Edit Delete |
| <a href="#">Respect the relationship</a> | There should always be boundaries, but a relationship where a student develops into a colleague and/or friend, will aid the process and development.   | Edit Delete |
| <a href="#">Play the parent</a>          | Occasions may arise where extra effort is necessary to keep the process, development, etc moving.  | Edit Delete |
| <a href="#">Luck of the draw</a>         | Some things will be beyond the advisor's, and often anyone's control.  | Edit Delete |

1 10 records per page

Add

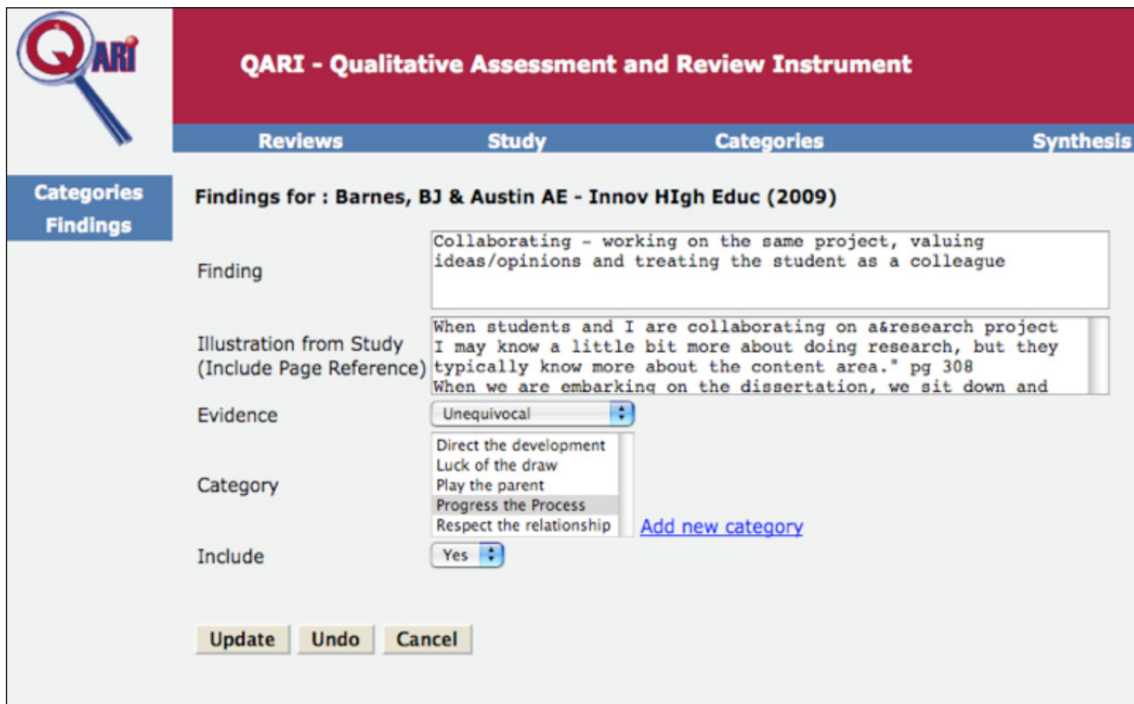
The Categories page will appear: Click on <Add> to add a category.



Assign a "Name" to the category and summarise the meaning of the category name in the <Summary> field. Click on <Update> to save.

#### Allocating Findings to categories.

To allocate a Category to a Finding, click the link to the Finding you wish to allocate the Category to, this will reopen the Finding Details page. Select the appropriate Category from the drop box next to the Finding. Clicking <update> will save.



Clicking on Findings on the left of the screen will show findings, their illustration and once categories have been added, these will be listed in the far right column.

