



Review Article

Systematic-narrative hybrid literature review: A strategy for integrating a concise methodology into a manuscript

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ABSTRACT

Attempting to build a house without a blueprint could result in a fundamentally unsound structure. A thorough investigation of a building's foundation is essential to assess its quality and fitness for purpose. This is also true of literature reviews which should be constructed on the foundation of a well-developed methodology that clearly outlines the search strategy, inclusion/exclusion criteria, sources of literature, and information synthesis techniques employed to develop the arguments and conclusions presented to the reader. This research note outlines a systematic-narrative hybrid strategy that can be incorporated into a literature review manuscript without overburdening the reader with unnecessary detail.

1. Introduction

Literature reviews form the starting point of almost all empirical studies, regardless of the discipline. They collect, collate, and present information related to a research problem (Snyder, 2019), and should be written in a format that allows the reader to efficiently digest a range of perspectives without having to refer to the original publications. A credible literature review will contain a comprehensive reference section that includes the details of examined works in an easy-to-find format. Literature reviews serve a linchpin function in our globally connected research environment, which produced over three million peer-reviewed articles in over 33,100 active journals in 2018 alone (Johnson et al., 2018). They synthesize elements of large repositories of credible research that collectively can help answer legitimate research questions. Moreover, they are published as credible research pieces in their own right, offering unique perspectives on existing studies.

Like any research endeavor that investigates a problem, to be credible, a literature review should be conducted using a methodology that incorporates a set of transparent procedures. Systematic literature reviews are the gold standard for locating, selecting, and synthesizing published material to answer a predetermined research question. All too often, literature reviews report interesting findings but fail to adequately document how the literature search process was carried out. For example, many literature reviews do not discuss the search strategy used to retrieve articles, do not adequately evaluate the quality of included

studies, fail to mention the sources of the retrieved items, and omit important inclusion and exclusion criteria applied to the search. In other words, they fail to provide an adequate methodology that can give readers confidence that the foundation of the literature review's data, i.e., published works, has been obtained following a robust set of procedures (Oxman & Guyatt, 1988). The lack of an adequate methodology section in research papers can be a reason for their rejection by prominent journals (Khadilkar, 2018).

In preparing a manuscript, authors have to be mindful of the word count allocated to each section of the document. Most journals have manuscript formatting guidelines that limit the amount of text an author can use to present their work (Walsh & Downe, 2005). The restrictions depend on the journal, the type of submission, and any guidelines from the publisher. Word and page limits may or may not include supplementary items such as tables, references, and appendices. In their survey of word limits in a selection of political science journals, Gerring and Cojocaru (2016) found that most journals had word limits between 8000 and 10,000 words - often inclusive of references. Conscious of these word restrictions, authors may choose a parsimonious approach to word allocation for their methodology section or entirely omit any discussion on search methods applied to their literature review. Alternatively, some authors may provide overly detailed accounts of their search methodology at the expense of other sections of the manuscript. The challenge for literature review authors is finding the Goldilocks Zone of word allotment for their methodology sections, i.e., just enough to convince

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the reader that a robust procedure was applied, but not so much that it consumes the availability of words for other sections of the manuscript. This research note is dedicated to that cause.

2. Narrative versus systematic literature reviews

There are several different methods for performing literature reviews. Some terms associated with literature review methodologies include ‘narrative’, ‘integrative’, ‘systematic’ and ‘scoping’ (Paré et al., 2015; Snyder, 2019). Systematic and narrative reviews are often referred to as the two main approaches to extracting and analyzing literature (Cipriani & Geddes, 2003; Greenhalgh et al., 2018). There are both advantages and disadvantages to applying these techniques to the conduct of literature reviews. While narrative reviews are comprehensive in their coverage of the literature, they lack an explanation of explicit methods used to search for evidence (Collins & Fauser, 2005). In addition, narrative reviews are often criticized for being biased in their choice of available literature, as they frequently lack any discussion on how the review process was conducted (Paré et al., 2015). Interestingly, this is not the view of Greenhalgh et al. (2018), who contend that narrative reviews can be conducted within a structured process. Narrative reviews provide scope for deepening understanding of the topic, interpretation and critique but are still considered biased (Greenhalgh et al., 2018).

