Understanding Meta-Ethnography in Health Professions Education Research

Victoria Luong, MD, MEd
Margaret Bearman, PhD
Anna MacLeod, PhD

The number of qualitative studies published in the health professions education (HPE) literature has grown exponentially over the past few decades—as has the acceptance of this type of research as a credible form of inquiry. Therefore, HPE researchers require rigorous approaches to the synthesis of multiple qualitative studies to integrate findings and interpret their collective meaning. Qualitative synthesis methods, such as *meta-ethnography*, may lead to more effective forms of knowledge transfer and more refined approaches to medical education research and practice.

Using meta-ethnography, researchers choose, analyze, and interpret qualitative studies to increase understanding of a phenomenon. The goal is to arrive at new insights and, possibly, conclusions on a topic. For example, recent meta-ethnographic research has been used to illuminate the range of intended and unintended consequences of accreditation for medical teachers and students,[1] to theorize how foundation year and internship experiences shape physicians' career choices,[2] and to develop a conceptual model of the barriers that international medical graduates face after migration.[3]

With roots in education[4] and well-established applications in health research,[5-9] meta-ethnographic approaches have significant potential in the realm of HPE. Yet, with a few notable exceptions,[10,11] this approach has not been widely used in our field. This article encourages HPE researchers to consider meta-ethnography and provides essential information about the foundations of the approach, strengths and limitations, and process considerations. BOX 1 illustrates the Case of Dr. Smith, which continues throughout this special review series, considering the same question using different review methodologies.

Purpose and Rationale

Synthesizing evidence from existing qualitative work is increasingly recognized as a powerful way to make sense of complex social phenomena. In HPE, qualitative insights can help decision-makers understand why certain educational policies are successful, why certain professionals behave in particular ways, or how diverse learners experience an educational innovation. Synthesizing *quantitative* evidence helps us understand *if* something works; however, synthesizing *qualitative* evidence helps us understand *what* things work and *how*, through descriptions of the complex and nuanced range of human experience.

The field of HPE has adopted several approaches to qualitative evidence synthesis, each method underpinned by distinct goals and assumptions. For instance, meta-narrative research seeks to compare and contrast different ways researchers approach a topic over time[12,13]; meta-studies focus on interpreting qualitative research in light of differences in findings, methods, and theories[14]; and realist syntheses ask how and why complex interventions (both qualitative and quantitative) may or may not produce intended outcomes in different contexts.[15]

Meta-ethnography distinguishes itself from these approaches in 3 distinct ways. First, meta-ethnography focuses only on qualitative data and social science phenomena; it does not draw from quantitative evidence. Second, it uses original interpretations from primary qualitative studies as data. Third, it seeks to interpret through analytic synthesis by translating the synthesized studies into new and unique insights about the social phenomena under study.

The ultimate goal of meta-ethnography is to arrive at new interpretations that transcend the findings of individual studies. Noblit and Hare described this as "making a whole into something more than the parts alone imply."[4(p28)] For example, Krishnasamy and colleagues used meta-ethnography to explore empathy (TABLE).[11] Each study included in their review offered a unique explanation of how empathy is experienced in medical school. Using meta-ethnographic methods, Krishnasamy and colleagues were able to *interpret these interpretations* as a collective and reconceptualize empathy as something that is derived through the complex interplay between medical culture, role models, atmosphere, and time.[11]

Meta-ethnography, then, is useful for researchers who seek to study the literature interpretively and for educators and policymakers who may be struggling to

DOI: http://dx.doi.org/10.4300/JGME-D-22-00957.1

make sense of multiple (and often conflicting) studies. Most importantly, meta-ethnography is valuable to those seeking to go beyond single accounts to explore the analogies, patterns, and variations within qualitative findings. If rigorously conducted and reported, meta-ethnography can facilitate novel conceptual understandings of complex issues.

