Using Meta-Synthesis to Facilitate Evidence-Based Practice

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In a previous column, Fineout-Overholt et al. (2008) discussed the use of systematic reviews in decision making for clinical practice, focusing primarily on the quantitative studies, such as randomised controlled trials. Narrative reviews were included but in less detail; this was intentional because the synthesis of qualitative evidence is a complex process and has evoked significant discussion over the past 5 years. Consequently, this column addresses some of the process issues surrounding qualitative evidence synthesis, or meta-synthesis as it is more commonly known, and offers ideas for how evidence arising from these can be used to inform education, teaching, and practice.

Meta-synthesis: What Is It?

It would be fair to say that the term does not lend itself well to simple definition. Meta-synthesis has been called meta-study, meta-ethnography, qualitative meta-analysis, and aggregated analysis. Breaking it down, meta-synthesis is the summation of the findings of multiple qualitative studies, and this has been likened to meta-analysis in traditional systematic review methodology. However, as Walsh and Downe (2005) commented, there are distinct differences between traditional systematic reviews and meta-syntheses; not least is the focus of the evidence, which for meta-synthesis is from the qualitative domain. The meta-synthesis of qualitative data goes further than pure summarising; it aims to produce new interpretations of the qualitative research findings whilst, at the same time, remaining faithful to the philosophical and theoretical or conceptual frameworks associated with the original research designs. Meta-ethnography, for example, is an approach used for synthesising ethnographic case studies as initially described by Noblit and Hare (1988), as well as other interpretative research reports, whilst preserving the properties of the primary data.

Zimmer (2006) considers meta-synthesis to be a “type of qualitative study that uses as data the findings from other qualitative studies linked by the same or related topic” (p. 312). Therefore it is not an integrated or narrative review, nor a secondary analysis of the primary raw data; rather it is the reviewer’s interpretation of the findings, which may include themes, categories, and relationships, arising from the data of the original studies. This is arrived at through comparison, translation, and analysis of those original findings, to produce new interpretations that incorporate the meanings of the included studies (Jensen & Allen 2006).

The number of qualitative studies exploring many different health care issues has grown exponentially over the past decades and, given the nature of qualitative research with its small sample sizes, and potentially limited wider applicability of the findings across different populations (although this may be contested), it is important that the findings from similar studies are synthesised to enhance evidence-based practice. For meta-synthesis to be useful to practitioners and inform evidence-based decision making, it is important that the syntheses contribute to “the development of culturally sensitive theories, culturally appropriate research tools, and patient-centered, -targeted, or -tailored interventions that are effective, feasible, and acceptable to users” (Sandelowski 2006; p. 10).

The concept of meta-synthesis is not new. Glaser and Strauss, the sociologists usually associated with grounded theory, synthesised the qualitative findings from four studies to produce “Status Passage” (Glaser & Strauss 1971). In the nursing literature, Zimmer (2006) suggests that Stern and Harris were the first to publish a meta-synthesis, which they called qualitative meta-analysis (Stern & Harris 1985). A couple of years later, educationalists Noblit and Hare (1988) coined the term meta-ethnography for their synthesis of interpretive ethnographic research located within the field of anthropology.

Challenges Associated with Meta-Synthesis

One problem that arises when conducting a meta-synthesis is the differences that may exist between the studies, the lived and narrative lives, and between participants’ and researchers’ perspectives. This creates a crisis of representation (Sandelowski 2006). It arises from the interpretation, by the reviewer, of the original research findings; in other words, the reviewer’s version of the researcher’s analysis of the data. It is important that practitioners are aware of
these differences since they do complicate meta-synthesis. The reviewer has a duty to identify these differences and be transparent about the processes used within the synthesis to make visible the language, context, and social practices relevant to the research findings. This, then, should help the practitioner reach decisions around the usefulness of the findings in practice. For example, the meta-synthesis process might identify a study that explores a phenomenon such as pain within a specific cultural context with which many practitioners might not be familiar. The reviewers, or the members of the meta-synthesis team, should take every effort to facilitate a greater understanding of the specifics of that culture so that the meaning can more easily be transferred from the original culture to that of the practitioner’s.

