How to critically appraise a qualitative health research study

Come valutare criticamente uno studio di ricerca sanitaria qualitativa

Michela Luciani[1] Karen A. Campbell[2] Carly Whitmore[2] Stefania Di Mauro[1]
Susan M. Jack[2]

1 RN, MScN, PhD, School of Nursing, Dept. of Medicine and Surgery, University of Milano – Bicocca, Milan, Italy

2 RN MScN PhD student, School of Nursing, McMaster University, Hamilton, Ontario, Canada

3 RN, PhD student, School of Nursing, McMaster University, Hamilton, Ontario, Canada

4 RN, MScN PhD, School of Nursing, Dept. of Medicine and Surgery, University of Milano - Bicocca, Milan, Italy

5 RN, PhD, School of Nursing, McMaster University, Hamilton, Ontario,Canada

Corresponding author:
Michela LUCIANI,
RN MScN PhD*,
School of Nursing, Dept. of Medicine and Surgery,
University of Milano Bicocca,
Milan, Italy
Email:
michela.luciani@unimib.it

ABSTRACT

Evidence-based nursing is a process that requires nurses to have the knowledge, skills, and confidence to critically reflect on their practice, articulate structured questions, and then reliably search for research evidence to address the questions posed. Many types of research evidence are used to inform decisions in health care and findings from qualitative health research studies are useful to provide new insights about individuals' experiences, values, beliefs, needs, or perceptions. Before qualitative evidence can be utilized in a decision, it must be critically appraised to determine if the findings are trustworthy and if they have relevance to the identified issue or decision. In this article, we provide practical guidance on how to select a checklist or tool to guide the critical appraisal of qualitative studies and then provide an example demonstrating how to apply the critical appraisal process to a clinical scenario.

Keywords: critical appraisal, qualitative health research, rigor, trustworthiness, evidence-based nursing, evidence-informed decision making

RIASSUNTO

L'Evidence-Based Nursing Ë un processo che richiede agli infermieri di avere le conoscenze, le competenze e la fiducia necessarie per riflettere criticamente sulla loro pratica, articolare domande strutturate e poi cercare in modo affidabile la letteratura per rispondere alle domande poste. Ci sono molti tipi di *evidence* che vengono utilizzate per informare le decisioni nell'assistenza sanitaria e i risultati di studi di ricerca qualitativa sanitaria sono utili per fornire nuove intuizioni sulle esperienze, i valori, le convinzioni, i bisogni o le percezioni degli individui. Prima che l'*evidence* qualitativa possa essere utilizzata in una decisione, deve essere valutata criticamente per determinare se i risultati sono affidabili e se hanno rilevanza per la questione o la decisione identificata. In questo articolo forniamo una guida pratica su come selezionare una *checklist* o uno strumento per guidare la valutazione critica degli studi qualitativi e, poi, forniamo un esempio che dimostra come applicare il processo di valutazione critica a uno scenario clinico.

Parole chiave: Valutazione Critica, Ricerca Sanitaria Qualitativa, Rigore, Affidabilità, Evidence-Based Nursing, Evidence-Informed Decision Making

INTRODUCTION

For over two decades, the principles of evidence-based nursing and the use of valid and relevant information have been promoted as foundational to decision-making in professional nursing practice, education, and policy (Cullum et al., 2008). The origins of evidence-based practice are in clinical epidemiology (Cullum et al., 2008) and the earliest documented definitions of evidence-based medicine were published in 1992 (Evidence-Based Medicine Working Group, 1992). The development of this innovative approach to decision-making, where research evidence, the availability of resources, and patient values and preferences were valued over intuition and anecdotal experiences, led to the adoption of this approach across most health disciplines (e.g. leading to the development thus of evidence-based nursing, evidence-based dentistry, etc.).

Critics of the early evidence-based definitions, and in particular of evidence-based medicine, identified the privileged preference, use, and application of research findings derived from systematic reviews and randomized controlled trials (Ingersoll, 2000). These types of research evidence are certainly critical to addressing nursing practice questions about the effectiveness of interventions or causation and harm. However, in their work with individuals, families, and communities, nurses also ask questions to fulfill their needs to understand individuals': 1) health and illness experiences; 2) information, support or care needs; or 3) trajectories of illness, recovery, coping, or disability (Morse, 2012). The best research designs to answer these types of questions are situated within the qualitative, and not the quantitative, research paradigm. Therefore, definitions of evidence-based nursing have evolved to include language that reflects the multiple forms of information and evidence, including theory and qualitative research, that can be used to inform decision-making. Evidence-based nursing practice and administration have been uniquely defined as the conscientious, explicit and judicious use of theory-driven, research-based information in making decisions about care delivery to individuals or groups of patients and in consideration of individual needs and preferences [...] or making decisions about care delivery systems and in consideration of internal and external consumer needs and preferences (Ingersoll, 2000, p. 152).

The evidence-based nursing process (**Table 1**) starts with nurses who are curious about their clinical, administrative, or educational practices and who, through reflection and critical thinking, pose different questions. In many circumstances, it is then typical to convert these practice-based questions into structured questions, using such formats as PICOT (Melnyk et al., 2010) or EPPiC (Luciani, Campbell, et al., 2019). Implementing evidence-based practice requires that nurses are competent in searching for the best available evidence, critically appraising the evidence for quality and applicability, and then as appropriate, applying the evidence in conjunction with clinical expertise and the preferences and values of the individual or group. The objective of this article is to provide readers with guidance on how to critically appraise qualitative health research studies.