Foundations

As meta-ethnography is a method of synthesizing qualitative research, its roots are in the interpretivist paradigm within the social sciences. Through interviews, observations, and document analyses, qualitative studies aim to provide deep insights into the subjective experiences of patients, learners, and health care professionals, and the contexts within which they operate. Hence, meta-ethnographies, like qualitative studies, focus on *how* and *what* questions and seek to uncover meaning. They are designed to add in-depth, interpretive insights to questions, such as "How do students learn about empathy in HPE?" and "What is the role of facilitators in interprofessional education?"

Meta-ethnography was introduced by Noblit and Hare in an "attempt to develop an inductive and interpretive form of knowledge synthesis."[4(p16)] By inductive and interpretive, they meant research that explores social phenomena through the perspectives and experiences of the people involved in it. Many approaches to knowledge synthesis, such as systematic reviews, are oriented in the positivist paradigm. These positivist approaches generally assume that knowledge accumulates and, thus, their methods aim to derive causal relationships and generalizable conclusions based on the aggregation of data. Noblit and Hare argued that this may be ill-fitted to the synthesis of qualitative evidence. The authors demonstrated how *aggregating* findings from 5 ethnographic studies failed to offer novel insights into the phenomenon they were investigating.[4] In response, Noblit and Hare proposed a synthesis approach that *translates* studies into each other and makes sense of the analogies and inconsistencies found within them.

Meta-ethnography is now one of the most common qualitative synthesis approaches in health research[16-19] and is increasingly common in education research.[7] Within these fields there is growing recognition that high-quality meta-ethnographic work can be invaluable with respect to program design, development, and policy making (see the TABLE for examples).[6,8,20,21]

BOX 1 The Case of Dr. Smith

Dr. Smith, a program director, has been tasked to develop an interprofessional education (IPE) experience for the residency program. Dr. Smith decides that conducting a literature review would be a savvy way to examine the evidence and generate a publication potentially useful to others.

After running a Google search using the term "interprofessional education," Dr. Smith finds more than 11 million hits. Turning to PubMed and using a general subject search with the same term, "interprofessional education," Dr. Smith identifies 24 000 matches. Dr. Smith randomly samples a few papers and notes the huge diversity of types and approaches, including randomized trials, qualitative investigations, and critical perspectives.

With Dr. Smith's interest in the sociocultural factors that influence the effectiveness of IPE programs, Dr. Smith decides to complete a meta-ethnographic review of the literature. Specifically, the purpose of Dr. Smith's review is to synthesize what the qualitative research literature reveals about student and teacher perceptions of IPE. Meta-ethnography seems like the right choice because it is grounded in research focusing uniquely on the *how* and *what* questions of IPE (ie, it is an interpretive synthesis method that reviews purely qualitative research), and it has the potential to lead to new models and interpretations that could shape the way Dr. Smith approaches IPE with the program's residents.

Strengths and Limitations

Strengths

High-quality meta-ethnographies are ideal for synthesizing information from multiple studies about people's experiences of a particular phenomenon. The approach of bringing together a range of qualitative studies allows for a more contextual and comprehensive exploration of an issue. Other strengths of meta-ethnographic methods for synthesis include that meta-ethnography has clear origins in the interpretive paradigm and is thus consistent with the studies it synthesizes; it can add breadth and depth to existing systematic reviews; and it may help to mitigate duplication in qualitative research.[6,16,18] This synthesis approach also helps generate higher-level analysis, comprehensive theory, new models or frameworks, and new research questions beyond what can be found in the individual studies it synthesizes.

Limitations

The reporting quality of published meta-ethnographies is variable and sometimes poor. Recently, the eMERGe Reporting Guidelines collective has been working to develop guidelines to increase reporting quality.[16] Challenges in detailing analytical processes are particularly apparent. Low-quality reporting makes it difficult to assess the quality and thoroughness of a meta-ethnographic review and leads to a lack of trust.

