A Method for Interpretively Synthesizing Qualitative Research Findings

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Abstract:

In the qualitative research world, one can use a method called meta-synthesis to interpretively assess a compiled body of literature on a specific topic, though it has seen little application in business research let alone in management information systems scholarship. However, because methods for qualitative inquiry have gained more popularity in the information systems discipline, this method holds great promise in supporting efforts toward theoretical generalization for qualitative researchers. Accordingly, in this paper, we present a methodological tutorial on the nature and practice of analytically synthesizing a body of qualitative research for developing and explicating theory.

Keywords: Qualitative Methodology, Interpretive Assessment, Meta-synthesis, Meta-ethnography, Meta-studies.

1   Introduction

In this paper, we present a tutorial on a qualitative method for analyzing and synthesizing bodies of qualitative research. Called "meta-synthesis", this technique philosophically resembles the more widely known quantitative meta-analysis method, which involves statistically aggregating numerous quantitative studies about a particular phenomenon to summarize their combined findings (e.g., Rosenthal & Rosnow, 1991). In contrast to meta-analysis's statistical and quantitative-aggregation approach, the qualitative approach meta-*synthesis* approach involves interpretively assessing qualitative studies to theoretically and interpretively integrate them (Finfgeld, 2003). The method can help researchers develop and explicate theory—particularly with large bodies of qualitative research that they want to combine and synthesize (Hoon, 2013). While researchers in the nursing research literature have used meta-synthesis most prevalently, the method is also useful in the information systems (IS) discipline given that it continues to accrue qualitative research and that a well-respected process for synthesizing qualitative studies on a similar topic could aid greatly in theoretical development.

In this paper, we provide guidance about how to conceptualize and conduct a qualitative meta-synthesis. As part of this process, we review an extensive literature on the method from reference disciplines in which researchers more widely practice it. Accordingly, we introduce the reader to the meta-synthesis methodology and its several aspects such that they might comfortably explore and use the approach in their own research.

2   Meta-synthesis: A Solution in Search of a Problem

1.1   The Generality of Generalizing

In conducting a meta-synthesis, researchers typically seek to generate theory from analyzing a cumulative body of related studies (e.g., Finfgeld, 2003). As such, it represents a qualitative method for theory development and generalization. Indeed, the way in which Yin (2011) defined research generality's types and levels (which Lee and Baskerville (2003) further confirmed in reviewing the many types of generalizability from research to theory) indicates that one can find theoretical generalizability not only from statistically generalizable quantitative studies but also from well-conducted qualitative studies. Researchers often resist the notion that qualitative research can generalize to other contexts (e.g., Sarker, Xiao, & Bealieu, 2013); however, the literature includes at least two studies that discuss four specific types of generality in which qualitative research fits well (e.g., Lee & Baskerville, 2003; Walsham, 1995).

One can find the wisdom in careful qualitative generality in Lee and Baskerville's (2003) notion that "generalization refers to the validity of a theory in a setting different from the one where it was empirically tested and confirmed". Since this notion expects generalization to involve sufficiently well-developed theory that applies in more than one context and carries no baggage in regard to the testing and development method, we consider the "TT" quadrant in Lee and Baskerville's (2003) four-way generalization framework to characterize the sort of generality that a meta-synthesis would engender: generalizing from concepts to theory in which one generalizes both from and to theoretical statements when synthesizing like-themed qualitative studies. Aside from generating theory, which Yin (2011) already documents well, the three qualitative generalization methods that Walsham (1995, p. 79) offers— developing concepts, drawing specific implications, and making rich contributions—could all apply in meta-synthesis given one synthesized a sufficiently rich body of related work.

Even so, the reader unfamiliar with meta-synthesis may see it as a solution without a problem. However, IS research boasts a growing number of qualitative studies (Sarker et al., 2013; Walsham, 1995) that contain important new ways of considering technology use, disuse, development, and implementation. We posit that we should be open to novel new methods for combining the knowledge in individual qualitative studies to explain what it all means. A meta-synthesis allows one to combine the results of qualitative studies on a given topic in order to synthesize theoretical meaning that one can apply to other contexts. A meta-synthesis constitutes a means for vastly expanding the generality and subsequent applicability and usefulness of the qualitative research studies that we increasingly conduct, read, and cite in our work.

3   Literature Reviewed

Using the keyword "metasynthesis", we searched Google Scholar and various library-based electronic databases for publications to select guidance on describing meta-synthesis methods. We also searched

the references in the papers we initially identified in order to find other relevant sources. As a result, we initially identified 50 publications that prominently involved meta-synthesis (see Appendix for list). After analyzing each paper, we selected 17 papers as archetypes for conducting meta-syntheses. From these papers, we extracted substantive guidance in developing this methodological tutorial. We list the papers and summarize their substance in Table 1.

Of the 17 papers, we identified five that one could construe as tangentially belonging to several topic areas that would interest IS researchers: Internet addiction (Douglas et al., 2008), culture and information systems innovation (Lawrence, 2013), cloud computing (Reza Bazi, Hasanzadeh, & Moeini, 2017), eGovernment (Siau & Long, 2005), and "information behavior" (Urquhart, 2011). Two of the five papers came from journals arguably on the IS research fringe (*Computers in Human Behavior* and *Industrial Management & Data Systems*), one came from computer science (*Journal of Systems and Software*), and one came from library science (*Information Research*). In our search, we identified only one journal paper (Hoon, 2013), one monograph (Noblit & Hare, 1988), and one textbook (Sandelowski & Barroso, 2007) that one could say to have a pure methodology focus. We also found that largest body of guidance on the meta-synthesis practice in applied qualitative studies on nursing practices. As such, we surmise that the academic nursing research represents an area where the meta-synthesis technique has truly matured and become accepted.