Core Competencies Required to Critically Appraise a Qualitative Health Research Study

As a critical consumer of research evidence, a nurse requires basic knowledge about the essential principles of qualitative research studies so that they can make judgments about the credibility of the findings, the importance of the results, and determine if the findings are transferable to their patient population or context. A list of these key competencies are outlined in Table 2 and introductory information about the foundational principles of qualitative health research studies is provided in the first three articles of this published series (Luciani, Campbell, et al., 2019; Luciani, Jack, et al., 2019; Luciani, Orr, et al., 2019).

Table 2. Evidence-Based Nursing Competencies Related to Critical Appraisal and Interpretation of Qualitative Health Research.

Evaluate the rigor of a qualitative health research study
- List study designs commonly used in qualitative health research, describe their unique methodological rules, and the qualitative function they address (description, exploration or explanation)
- Identify the elements of an EPPiC question
- Understand how purposeful sampling is applied
- Identify the basic data types used (e.g. interviews, observation, documents, artifacts)
- Recognize that in qualitative research that the relationship between the researcher(s) and participant(s) needs to be considered and its (potential) impact on data collection and analysis be critically examined.
- Identify common approaches for the analysis of qualitative data
- List common strategies for promoting the credibility of the findings (e.g. use of data source or type triangulation, member checking, peer debriefing, evaluation of researcher credibility, reflexivity) and data dependability

Interpret the findings from a qualitative health research study
- Interpret the results, including understanding of study limitations and strengths

Determine the transferability of findings from a qualitative health research study
- Recognize how qualitative health research findings can be used instrumentally or conceptually to inform the decision-making process

RIGOR AND ITS EVOLUTION IN QUALITATIVE HEALTH RESEARCH

When appraising an article, readers might wonder how to know whether the findings of the study they are reading are true. If we were to be reading a quantitative study we would have statistical tests and coefficients that would tell us the probability of the results being true, namely valid and reliable. But how does it work in qualitative health research? Many qualitative health research methodologists have already discussed the topic of rigor (Morse, 2015; Thorne, 2011; Sandelowski, 1993) and in this paper, we aim to only provide a brief synthesis and a critical commentary of rigor in qualitative health research. It might be argued that qualitative health research should use its own criteria and strategies to ensure rigor for two main reasons. First, variability and plurality

Table 2 Process of Implementing Evidence-Based Nursing, adapted from (Melnyk et al., 2010).

Step	Description	Example
Step 0: Develop and nurture a spirit of inquiry and curiosity	Create educational and workplace cultures where nursing students and practicing nurses are encouraged to observe, reflect on and ask critical questions about existing practices, policies, or procedures. Questioning the "status quo" creates opportunities to evaluate "accepted" or "best practices" and identify areas where research evidence can be applied.	Nurses working in a cardiac rehabilitation unit observe that a proportionally higher number of adult males than adult females attend the cardiac rehabilitation programs and services offered within their out-patient setting. These nurses reflect and wonder, "does cardiac rehabilitation work for women who have had an MI or cardiac surgery?" and "why are women not attending these programs?"
Step 1: Ask clinical questions in the PICOT or EPPiC format	Questions derived from clinical practice are then transformed into a clearly articulated research question. Questions about effectiveness, prevalence, incidence, or causation and harm are typically answered through quantitative studies. The PICOT format can be used to formulate a quantitative research question. Questions about individuals' experiences, perceptions, values or beliefs or "how" and "why" questions, are often addressed through the conduct of qualitative research. The EPPiC format can be applied to develop a structured qualitative question. **PICOT** (P) Patient population of interest (I) Intervention/area of interest (C) Comparison intervention or group (O) Outcome(s) (T) Time **EPPiC** (E) Emphasis (P) Purposeful sample (Pi) Phenomenon of interest (C) Context	**Quantitative question** Among adult women with a recent history of myocardial infarction or coronary bypass surgery, does participation in an outpatient cardiac rehabilitation program compared to usual care (monitoring by primary care physician) affect cardiovascular risk control, social functioning, hospital re-admission rates, and mortality rates over 12 months? **Qualitative Question** Among older women (>65 years) with a recent history of myocardial infarction or coronary bypass surgery, what are the individual, family and program factors that influence active and regular participation in outpatient cardiac rehabilitation programs offered in urban settings in Northern Italy?
Step 2: Conduct a systematic, comprehensive search for available evidence	The individual components of the structured research question(s) can be used as keywords or MeSH terms to develop a structured search strategy to locate available research evidence. Common databases often searched for health-related questions may include CINAHL or Medline. To narrow search results, one may also apply limits such as publication range, language or research design. It can be beneficial to also search for synthesized sources of research evidence (e.g. systematic reviews, meta-analyses, qualitative meta-synthesis).	Search strategy for quantitative question: Cardiac rehabilitation AND hospital re-admission rates (repeat search with different outcomes) **Limits applied** Publication date: 10 years Language: English or Italian Article type: Systematic review, randomized controlled trial Sex: Female *Search strategy for qualitative question:* Key terms: "women" and "cardiac rehabilitation" and "participation" "qualitative study" Limits applied: Publication date: 10 years Language: English or Italian Sex: Female
Step 3: Critically appraise the evidence	From the search strategy, select relevant articles to review. Critical appraisal employs skills to determine if the evidence is valid/trustworthy, to determine the results of the study and ascertain if they are important, and then to determine if the results can be generalized/transferred to your patient, community, organizational context.	Determine the "design" of the study (e.g. guideline, systematic review, cohort study, qualitative study) to be appraised and select an appropriate critical appraisal tool to apply. Critically appraise the evidence to determine if the body of evidence supports a decision or a change in practice. From the search above, one article located would include: Midence, L., Arthur, H.M., Oh, P., Stewart, D.E., and Grace, S.L. (2016). **Women's health behaviours and psychosocial well-being by cardiac rehabilitation program model: a randomized controlled trial.** Canadian Journal of Cardiology, 32, 956-962. It could be critically appraised using the CASP RCT checklist https://casp-uk.net/wp-content/uploads/2018/01/CASP-Randomised-Controlled-Trial-Checklist-2018.pdf Using the qualitative search strategy, one publication identified for review and appraisal would include: Sutton, E.J., Rolfe, D., Landry, M., Sternberg, L., & Price, J.A.D. (2012). **Cardiac rehabilitation and the therapeutic environment: The importance of physical, social and symbolic safety for programme participation among women.** Journal of Advanced Nursing, 68(8), 1834-46. It could be critically appraised using the CASP Qualitative Checklist https://casp-uk.net/wp-content/uploads/2018/01/CASP-Qualitative-Checklist-2018.pdf
Step 4: Integrate the evidence with clinical expertise and patient/community/organization values and preferences.	Education, practice, and administrative changes are guided by theory, research evidence, the availability of resources, as well as the values and preferences of the stakeholder group. Qualitative research studies can also be used conceptually to help inform our understanding of the values/preferences of specific groups or populations.	A clinical decision or a change in practice is determined by weighing different types of evidence. The synthesis of the available high quality evidence indicates that women's participation in cardiac rehabilitation programs leads to a range of improved health outcomes. The qualitative evidence indicates though that there are many gender-based barriers women experience, which limit physician's rates of referring women to programs and barriers to participation may lack social support, high burden of family responsibilities and a preference for home-based programs. As a result of this evidence, your program may develop an initiative to encourage physicians to refer eligible women and you may decide to pilot and evaluate a home-based exercise program.
Step 5: Evaluate the outcomes associated with the practice decisions or changes in practice, policy, or procedures implemented as part of the evidence-based process.	After the evidence is reviewed, if it leads to a decision or practice/policy change, it is important to monitor and evaluate changes in outcomes. An intervention that is effective in one context, may not demonstrate similar benefits in a different setting. Mixed methods process evaluations are also helpful to document how innovations are implemented, delivered and received.	
Step 6: Disseminate the results	If a practice decision or innovation is evaluated, it is important to disseminate the findings to relevant local, national, and international stakeholders. Dissemination of this type of work contributes to the development of nursing knowledge.	