Researchers engaging with meta-ethnography must recognize that meta-ethnography seeks to synthesize sometimes widely differing qualitative studies.[20-24] Thus, in the process of interpreting interpretations, salient ideas or contextual nuances can be lost.[20,24]

TABLE
Examples of Meta-Ethnographic Studies Involving Health Professions Education

Study	Aim	Second-Order Interpretations	Third-Order Interpretations
Krishnasamy et al (2019)[11]	Synthesize the evidence on the influence of medical curricula on students' empathy and compassion, as well as the perceptions of students, educators, and patients on what affects empathy and compassion.	▪ Students were more empathetic when they saw patients as people and considered the multiple elements of empathetic care (listening, exploring the patient's perspective, assuring and helping, responding and reciprocating). ▪ Learning about empathy depended on factors in the training environment (eg, time, medical culture, role models, atmosphere). ▪ Students held personal thoughts, motivations, and ideals that influenced what they learned about empathy in medical training.	The authors developed a conceptual model with 4 core themes: medical culture, role models, atmosphere, and time. The expression of empathy and compassion arises from the complex interaction between these 4 key components of the unique interaction between student and care recipient.
Jeffrey (2016)[10]	Explore what the synthesis of interview-based qualitative studies, as compared to quantitative studies, can reveal about medical students' views and experiences of empathy in undergraduate medical education.	▪ Students defined empathy in different ways. ▪ Students valued empathy and sought out opportunities to connect with patients. ▪ Role models, as well as personal experiences with illness and death, influenced how students thought about empathy. ▪ Students struggled to find a balance between detachment and connection and feared their empathy would diminish over time. ▪ The profession tends to value the biomedical model over psychosocial care. ▪ The hidden curriculum dictates that emotions threaten objectivity; students feel that they should hide their feelings.	▪ The dichotomy between the cognitive and affective/the biomedical and sociocultural was at the core of all discussions of empathy in medical education. ▪ Rather than becoming less empathetic, learners may be adopting less overt ways of demonstrating empathy as they learn that the profession values emotional detachment. ▪ The field lacks a clear definition of empathy encompassing affective and cognitive elements, and this may be affecting how students learn to connect with patients.
Al-Haddad et al (2022)[3]	Synthesize the existing qualitative literature on the overall personal and professional experiences of IMGs, to identify factors affecting IMGs' professional practices.	▪ Decisions to migrate depended on a number of push, pull, and plant factors; they were individual and often pragmatic. ▪ IMGs faced periods of shock and disorientation, and a loss of social connections and professional status. ▪ Differences in language, culture, medical education, and identity contributed to dissonance. ▪ Orientation programs were not universally effective, but those that were effective reduced the impact of cultural and language barriers, and alleviated stress. ▪ IMGs initially wanted to survive. They had to adjust quickly, often to a lower status.	The authors developed 5 key concepts. IMGs made decisions based on several migration dimensions, then faced a challenging start once migrating to their host country. The barriers they experienced depended on the degree of dissonance with their host country. Support to reduce those barriers would help IMGs first survive, then thrive, and level the playing field for IMGs.

TABLE
Examples of Meta-Ethnographic Studies Involving Health Professions Education (continued)

Study	Aim	Second-Order Interpretations	Third-Order Interpretations
Reeves et al (2016)[22]	Synthesize the qualitative evidence on the role of facilitators in interprofessional education.	▪ Seven key concepts were identified in the qualitative research literature. ▪ Facilitator effectiveness was influenced by logistical, organizational, and information technology issues; facilitator preparation and support; collaboration and professional development activities; the teaching approaches employed; and the enrichment of learning with teacher and learner experiences.	Three overarching factors help explain the nature of IPE facilitation: contextual characteristics, facilitator experiences, and the use of different facilitation strategies. Curricular developers must consider these 3 factors when designing the recruitment, training, and support of IPE facilitators.

Abbreviations: IMG, international medical graduate; IPE, interprofessional education.

Because meta-ethnography is a relatively new approach, debates and uncertainties remain around the best process, such as how to decide which studies to include or exclude, and the appropriate number of studies to include within a single review.[18-20] Similarly, reporting guidelines for meta-ethnography are recent, and recommendations for good practices in design and implementation of meta-ethnographies are still in development.[16] As meta-ethnography is limited to synthesizing qualitative evidence, other approaches may be more appropriate for researchers seeking to broadly map the literature on a topic. Finally, meta-ethnography does not offer immediate practical advice for medical educators, but rather frames new ways of considering the phenomenon at hand.