Table 1. Studies Reviewed for Tutorial

Paper	Summary
Barnett-Page & Thomas (2009)	One can synthesize qualitative research in various ways; as such, one needs to distinguish between the methods and select the most situationally appropriate one. In an exhaustive search of journals, the authors found 203 papers on qualitative synthesis techniques and identified nine distinct approaches: meta-narrative synthesis, critical interpretive synthesis, meta-study, meta-ethnography, grounded formal theory, thematic synthesis, textual narrative synthesis, framework synthesis and ecological triangulation. The authors filter these nine approaches into either realist or idealist epistemologies. They also introduce the notion of second- and third-order synthesis levels.
Bondas & Hall (2007)	The authors trace meta-synthesis to two disciplinary roots: 1) sociology (where researchers systematically study the underlying structure of theory across studies) and 2) anthropology (where researchers synthesize field research). Similarly, two goals reside in engaging in meta-synthesis: 1) furthering knowledge to develop a discipline and 2) initiating understanding.
Britten et al. (2002)	The authors explain the steps involved in conducting a meta-synthesis. They largely adopt and explain Nobilt and Hare's (1988) seven-step process to meta- ethnography. An inductive approach, meta-ethnography involves interpretively assessing a body of studies to "translate" one study's findings into another. The steps roughly coincide with 1) planning the study; 2) deciding on the synthesis's scope, which guides one in selecting studies to include; 3) reading the studies; 4) determining how they relate; 5) translating the studies into one another (reciprocal translation); 6) synthesizing the translations; and 7) expressing the synthesis.
Douglas et al. (2008)	One of two studies we identified that applied meta-synthesis in a business research context. The study focuses on Internet addiction. The authors conducted a meta-synthesis on the qualitative research on the topic from 1996-2006. They note that, while quantitative studies have the ability to generate aggregate findings, qualitative studies lack this capability due to their limited practical connections with prior literature. Meta-synthesis solves this issue.
Finfgeld (2003)	Meta-synthesis has an interpretive nature in contrast to meta-analysis, which has an aggregative nature. In a meta-synthesis, one does not collate, codify, or sum up but rather bring together, break down, and discover the essential features in common across studies. One interprets the findings, not the data, from the studies one analyzes. Theorization arises from this process. Grounded formal theory and meta-study constitute the two approaches one can use to induce theory from the process.
Finlayson & Dixon (2008)	Both context and culture bind qualitative research, and synthesis tends to conflict with the central philosophy that governs inquiry. Although many writers argue in favor of certain quality standards in selecting studies to include in a meta-synthesis, applying overly stringent quality standards might mask important knowledge. Since meta-synthesis focuses on theory building, more inclusionary standards might be desirable. The analysis method should match the style of the papers one selects, and one can use four specific and different approaches to analyze them: 1) meta-ethnography (sequential, merge and combine using metaphors), 2) grounded theory (coding, categorizing, consistently comparing data to a more abstract theoretical representation), 3) cross-case analysis (one cross-references categories that one identifies in single studies with other studies (our method here), and 4) meta-study (a systematic process that includes three pre-synthesis stages (i.e., meta-theory, meta-method, and meta-data-analysis) before meta-synthesis).

Table 1. Studies Reviewed for Tutorial

Hoon (2013)	The author offers eight prescriptive steps to synthesize qualitative studies in order to build theory: 1) framing the question, 2) locating relevant literature, 3) determining inclusion criteria, 4) extracting and coding data (in the form of the included studies' insights), 5) analysis at the case-specific level, 6) synthesizing across the case-specific level, 7) building theory, 8) discussing findings. In this view, synthesis focuses either on 1) aggregation (positivist approach), 2) synthesis (post-positive), or 3) translation (constructivist).
Noblit & Hare (1988)	This work, a classic in the meta-synthesis literature, demonstrates the meta-ethnography approach to meta-synthesis. The approach specifics seven steps: 1) getting started, 2) deciding what pertains to the study, 3) reading the studies, 4) determining how the studies relate, 5) translating studies into one another, 6) synthesizing translations, and 7) expressing the synthesis. The authors describe three broad approaches to meta-synthesis: 1) translating one study into another (called reciprocal translation) in which one forms analogies between and among studies, 2) refutational synthesis in which one considers exceptions and contradictions in the Kuhnian sense of paradigm shift, and 3) constructive syntheses in which one uses largely inductive line-of-augment approaches that cohere closely with grounded theory sensibilities and deal with developing inference.
Paterson et al. (2009)	Applying the specific meta-study approach, these authors conducted a meta-synthesis on 43 different reports about the transformative process of chronic illness and disability over a three-year period in order to clarify ambiguity about transformation in the literature. In the meta-study approach, one compares and contrasts individual study findings, designs, and theoretical frames. In conducting a meta-synthesis in this way, researchers need to consider the nature of their research team (they should aim for a diverse team that spans disciplines), develop protocols and procedures (researchers can start with the norms in their authoritative literature on the method, but they should be ready to adapt their approach to meet their study's unique needs), use schematic representations (graphics aid in collaborative analysis), and consider unexpected outcomes.
Reza Bazi et al. (2017)	The authors coded 657 papers into seven categories and 15 subcategories related to developing a framework for cloud computing migration for businesses. They then used these categories to guide focus group research with industry experts on the nature of cloud computing migration.
Sandeloswski & Barroso (2007)	The authors provide a comprehensive guide on synthesizing qualitative research. They cover how to develop a synthesis study, how to access and retrieve the qualitative reports that form the basis for synthesis, how to appraise reports and classify the findings drawn from the body of studies, and how to conduct the meta-summary and meta-synthesis steps in the analysis.
Sandeloswski & Barroso (2003)	The authors consider synthesis's role and contrast it to the meta-summary notion. They state that meta-synthesis should do more than simply summarize findings from papers on a related topic. They propose various analytic devices to enhance the synthesis process: 1) a taxonomy of findings, 2) the explicit use of sustained comparisons, 3) the translation of in vivo concepts, and 4) the use of imported concepts.
Sandeloswki, Docherty, & Emden (1997)	The authors show how three synthesis types have arisen: 1) syntheses that integrate multiple studies from a single researcher, 2) syntheses that integrate multiple studies across different researchers, and 3) syntheses that use quantitative methods to aggregate qualitative findings from cases across different studies. Key meta-synthesis methods include: determining topic similarity, determining study inclusion criteria, determining methodological comparability, and explaining the methods and techniques in studies for synthesis.
Siau & Long (2005)	The authors study e-government development by using meta-synthesis in the meta-ethnography style. In this approach, the authors 1) compare, 2) interpret, 3) translate, and 4) synthesize findings from prior qualitative studies on e-government. This approach might not use a large amount of studies depending on the topic and does not lead to overall generalizations but to translations of individual studies with one another. The authors focus on discovering underlying themes and metaphors. They use Noblit and Hare's (1988) seven-step approach and categorize the classic seven-step approach into three broad categories: 1) selecting studies, 2) synthesizing translations, and 3) presenting the synthesis.
Thorne, Jensen, Kearney, Noblit, & Sandelowski (2004)	Meta-synthesis differs from broad and expansive literature reviews, though practitioners do not recognize this distinction well. This paper, essentially a meta-methodology paper, merges views about the meta-synthesis method based on five different researchers who have conducted analyses using it. The scholars have distinct views according to the nature of 1) comparison and integration, 2) deconstruction and synthesis, and 3) reporting and integration.