The Process of Meta-Synthesis

There is clearly a process to meta-synthesis, and this can be used by educators to reveal how the final synthesis of qualitative evidence has been reached. By peeling away the layers, practitioners should be able to see how the new insights or understandings have emerged. Walsh and Downe (2005) outline the process, which involves six stages (see Table).

Dundon (2006) used Noblit and Hare’s (1988) process to gain greater insight into the assessment and treatment of adolescent depression. She illuminates the nonlinear nature of the meta-synthesis process and commented that, although the stages identified above are all undertaken, they do not necessarily flow from one to another, and that there is a large degree of overlap or repetition within the process.

Any meta-synthesis has to begin by carefully defining the subject or focus, the questions to be asked, and the purpose of the activity. Some have a broad focus, whilst others may be more specific; this remains the subject of much debate. However, it is generally agreed that the objective should be to retrieve all of the relevant studies, from journals, books, and the gray literature (which includes unpublished works), to minimise the risk of the synthesis being conducted on just a sample of the studies that are available for review (Barosso et al. 2003).

The search process differs from quantitative systematic review in that a “berry-picking” approach is commonly used, in which there is a bit at a time retrieval of information, rather than a linear approach that produces a single retrieved set. Bates (1989) first used this term to explain the behaviors of searchers who search for studies in similar ways to those of fruit pickers, who look for fruit in many bushes, picking some from one, then another, then another. Consequently, the search evolves in a much more ad hoc fashion than occurs in traditional systematic review; as the wealth of information is sifted, the direction of the search changes to allow new leads to be followed and new avenues to be explored (Barosso et al. 2003).

Examples of Meta-Synthesis

As the focus of this edition of Worldviews on Evidence-Based Nursing is on pediatric and adolescents, we have drawn on examples of meta-synthesis that highlight these populations to illustrate pertinent aspects of the synthesis process.

In a meta-synthesis on parenting a child with a chronic illness, Coffey (2006) comments on the elimination of some studies, which were ultimately included, when a traditional keyword search was undertaken. This narrowed the search too much and so a broader search was undertaken that identified several other qualitative studies. This meta-synthesis finally included 11 qualitative research reports and generated, from these studies, a table of metaphors, from which a number of themes emerged. These provided a new insight into the understanding of the role of parenting when caring for a child with chronic illness, which can be used by practitioners as they develop or incorporate support strategies in the plan of care and subsequently work with parents more effectively.

The value of meta-synthesis is captured by Meadows-Oliver (2006) who, prior to undertaking a meta-synthesis on what it is like living as homeless adolescent mothers, questioned the generalisability of the growing number of individual studies on this topic. In isolation, each one provides a glimpse into the reality of living as a homeless adolescent mother. However, only with a fuller understanding would clinical utility be achieved. The resultant meta-synthesis provides insight into the collective experiences that can be used by nurses working with this vulnerable population to facilitate support and appropriately target the provision of community resources that are often needed. The themes that emerged from the meta-synthesis included housing instability prior to becoming homeless, which arose in part from the multiple moves or locations that they had experienced during childhood as a consequence of their mothers’ changing situations, the emotional, verbal, and sexual abuse that all had experienced, the search for support during and after the pregnancy, and their desire to seek a better life. The findings from the meta-synthesis could, once again, be used by practitioners to inform interventional strategies and decision making for clients in similar situations to these women.
Translating Qualitative Evidence into Practice
It is clear that there is a growing acceptance of the valuable contribution that qualitative research can make to improving health care through evidence-based practice and the erroneous nature of excluding qualitative research from consideration as best evidence (Sandelowski et al. 2006). Sandelowski et al. also believe that the health disciplines have an obligation to “produce knowledge that is accessible to researchers, clinicians, and the general public, that can be translated for practice” (Thorne et al. 2004 p. 1360).

There is a growing interest in meta-synthesis, which in turn evokes, for educators and practitioners, questions related to the ontology, epistemology, and methodology of doing research on research (Bondas & Hall 2007). The findings or meta-syntheses will rarely provide the complete view or understanding of a phenomenon because of the evolving nature of qualitative research. However, given the breadth of insight gained by incorporating the findings from a number of studies, meta-syntheses have a greater ability to reflect the generalisable reality than a single study can do (Zimmer 2006).

References