## Meta-synthesis

### Synthesised Findings

The final stage in the process is to develop a meta-synthesis; that is, a set of synthesised findings that draw some conclusions of use to practice. In the JBI meta-aggregation approach a synthesised finding is:

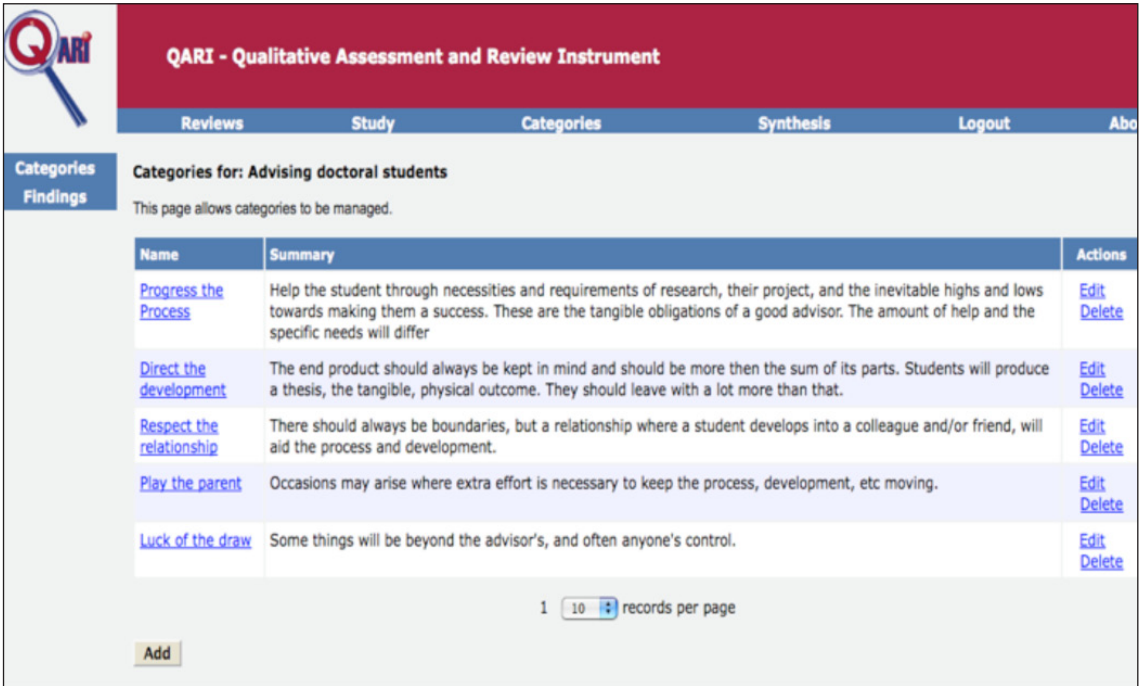
an overarching description of a group of categorised findings that allow for the generation of recommendations for practice.

### Formulating synthesised findings

Can be stated propositionally as “if-then” statements - for example: “If a patient is awaiting a final diagnosis, their relatives will sometimes feel as if they are not involved” (a somewhat awkward and eccentric form). The declaratory form that emphasises the probability of the claim is preferred: *“Relatives of patients awaiting a final diagnosis of brain death may feel as if they are not involved if strategies to include them are not pursued”*.

### Synthesising Categories

To synthesise the categories, the reviewer needs to review the full list of categories and identify categories of sufficient similarity in meaning to generate synthesised findings.




The screenshot shows the QARI web application interface. The top navigation bar includes 'Reviews', 'Study', 'Categories', 'Synthesis', 'Logout', and 'About'. The main content area is titled 'Categories for: Advising doctoral students' and includes a table of categories. The table has columns for 'Name', 'Summary', and 'Actions'. The categories listed are 'Progress the Process', 'Direct the development', 'Respect the relationship', 'Play the parent', and 'Luck of the draw'. Each category has 'Edit' and 'Delete' links in the Actions column. There is also an 'Add' button at the bottom left and a 'records per page' selector set to 10.