Process Considerations

Meta-ethnography is generally conceptualized as an iterative 7-phase process (see BOX 2). While it is tempting to see these steps as distinct and chronological, in reality, phases 4 through 6 are often happening at the same time. Phase 1 describes the period of exploration in which researchers identify an appropriate topic "worthy of the synthesis effort."[4(p27)] In phase 2, the researchers compile a list of potential studies and justify which to include based on criteria developed in relation to the focus of the synthesis. In phase 3, the researchers read each study multiple times; and in phase 4, they relate studies with one another and create lists that help make sense of their similarities and differences.

Phases 5 through 7 center on comparing studies, deriving higher order meaning from these comparisons and communicating these findings. Meta-ethnographic analysis involves treating the various theories and interpretations presented in each qualitative study as research "data." Hence, a key concept relevant to this type of analysis is the idea of levels of interpretation.[25] Researchers undertaking qualitative synthesis often consider first-order interpretations as the common sense and everyday explanations of research participants (ie, raw research data); second-order interpretations as the constructs and theories explaining those experiences (ie, research interpretations); and third-order interpretations as the holistic meanings drawn from the synthesis of those studies (ie, meta-ethnographic interpretations). Third-order interpretations thus remain consistent with first- and second-order interpretations, but also extend beyond them (see the TABLE).

Meta-ethnography uses a process called *translation* to build third-order interpretations. This involves exploring analogies and metaphors that explain how findings from different studies relate to one another. By comparing and integrating these ideas, holistic meanings are preserved throughout the process. More in-depth discussion of the development of third-order interpretations through "translation" is available for researchers.[4]

Markers of Rigor

Strike and Posner[26] described 3 criteria that can be used to evaluate the quality of literature syntheses. They proposed that high-quality syntheses (1) do not oversimplify or obscure differences between findings and ideas but clarify and resolve them; (2) involve reinterpretation and conceptual innovation; and (3) result in theoretical explanations that are consistent, parsimonious, elegant, and fruitful. In other words, syntheses should be "not just encyclopedias of current knowledge, but represent a creative and progressive transformation of current knowledge."[25(p355)]

Rigorous meta-ethnography, through its careful interpretive work, meets these standards. Although not always successful, the initial aim of meta-ethnographic synthesis is to generate new interpretations or a new model or framework. However, some meta-analyses will fail to produce robust causal explanations or new interpretations that advance

BOX 2 The Meta-Ethnography eMERGe Reporting Guidelines[16]

A well-reported meta-ethnography will...

Phase 1: Selecting and getting started

- Describe the gap in research or knowledge to be filled
- Describe the meta-ethnography aim(s)
- Describe the meta-ethnography review questions (or objectives)
- Explain why meta-ethnography was considered the most appropriate qualitative synthesis methodology

Phase 2: Deciding what is relevant

- Describe the rationale for the literature search strategy
- Describe how the literature search was carried out and by whom
- Describe the process of study screening and selection, and who was involved
- Describe the results of study searches and screening

Phase 3: Reading included studies

- Describe the reading and data extraction methods and processes
- Describe characteristics of the included studies

Phase 4: Determining how studies are related

- Describe the methods and processes for determining how the included studies are related:
  - Which aspects of studies were compared
  - How the studies were compared

Phase 5: Translating studies into one another

- Describe the methods of translation:
  - Describe steps taken to preserve the context and meaning of the relationships between concepts within and across studies
  - Describe how the reciprocal and refutational translations were conducted
  - Describe how potential alternative interpretations or explanations were considered in the translations

Phase 6: Synthesizing translations

- Describe the methods used to develop concepts
  - Describe how potential alternative interpretations or explanations were considered in the synthesis

Phase 7: Expressing the synthesis

- Summarize the main interpretive findings of the translation and synthesis and compare them to existing literature
- Reflect on and describe the strengths and limitations of the synthesis:
  - Methodological aspects
  - Reflexivity (impact of the researchers on the review process and vice-versa)

our understanding of the theoretical underpinnings of the studied phenomenon.