Table 1. Studies Reviewed for Tutorial

Urquhart (2011)	From the library science literature, this meta-synthesis demonstrates the viability of meta-ethnography and critical interpretive synthesis for investigating information behavior. The authors provide an excellent procedural guide for conducting a meta-synthesis. They provide particularly good guidance about the initial stages in which researchers select studies and set inclusion criteria and discuss the efficacy of conducting tabular analyses (a theme spanning several different accounts of the meta-synthesis method).
Walsh & Downe (2005)	On the one hand, summarizing qualitative findings potentially destroys the individual projects' integrity. On the other hand, projects in isolation may pertain less to the theory-development process. Thus, the authors searched widely for literature about what meta-synthesis means. They discuss several issues: 1) locating relevant papers; 2) deciding which ones to include based on the method one employs; 3) appraising selected studies (here the authors suggest using a descriptive table of studies); 4) engaging in an analytic technique to determine how studies relate or differ, which leads to the reciprocal translation process in which one considers one study's results in the context of another study's results; and 5) synthesizing the translation to produce metaphors that arise from considering multiple compared studies.

4   Types of Meta-synthesis

One can conduct a meta-synthesis in several ways, but most writers agree that the meta-synthesis rubric does *not* include broad literature reviews (Thorne et al., 2004). Even so, technically speaking, a meta-synthesis constitutes *secondary* research since it cumulates the outcomes of a body of previously published studies (Bennett-Page & Thomas, 2009). The meta-synthesis approach that researchers choose might depend on its disciplinary origin and what they find most appealing. The origins of the practice stem largely from either anthropology or sociology (Bondas & Hall, 2007), and one can find the archetype for it in the Noblit and Hare (1988) monograph. Yet, one can find much modern meta-synthesis research and associated methodological templates in the nursing research literature (cf. Bennett-Page & Thomas, 2009; Finfgeld, 2003; Finalyson & Dixon, 2008; Sandelowski et al., 1997; Thorne et al., 2004; Walsh & Downe, 2005).

In this sense, IS researchers might take the meta-synthesis techniques in the nursing research as methodological guidance from a reference discipline. To that end, we draw most of our understanding about meta-synthesis from healthcare researchers. These researchers vary in how they perceive the best approach to synthesize a body of qualitative studies.

We found three specific overviews for how to engage in the process. They range from highly detailed to broadly thematic.

4.1   Three Broad Overviews of Meta-synthesis Methodology

In the first and most detailed overview, Barnett-Page and Thomas (2009) identify nine specific synthesis varieties to apply to qualitative research, which we detail in Table 2.

Table 2. Comparison of the Features of Different Meta-synthesis Methods (Adapted from Barnett-Page & Thomas, 2009)

Method	Method features
Meta-ethnography	The authors offer three broad philosophical approaches for conducting a meta-ethnographic analysis: 1) reciprocal translation (translating concepts from one study into that of another study), 2) refutational synthesis (explaining the contradictions between studies), and 3) line-of-argument synthesis (building a "picture of the whole" from the component parts found in various studies. They offer a guide with seven specific steps for conducting an analysis: 1) getting started, 2) deciding what studies to investigate, 3) reading identified studies, 4) determining how the studies relate, 5) translating the studies into one another, 6) synthesizing translations, and 7) expressing the syntheses.
Grounded theory	An inductive approach, grounded theory involves simultaneously collecting and analyzing data and encourages theory to "emerge" from the data. One uses a constant comparative approach in which one regularly contrasts results in hand to data in hand and prior results that arose from them. Coupled with theoretical sampling in which one seeks new data elements as new illuminations arise, grounded theory results in a robust inductive construction of emerging theoretical perspectives.

Table 2. Comparison of the Features of Different Meta-synthesis Methods (Adapted from Barnett-Page & Thomas, 2009)

Thematic synthesis	This method merges meta-ethnography and grounded theory precepts. One organizes coded findings into descriptive themes in the analysis. One further interprets descriptive themes into analytical themes (third-order interpretations). Descriptive and analytical themes arise from reciprocal translation (expressing one study's results in the context of other studies), and the approach proceeds inductively by constantly comparing what one has learned to what can yet learn. Here, the synthesis in meta-ethnography and grounded theory seems strongest since grounded theory's constant comparison process largely supports meta-ethnography's reciprocal translation approach.
Textual narrative synthesis	In this method, one arranges studies into homogeneous groups for analysis. One reports the studies' characteristics, context, quality, and substantive findings and compares their similarities and differences.
Meta-study	The analysis has three components: meta-data analysis (comparing findings across studies in which one compares similarities and discrepancies), meta-method analysis (comparing methods across studies and critically appraising the studies' epistemological soundness) and meta-theory analysis (comparing theoretical perspectives that different studies suggest). These three comparisons culminate in a synthesis across the three parts; accordingly, the meta-study synthesis creates interpretations that account for the results of all three analytical components.
Meta-narrative	This method builds on Kuhnian paradigms in which one considers competing theoretical viewpoints incommensurable. Researchers developed this approach to merge findings on a common concept from across different disciplines. In this approach, one considers key features of each disciplinary in parallel with an eye to finding key themes and dimensions for synthesis once one produces maps of each disciplinary view about historical origins, scope, theoretical basis, research questions, methodology, key findings.
Critical interpretive synthesis	This approach helps one synthesize multi-disciplinary and multi-method results. It adapts meta-ethnography (that also uses some grounded theory techniques, such as theoretical sampling for selecting studies and the notion of reviewing studies in stages), and concentrates on merging both quantitative and qualitative study results.
Ecological triangulation	Also known as "ecological sentence synthesis", this approach concentrates on accumulating multi-faceted evidence for subsequent synthesis. The synthesis method involves "ecological sentences" that one forms in order to compare studies. Ecological sentences take the form: "with this method, these outcomes occur with these populations, in these settings". The method focuses on explaining interdependent relationships between behaviors, persons, and environments.
Framework syntheses	Following a qualitative analysis convention of coding and data charting to support analysis, this approach differs from others in that it begins with a priori frameworks that researchers construct from background material and discussion among themselves. The framework informs how they extract and synthesize findings.