| Name                                     | Summary  | Actions  |
|--|--|--|
| <a href="#">Progress the Process</a>     | Help the student through necessities and requirements of research, their project, and the inevitable highs and lows towards making them a success. These are the tangible obligations of a good advisor. The amount of help and the specific needs will differ | <a href="#">Edit</a><br><a href="#">Delete</a> |
| <a href="#">Direct the development</a>   | The end product should always be kept in mind and should be more than the sum of its parts. Students will produce a thesis, the tangible, physical outcome. They should leave with a lot more than that.   | <a href="#">Edit</a><br><a href="#">Delete</a> |
| <a href="#">Respect the relationship</a> | There should always be boundaries, but a relationship where a student develops into a colleague and/or friend, will aid the process and development.   | <a href="#">Edit</a><br><a href="#">Delete</a> |
| <a href="#">Play the parent</a>          | Occasions may arise where extra effort is necessary to keep the process, development, etc moving.  | <a href="#">Edit</a><br><a href="#">Delete</a> |
| <a href="#">Luck of the draw</a>         | Some things will be beyond the advisor's, and often anyone's control.  | <a href="#">Edit</a><br><a href="#">Delete</a> |

To create a synthesised finding, click on <Synthesis> on the top menu bar and then click the button <Add Synthesis>. Alternatively, in the Category Details page, click on the link <Add Synthesis>. Each will take the user to the Synthesis Details page:





## QARI - Qualitative Assessment and Review Instrument

Reviews
Study
Categories
Synthesis

**Categories**  
Findings

### Synthesis Details


This page allows the addition of a synthesis.

Name

Summary

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Enter the "Name" of the synthesised finding and click on <Update> to save.



## QARI - Qualitative Assessment and Review Instrument

Reviews
Study
Categories
Synthesis

**Categories**  
Findings

### Category Details

This page allows the editing of a Category.

Name

Summary

Synthesis:  [Add new synthesis](#)

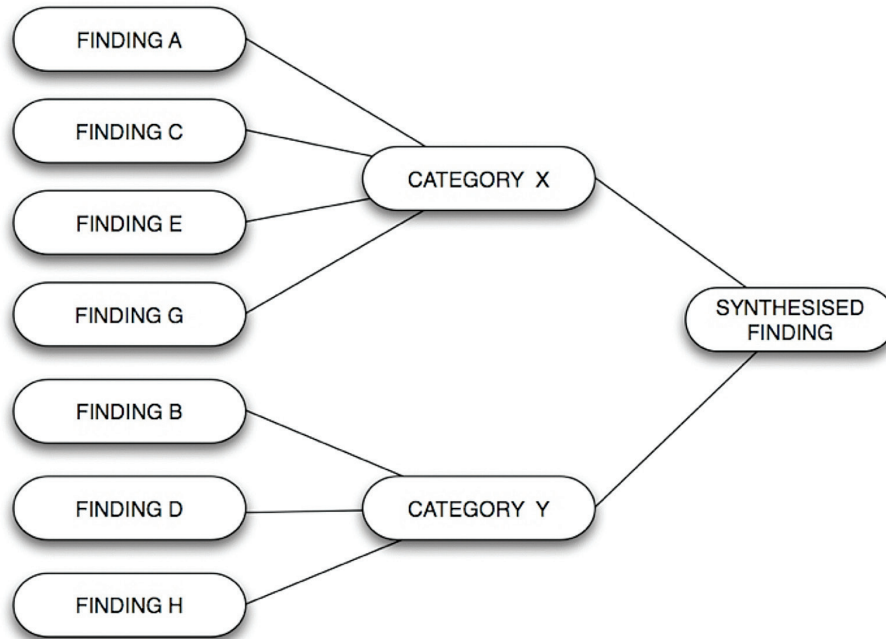
(None)  
Aid Evolution

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## Allocating Categories to a Synthesised Finding

To allocate a category to a synthesised finding, click on <Categorise> on the top menu bar; then click on <categories> on the left hand menu. Click on the category and select the appropriate Synthesised Finding for the selected category:

JBQI-QARI sorts the data into a meta-synthesis table or "QARI-View". Click on <Synthesise> when allocation of categories to synthesised findings is completed to view the QARI view graph.