are key characteristics of qualitative research and therefore, within it, there are great differences between paradigms, methodologies, designs, and methods (Gumez, 2009; Yardley, 2000). It is, then, reasonable that each discipline would use and evaluate those theoretical and practical choices differently and it would be inappropriate to expect fixed, universal or standard criteria, tools or techniques to be applied indiscriminately (Yardley, 2000). Second, health professional researchers study problems, not only from a theoretical perspective but mainly from a practical one, because the ultimate aim is to bring solutions to practice (Thorne, 2011). The strive for rigor must then balance the selection of methodologies that match the discipline's principles and meaning (Thorne, 2011) and principles and strategies that will also make sense to other social sciences (Morse, 2015).

At the end of the 1980s, Lincoln and Guba substituted validity and reliability with trustworthiness,î which is composed of four principles: credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985; Guba & Lincoln, 1989) (Table 2).

Morse's critical analysis of Lincoln and Guba's criteria and strategies (2002, 2015) highlights that these have been used indiscriminately, without recommendations, and without an assessment of the achievement of their goal. In synthesis, they are a post-hoc arbitrary evaluation of rigor but do not ensure rigor per se (Morse et al., 2002). Morse's suggestion is to overcome Lincoln and Guba's criteria and return to assessing rigor using the criteria of validity and reliability, in fact, she argues, these are concepts applicable to qualitative research and are terms understood and used by the whole scientific community (Morse, 2015; Morse et al., 2002). These two criteria are often intertwined and are achieved mostly during the steps of data collection and analysis (Morse, 2015). Furthermore, Morse (2015) criticizes the usage of strategies regardless of the type of qualitative research as a threat to rigor, as strategies must be selected according to the methodology and design of the study. For example, method triangulation is useful for achieving validity in mixed-method designs but the idea of using it to achieve reliability in mono method qualitative health research is pointless because we cannot and must not always expect two methods using different theoretical underpinnings to provide the same results (Morse, 2015). To deepen your understanding of these complex issues we recommend reading the original articles (Morse, 2015; Sandelowski, 1993; Thorne, 2011).

So how do we achieve rigor in qualitative health research? First, it is the responsibility of the research team to design a study that demonstrates methodological congruence between the chosen design and the sampling, data collection, and data analysis strategies selected (Morse, 2015). It is of the utmost importance that these are consecutive, coherent, and theoretically linked, as we stressed and explained in the previous articles of this series (Luciani, Campbell, et al., 2019; Luciani, Jack, et al., 2019; Luciani, Orr, et al., 2019). Therefore, it is not mandatory to include certain tools or techniques in the study because historically it has been done so, but researchers must comprehend the disciplinary origin of their chosen methodology and critically choose techniques to ensure rigor according to coherence and context (Thorne, 2011). For example, we often read in qualitative papers about theoretical saturation; while this technique is used and necessary in grounded theory, it does not necessarily make sense and thus is not needed to ensure rigor for other methodologies, such as interpretive description (Thorne, 2016).

Based on the notion that criteria to establish rigor must be flexible to interpretation, and adaptable to different disciplines and methodologies, Yardley (2000) suggested four new criteria to assess the quality of qualitative research: sensitivity to context, commitment and rigor, transparency and coherence, and impact and importance. These criteria are broad and not fixed so they apply to different methodologies and disciplines. They are more than techniques and practical solutions, they represent aspects researchers must consider if they want their research to be of good quality and meaningful (Yardley, 2000).

