Evidence Based Library and Information Practice

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Evidence Based Library and Information Practice

Classic

Syntheses Synthesized: A Look Back at Grant and Booth's Review Typology

A Review of:
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Abstract

Objective – The article, published in 2009, aims to provide a descriptive analysis of common review types to dispel confusion and misapplication of terminology.

Design – An examination of terminology and methods applied in published literature reviews.

Methods – Grant and Booth preliminarily performed a scoping search and drew on their own experiences in health and health information theory and practice. Using literature reviews from the *Health Information and Libraries Journal* review feature and reviews identified in a previously published evaluation of methods in systematic reviews and meta-analyses (Ankem, 2008), Grant and Booth examined characteristics of literature reviews. They subsequently identified variations in literature review methodologies and correlating vocabulary. After arriving at the conclusion that probing the review titles and descriptions—or alternatively, examining review workflow and timeframe processes—were not accurate for classifying review types, the authors chose to apply an analytical framework called Search, AppraisaL, Synthesis, and Analysis (SALSA). By examining the scope of the

search, the method of appraisal, and the nature and characteristics of the synthesis and analysis, SALSA helped the authors describe and characterize the "review processes as embodied in the description of the methodology" (Grant & Booth, 2009, p. 104). By employing an objective technique to categorize literature review types, the authors generated a descriptive typology.

Main Results – The authors provided a descriptive typology for 14 different literature reviews: critical review, literature review, mapping review/systematic map, meta-analysis, mixed studies review/mixed methods review, overview review, qualitative systematic review/qualitative evidence synthesis, rapid review, scoping review, state-of-the-art review, systematic review, systematic search and review, systematized review, and umbrella review. With the application of the SALSA framework, the literature review types were defined and narratively described and summarized, along with perceived strengths, weaknesses, and a previously published example provided for comparison. Two tables supplied a quick reference for comparing literature review types and examining selected reviews. A breakdown of review types was followed by a discussion of using and developing reviews in the library and health information science domain.

Conclusion – Inconsistency in nomenclature and methods across literature reviews perpetuates significant confusion among those involved in authoring or deciphering literature reviews. Grant and Booth noted the lack of an internationally agreed-upon set of review types, the formulation of which would set a precedent for a better understanding of what is expected and required of such publications. In supplying a historical context of the literature review (detailing both its importance as a synthesis of primary research and its value to users), Grant and Booth provided a useful narrative and typology to "inform how LIS workers might approach the appraisal or development of a health information review" (p. 106).

Commentary

Background of the Work

The publication of literature reviews, systematic and otherwise, has been on the rise for decades, at the very least since epidemiologist Archie Cochrane famously criticized the lack of a formal summary of research evidence in medicine (Cochrane, 1979). Evidence-inclined educators, researchers, practitioners, and students in various domains place value in reviews of the literature and consequently seek them out to inform research, policy, and practice. Readers of reviews have found that methodological quality cannot be assumed and that reviews may follow disparate methods, introduce bias, or lack quality assessment or appropriate synthesis (Shea et al., 2002; Shea et al., 2007) despite stated methods.

Prior to 2009, publications had evaluated and described singular literature review methodologies, such as systematic and scoping reviews. One famous example is the Cochrane Handbook for Systematic Reviews of Interventions, the first version of which was developed and published in 1994 (Cochrane, 2021) with successive versions to come. Yet another example of an in-depth description of methodology is the still-relevant scoping studies' methodological framework articulated by Arksey & O'Malley in 2005.

Likewise, other publications focused on the art and conduct of general literature reviews. Perhaps most notable is a publication that appeared in 1988. Oxman and Guyatt in "Guidelines for Reading Literature Reviews" created a guide for readers of literature reviews who were grappling with increasing, and increasingly overwhelming, amounts of published medical literature. In their parting sentiments, Oxman and Guyatt (1988) state that "just as flawed methods in a study of diagnosis or therapy may invalidate the results, an unscientific literature review may come to incorrect conclusions" (p. 697). The 1988 publication facilitated future work, such as a literature review checklist (Oxman,

1994), an article series (Oxman et al., 1993) on reading the medical literature, and the *User's Guide to the Medical Literature*, now in its third edition (Guyatt et al., 2001). In 1997, Greenhalgh included a chapter on "papers that summarize other papers" in her extensive *How to Read a Paper: The Basics of Evidence-Based Medicine*, focusing primarily on systematic reviews of the literature.