|  |                        |   |
|--|------------------------|---|
| Helping students develop as researchers - incl. help to become independent to plan, conduct, and execute research projects. (U ) | Direct the development | <p><b>Aid Evolution</b><br/>           'Help' or 'aid' is a recurrent theme throughout. 'Evolution' encompasses gradual achievement and development of the student - aim of the process. Developing a good relationship with the student clearly 'aids' also. Term also acknowledges 'chance events'.</p> |
| Mentoring - guiding student's professional development, more than just academic requirement of advisor (U )                      |                        |   |
| Role model or mentor (C )  |                        |   |
| Similar career path had a positive effect on the relationship (C )   | Luck of the draw       |   |
| Advisee's personal and professional characteristics contributed to relationship quality. (C )                                    |                        |   |
| Chastising - correct bad behaviour (U )  | Play the parent        |   |
| Supportive/caring (U )   |                        |   |
| Accessible (U )  | Progress the Process   |   |
| Advocating - protect/stand up for students (U )  |                        |   |
| Collaborating - working on the same project, valuing ideas/opinions and treating the student as a colleague (U )                 |                        |   |
| Help advisee navigate program (C )   |                        |   |
| Helping students to be successful - incl. a) assessing students needs; b) helping them progress; c) help them find topic; d)     |                        |   |

For QARI users who are also using JBI-CReMS, these tables are exported to the Final Report in JBI-CReMS.

## Reporting Findings

When writing the final systematic review report, there are various ways to present the information.

### Report by category

To report information related to the Categories select the <Categories> button in the QARI top menu bar and click on <Findings> in the left hand menu. The information displayed includes the Finding with the supporting illustration from the study as well as the Category assigned to it.

### Filtering findings by category

Allows filtering of the Findings of a particular review by Categories. This allows all of the Findings for a Category to be viewed together. Based on the Findings for a single Category the summary can now be written.

To view filtered Findings, click the <Findings> button on the left hand menu to bring up the list of Categories. Select the desired filter from the drop down menu next to "Filter", then click the <Filter> button to filter the Findings by the Category.

## Conflict of interest

A statement should be included in every review protocol that either declares the absence of any conflict of interest or describes a specified or potential conflict of interest.

## Implications for practice

Implications for practice should be detailed and based on the documented results, not reviewer opinion. In qualitative reviews, recommendations are declamatory statements that are steeped in context. Therefore, generalisability occurs between cases rather than across broad populations. Recommendations must be clear, concise and unambiguous. Recommendations for research. Where evidence is of sufficient level, appropriate recommendations should be made. Recommendations must be clear, concise and unambiguous.

## Implications for research

All implications for research must be derived from the results of the review, based on identified gaps in the literature or on areas of weakness, such as methodological weaknesses. Implications for research should avoid generalized statements calling for further research, but should be linked to specific issues.

## Developing recommendations

The Joanna Briggs Institute develops and publishes recommendations for practice with each systematic review. Across the different types of evidence and approaches to systematic reviews a common approach to the construction of recommendations for practice has been developed, which can be summed up as the requirement for recommendations to be phrased as declamatory statements. Recommendations are drawn from the results of reviews and given a level of evidence (see below) based on the nature of the research used to inform the development of the recommendation. Recommendations are a reflection of the literature and do not include any nuances of preference or interpretation that reviewers or review panels may otherwise infer.

## Assigning levels of evidence

The Joanna Briggs Institute and its collaborating centres and Evidence Synthesis Groups currently assign a level of evidence to all recommendations drawn in JBI systematic reviews. The reviewers, in conjunction with their review panel, should draft and revise recommendations for practice and include a level of evidence congruent with the research design that led to the recommendation. The JBI Levels of Evidence are detailed in the table below.