4.1.1 A Less Granular Categorization

In the second overview, Finlayson and Dixon (2008) categorize four general synthesis approaches. They offer guiding advice for researchers just beginning to experiment with the meta-synthesis method. In providing a "guide for the novice", Finlayson and Dixon focus mostly on what meta-synthesis *is* versus what it is *not.* In caharacterizing the prevailing methods, they identify four key approaches:

1) **Meta-ethnography:** a sequential process that merges and combines studies through the use of metaphors.

2) **Grounded theory**: involves coding, categorizing, and consistently comparing the studies in a corpus into more abstract theoretical representations.

3) **Cross-case analysis**: involves cross-referencing categories identified in single studies with other studies.

4) **Meta-study**: a systematic process in which one conducts three pre-synthesis stages (i.e., meta-theory, meta-method and meta-data-analysis) before the meta-synthesis.

4.1.2   A Brief Taxonomy

In the third overview, Sandelowski et al. (1997) promote three broad approaches:

1) **Synthesis specifically:** refers to integrating multiple studies from a *single researcher* on a specific topic. (We refer to this approach as self-synthesis henceforth.)
2) **Meta-ethnography**: involves coding, categorizing, and consistently comparing studies to obtain more abstract theoretical representations.
3) **Cross-case analysis:** involves cross-referencing categories identified in single case studies with other case studies.

We note that Sandlelowski et al. (1997) concisely categorize meta-synthesis methods according to 1) whether researchers catalogue and synthesize from their own body of produced studies or from a corpus from across various researchers in the literature, 2) whether the corpus specifically includes case studies, and 3) whether the corpus can include various qualitative studies (and even possibly quantitative findings). Being the most open conceptualization that one can adapt to the widest possible data context, we consider the meta-ethnography rubric that originates with Noblit and Hare (1988) likely the best starting point for a generic meta-synthesis tutorial on method. Meta-ethnography does not specify that one synthesize a single researcher's body of studies as in Saldelowski et al.'s (1997) first broad category, nor does it limit itself to comparing effects across only qualitative case studies as in Sandleowksi et al.'s (1997) third broad category.

5   Practicing the Methodology: Origins in Noblit and Hare's (1988) Sage Monograph

Noblit and Hare's monograph (1988) probably represents the best candidate for the meta-synthesis method's progenitor since it appeared the earliest and has become the most prominently identifiable example of the process. Further, nearly every study on meta-synthesis cites their work. We consider their seven-step template to meta-ethnographic synthesis a basic template for conducting the meta-synthesis method, but we also broaden our perspective by finding additional touchpoints in the reference discipline literature. We discuss each step in their approach in subsequent sections.

5.1.1   Getting Started

In this step, one identifies an interest that the analysis might inform. One gives this "specific interest" form from reading accounts about the phenomena that the analysis focuses on. One can consider this step analogous to the "problem-formation" phase in a research study in which the author studies a problem and develops a solution through theorization.

5.1.2   Deciding What Studies to Investigate

In this step, one determines what pertains to one's study. The corpus of studies one collects to synthesize determines the character of what one can learn, so one's interest in a given topic (the first step above) critically influences the outcome's eventual theme and tone. In this step, one should focus on collecting studies that highly pertain to the question at hand rather than simply collecting as many studies as possible, which ensures one conducts a synthesis that pertains directly to the topic. One should use an extensive and broad corpus only when the research problem necessitates it. In this step, one also needs to have a sense about the audience.

5.1.3   Reading Identified Studies

In this step, Noblit and Hare (1988) advise researchers "to move quickly to analyzing the characteristics of the study relevant to the topic of interest" (p. 28). They advise researchers to repeatedly read accounts (e.g., papers) and take notes about interpretive metaphors. Since the meta-ethnography method pertains to synthesizing texts, the important factors in this step include the details of each account and what they say about one's substantive interest (first step).

5.1.4   Determining how the Studies Relate

Noblit and Hare (1988) indicate that, in this step, one puts the studies together. As simple as that sounds, the process requires one to determine the relationships between the studies one wants to synthesize. To

that extent, the first phase (in which one determines which studies to collect) pays off in this phase in that it limits work to relevant studies that one can reasonably expect to have some sort of relationship for synthesizing. In this phase, one makes initial assumptions about the relationships between studies. These assumptions fall into three general categories: 1) reciprocal translation, 2) refutation, and 3) lines of argument. Refutation largely speaks for itself; this general approach to assumptions about the connections between studies concerns how studies *do not* agree with each other and what that might mean. Reciprocal translation refers to the process in which one considers one study's findings in the context of from another study's findings and how that might modify how one perceives the emerging synthesis. Line-of-argument assumptions take an inductive approach in which one constructs meaning from the progressively building meaning through a series of studies. Grounded theory practitioners will find this latter approach familiar.

5.1.5 Translating the Studies into One Another

Lest one think that "translating studies into one another" resembles the reciprocal translation approach to determine how studies relate to each other that we discuss above, Noblit and Hare (1988) note that, in this specific analysis step, researchers should consider each research study an "analogy". As such, each account represents a story replete with meaning unique to its context but also similar in some ways to other studies from the corpus (indeed, one collects the studies for their likely similarities in earlier steps). In this step, one needs to understanding that "each study is like another, *except…*" (Noblit & Hare, 1988, p. 28), yet, at the same time, it remains important to understand the ways in which analogies resemble each other yet differ. The translation technique maintains respective studies' central metaphors while considering each account in the context of the metaphors and analogies developed in other accounts. Synthesis arises from considering how conceptually similar studies find subtly different things that broaden how one understands the phenomenon at hand.

5.1.6 Synthesizing Translations

This step concerns making the whole more than the sum of the parts. If a large number of translations exist from the prior step, one can conduct a meta-step and translate groups of translations into a higher order of discerned meaning. Such a situation might arise when groups of translations seemingly compete with or contradict each other. Qualitatively, one might think about this process similar to the function that a principle-components analysis plays in statistical analyses: it serves to discern groupings of strong meaning across a group of elements that all have some interconnection (in this case, the thematic area of interest that drove one to initially collect the elements in the corpus).

5.1.7 Expressing the Synthesis

In this phase, one concludes the process. Specifically, one focuses on inducing theoretical meaning from analyzing the compiled body of studies that one processed through the several previous stages.

