



Reflections on the methodological challenges of undertaking a meta-synthesis: A response to Heyman

We are appreciative of and encouraged by the insightful commentary on our article “A meta-synthesis of pregnant women’s decision-making processes with regard to antenatal screening for Down syndrome” (Reid, Sinclair, Barr, Dobbs, & Crealey, 2009) offered by Heyman (2009). The commentary seems to accept our view that meta-synthesis is a dynamic research methodology with the potential to facilitate the synthesis and re-conceptualisation of existing qualitative studies. Perhaps more importantly, the commentary offers a finely nuanced examination of the methodological challenges that complicate the meta-synthesis endeavour. In doing so, it accounted for many of the confusions and tensions which we also discussed and debated as we journeyed along our path towards meta-synthesis ‘know how’ and ‘know what’. However, it is not always possible to provide insights into all such confusions and tensions within the context of a single publication, and we therefore welcome this opportunity to do so. Like Heyman, our journey asked questions about the appropriateness of a constructivist approach, the possible inclusion of purposively diverse studies as a means of answering the meta-question, the thorny issue of appraising the quality of qualitative studies, and the representation of multiple social contexts within the product of the meta-synthesis. We also discussed concerns that meta-synthesis has the potential to recreate the very aggregative logic which it aims to replace. Through discussion and debate, we have come to appreciate that the journey towards theory development via meta-synthesis demands that attention be paid to both the interpretative and creative aspects of the process. Conceiving meta-synthesis in this way, merges the interpretative aspect with the reflexivity and conscientization of those undertaking the synthesis, and sets a new stage for addressing methodological issues involved. However, we suggest that midwives and other healthcare professionals undertaking a meta-synthesis have few models upon which to draw in order to achieve such an emergent kind of theoretical and methodological sensitivity. We therefore hope that our reply to each of the methodological concerns raised by Heyman will further support us and other researchers as we continue on our journey towards the attainment of such sensitivity.

Realism versus constructivism

Heyman suggests that our adoption of a constructivist approach appears incompatible with the apparently realist act of locating and synthesizing second-order constructs from existing qualitative studies (Heyman, 2009). He argues that the act of locating and synthesizing such diverse constructs within the framework of

a meta-synthesis implies that a common reality exists to be discovered and distilled from them, thereby subscribing to a realist approach. However, we tentatively suggest that constructivism is at once realist and relativist (Crotty, 1998). To say that a fragile reality of women’s decision-making about Down syndrome screening is constructed is not to say that it is not real. Drawing upon the example of risk, it is suggested that a high risk screening test result is constructed. It exists because of women and healthcare professionals’ interpretations and screening policies. Yet it is also real. Some women do have a risk of one in two-hundred-and-fifty of giving birth to a baby with Down syndrome. A high risk test result is a construction and may change in nature if alternative cut-off points are adopted, but it is nonetheless real. Accordingly, what constructivism suggests is that ‘the way things are’ (realist view) is really ‘just the way we make sense of them’ (relativist view). Indeed, Charmaz (2000) claims that grounded theory, which is analogous to meta-synthesis, is strengthened by constructivism by viewing the data as narrative constructions, focusing on subjective meaning, being flexible in the process, and acknowledging that findings are only one possible interpretation of participants’ reality. Embracing such a viewpoint suggests that while women’s decision-making about screening is real, meta-synthesis can only endeavour to represent a fragile reality of such decision-making. It is not simply a case of mirroring ‘what is there’. The meta-synthesis reports how second-order constructs are viewed and reacted to, and thereby meaningfully constructed into third-order constructs, by its authors. At different times and in different places, there may be very different interpretations of the same second-order constructs. The fragile reality distilled during meta-synthesis must therefore be viewed as partial and positional. The adequacy of such a reality may be assessed to some extent by how the authors’ voices are heard by and explained to the reader.