| Level of Evidence | Feasibility<br>F (1-4)  | Appropriateness<br>A (1-4)  | Meaningfulness<br>M (1-4)   | Effectiveness<br>E (1-4)   |
|-------------------|---|---|---|--|
| 1.                | Metasynthesis of research with unequivocal synthesised findings   | Metasynthesis of research with unequivocal synthesised findings   | Metasynthesis of research with unequivocal synthesised findings   | Meta-analysis (with homogeneity) of experimental studies (eg RCT with concealed randomisation) OR One or more large experimental studies with narrow confidence intervals      |
| 2.                | Metasynthesis of research with credible synthesised findings  | Metasynthesis of research with credible synthesised findings  | Metasynthesis of research with credible synthesised findings  | One or more smaller RCTs with wider confidence intervals OR Quasi-experimental studies (without randomisation)   |
| 3.                | <ul style="list-style-type: none"> <li>a. Metasynthesis of text/opinion with credible synthesised findings</li> <li>b. One or more single research studies of high quality</li> </ul> | <ul style="list-style-type: none"> <li>a. Metasynthesis of text/opinion with credible synthesised findings</li> <li>b. One or more single research studies of high quality</li> </ul> | <ul style="list-style-type: none"> <li>a. Metasynthesis of text/opinion with credible synthesised findings</li> <li>b. One or more single research studies of high quality</li> </ul> | <ul style="list-style-type: none"> <li>a. Cohort studies (with control group)</li> <li>b. Case-controlled</li> <li>c. Observational studies (without control group)</li> </ul> |
| 4.                | Expert opinion  | Expert opinion  | Expert opinion  | Expert opinion, or physiology bench research, or consensus   |

## Assigning grades of recommendations

Recommendations in Best Practice Information Sheets are graded on the basis of both the level of evidence that underpins them and their clinical appropriateness/relevance. JBI uses the following Grades of Recommendation. It is important to note, however, that these apply to Best Practice Information Sheets, not the recommendations incorporated in systematic reviews.

| Grade of Recommendation | Feasibility   | Appropriateness   | Meaningfulness  | Effectiveness   |
|-------------------------|---|---|---|---|
| A.                      | Strong support that merits application                      | Strong support that merits application                      | Strong support that merits application                      | Strong support that merits application                      |
| B.                      | Moderate support that warrants consideration of application | Moderate support that warrants consideration of application | Moderate support that warrants consideration of application | Moderate support that warrants consideration of application |
| C.                      | Not supported   | Not supported   | Not supported   | Not supported   |



## Session 6:

### QARI Trial

*Turn to your Workbook and work through the QARI Trial. Completing the extraction and synthesis from the included studies.*

## Session 7:

### The systematic review of text and opinion


Published opinion, text such as review papers and discussion papers, and consensus guidelines are all shaped by the social norms of the context from which the text arises and they are political in the sense that they carry the power that reflects the interests of those who have written them. Opinion leaders, professional organisations and learned bodies (such as professional academies, royal colleges etc) have a powerful influence in shaping the way in which health professionals frame and discuss appropriate ways of practicing effectively and appropriately. (Henry and Tator 2002; Soroka and Lim 2003)

#### Executing meta-synthesis using NOTARI

The JBI-NOTARI software is designed to manage, appraise, extract and synthesize data as part of a systematic review of evidence arising out of expert opinion texts and of reports. JBI-NOTARI has been designed as a web-based database and incorporates a critical appraisal scale; data extraction forms; and a data synthesis function. The JBI-NOTARI approach to reviewing non-research text requires reviewers to consider its validity as a source of guidance for practice; identify and extract the conclusions (not findings as in QARI) or recommendations made (messages conveyed) from papers included in the review; and to determine how these conclusions or recommendations have been influenced by those who present the findings from a historical, social, and political perspective. It is important to note here that JBI-NOTARI does not involve a reconsideration and analysis of the text reviewed as if it were primary data. JBI-NOTARI focuses only on the combination of conclusions or recommendations.

JBI-NOTARI draws on these perspectives to pragmatically:

- Assess the validity of the conclusions or recommendations by ascertaining the degree of authority that should be invested in the conclusions or recommendations (using simplified discourse analysis techniques in the critical appraisal process);
- Identify and extract conclusions or recommendations (using content analysis techniques in the extraction process); and
- Synthesise conclusions or recommendations.