The synthesis process explicitly considers the role of the audience for whom one conducts the analysis and reports it to. To that end, one should consider the "language" in which the audience might reasonably expect to receive such information. Certainly, "speaking to the audience in their own terms" constitutes good communications theory, but, more pointedly, when expressing syntheses of a body of related studies in which the audience and the author share an interest, recipients should be able to discern the theoretical meaning that arises from the multi-stepped analysis when one makes the resulting analytical synthesis. As such, one should consider readers, reviewers, editors, and so on when framing the synthesis for external consumption.

In the reporting process, one needs to understand the audience's culture in the same way one understands the studies that one synthesizes. The synthesis and its explication in large part exist to persuade the intended audience about some point—its worth lies in how well the intended audience can comprehend it Noblit & Hare, 1988).

To that end, while one can express and report a meta-synthesis in various ways that span drama, video, and text (p. 77), writing constitutes the paradigmatic form in our world, and one will best meet the the intended audience's expectations with written interpretive accounts. Noblit and Hare (1988) advocate that researchers metaphorically translate the studies they compare and synthesize, and they emphasize the need to express the "strange" findings in the "familiar" audience's language—an artistic rather than scientific process.

Importantly, this highly subjective process involves affirmatively embracing the notion that a meta-synthesis derives its meaning from researchers' presenting their views as much as it does the audience's interpreting those views. As Noblit and Hare (1988, p. 79) conclude, researchers need to understand their role as interpretation arbiters in a larger discourse that comprises the meta-synthesis and the scholarly community. To that end, a meta-synthesis becomes a colloquy between researchers and the audience.

5.2   A Simplified Methodological Template

We find Siau and Long's (2005) abridged distillation of Noblit and Hare's (1988) steps into three broad practices compelling for several reasons. First, many IS scholars will know Keng Siau given he also works in the IS discipline; accordingly, his engagement in the method lends it disciplinary credibility. Second, having published his account in a journal tangentially related to our mainstream IS research, IS researchers would likely find it more accessible and contextually compelling than many accounts that arise from the nursing literature, which also buttresses its credibility and encourages scholars to adopt it. Third, by encapsulating Noblit and Hare's seven steps into three broad and general activity areas, we believe that Siau and Long make the process more understandable and user friendly.

5.2.1   Stage 1: Selecting a Group of Studies

This general stage of the analysis process merges Noblit and Hare's (1988) steps in which one identifies a research interest and selects papers related to it. To the degree that Siau and Long's (2005) categorization collapses the more granular Noblit and Hare approach in the first stage, it likely takes as given the notion that the researcher wants to pursue a specific research question that will most certainly guide how the researcher collects studies. As such, it makes to group these steps together under study selection for experienced researchers who typically proceed with studies that they ground well in their intellectual and theoretical interests and who have much experience in permitting these intellectual and theoretical predispositions to guide the literature they consider in a study's early stages.

5.2.2   Stage 2: Synthesizing Translations of the Studies

This stage involves the most complexity since it merges three full stages from Noblit and Hare's (1988) process: reviewing the literature, determining how the studies relate, and translating the studies into one another. While two of these stages are quite intuitive (reviewing literature and considering relationships between studies), the third, translating studies into one another, involves considerable more challenge and bears specific consideration.

The core of the cross-translation process involves comparing key concepts and metaphors between the elements in studies. While scholars familiar with grounded theory practice might be tempted to liken this activity to the "constant comparative process", the two subtly differ. Siau and Long (2005) provide an instructive approach: they create a matrix of metaphors across the collection of studies they analyze. In exhaustively cross-referencing the commonalities between the studies under consideration in a tabular matrix, one can more easily begin to prepare for the eventual synthesis that the final stage of the approach they use encompasses.

5.2.3   Stage 3: Expressing the Overarching Synthesis

The third stage in Siau and Long's (2005) abridged process involves synthesizing the translations and presenting the subsequent findings. As one has completed the key work of the synthesis in the highly detailed second general step by this point, the final, largely descriptive step simply requires the researcher to report the results of the tabular syntheses matrix that arise from the cross translations in the prior step.

5.3   Methodological Considerations beyond the Meta-Ethnography Approach: The Special Case of Cases

As we note above, Sandelowski et al. (1997) categorize meta-syntheses into three broad and largely mutually exclusive approaches (self-synthesis, meta-ethnography, and cross-case analysis). We present the meta-ethnography variation for general tutorial purposes given its broad capabilities and lack of contextual and data-type limitations. Recognizing that Sandelowski et al.'s (1997) self-synthesis approach serves as a tool for researchers to integrate their own body of qualitative investigations on a specific topic and given we demonstrate the meta-ethnography approach above, we briefly consider cross-case analysis.

Hoon's (2013) paper on specifically synthesizing qualitative case studies characterizes meta-synthesis with cross-case analysis as a theory-building method. Hoon advances an eight-step approach to synthesizing case study findings to generate theory, and these steps have some similarities to and some differences from Noblit and Hare's (1988) approach that we discuss above. If we reconciled Hoon's case approach to the more telegraphic three-step approach that Siau and Long (2005) use to abridge Noblit and Hare's (1998) meta-ethnography approach, we would observe that the first phase involves collecting studies related to some intellectual or theoretical interest, the second involves qualitatively analyzing the collected studies (in which one qualitatively codes elements from the respective cases, a notable difference from the other approaches we examine here), and the third involves the same general synthesis and reporting process in other modalities.

We consider Hoon's (2013) case-specific approach because, in some situations, researchers might wish to attempt synthesis and theory building from studies that do not necessarily represent a unified effort (i.e., an unrelated body of work that contains only qualitative studies). Accordingly, we present the three general phases in the cross-case analysis approach below.

5.3.1 Stage 1: Conceptualizing the Study and Collecting Cases

In this stage, one focuses on determining the research problem and what one might collect to inform its answer. Thus, in this stage, one 1) frames the research question, 2) locates the relevant literature, and 3) determines inclusion criteria for retaining studies in analysis.

Framing the research question requires one to embed the meta-synthesis in a research area. As in every meta-synthesis approach we consider in this paper, one uses what one wants to know as the starting point, which typically leads to one's finding a body of studies that relate to the problem at hand. Hoon's (2013) case-specific approach differs from Noblit and Hare's (1988), Sandelowski et al.'s (1997), and Siau and Long's (2005) approaches in that it explicitly recognizes that one should consider criteria for including a study, which we find a highly useful notion.