Table 2. Lincoln & Guba criteria, related concepts, and strategies to obtain them, adapted from (Guba & Lincoln, 1989; Krefting, 1991; Lincoln & Guba, 1985)

Principles	Concept	Strategies
CREDIBILITY	**INTERNAL VALIDITY** Truth value	Prolonged engagement with participants or in the field Triangulation of data sources, data types, theories, and researchers Peer debriefing Negative case analysis Referential adequacy Member checking Researcher credibility
TRANSFERABILITY	**EXTERNAL VALIDITY / GENERALIZABILITY** Applicability	Thick description of sample and context Time sampling
DEPENDABILITY	**RELIABILITY** Consistency	Triangulation Stepwise replication Inquiry audit Co-recoding Achieving consensus among coders
CONFIRMABILITY	**OBJECTIVITY** Neutrality	Confirmability audit Audit trail Triangulation Reflexivity

Furthermore, the rigor in qualitative health research lies in the fact that the findings are convincing beyond the researcher's certainty (Morse, 2012, p. 135) and the readers experience what is called the phenomenological nod (Dowling, 2007). Stemming from the phenomenological tradition, the phenomenological nod is described as the feeling when reading a good qualitative study that it represents accurately a phenomenon which we have experienced or we might experience, something we can nod to (Dowling, 2007). This principle was incorporated in qualitative health research as a technique to ensure rigor in interpretive description through the thoughtful clinician test (Thorne, 2016). The thoughtful clinician is a practitioner with expertise on the phenomenon in study that provides a deeper understanding of the situation and contributes to framing a better question, choosing a meaningful sampling, offering insight during analysis, data interpretation and discussion. It is clear how this is antithetical to the concept of bracketing or tabula rasa, again from the phenomenological tradition, which would require researchers to frame, separate, and abstract from their preconceptions and ideas from the study (Thorne, 2011). In qualitative health research, because researchers are professionals in applied disciplines, it would be impossible to separate from researchers' knowledge, clinical judgment, and preconceptions and instead these are valued because of their role in leading to more meaningful, rigorous research (Thorne, 2016).

Strive for quality in qualitative health research cannot and must not be reduced to a list of technical fixes to be applied to ensure rigor (Barbour, 2001). This is to be remembered when we approach the next paragraph about tools and checklists to appraise qualitative health research, they are helpful but it is risky to use a one size fits all approach (Barbour, 2001). Instead, qualitative researchers must pursue rigor and quality in each methodological decision through critical thinking and knowledge and understanding of the methodology, study design and analysis techniques they chose, and make their decisions clear in reports and articles.

APPRAISAL TOOLS AND CHECKLISTS FOR QUALITATIVE HEALTH RESEARCH

There are several tools and checklists available to appraise qualitative health research. Broadly, these critical appraisal tools and checklists evaluate the quality of the research and are often focused on the methodological decisions made (Katrak, Bialocerkowski, Massy-Westropp, Kumar, & Grimmer, 2004; Menzies Munthe-Kaas, Glenton, Booth, Noyes, & Lewin, 2019). This is because, similar to quantitative research, methodological decisions, such as those related to sampling or recruitment, have the potential to influence study findings, how data are interpreted, and ultimately the ability of the research to be appropriately applied in policy, education, and practice (Barbour, 2001).

Critical appraisal tools and checklists may be classified as either research design specific or more generalized ones. While many tools or checklists to appraise quantitative research will be specific to the research design, the appraisal of qualitative research is more generic. Although there are several qualitative research appraisal tools and checklists, three commonly used tools will be described. These include the Critical Appraisal Skills Programme's (CASP) qualitative research checklist (CASP, 2018b), the Joanna Briggs Institute's (JBI) Checklist for Qualitative Research (Joanna Briggs Institute, 2017), and the Equator Network's Standards for Reporting Qualitative Research (O'Brien et al., 2014).

Critical Appraisal Skills Programme Qualitative Research Checklist

The CASP has produced eight different appraisal checklists for various research designs. This includes appraisal tools for systematic reviews, randomized controlled trials, case-control studies, diagnostic test studies, cohort studies, economic evaluation studies, clinical prediction studies, and qualitative research (CASP, 2018a). These tools were developed through extensive consultation and testing, and are suitable for use among a wide audience when reviewing and evaluating research.

The checklists by CASP all have the same structure. Each one starts with three broad questions to be considered throughout the appraisal process. These include: 1) Are the results of the study valid?, 2) What are the results?, and 3) Will the results help locally? (CASP, 2018a). Guided by those three questions, a series of questions are posed with each prompting a response of either yes, no, or can't tell. The first two questions of the checklist are considered screening questions, with a response of ìyesî required to continue with the checklist (CASP, 2018a). Specific to the qualitative research checklist, ten questions are posed in total, with prompts offered for each of these questions to remind the reviewer of the importance of each of the appraisal questions (National Collaborating Centre for Methods and Tools, 2011). For example, one of the questions asks about the appropriateness of the recruitment strategy described in the study. This question prompts the reviewer to consider how the researcher explained the selection of participants, the appropriateness and alignment of the participants selected to the research aims and knowledge desired, and if any additional information regarding why individuals may have chosen not to participate is provided (CASP, 2018b). For each question, space is provided to record comments by the reviewer. Depending on the length of the qualitative health research study, completion of the CASP qualitative tool could take between 10 and 30 minutes (National Collaborating Centre for Methods and Tools, 2011).