**Notari**  
**Narrative, Opinion and Text Assessment Review Instrument**

Reviews Publications Categorise Synthesis Logout About

**Reviews**

Primary    Opened  
 Secondary    Closed


This page lists the Reviews that are in the system. To add a review, click on the Add button below. To edit or delete a review, click on the name of that review.

| Name | Description | Year | Primary | Secondary | Status | Edit |
|------|-------------|------|---------|-----------|--------|------|
|------|-------------|------|---------|-----------|--------|------|

This is a front page of the NOTARI Program. The main menu is located at the top of the screen: Reviews, Publications, Categories, Synthesis, Logout and About.

**Note that the QARI heading STUDIES on the menu bar is replaced with PUBLICATIONS in NOTARI**

Reviews Icon: Reviews are the projects that Publications, Extractions and Conclusions are related to. If the Reviews icon is clicked, the following screen will appear:



**Notari**  
**Narrative, Opinion and Text Assessment Review Instrument**

Reviews Publications Categorise Synthesis Logout About

Review Name

Review Description

Review Year

Primary Reviewer

Secondary Reviewer

The Review page lists the reviews that are in the system. This page is used to add new, edit existing or cancel Reviews. Each entered review has a primary and secondary reviewer. When “secondary” appears on the menu bar, this means that the user logged-on is viewing the reviews for which she or he is the Primary reviewer. The user logged-on’s name will automatically be entered as Primary Reviewer. Select the secondary reviewer from the drop down box titled <Secondary Reviewer>

**PUBLICATIONS** (on the top menu bar): A Publication is the basic unit of a Review. Extractions and Conclusions are written for a single Study. Clicking on <Publications> on the top toolbar opens the publications page. The Publication page allows users to view, add, edit and delete Publications. The column on the right describes the stage reached for specific publications in the review. A Publication goes through a process of being Assessed, Extracted then has Findings made against it. Assessment of a Publication determines whether a Publication is to be “included” or “excluded”.

In JBI-SUMARI, of which JBI-CReMS and JBI-NOTARI are components, users are able to export studies entered into JBI-CReMS across to JBI-NOTARI automatically.

Users who do not access CReMS need to enter studies manually. To enter new studies manually, users click on the <Add> button in the bottom left hand corner of the screen.

To view reviews where you are a secondary reviewer, click on “Secondary”. A Primary Reviewer leads the review and has rights to add, edit or delete Reviews. Before a Reviewer can work on a project they must be assigned to the Review, either when the Review is first created or later by editing the Review. A Secondary Reviewer assesses every publication selected for critical appraisal, and assists the Primary Reviewer in conducting the review.

To open an existing review, click on the review title. Review details will appear.

To add a new review click on ADD.

\* Note that only registered users can be used as reviewers.

Note: Aside from the differences in terminology, you will find that the processes you follow using the NOTARI software are similar to the ones you follow when using QARI for the synthesis of qualitative research. The key processes are outlined below:

## NOTARI - critical appraisal

The major aim in critically appraising experimental or quantifiable data is to limit bias and thus establish the validity of a publication. From a quantitative perspective, sources of bias include selection bias, performance bias and attrition bias. Validity is assessed by establishing the extent to which the study design and conduct addresses potential bias. This focus on limiting bias to establish validity is not appropriate when appraising narrative, opinion or text. Expert opinion – whether expressed by an individual; by a learned body; or by a group of experts in the form of a consensus guideline – draws on the experience of practitioners. Thus, validity in this context relates to the soundness of opinion in terms of its logic and its ability to convince, the authority of the source and the quality of the opinion that renders it supportable. Whilst expert opinion is rightly claimed to not be a product of “good” science, it is empirically derived and mediated through the cognitive processes of practitioners who have typically been trained in scientific method. This is not to say that the superior quality of evidence derived from rigorous research is to be denied; rather, that in its absence, it is not appropriate to discount expert opinion as non-evidence.