Indeed, Hoon (2013) states that inclusionary criteria play an important role in a meta-synthesis study since they frame its validity. In particular, Hoon suggests that research should meet five criteria: methodological consistency, theoretical coherence with the research question, substantive coverage, coherence with both the original research question and any evolutions of it, and the study's quality.

Methodological consistency refers to searching for qualitative case studies. This differentiates cross-case analysis from pure meta-ethnography, which considers many types of findings.

Theoretical coherence with the research question refers to the consideration that one include only studies relate to the original research problem that launched the synthesis.

Substantive coverage, a more subtle criterion compared to the first two criteria, requires researchers to include studies in the meta-synthesis that deal with the problem at hand at a deep enough level. One could consider this step as saving labor time since it encourages researchers to choose only the studies that advance the research problem in some meaningful way (excluding those with only tangential connection to the problem).

Coherence with the research question and its evolutions requires the researcher to consider topical studies that possibly extend beyond the context of the reach problem in some related way. In contrast to studies that one excludes for only having a passing connection to the research problem, in the substantive coverage criterion, the coherence with evolution criterion prompts the researcher to consider studies that may well expand the study's horizons and its related research problem.

Quality, a somewhat self-evident criterion, refers to ensuring one includes only good-quality studies and excludes poor-quality ones.

5.3.2 Stage 2: Case Analysis

This phase—a particularly interesting one in a cross-case analysis—requires the researcher to actually engage in qualitative analysis and coding before the synthesis task. As such, this stage tends to make this meta-synthesis modality rather more like a quantitative meta-analysis in ways. For example, in a meta-analysis, one "analyzes the analyses", and, in a cross-case meta-synthesis, one "codes the codes".

Extracting and coding data, a self-evident step for qualitative researchers, is unique in the meta-synthesis process since it largely occurs only in the cross-case analysis modality. In this process, as researchers

consider, read, and interpret the corpus of studies, they carefully codes each case for study characteristics and for insights related to the meta-synthesis's larger research question.

Analyzing on a case-specific level involves identifying the most influential variables in each case in terms of the research focus/research question. The eventual synthesis will require researchers to consider important variables that span cases as in classic meta-ethnography's reciprocal translation technique. In a cross-case analysis, researchers will consider such variables at this point.

5.3.3   Stage 3: Expressing the Synthesis

Synthesizing on an across-study level in a cross-case analysis requires researchers to look for patterns in important variables across each case. Pragmatically, researchers would have already found and noted commonalities across cases in the case analysis stage but, with that done, need to understand and reflect on them before they enter the synthesis stage. In this part of the cross-case meta-synthesis, researchers discuss the commonalities in terms that provide the audience with a shared understanding such that the audience can understand the overarching research question in the context of the ensuing synthesis and interpretations.

Building theory represents the key reason for engaging in a meta-synthesis—be it in meta-ethnography, self-synthesis, or cross-case analysis. Researchers raise an important question in initiating the meta-synthesis, and the synthesis should lead to theoretical perspectives that broaden views about the problem for wider understanding. In this sense, researchers have a duty to conduct the synthesis to draw theoretical conclusions from the emerging pattern of influential variables that relate to the research question.

Finally, researchers need to discuss the results of the cross-case analysis. As with any good research paper, meta-synthesis (in this case, cross-case analysis) leads to theoretical considerations.

6   An Informal Synthesis of Meta-synthesis Methods

In this tutorial paper, we explicate the several related approaches to conducting the meta-synthesis method. As such, we make a small and informal effort to synthesize related ways to conduct a meta-synthesis. We can encapsulate the method succinctly as per Noblit and Hare (1988, p. 81): researchers conduct meta-synthesis to address their interests; discover relations between the studies in the translation process by comparing their characteristics; and consider, contrast, and synthesize the translations to discover the synthesis's meaning. The key step in a meta-synthesis likely does not involve initially choosing studies (assuming one does so for relevance) but rather in determining how the studies relate to one another since it constitutes the synthesis process's foundational aspect.

In this sequenced collection/translation/synthesis process, we discern that meta-synthesis generalizes to three broad phases. Regardless of the number of specific steps (seven for meta-ethnography, eight for cross-case analysis), the general procedures tend to involve 1) collecting a body of studies related to a key research problem, 2) considering how the studies relate (or how they contrast or how they build together toward some inductive end), and 3) expressing the subsequent synthesis of what the studies, as a body, mean in the context of the research problem for the research audience to subjectively consider.

7   Conclusion

In this paper, we provide a methodological tutorial on the meta-synthesis approach to compiling findings across a body of qualitative research studies to achieve theoretical generalization. From the studies we identified, we extracted two broad approaches to conducting meta-syntheses: 1) meta-ethnography and 2) cross-case analysis. We also identified a third modality, self-synthesis, that involves only a single researcher's studies compared to a broad stream of literature. Self-synthesis helps researchers converge on the broad meaning of a researcher's individual body of work.

Practiced widely in the medical literature, the meta-synthesis method is new to the IS literature. But, in consideration of the rising popularity of qualitative inquiry in our field, the meta-synthesis method demonstrated is a novel and useful approach for identifying important theoretical developments in the rapidly expanding field of qualitative information systems research.

References

Barnett-Page, E., & Thomas, J. (2009). Methods for the synthesis of qualitative research: A critical review. *BMC Medical Research Methodology, 9*(1), 59-81.

Bondas, T., & Hall, E. O. C. (2007). Challenges in approaching metasynthesis research. *Qualitative Health Research, 17*(1), 113-121.

Britten, N., Campbell, R., Pope, C, Donovan, J., Morgan, M., & Pill, R. (2002). Using meta ethnography to synthesize qualitative research: A worked example. *Journal of Health Services Research & Policy, 7*(4), 209-215.

Douglas, A. C., Mills, J. E., Niang, M., Stepchenkova, S., Byun, S., Ruffini, C., Lee, S. K., Loutfi, J., Lee, J., Atallah, M., & Blanton, M. (2008). Internet addiction: Meta-synthesis of qualitative research for the decade 1996-2006. *Computers in Human Behavior, 24*, 3027-3044.

Finfgeld., D. L. (2003). Metasynthesis: The state of the art—so far. *Qualitative Health Research, 13*(7), 893-904.