The meta-question

We accept Heyman’s argument that the purpose of individual studies did not always correspond with the meta-synthesis question (Heyman, 2009). Heyman et al. (2006), for example, focused on the women’s understandings of being at higher risk. Similarly, Reminnick (2006) sought to identify the key social factors influencing the diffusion of screening from women’s perspective. Such studies were not primarily concerned with women’s decision-making processes. Heyman questions whether such studies should have been included in the meta-synthesis, perhaps tentatively pointing towards their exclusion. We suggest that Heyman’s

argument gives rise to what is often termed the apples and oranges' problem (Deeks, Higgins, & Altman, 2005; Sharpe, 1997). In other words, a decision had to be made about whether to include studies with such diversity of purpose (apples and oranges) or to strive for uniformity of purpose (apples and apples). Sandelowski, Voils, and Barroso (2007) argue that there is often an inclination towards excluding purposively diverse studies in order to ensure that the meta-synthesis is less complex and more manageable. However, in this case, the decision made was based on the inclusion of studies which were considered to offer the most fruitful and meaningful insights in order to answer the meta-synthesis question, or as Stake (2000, 446) suggests 'the greatest opportunity to learn', and not whether they purported to have the same perspective or purpose. As perceptions of risk and social influences upon the diffusion of screening were considered to have a credible link with women's decision-making, both studies were included. Such a decision was reflective of the viewpoint of Glass (2000, 6) who, drawing upon Nozick's (1981) closest continuer theory, argues that to combine apples with apples would be 'trivial' because only the study of fruit is 'worthy of true scientists'. However, we do acknowledge that the studies were included without making clear to the reader their diversity of purpose.

Data quality

We agree with Heyman that appraising the quality of qualitative research is widely debated, and that there is currently no consensus on whether quality appraisals should be undertaken, which criteria to use and how to apply them. Authors of published meta-syntheses are also divided on the merits of quality appraisal and whether it should form part of the meta-synthesis at all (Atkins et al., 2008). However, in line with Walsh and Downe (2006), we suggest that quality appraisal reflects a central concern of qualitative research, that of illuminating context. Accordingly, the framework used was considered to assist in ensuring the integrity, transparency and transferability of the meta-synthesis. We found having a team from diverse professional and research backgrounds was helpful in 'judging', discussing and eventually reaching consensus about the quality of included studies. Such a process drew our attention to limitations in the analysis and interpretation of study findings which in turn had some bearing on the findings of the meta-synthesis. Chiang et al. (2006), for example, provided mainly descriptive findings which offered few insights into women's decision-making. Nevertheless, it is important to emphasize that this framework, like other quality appraisal frameworks, was designed as an indicator of quality and therefore was not applied in an overly-rigorous manner as a prescriptor of quality. We therefore did not exclude any study on the basis of the quality appraisal.

Multiple social contexts

Meta-synthesis is designed to bring the contextual differences and similarities from individual studies into dialogue with each other in order to generate a theoretical framework that retains a sense of such contextual diversity whilst simultaneously offering thick and insightful description (Thorne, Jensen, Kearney, Noblit, & Sandelowski, 2004). Britten, Campbell, Pope, Donovan, and Morgan (2002) suggest that it is important to bring studies conducted across diverse settings together in order to attain a higher level of conceptual development that is required from a meta-synthesis. Yet there is limited guidance as to how and where such differences may be made visible within the meta-synthesis process, and emergent theories have elucidated upon such differences to limited degrees (Atkins et al., 2008). We did consider including such

differences as explanations of the variations in findings of the meta-synthesis. However, such multiple differences would have further increased the complexity of the findings section, and reduced the potential for generating thick description. Thus, in line with Thomas and Harden (2008), an effort was made to preserve context by providing structured summaries of each study detailing scope and purpose, methodology and methods, main findings, and issues relating to relevance and transferability in Table 3 (Reid et al., 2009). During analysis and synthesis consideration was also given as to whether emergent key themes were transferable across the different study contexts. For example, efforts were made to distinguish between the timing of data collection during pregnancy, the organizational contexts of screening, or where women had accepted or declined screening. In the event, it was not possible to draw such comparisons and we acknowledge this as a limitation of the meta-synthesis.