Regarding expert opinion as evidence; viewing the words or text used to present it as findings; and reviewing these type of findings within the systematic review process, is not well recognised in the mainstream evidence-based health care movement. Pearson (Pearson 2003) describes processes designed to examine text in documents, reports and consensus guidelines. The process seeks to locate the major conclusions in text that represents expert opinion. Approaches to critically appraise such nebulous, and often conflicting, data will always be at best tentative. This is not, however, sufficient an objection to rule out the use of a transparent process designed to identify the best available evidence for practice when results of research are not available. Appropriate sources of such evidence are therefore any text in which an informed opinion on the benefits or otherwise of an intervention or practice is manifested, that is, any statement in a particular medium such as a journal article, book, report or guideline that represents a discourse that informs practice that emanates from a source which is regarded as authoritative by practitioners.

The assessment of validity within the JBI-NOTARI process focuses on:

- Examining the opinion;
- Identifying the credibility of the source of the opinion;
- Establishing the motives that underlie the opinion; and
- Locating alternative opinions that give credence to it, or conversely, question it.

Validity in this context therefore relates to what is being said, the source and its credibility and logic; and consideration of the overt and covert motives at play. Based on the literature, Pearson (Pearson 2003) describes a general set of criteria for appraising the validity of text. These critical criteria are incorporated into the JBI-NOTARI module and consist of a series of questions to be addressed for each paper retrieved.

### **Critical appraisal criteria**

The seven appraisal Criteria are:

#### **1. Is the source of the opinion clearly identified?**

The reviewer needs to be satisfied that the author(s) is named.

#### **2. Does the source of the opinion have standing in the field of expertise?**

The qualifications, current appointment and current affiliations with specific groups need to be stated in the publication and the reviewer needs to be satisfied that the author(s) has some standing within the field.

#### **3. Are the interests of patients the central focus of the opinion?**

Is the focus on achieving the best health outcomes or on advantaging a particular professional or other group? What is the author's purpose? Who is the author's intended audience?

#### **4. Is the opinion's basis in logic/experience clearly argued?**

Questions to pose here include: What are the main points in the conclusions or recommendations? What arguments does the author use to support the main points? Is the argument logical? Have important terms been clearly defined? Do the arguments support the main points?

#### **5. Is the Argument developed analytically?**

Is the opinion the result of an analytical process drawing on experience or the literature?

#### **6. Is there reference to the extant literature/evidence and any incongruency with it logically defended?**

What extant literature does the author present to support the arguments? Are incongruence addressed and justified?

#### **7. Is the opinion supported by peers?**

Does the text present and refute opposing points of view?

Based on the standard approach promoted by the Cochrane Collaboration and adopted by the Joanna Briggs Institute, two reviewers are expected to independently critically appraise data, and to then confer.

**NOTARI - Narrative, Opinion and Text Assessment and Review Instrument**

Reviews      Publication      Categories      Synthesis      Logout      About

**Assessment for : Poggetti, R, Leppanemi, A, Ferrada, P, Puyana, JC, Peitzman, AB, Ansaloni, L, Catena, F, Pinna, AD, Moore, EE., - World J Emerg Surg (2009)**

Type: Primary  
User: ayeaye

| Criteria   | Yes                              | No                    | Unclear                          | Not applicable        | Comment |
|--|----------------------------------|-----------------------|----------------------------------|-----------------------|---------|
| 1) Is the source of the opinion clearly identified?  | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/> |         |
| 2) Does the source of the opinion have standing in the field of expertise?                               | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/> |         |
| 3) Are the interests of patients/clients the central focus of the opinion?                               | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/> |         |
| 4) Is the opinion's basis in logic/experience clearly argued?  | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/> |         |
| 5) Is the argument developed analytical?   | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/> |         |
| 6) Is there reference to the extant literature/evidence and any incongruency with it logically defended? | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/> |         |
| 7) Is the opinion supported by peers?  | <input type="radio"/>            | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> |         |

Include: Yes   
Reason: Present history, current scope, current training program

## JBINOTARI - data extraction

Data extraction involves transferring conclusions from the original paper using an approach agreed upon and standardised for the specific review. Thus, an agreed format is essential to minimise error, provide an historical record of decisions made about the data in terms of the review, and to become the data set for extraction and synthesis. A data extraction instrument is incorporated into the JBINOTARI module.