A few publications began to compare evidence synthesis methods but with limited attention or momentum. In 1988, Cooper devised a taxonomy of literature reviews in education and psychology. There was difficulty in separating "what one hears from what one hopes to hear, and what is from what ought to be" (p. 123), leading again to the conclusion that "efforts at systematic evaluation will be fruitless unless a descriptive scheme . . . exists to structure the discussion" (p. 125).

Finally, it was just before Grant and Booth's typology publication that literature review assessment tools started to appear such as the Assessment of Multiple Systematic Reviews (AMSTAR) Checklist and the subsequent AMSTAR-2. Tools such as these aimed to help readers assess methodological quality in systematic reviews (Shea et al., 2007; Shea et al., 2017).

Prior to Grant and Booth (2009), no other authors had so clearly categorized and described 14 common literature review types. Grant and Booth, both fully aware of evolving trends in evidence-based medicine, describe the use of the systematic literature review to synthesize research evidence in health care: "Gathering research, getting rid of rubbish and summarizing the best of what remains captures the essence of the science of systematic review" (p. 92).

The application of explicit methods to literature reviews is, Booth anticipated as early as 2001, a practice that should be adopted in the library and information science sector for the purpose of "establishing a solid evidence base" within a field that had little (Grant & Booth, 2009, p. 92). "Given the importance evidence-based practice places upon the retrieval of appropriate information," ambiguous and inconsistent terminology only perpetuates further uncertainty (Grant & Booth, 2009, p. 93).

In a 2017 letter in the *Health Information and Libraries Journal*, Grant reflects on one of the typology's catalysts. As a new review editor at the journal in 2007, Grant realized that "there were no consistent guidelines on the features a review should incorporate perpetuating a sense of confusion about what . . . was an indistinct and misapplied term" (p. 1). Grant goes on to note that it was the shortage of consistent guidelines that led her to coauthor with Booth.

Expanding on Ankem's (2008) work, which evaluated systematic review and meta-analysis methods in LIS journals, Grant and Booth provided an "explicit basis . . . to gain a clear understanding of what [method] is being requested and the resources . . . required to meet the specification" for various types of literature reviews (Grant & Booth, 2009, p. 104).

Impact of the Work

Grant and Booth's work ignited a spark for those, both inside and outside of health information science, who hoped to see an implementation of more appropriate, more transparent, and more consistent methods for knowledge and evidence synthesis publications. While Grant and Booth originally set out to describe literature reviews in health information topics, the resulting publication proved useful for its generalizability to other fields and disciplines. It is likely for this reason that the article has been so popular in higher education, becoming highly cited not only in library science and health methods research but in other domains such as social and environmental science, psychology, business, engineering, computer science, and even the arts and humanities (Scopus, n.d.). The article has had over 3,100 citations as of March 2022, with over 900 citations just in 2021 alone (Scopus, n.d.). Google Scholar reports almost twice as many cumulative citations as Scopus (Google Scholar, n.d.).

The article's Altmetric Attention Score, which is representative of online attention and other nontraditional metrics, was 394 as of March 2022 (Altmetric, n.d.; Elmore, 2008). A score of 20 or more, according to Altmetric, demonstrates a higher-than-average level of attention (Altmetric Support, 2020). The article's significant Altmetric Attention Score indicates that through media attention, including Tweets, blog posts, and more, it has been shared widely on various digital platforms.