Joanna Briggs Institute Checklist for Qualitative Research

The JBI has developed 13 different appraisal tools, including for analytical cross-sectional studies, case-

control studies, case reports, case series studies, cohort studies, diagnostic test accuracy studies, economic evaluation studies, prevalence studies, quasi-experimental studies, randomized controlled trials, systematic reviews, text and opinion publications, and qualitative research (Joanna Briggs Institute, n.d.). Developed through peer review, these appraisal tools were designed for use in systematic reviews, or in the case of qualitative research, for meta-aggregation (Hannes & Lockwood, 2011).

The JBI qualitative research appraisal tool is comprised of ten questions related to the congruency and adequacy of the methodological decisions and reporting of those decisions in the qualitative health research (Joanna Briggs Institute, 2017). Each of these questions prompts a response of yes, no, unclear, or not applicable with space on the appraisal form to record comments. For example, one of the appraisal questions relates to the alignment of the analysis, interpretation, and findings of the study with the conclusions that are drawn (Joanna Briggs Institute, 2017). Following the posed questions, a discussion section provides further clarification and examples of how each of the questions may be answered (Lockwood et al., 2015). After these ten questions, the reviewer is prompted to provide an overall response of whether the reviewed research study would be included, excluded, or if further information is required if completing a meta-aggregation (Joanna Briggs Institute, 2017).

Equator Network Standards for Reporting Qualitative Research

The Equator Network has developed over four hundred reporting guidelines related to the main research study designs (The EQUATOR Network, 2019). These include randomized controlled trials, observational studies, systematic reviews, study protocols, diagnostic studies, case reports, clinical practice guidelines, preclinical studies, quality improvement studies, economic evaluations, and qualitative research (The EQUATOR Network, 2019). These reporting guidelines differ from the appraisal checklists above in that they additionally serve to guide the researcher in reporting the key components of the qualitative health research to enhance the quality and transparency of the research (The EQUATOR Network, 2019). Specific to the Standards for Reporting Qualitative Research (SRQR), these recommendations are meant to enhance the quality of reported research beyond that of data collection, or the narrow ways in which qualitative research has been previously appraised (O'Brien et al., 2014).

Developed out of a rigorous synthesis of published research, the SRQR includes 21 recommendations related to the title and abstract, introduction, methods, results or findings, discussion, and other components of qualitative health research (O'Brien et al., 2014). For example, one of the recommendations related to the methods in the SRQR is that characteristics of the researcher and research team, often referred to as reflexivity, are described (O'Brien et al., 2014). This description may include occupation, training, power dynamics, as well as the assumptions, preliminary hypotheses, and motives of the researcher as these characteristics may influence the study design, collection of data, or data analyses (O'Brien et al., 2014). Supplementing the SRQR are further explanations of each of the standards recommended as well as comprehensive examples (O'Brien et al., 2014).

The recommendations posed in this reporting guideline serves as guidance in the development of methodologically sound and responsible qualitative research proposals, the communication of research decisions, and as a tool to evaluate and appraise completed research (O'Brien et al., 2014; Peditto, 2018). These reporting recommendations made in the SRQR have been adopted by some academic journals as required for publication. While some of the Equator Network's reporting guidelines are available in Italian, the SRQR has not been translated at this time.

Breadth of Appraisal Tools for Qualitative Health Research

In recent years, the emphasis placed upon critical appraisal of qualitative health research has led to the development of many critical appraisal tools (Hannes & Macaitis, 2012). This is demonstrated in a recent review in which 102 critical appraisal tools or checklists, many of which were adaptations of existing tools to specific and narrow purposes, were identified across 100 documents (Munthe-Kaas et al., 2019). While it is widely accepted that there is likely no one universal appraisal tool or checklist for qualitative health research, there remains a need to critically select the tool for critical appraisal based on the needs of the review (Majid & Vanstone, 2018; Munthe-Kaas et al., 2019). In response to this need, the Cochrane Qualitative and Implementation Methods Group has developed a set of criteria that may be used to guide the selection of an appraisal tool or checklist (Noyes et al., 2018). These criteria emphasize the potential to use critical appraisal tools specific to the study methodology and encourage the reviewer to focus on tools and checklists that appraise methodological strengths and limitations, as opposed to reporting standards (Noyes et al., 2018). Another guide to choose which qualitative appraisal tool is most suitable, The Appraisal Tool Guide (Majid & Vanstone, 2018) provides a list of questions to help guide the reader to determine which tool is most appropriate to use given who is appraising the study, the length of the tool, its development and applications, and philosophical perspective.

CRITICAL APPRAISAL OF A QUALITATIVE HEALTH ARTICLE

Thus, researchers and consumers of health research are supported by a myriad of tools and guidelines that can facilitate critical appraisal of qualitative health research. Users should critically examine available appraisal forms and choose one that is meaningful to their context and needs. In

this article, we have outlined reasons why it is important to appraise qualitative research, explored the evolution of rigor, and introduced a variety of such tools and checklists.

In Table 3 we present an example of a critically appraised qualitative health article that is relevant to the clinical scenario outlined below. For this example, we adapted an existing tool from Letts et al. (2007) to evaluate an article by Grosso and colleagues (2019). We found this tool particularly helpful for both researchers and consumers of qualitative health research because it reinforces the need to continuously check for relevance against their research questions or practice settings and it is easy to use. At each relevance checkpoint, we refer back to the clinical scenario. It is important to note that when selecting any of the many existing appraisal tools, clinicians and researchers must be critical of the tool and its application to their practice setting or research needs. Appraising qualitative health research is a skill that requires support, continued learning, and critical thinking.