### Steps in extracting conclusions or recommendations from narrative, opinion and other text

The Primary reviewer or the Secondary reviewer may identify conclusions or recommendations from included papers. To identify and extract conclusions or recommendations:

Note that the purpose is to identify and extract the author(s) conclusions or recommendations – not to engage in further analysis. Analysis refers to re-interpreting the data, whereas extraction refers to re-stating the meaning of the author(s). Then, **for each individual paper:**

Read each the paper and the conclusions or recommendations carefully; then re-read;

When you are satisfied that you have identified all of the conclusions or recommendations, enter each one into the conclusions field in JBINOTARI;

Locate the basis for the conclusion or recommendation located in the main text of the paper and either transpose it verbatim to the “illustration” section for the conclusion, or paraphrase – ensure that the page number is assigned to this statement; and

Continue this process, paper-by-paper until the conclusions or recommendations for all included papers are entered into JBINOTARI before moving on to step 2.

## Meta-aggregation

The most complex problem in synthesising textual data is agreeing on and communicating techniques to compare the conclusions of each publication. Drawing on the literature, the meta- aggregation of text developed in JBI-NOTARI involves categorising the conclusions or recommendations and synthesising these categories. Suri (Suri 1999) argues that the synthesis of text should be interpretive rather than aggregative. JBI-NOTARI is less directive than this and permits the reviewer to exercise some degree of judgment. However, synthesis using JBI-NOTARI involves both an aggregation of categories and the use of interpretive techniques to summarise the findings of individual studies into a product of practical value.

## Categorising conclusions or recommendations

In order to pursue this, reviewers, before carrying out data synthesis, need to establish:

- their own rules for setting up categories;
- how to assign conclusions to categories; and
- how to write narrative summaries for each category.

The intent is the grouping of the conclusions or recommendations on the basis of similarity in meaning. Reviewers need to document their decisions and their rationale in the systematic review report.

## Conflict of interest

A statement should be included in every review protocol that either declares the absence of any conflict of interest or describes a specified or potential conflict of interest.

## Implications for practice

Implications for practice should be detailed and based on the documented results, not reviewer opinion. In qualitative reviews, recommendations are declamatory statements that are steeped in context. Therefore, generalisability occurs between cases rather than across broad populations. Recommendations must be clear, concise and unambiguous. Where evidence is of sufficient level, appropriate recommendations should be made. Recommendations must be clear, concise and unambiguous.

## Implications for research

All implications for research must be derived from the results of the review, based on identified gaps in the literature or on areas of weakness, such as methodological weaknesses. Implications for research should avoid generalized statements calling for further research, but should be linked to specific issues.

## Levels of evidence

Current approaches to evaluating evidence utilise a hierarchy of evidence designed to assess the validity of recommendations for clinical guidelines, focusing on the effectiveness of treatment and ranking only quantitative evidence according to the rigour of the research design used to limit bias. Drawing on the literature, an approach to categorising the validity of narrative, opinion and text, is incorporated into JBI-NOTARI. This is based on the three levels of credibility used in the QARI approach..



## **Session 8:** NOTARI Trial

*Turn to your Workbook and work through the NOTARI Trial. Completing the extraction and synthesis from the included studies.*

## **Session 9:** Protocol Development

Using CReMS, Develop a draft Protocol.

## **Session 10:** Presentation of draft Protocols

All participants are required to give a 7 minute power-point presentation using 3-4 slides.

## **Session 11:** Assessment

Take 20minutes to complete the MCQ questions.  
Discuss answers.

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