Preference for generality over difference and author reflexivity

We accept Heyman's concern that meta-synthesis may be used to highlight generality over difference and thereby recreate the aggregative logic which it is designed to replace. Sandelowski, Docherty, and Emden (1997, 366) express this elegantly as they argue against 'summing up' the knowledge generated by this kind of research:

'To summarise qualitative findings is to destroy the integrity of the individual projects on which such summaries are based, to thin out the desired thickness of particulars...'

However, we suggest that a balanced approach was adopted in this meta-synthesis. We looked for similarities or comparisons between studies but also explored nuanced differences or exceptions as witnessed by our reference to, for example, the few women in Heyman et al.'s (2006) study who accepted screening in order to engage with maternity care services and the minority of women in Reminnick's (2006) study who argued that screening was against the true interests of women and their babies, and that the main beneficiaries of the expansion of the 'genetic testing race' were doctors and the biomedical industry. We therefore consider that appropriate differences between studies were emphasised within the context of a peer-reviewed publication which was word limited.

Heyman argues that we somewhat inaccurately summarised the findings from his study (Heyman et al., 2006) and then proceeds to outline some additional findings included in the original publication. However, it proved very difficult to summarise a complex study in less than one hundred words. There is also considerable debate as to whether those undertaking a meta-synthesis should contact the authors of included studies (Britten et al., 2002). As researchers seek to verify their findings with study participants, so might we have contacted authors to gain greater insights into study findings and to elicit missing findings. To our knowledge, there is limited information about this practice in meta-synthesis. For example, we did not know what purposes this activity would pursue, how often and why we might have sought to contact authors, and to what extent these contacts might have been successful. Consequently, we decided to analyse and synthesise published findings in order to reduce the potential for introducing original author bias, to examine the quality of published qualitative studies and reduce the burden of undertaking the meta-synthesis.

Interestingly, Heyman infers that we as authors lent towards the views that women do not wish to parent a child with Down syndrome and that women find the screening process stressful. Admirably, he acknowledges that such inferences may be incorrect.

We suggest that such inferences were not supported by the meta-synthesis. Rather the evidence from included studies indicated that women appear to find the screening process somewhat stressful and that some, but not all, women may not wish to parent a child with Down syndrome. We further suggest that all research, whether qualitative or quantitative, is influenced by a researcher's views, presuppositions, predilections and biases which inevitably reflect the social milieu they inhabit. Reflexivity is the recognition that a researcher's background and prior knowledge have an unavoidable influence on the research they are conducting. This means that no researcher can claim to be completely objective (Pope, Mays, & Popay, 2007). The impact of reflexivity cannot be avoided but it can be monitored and reported. This meant being self-aware and open about the possible influences on the meta-synthesis of our professional backgrounds in midwifery, learning disability nursing, medicine and health economics. In line with the general openness required to deal with reflexivity, we therefore sought to ensure that the process of undertaking the meta-synthesis used an auditable formal framework – Noblit and Hare (1988). In other words, it is possible for the readers of the meta-synthesis to retrace the process leading to a certain interpretation, key theme or core concept to check that no alternatives were left unexamined and that no biases had any avoidable influence on the results. This entailed the recording and subsequent discussion by the research team about who did what with study findings and in what order so that the genesis of interpretations could be retraced. We consider that such an audit trail provided a sufficiently clear account of the meta-synthesis process to allow others to follow our thinking and conclusions about the findings and thus allows them to assess whether the findings are dependable.

Conclusion

The process of undertaking a meta-synthesis is iterative, conditional and never definitively complete. Discussion and debate is ongoing about most steps in the process. Nevertheless, like Thorne et al. (2004) and Downe (2008), we remain enthusiastically optimistic about meta-synthesis as a distinctive form of systematic inquiry that holds the potential to produce innovative and usable insights about a phenomenon, especially if we take thoughtful steps towards ensuring its methodological integrity.

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