Finlayson, K., & Dixon, A. (2008). Qualitative meta-synthesis: A guide for the novice. *Nurse Researcher, 15*(2), 59-71.

Hoon, C. (2013). Meta-synthesis of qualitative case studies: An approach to theory building. *Organizational Research Methods, 16*(4), 522-556.

Lawrence, C. (2013). A holistic narrative of culture's mediation of information systems innovation: A qualitative metasynthesis. *Journal of Global Information Technology Management, 16*(3), 31-52.

Lee, A. S., & Baskerville, R. L. (2003). Generalizing generalizability in information system research. *Information Systems Research, 14*(3), 221-243.

Noblit, G. W., & Hare, R. D. (1988). *Meta-ethnography: Synthesizing qualitative studies.* Thousand Oaks, CA: Sage.

Paterson, B. L., Dubouloz, C., Chevrier, J., Ashe, B., King, J., & Moldoveanu, M. (2009). Conducting qualitative metasynthesis research: Insights from a metasynthesis project. *International Journal of Qualitative Methods, 8*(3), 22-33.

Reza Bazi, H., Hasanzadeh, A., & Moeini, A. (2017). A comprehensive framework for cloud computing migration using meta-synthesis approach. *Journal of Systems and Software, 128*, 87-105.

Rosenthal, R., & Rosnow, R. L. (1991). *Essentials of behavioral research: Methods and data analysis.* Boston, MA: McGraw-Hill.

Sandelowski, M., & Barroso, J. (2003). Focus on research methods toward a metasynthesis of qualitative findings on motherhood in HIV-positive women. *Research in Nursing and Health, 26*(2), 153-170.

Sandelowski, M., & Barroso, J. (2007). *Handbook for synthesizing qualitative research.* New York, NY: Springer.

Sandelowski, M., Docherty, S., & Emden, C. (1997). Qualitative metasynthesis: Issues and techniques. *Research in Nursing & Health, 20*, 365-371.

Sarker, S., Xiao, X, & Bealieu, T. (2013). Qualitative studies in information systems: A critical review and some guiding principles. *MIS Quarterly, 37*(4), iii-xviii.

Siau, K., & Long, Y. (2005). Synthesizing e-government stage models—a meta-synthesis based on meta-ethnography approach. *Industrial Management & Data Systems, 105*(3/4), 443-458.

Thorne, S., Jensen, L., Kearney, M.H., Noblit, G., & Sandelowski, M. (2004). Qualitative metasynthesis: Reflections on methodological orientation and ideological agenda. *Qualitative Health Research, 14*(10), 1342-1365.

Urquhart, C. (2011). Meta-synthesis of research on information seeking behavior. *Information Research, 16*(1).

Walsh, D., & Downe, S. (2005). Meta-synthesis method for qualitative research: A literature review. *Methodological Issues in Nursing Research, 50*(2), 204-211.

Walsham, G. (1995). Interpretive case studies in IS research: Nature and method. *European Journal of Information Systems, 4*(2), 74-81.

Yin, R. (2011). *Qualitative research from start to finish*. New York, NY: Guildford Press.

Appendix: Collected Studies

Au, W. (2007). High-staked testing and curricular control: A qualitative metasynthesis. *Educational Researcher, 36*(5), 258-267.

Barnett-Page, E., & Thomas, J. (2009). Methods for the synthesis of qualitative research: A critical review. *BMC Medical Research Methodology, 9*(1), 59-81.

Barroso, J, Gollop, C. J., Sandelowski, M., Meynell, J., Pearce, P. F., & Collins, L. J. (2003). The challenges of searching for and retrieving qualitative studies. *Western Journal of Nursing Research, 25*(2), 153-78.

Bawden, D. (2012). On the gaining of understanding; Syntheses, themes and information analysis. *Library and Information Research, 36*(112), 147-62.

Bondas, T., & Hall, E. O. C. (2007). Challenges in approaching metasynthesis research. *Qualitative Health Research ,17*(1), 113-121.

Britten, N., Campbell, R., Pope, C, Donovan, J., Morgan, M., & Pill, R. (2002). Using meta ethnography to synthesize qualitative research: A worked example. *Journal of Health Services Research & Policy, 7*(4), 209-215.

Cao, L., & Nguyen, N. T. (2008). Intelligence metasynthesis and knowledge processing in intelligent systems. *Journal of Universal Computer Science , 14*(14), 2256-2262.

Catalano, A. (2013). Patterns of graduate students' information seeking behavior: A metasynthesis of the literature. *Journal of Documentation, 69*(2), 243-274.

Cobb, B., Newman-Gonchar, R., & Alwell, M. (2009). Self-determination for students with disabilities: A narrative metasynthesis. *Career Development for Exceptional Individuals, 32*(2), 108-114.

Douglas, A. C., Mills, J. E., Niang, M., Stepchenkova, S., Byun, S., Ruffini, C., Lee, S. K., Loutfi, J., Lee, J., Atallah, M., & Blanton, M. (2008). Internet addiction: Meta-synthesis of qualitative research for the decade 1996-2006. *Computers in Human Behavior, 24*, 3027-3044.

Duke, T. S., & Ward, J. D. (2009). Preparing information literate teachers: A metasynthesis. *Library and Information Science Research, 31*(4), 247-256.

Erwin, E. J., Brotherson, M. J., & Summers, J. A. (2011). Understanding qualitative metasynthesis: Issues and opportunities in early childhood intervention research. *Journal of Early Intervention, 33,* 186-200.

Finfgeld, D. L. (2003). Metasynthesis: The state of the art—so far. *Qualitative Health Research, 13*(7), 893-904.

Finlayson, K., & Dixon, A. (2008). Qualitative meta-synthesis: A guide for the novice. *Nurse Researcher, 15*(2), 59-71.

Geoffrey L. D., Lamont, E., & Gray, S. (2016). Mental health nurses' attitudes, behavior, experience and knowledge reading adults with a diagnosis of borderline personality disorder: Systematic, integrative literature review. *Journal of Clinical Nursing, 25*(13-14), 1848-1875.

Gu, J., Song, W., & Zhu, Z. (2008). Meta-synthesis and expert mining. In *Proceedings of the IEEE International Conference on Systems, Man and Cybernetics.*

Gu, J., & Tang, X. (2004). Wu-li Shi-li Ren-li system approach to a major project on the research of meta-synthesis system approach. *International Journal of Knowledge and Systems Sciences, 1*(1), 70-77.