Achieving such desired rigor is no simple task. To address the inconsistent reporting quality of meta-ethnographies in health literature, a group of meta-ethnographers (eMERGe collective) have come together to develop a set of reporting standards, tailored to the broad spheres of health and social care.[16] The 19-item reporting criteria is related to the 7 phases of meta-ethnography.[16] It is intended to help researchers design and communicate their studies, but also help readers interpret the quality of meta-ethnographic design. The eMERGe Reporting Guidelines emphasize transparency in the reporting of results and justification of methodological and interpretive decisions.

Conclusions

Synthesizing qualitative research—that is, research that examines what phenomena occur and how they are experienced—is complex and requires deliberate and thoughtful procedures to undertake successfully. Many HPE researchers may be unfamiliar with meta-ethnography, but it is an approach that has significant potential for our field. Based in interpretive foundations, meta-ethnographies "translate" concepts and interpretations from multiple qualitative studies into one another, and thus effectively advance the *how* and *what* questions beyond what any one study can accomplish. Overall, meta-ethnography may provide an effective way to explore complex and persistent questions in HPE.

References

1. Choa G, Arfeen Z, Chan SCC, Rashid MA. Understanding impacts of accreditation on medical teachers and students: a systematic review and meta-ethnography. *Med Teach*. 2022;44(1):63-70. doi:10.1080/0142159X.2021.1965976
2. Zhao Y, Mbuthia D, Blacklock C, et al. How do foundation year and internship experience shape doctors' career intentions and decisions? A meta-ethnography [published online ahead of print August 9, 2022]. *Med Teach*. doi:10.1080/0142159X.2022.2106839
3. Al-Haddad M, Jamieson S, Germeni E. International medical graduates' experiences before and after migration: a meta-ethnography of qualitative studies. *Med Educ*. 2022;56(5):504-515. doi:10.1111/medu.14708
4. Noblit GW, Hare RD. *Meta-Ethnography: Synthesizing Qualitative Studies*. Sage Publications; 1988.
5. Atkins S, Lewin S, Smith H, Engel M, Fretheim A, Volmink J. Conducting a meta-ethnography of