A significant amount of information from a single article is often recorded on a critical appraisal form. In the evidence-based nursing process, we are reminded that

Clinical Scenario

Sofia has been working on a general medical ward for the past two years. In that time, she has learned that no day is typical, and each day brings new challenges. She is always busy, and the work never seems to be finished. Her confidence in her nursing skills is steadily increasing but she is constantly worried that she may be expected to provide care beyond her scope. Overall, she enjoys working with her nursing colleagues and feels proud in her role as a nurse.

As Sofia sets out on her morning rounds, she prepares for medications, blood glucose testing on diabetic patients, vital signs and nursing assessments for all her 14 patients, five patients that need help with hygiene, three need their wounds dressed, a couple need their peripheral cannula repositioned, and a patient is waiting to be discharged. On this particular day, one of the nurse aids was sick and could not be replaced. Mrs. A has dementia and has become increasingly agitated with the physiotherapist. Mrs. A had a scheduled CT scan today, and the transport squad is refusing to bring Mrs. A to Radiography without assistance, so Sofia has to go with Mrs. A to ensure the CT scan gets done. She had planned to use this time to do health teaching with Mrs. C and her family before she is discharged.

It is 13.00 and the lunch trays have not arrived yet. At the moment, everybody is busy and the charge nurse is in a meeting with management to discuss the problem they have been having with understaffing. Sofia does not want to waste any more time and contacts dietary services: some paperwork was missing. She fills it in and have the trays delivered to the ward but because her nursing aid is missing she has to distribute trays to all of her patients. The shift is ending, and she had to leave behind some of her morning duties. The family of Mrs. C is still waiting to take her home, but outpatient tests and drugs prescriptions and discharge letter were not printed yet, and they are growing impatient with Sofia, so she spends some time explaining to them that the physician will soon give them all the paperwork they need. Eventually, she has to give a very fast, brief handover to the afternoon colleagues; unfortunately, it is not the first time she does not have time to perform handovers properly.

During their next staff meeting, Sofia and her colleagues discuss how non-nursing tasks influence their workload and interfere with their ability to provide excellent nursing care. They wonder how this became the norm on their ward and how can it best be addressed. Their nursing manager is supportive of implementing a change and wants to address non-nursing work being done by nursing on a medical hospital ward

Table 3. Critical Appraisal of a Qualitative Health Article, adapted from Letts et al., 2007. Section 1.

CITATION: Grosso, S., Tonet, S., Bernard, I., Corso, J., De Marchi, D., Dorigo, L., Funes, G., Lussu, M., Oppio, N., Pais dei Mori, L., & Palese, A. (2019). Non-nursing tasks as experienced by nurses: A descriptive qualitative study. International Nursing Review, 66(2), 259–268. https://doi.org/10.1111/inr.12496

STUDY PURPOSE Was the purpose and/or research question stated clearly?	**Outline the purpose of the study and/or research question.** *This purpose of this article is to "explore the non-nursing tasks phenomenon, its antecedents and consequences according to the experience of nurses, to develop knowledge useful in highlighting its features and suggesting both professional and policy decisions" (p. 260). The research question was not formally stated however, it is embedded in the aim from which one can extrapolate. In fact, because of journal word limitations, authors often decide to state either the aim/purpose of the study or the research question(s).*
LITERATURE Was relevant background literature reviewed?	**Describe the justification of the need for this study. Was it clear and compelling?** *Relevant background literature provides a clear understanding of this problem and what is currently known about the phenomenon. The information provided is clear, compelling, and supports the justification for this study.*

CHECK FOR RELEVANCE

How does the study apply to your practice and/or to your research question? Is it worth continuing this review? *Clinical Scenario: This research study examines the same phenomenon that is occurring on Sofia's medical ward. It is worth continuing this review.*

Table 3. Critical Appraisal of a Qualitative Health Article, adapted from Letts et al., 2007. Section 2.