Guillet, B. D., & Mohammad, I. (2015). Revenue management research in hospitality and tourism: A critical review of current literature and suggestions for future research. *International Journal of Contemporary Hospitality Management, 27*(4), 526-560.

Hajiheydari, N., & Dabaghkashani, Z. (2011). BPM implementation critical success factors: Applying meta-synthesis approach. In *Proceedings of the International Conference on Social Science and Humanity.*

Hamari, J., & Tuunanen, J. (2014). Player types: A meta-synthesis. *Transactions of the Digital Games Research Association, 1*(2), 29-53.

Hoon, C. (2013). Meta-synthesis of qualitative case studies: An approach to theory building. *Organizational Research Methods, 16*(4), 522-556.

Hughes, S., & Noblit, G. (2016). Meta-ethnography of autoethnographies: A worked example of the method using educational studies. *Ethnography and Education, 12*(2), 1-17.

Ivaylo V., Rogers, A., Kennedy, A., & Koetsenruijter, J. (2014). The influence of social networks on self-management support: A metasynthesis. *BMC Public Health, 14*(1), 719-731.

Jayashree, S., & Marthandan, G. (2010). Government to e-government to e-society. *Journal of Applied Sciences, 10*(19), 2205-2210.

Jensen, L. A., & Allen, M. N. (1994). A synthesis of qualitative research on wellness-illness. *Qualitative Health Research, 4*(4), 349-369.

Korhonen, A., Hakulinen-Viitanen, Y., Jylhä, V., & Holopainen, A. (2013). Meta-synthesis and evidence-based health care—a method for systematic review. *Scandinavian Journal of Caring Sciences, 27*(4), 1027-1034.

Kowlessar, O., Fox, J. R., & Wittkowski, A. (2015). The pregnant male: A metasynthesis of first-time fathers' experiences of pregnancy. *Journal of Reproductive and Infant Psychology, 33*(2), 106-127.

Lau, F., Kuziemsky, C., Price, M., & Gardner, J. (2010). A review on systematic reviews of health information system studies. *Journal of the American Medical Informatics Association, 17*(6), 637-645.

Lawrence, C. (2013). A holistic narrative of culture's mediation of information systems innovation: A qualitative metasynthesis. *Journal of Global Information Technology Management, 16*(3), 31-52.

Lee, A. S., & Baskerville, R. L. (2003). Generalizing generalizability in information system research. *Information Systems Research, 14*(3), 221-243.

Levack, W. (2012). The role of qualitative metasynthesis in evidence-based physical therapy. *Physical Therapy Reviews, 17*(6), 390-397.

McKenzie, S. K., Jenkin, G., & Collings, S. (2016). Men's perspectives of common mental health problems: A metasynthesis of qualitative research. *International Journal of Men's Health, 15*(1), 80-104.

Mehravani, S., Hajiheydari, N., & Haghighinasab, M. (2011). ITIL adoption model based on TAM. In *Proceedings of the International Conference on Social Science and Humanity.*

Noblit, G. W., & Hare, R. D. (1988). *Meta-ethnography: Synthesizing qualitative studies.* Thousand Oaks, CA: Sage.

O'Halloran, R., Grohn, B., & Worrall, L. (2012). Environmental factors that influence communication for patients with a communication disability in acute hospital stroke units: A qualitative metasynthesis. *Archives of Physical Medicine and Rehabilitation, 93*(1), S77-S85.

Paterson, B. L., Dubouloz, C., Chevrier, J., Ashe, B., King, J., & Moldoveanu, M. (2009). *Conducting qualitative metasynthesis research: Insights from a metasynthesis project. International* Journal of *Qualitative Methods, 8*(3), 22-33.

Reid, B., Sinclair, M., Barr, O., Dobbs, F., & Crealey, G. (2009). A meta-synthesis of pregnant women's decision-making processes with regard to antenatal screening for down syndrome. *Social Science and Medicine, 69*(11), 1561-1573.

Reza Bazi, H., Hasanzadeh, A., & Moeini, A. (2017). A comprehensive framework for cloud computing migration using meta-synthesis approach. *Journal of Systems and Software, 128*, 87-105.

Rodrigue, C., & Fernet, M. (2016). A metasynthesis of qualitative studies on casual sexual relationships and experiences. *Canadian Journal of Human Sexuality, 25*(3), 225-242.

Rousseau, A. L, & Low, L. K. (2002). An exploratory metasynthesis of midwifery practice in the United States. *Midwifery, 19*(3), 203-214.

Sandelowski, M. (2004). Using qualitative research. *Qualitative Health Research, 14*(10), 1366-1386.

Sandelowski, M., & Barroso, J. (2003). Focus on research methods toward a metasynthesis of qualitative findings on motherhood in HIV-positive women. *Research in Nursing and Health, 26*(2), 153-170.

Sandelowski, J., & Barroso, J. (2003). Classifying the findings in qualitative studies. *Qualitative Health Research, 13*(7), 905-923.

Sandelowski, M., & Barroso, J. (2007). *Handbook for synthesizing qualitative research.* New York, NY: Springer.

Sandelowski, M., Docherty, S., & Emden, C. (1997). Qualitative metasynthesis: Issues and techniques. *Research in Nursing & Health, 20*, 365-371.

Siau, K., & Long, Y. (2005). Synthesizing e-government stage models—a meta-synthesis based on meta-ethnography approach. *Industrial Management & Data Systems, 105*(3/4), 443-458.

Sibeoni, J., Orri, M., Valentin, M., Podlipski, M., Colin, S., Pradere, J., & Revah-Levy, A. (2017.) Metasynthesis of the views about treatment of anorexia nervosa in adolescents: Perspectives of adolescents, parents, and professionals. *PloS One, 12*(1), e0169493.

Thorne, S., Jensen, L., Kearney, M.H., Noblit, G., & Sandelowski, M. (2004). Qualitative metasynthesis: Reflections on methodological orientation and ideological agenda. *Qualitative Health Research, 14*(10), 1342-1365.

Urquhart, C. (2011). Meta-synthesis of research on information seeking behavior. *Information Research, 16*(1).

Walsh, D., & Downe, S. (2005). Meta-synthesis method for qualitative research: A literature review. *Methodological Issues in Nursing Research, 50*(2), 204-211.

Zimmer, L. (2006). Qualitative meta-synthesis: A question of dialoguing with texts. *Journal of Advanced Nursing, 53*(3), 311-318.

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