qualitative literature: lessons learnt. *BMC Med Res Methodol*. 2008;8:21. doi:10.1186/1471-2288-8-21learnt
6. Britten N, Campbell R, Pope C, Donovan J, Morgan M, Pill R. Using meta ethnography to synthesis qualitative research. *J Heal Serv Res Policy*. 2002;7(4):209-215. doi:10.1258/135581902320432732
7. Uny I, France EF, Noblit GW. Steady and delayed: explaining the different development of meta-ethnography in health care and education. *Ethnogr Educ*. 2017;12(2):243-257. doi:10.1080/17457823.2017.1282320
8. Wanat M, Boulton M, Watson E. Patients' experience with cancer recurrence: a meta-ethnography. *Psychooncology*. 2016;25(3):242-252. doi:10.1002/pon.3908
9. Kelly MA, Nixon L, McClurg C, Scherpbier A, King N, Dornan T. Experience of touch in health care: a meta-ethnography across the health care professions. *Qual Health Res*. 2018;28(2):200-212. doi:10.1177/1049732317707726
10. Jeffrey D. A meta-ethnography of interview-based qualitative research studies on medical students' views and experiences of empathy. *Med Teach*. 2016;38(12):1214-1220. doi:10.1080/0142159X.2016.1210110
11. Krishnasamy C, Ong SY, Loo ME, Thistlethwaite J. How does medical education affect empathy and compassion in medical students? A meta-ethnography: BEME Guide No. 57. *Med Teach*. 2019;41(11):1220-1231. doi:10.1080/0142159X.2019.1630731
12. Greenhalgh T, Robert G, MacFarlane F, Bate P, Kyriakidou O, Peacock R. Storylines of research in diffusion of innovation: a meta-narrative approach to systematic review. *Soc Sci Med*. 2005;61(2):417-430. doi:10.1016/j.socscimed.2004.12.001
13. Wong G, Greenhalgh T, Westhorp G, Buckingham J, Pawson R. RAMESES publication standards: meta-narrative reviews. *J Adv Nurs*. 2013;69(5):987-1004. doi:10.1111/jan.12092
14. Thorne S, Paterson B, Acorn S, Canam C, Joachim G, Jillings C. Chronic illness experience: insights from a metastudy. *Qual Health Res*. 2002;12(4):437-452. doi:10.1177/104973202129120007
15. Wong G, Greenhalgh T, Westhorp G, Pawson R. Realist methods in medical education research: what are they and what can they contribute? *Med Educ*. 2012;46(1):89-96. doi:10.1111/j.1365-2923.2011.04045.x
16. France EF, Cunningham M, Ring N, et al. Improving reporting of meta-ethnography: the eMERGe reporting guidance. *BMC Med Res Methodol*. 2019;19(1):25. doi:10.1186/s12874-018-0600-0
17. Hannes K, Macaitis K. A move to more systematic and transparent approaches in qualitative evidence synthesis: update on a review of published papers. *Qual Res*. 2012;12(4):402-442. doi:10.1177/1468794111432992
18. Toye F, Seers K, Allcock N, Briggs M, Carr E, Barker K. Meta-ethnography 25 years on: challenges and insights for synthesising a large number of qualitative studies. *BMC Med Res Methodol*. 2014;14:80. doi:10.1186/1471-2288-14-80
19. Sattar R, Lawton R, Panagioti M, Johnson J. Meta-ethnography in healthcare research: a guide to using a meta-ethnographic approach for literature synthesis. *BMC Health Serv Res*. 2021;21(1):50. doi:10.1186/s12913-020-06049-w
20. Campbell R, Pound P, Morgan M, et al. Evaluating meta-ethnography: systematic analysis and synthesis of qualitative research. *Health Technol Assess*. 2011;15(43):1-164. doi:10.3310/hta15430
21. Pound P, Britten N, Morgan M, et al. Resisting medicines: a synthesis of qualitative studies of medicine taking. *Soc Sci Med*. 2005;61(1):133-155. doi:10.1016/j.socscimed.2004.11.063
22. Reeves S, Pelone F, Hendry J, et al. Using a meta-ethnographic approach to explore the nature of facilitation and teaching approaches employed in interprofessional education. *Med Teach*. 2016;38(12):1221-1228. doi:10.1080/0142159X.2016.1210114
23. Ring N, Jepson R, Hoskins G, et al. Understanding what helps or hinders asthma action plan use: a systematic review and synthesis of the qualitative literature. *Patient Educ Couns*. 2011;85(2):e131-e143. doi:10.1016/j.pec.2011.01.025
24. Savin-Baden M, Major CH. Using interpretative meta-ethnography to explore the relationship between innovative approaches to learning and their influence on faculty understanding of teaching. *High Educ*. 2007;54(6):833-852. doi:10.1007/s10734-006-9035-3
25. Schutz A. *Collected Papers: The Problem of Social Reality*. Vol. 1. Kluwer Boston Inc; 1982.
26. Strike K, Posner G. Types of syntheses and their criteria. In: Ward S, Reed L, eds. *Knowledge Structure and Use*. Temple University Press; 1983:343-361.

Victoria Luong, MD, MEd, is a PhD Student, Faculty of Graduate Studies, and Research Associate, Continuing Professional Development and Medical Education Research, Faculty of Medicine, Dalhousie University, Halifax, Nova Scotia, Canada; **Margaret Bearman, PhD,** is a Professor, Centre for Research in Assessment and Digital Learning (CRADLE), Deakin University, Melbourne, Victoria, Australia; and **Anna MacLeod, PhD,** is a Professor, Continuing Professional Development and Medical Education Research, Faculty of Medicine, Dalhousie University, Halifax, Nova Scotia, Canada.

Corresponding author: Anna MacLeod, PhD, Dalhousie University, Halifax, Nova Scotia, Canada, anna.macleod@dal.ca