STUDY DESIGN	**What was the design? Was the design appropriate for the study question? (i.e., rationale) Explain.** *A descriptive qualitative study design guided by Sandelowski (2010) was used and is appropriate given the study purpose. Qualitative description is a design that provides guidance and strategies that allows researchers to identify and describe how an event or process is perceived or experienced by participants, including their description and understanding of antecedents and consequences of a phenomena, which was the purpose of this study* (Luciani, Jack, et al., 2019).
THEORETICAL PERSPECTIVE Was a theoretical perspective identified?	**Describe the theoretical or philosophical perspective for this study e.g., researcher's perspective.** T*he authors have not used a theoretical framework, which is appropriate for a qualitative descriptive study. The rationale is that in qualitative research a primary function is to understand and explore how participants experience the phenomenon, in this case, "non-nursing" tasks, rather than to validate existing research, models, frameworks or theories.* *In qualitative studies, all data collection and analysis decisions are influenced by the experiences, values, and beliefs of the researcher(s). Therefore, a strong qualitative study will involve researchers engaging in a process of reflexivity to ensure that the influence of their experiences, values, beliefs are articulated. In this study, it was identified that researchers maintained notes during the study interviews that allowed for "continuous self-critical reflection and awareness of their preconceptions" (p. 261). However, while the presence of a reflexive process was confirmed, the actual perspectives' of the researchers towards this phenomenon of interest remain unknown.* *A review of author credentials identifies that they all have a RN (nursing designation) and hold senior positions with FNOPI (Italian National Nursing Board). As a reader, we can then make an assumption, although not explicit in the text, that these authors applied a "nursing" lens, and view nursing as a professional health discipline, to interpret the data.*
METHODS	**Describe the method(s) used to answer the research question. Are the methods congruent with the philosophical underpinnings and purpose?** *The use of a qualitative method is congruent with the study purpose. The primary functions of naturalistic, qualitative inquiry are to either describe, explore or explain phenomena of interest. The authors clearly articulate that their purpose in conducting the study is exploratory.* *There is no discussion about the philosophic underpinnings of the study documented in the article.*
SAMPLING Was the process of purposeful selection described?	**Describe sampling methods used. Was the sampling method appropriate to the study purpose or research question?** *For the sample, the authors provided a very clear description of the inclusion criteria for nurses who would be eligible to participate. Information about the recruitment process was provided e.g. that from "the list of all registered nurses (RNs)" in Belluno province, 40 eligible nurses were identified. While the authors indicate purposeful sampling principles were employed, details about how these 40 nurses were specifically identified are not explicit in the paper (e.g. were these the first 40 nurses on the list who met the inclusion criteria – thus making it a convenient sample)? In purposeful sampling, it is essential that the participants have experienced the phenomenon under interest, yet there is no indication that this is a group of nurses who have been purposefully identified because of their unique or specific knowledge about non-nursing care. Possibly, the assumption made by the authors is that the phenomenon is so widespread that virtually every nurse had experienced it.* *The authors identify that maximum variation sampling was employed. From our assessment the variables where they purposefully strove to introduce variation were on a) workplace (hospital, community) and b) nursing role. Given the purpose was to broadly explore the phenomenon of interest, purposefully recruiting based on these variables is a strength of the study design. The authors identified that the intended preliminary purposeful sample was 40 participants. Given the degree of variation being introduced in the study design, and the resulting heterogeneous sample, achieving this sample size would be important. However, in the reporting of the results, it is evident that only 22 of the intended 40 nurses were recruited. The authors indicate, as rationale is provided as to why just over half of the intended sample was recruited, that the "process of inclusion ended when the saturation of data was achieved…" (p. 261). There appears to be strong "saturation" of themes related to "non-nursing task" work in acute care settings (hospital, on "units"), yet given that the authors also implied sampling from other nursing workplaces – and had participants who worked in community (nursing home, health promotion office) and educational settings, the articulation of what "non-nursing tasks" look like or how they are experienced in these other contexts is not included thus one cannot conclude that the concept, and its properties and dimensions, are fully saturated in this report of findings.* *However - of the 22 nurses recruited to be in the study, maximum variation sampling was successful, as there is variation in a workplace setting, nursing roles (e.g. frontline nurses, chief nursing executives, nursing educator). While the overall mean years of nursing experience (along with a range) is not provided, a review of the raw data indicates that a substantive proportion of the sample (16/22) have > 10 years of nursing experience, indicating that this purposeful sample is strongly positioned to speak about professional nursing practice given*
ETHICS	**Was informed consent obtained?** *Verbal and written informed consents were obtained. Given the relatively small sample size and the detail outlined in the participant characteristics, the authors could have aggregated the personal details into groups to ensure anonymity of the participants. The study was a group of nurses from one region and it could be possible to identify participants given the level of detail presented. This is particularly important considering that participant ID numbers were shared and then linked to participant quotes.*
CHECK FOR RELEVANCE	
Are the participants described in adequate detail? How is the sample applicable to your practice or research question? Is it worth continuing? *Clinical Scenario: There is significant data describing the participants and the context of the hospital setting is very relevant. It is worth continuing this review.*	

Table 3. Critical Appraisal of a Qualitative Health Article, adapted from Letts et al., 2007. Section 3.