Another indicator of this article's impact is the frequency with which it appears on library websites. A web search locates this article on many academic library literature review sites and guides, with over 100,000 Google results in a search for this article's title limited to the .edu domain. These types of guides are frequently disseminated to educators or researchers by library staff when approached seeking guidance about literature reviews. In consulting the typology, potential authors can simplify the task of selecting the appropriate literature review methodology for their research and choose the one that aligns with their goals and objectives. Readers of the typology will also note the early discussion of the utility and purpose of "systematized" reviews, instructed to be "typically conducted as a postgraduate student assignment, in recognition that they are not able to draw upon the resources required for a full systematic review" (Grant & Booth, 2009, p.102).

Since 2009, both authors have contributed further to the topics of methods, searching, writing, and reporting with Grant's focus on public health writing and Booth's attention on qualitative evidence synthesis and methods. In 2019, Booth collaborated once again, this time with different coauthors, on a publication that identified 48 review types and categorized them into seven broad review families (Sutton et al., 2019). Despite the thoroughness and expansion on methodological approaches of this more recent article and others that followed, the simplicity of the 2009 typology can be more easily understood and therefore more easily applied by those starting out in evidence synthesis.

Implications of the Work

The Grant and Booth typology helps authors contribute to the evidence base and transform the knowledge landscape in their own disparate fields in consistent ways (Grant & Booth, 2009). The work encourages transparency in applied methods and sets out best practices, such as defining the scope of the search, describing the need and nature of quality assessment, and identifying the appropriate types of synthesis and analysis. All of these topics are receiving significant attention in academic communities today.

The typology has made its way into instructions for authors: any potential authors wishing to submit a review article to *Health Information and Libraries Journal* will find a link to the Grant and Booth article on the "Author Guidelines" page (*Health Information and Libraries Journal*, 2022), setting a worthy example for other journals and placing a responsibility on editors to adhere to published standards and consistency.

Furthermore, review authors are beginning to understand the value of collaborating with a librarian or information specialist. Various research demonstrates that librarians can contribute to more thorough search methods reporting (Meert et al., 2016), higher quality searches (Rethlefsen et al., 2015), and other unique skills such as records management, methods education (Dudden & Protzko, 2010), and publishing. Professional expert review guidance like the Institute of Medicine's *Finding What Works in Healthcare: Standards for Systematic Reviews* (Institute of Medicine, 2011), the *Cochrane Handbook for Systematic Reviews of Interventions* (Higgins et al., 2022), and the *JBI Manual for Evidence Synthesis* (Aromataris et al., 2020) all encourage authors to collaborate with a librarian or information specialist for search strategy development in reviews of the evidence. Along with this evolving trend comes the need for established best practices and guidance. Over the past decade, a corpus of literature has started to emerge for those who would take on roles in literature review teams and participate in educating potential authors about appropriate review methodologies. Many of these publications

reference or build upon Grant and Booth's classic article. For example, the *JBI Manual for Evidence Synthesis* (Aromataris et al., 2020) explores methodological approaches for systematic reviews that are both interventional and non-interventional in nature while also advancing the methodology of scoping reviews that was first thoroughly examined by Arksey and O'Malley (2005) and later listed among Grant and Booth's (2009) 14 review types. Another notable development in the literature since the publication of Grant and Booth's typology article is the standardization of reporting for systematic and scoping reviews through the PRISMA Statement and its extensions for protocols, searching, scoping reviews, and more (Page et al., 2020).

Grant and Booth succeeded in establishing a well-regarded typology that has stood the test of time and is still being frequently consulted and cited over a decade later. The 14 identified review types, which align with prospective objectives and research designs, is referenced by subsequent detailed guidance. Developing terminological and methodological consistency will allow the "distinguishing features of each review type [to] be built up within the systematic review community through both direct comparison and emerging precedent" (Grant & Booth, 2009, p. 104). Certainly, Grant and Booth's contributions benefit the global evidence synthesis community. The article's simplicity and straightforward approach make it an ideal starting point for many. Through their typology, Grant and Booth have empowered those involved in evidence and knowledge synthesis to make appropriate decisions for the conduct and methodological applications of literature reviews not only in health information science but also in numerous other fields.

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