DATA COLLECTION Descriptive Clarity Clear & complete description of site Participants Role of researcher & relationship with participants Identification of assumptions and biases of researcher.	**Describe the context of the study. Was it sufficient for understanding of the "whole" picture? What was missing and how does that influence your understanding of the research?** *Do the researchers provide adequate information about data collection procedures e.g., gaining access to the site, field notes, training data gatherers? Describe any flexibility in the design & data collection methods.* *In a qualitative study, it is important to provide rich, detailed information about the setting of the study – or the social, geographic, political, economic context in which the phenomenon of interest is being studied. A rich description of the setting ultimately allows the reader to assess the transferability of these findings to their own context. In this article, there is minimal information about context. The only information provided was that participants were recruited from the "Nursing Board of Belluno province in Italy" (p. 261).* *The selection of semi-structured, in-depth, one-on-one interviews was an appropriate and strong choice of data collection strategy for this study. These types of interviews would allow participants to discuss their experiences in-depth and allow the researcher to explore new concepts/ideas as they emerge in the discussions. Also, given the sensitivity of speaking about one's personal workplace and professional practice challenges within that environment, one-to-one interviews provide a degree of privacy and confidentiality to participants that focus groups would not allow.* *A key strength of this study was the comprehensive process that was employed to develop the interview guide which consisted of triangulating data from a focus group with 11 content experts, a review of published and unpublished evidence, and 64 documents (letters from nurses to the President of the Nursing Board). The interview guide was included in the paper, this is a strength as it allows us to confirm that the questions asked were appropriate to explore and understand nurses' experiences of non-nursing tasks. An additional strength of the research process was that two pilot interviews were conducted to test and refine the interview guide.* *Six different researchers conducted the interviews, which allows for researcher triangulation. Researchers did not have relationships with the people they interviewed, were trained on conducting interviews, and collected notes during interviews for future reflection. Researchers read notes and discussed their assumptions/biases regarding the concept of non-nursing tasks.* *Only one interview was conducted with each participant. Mean length of interviews was 35 minutes given the number of questions in the interview guide and the scope of the information required, it is difficult to confirm that an appropriate level of depth and detail could be obtained in 35 minutes or less. However, for the interviews (number unknown) that took 60-90 minutes, one can assume that richer detail was provided in those interviews.*
DATA ANALYSIS Analytical Rigor Data analyses were inductive? Findings were consistent with & reflective of data?	**Describe method(s) of data analysis. Were the methods appropriate? What were the findings?** *Content analysis and analyzing metaphors were approaches to data analysis. Content analysis is consistent with the research design. Drawing on metaphors requires a deeper, more thorough analysis than what may need to be provided in qualitative description. It may not have been necessary and could complicate the analysis process. The findings are presented through themes with supporting quotes that reinforce the narrative presented.*
THEORETICAL CONNECTIONS Did a meaningful picture of the phenomenon under study emerge?	**How were concepts under study clarified & refined, and relationships made clear? Describe any conceptual frameworks that emerged**. *Antecedents, consequences, and a description of the phenomenon are presented in a meaningful way. It was beyond the scope of this study to present a conceptual framework, reinforcing qualitative description as an appropriate choice. However, a model was developed and can help readers understand the relationship between findings.*
OVERALL RIGOR Credibility Transferability □Dependability □Confirmability	**For each of the components of trustworthiness, identify what the researcher used to ensure each.** *The researchers present a detailed description of the overall rigor, which is often lacking in published articles. They include strategies for rigor, including piloting interviews, experienced practitioners conducting analysis, using inter-rater reliability, and member checking. While the authors describe a process of sharing findings with a community of nurses (n=93) at the Nursing Board meeting, and that findings were "agreed upon" – one might challenge that this is a process of peer debriefing rather than member checking.* *Investigator triangulation was another strategy used however, other methods of triangulation may increased rigor (Carter et al., 2018). Details of the healthcare system, region, or political, economical, and social issues in healthcare would provide a clearer picture of the context and allow for confidence in transferability.*
CONCLUSIONS & IMPLICATIONS Conclusions were appropriate given the study findings? □ The findings contributed to theory development & future practice/ research?	**What did the study conclude? What were the implications of the findings for practice & research? What were the main limitations in the study?** *This article concludes with clear implications for practice (organizational and systemic) and for future research. The main limitations described include one geographical region hindering transferability, and the changes that occurred during the two-year time frame for the study. However, the limitations of these issues in a qualitative study may be effectively dealt with by clearly describing the region and the economical changes that occurred.* □□*Another limitation of this study is that while the sampling strategy included a process to include nursing working in either hospital or community settings, and the demographics indicate that at least 7/22 participants did not provide direct nursing care in a hospital setting at the moment of recruitment, the focus of the findings seem to reflect nurses' direct experiences at the "bedside" in a hospital environment. Thus, the findings would be transferrable only to another hospital* context and not, for example, a community setting.
CHECK FOR RELEVANCE What meaning and relevance does this study have for your practice or research question? *Clinical Scenario: The findings of this study may be applied to Sofia's medical ward in Italy and support resolution in that clinical setting.*	

SOLUTION OF CLINICAL SCENARIO

After critically appraising the descriptive qualitative article by Grosso et al (2019), Sofia and her colleagues have concluded that the in general the study methods were strong and that the findings are credible. However given limitations specific to the sampling procedures and limited description of the context, the results may only have limited transferability to acute care contexts in Italy. They identified antecedent and consequences of non-nursing tasks in the context of a medical ward in an Italian hospital. This article provided rudimentary information about organizational changes that can be implemented to address the phenomenon of non-nursing tasks done by nurses. Sofia's manager is planning to discuss with other ward managers and senior management. Sofia and her nursing colleagues recognized many of the narratives exposed in the article and findings resonated with them. They plan to continue to search and appraise other health research articles to identify their next course of action. They feel hopeful that changes can be made to benefit patients and staff.

critical appraisal is conducted so we can determine if the study findings are valid, or in this case credible, document what the findings are, and then reflect on if the findings are valid if they then can be transferred or applied to our unique clinical setting or patient population or policy work.

To facilitate this process, it is sometimes helpful to prepare a summary of the critical appraisal. This summary would include a: 1) description of the study purpose/research question, 2) identification of the study design, 3) a succinct list of the study's overall methodological strengths and weaknesses, 4) the key findings, and 5) then a subjective evaluation (based on the appraisal) on the overall quality of the study. Often appraisers will qualitatively describe a study as methodologically weak, moderate, or strong. A study that is deemed methodologically strong (or in certain circumstances moderate) would be a study we would then have confidence in the evidence and would consider seeing if the findings are relevant to apply to our clinical scenario. Developing the skill to synthesize an appraisal in this succinct manner can be quite helpful in communicating the results of the appraisal to individuals considering using the evidence to make a clinical decision or policy.

CONCLUSIONS

Nurses are required to inform and make critical decisions at all levels within health care teams or systems. Within a culture of evidence-based nursing this implies that nurses have the knowledge, skills, and confidence to locate and appraise relevant research evidence to inform practice, education, administration or policy decisions. The development of competence and confidence in critical appraisal takes time and experience and requires knowledge of a range of research designs and their associated methodological principles. In nursing practice, there is an important role in using qualitative health research evidence either instrumentally or conceptually within the decision-making process. In particular, qualitative evidence can provide important insights or new perspectives about patients' or communities' experiences, values, beliefs, and perceptions – an important source of information in evidence-informed decision making. To support nurses in this activity, we have provided information on a range of different tools and checklists that can facilitate the process of critically appraising qualitative health research studies, as well as applied these principles to the appraisal of a recent qualitative descriptive study.

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