Systematic reviews attempt to remove bias from the literature selection process and include detailed accounts of the methodology applied to literature searches. Systematic reviews require the researcher to adopt an exhaustive search methodology with detailed inclusion and exclusion criteria that other researchers can replicate to yield similar results (Greenhalgh et al., 2018; Linnenluecke et al., 2020). This approach also requires the specification and application of data analysis processes such as meta-analysis for quantitative data (Magarey, 2001). However, conducting systematic reviews can be time-consuming and uneconomical for smaller studies with limited time frames. Also, to comply with publishers’ word or page length restrictions, it may be difficult to satisfactorily document a systematic search methodology without consuming a large portion of the available space.

The issue is whether it is possible to adopt features inherent in both narrative and systematic approaches to construct a methodology that can be incorporated into a manuscript that is both convincing and economical in word count. There are examples of a hybrid approach using aspects of both narrative and systematic literature methodologies that have been used with good effect in different studies – computing (Boyle et al., 2012), education (Fleischer, 2012), psychiatry (Robinson et al., 2016) and social media (Sarmiento et al., 2020). These studies, exploring different issues, presented clear explanations of systematic search criteria applied to the selection of articles, while declaring that a narrative approach was taken to the synthesis of the retrieved literature. This information was encapsulated within a distinct methodology section in each published literature review. The remainder of this paper is devoted to presenting an approach that will enhance the robustness of a literature review manuscript’s methodology section without utilizing an excessive number of words. The proposed style draws on characteristics of both the narrative and systematic review traditions. Therefore, we label this style ‘Systematic-narrative hybrid literature review’. The similarities and differences between our proposed method compared to the narrative and systematic approaches are outlined in Table 1.

3. Blueprint for writing a systematic-narrative hybrid literature review

Fig. 1 highlights the key elements inherent in our proposed approach towards writing the methodology section for a systematic-narrative hybrid literature review.

The six subsections to include in a paper’s methodology section that adopts our proposed hybrid methodological design begins with the

Table 1
a. Differences and similarities between narrative, systematic, and systematic-narrative hybrid literature reviews.

Features	Narrative	Systematic	Systematic-narrative hybrid literature review
Question	Broad	Specific	Specific, linked to search criteria
Source	Not usually specified, potentially biased	Comprehensive sources, explicit search approach	Comprehensive sources, explicit search approach
Selection	Not usually specified, potentially biased	Criterion-based selection, uniformly applied	Criterion-based selection, uniformly applied
Evaluation	Variable	Rigorous critical evaluation	Rigorous critical evaluation
Synthesis	Often Qualitative	Quantitative	Elements of Qualitative and Quantitative
Inferences	Sometimes evidence-based	Usually evidence-based	Usually evidence-based

a Note: Adapted from Rother, 2007.

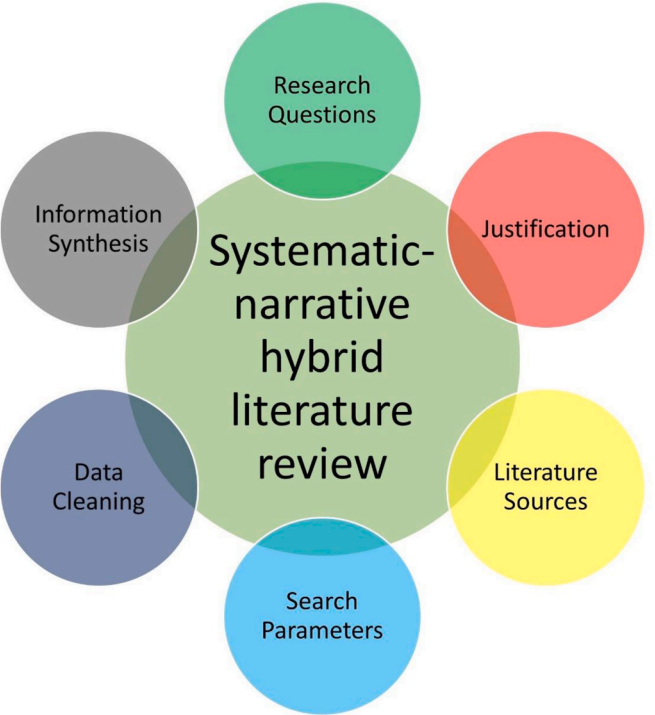


Fig. 1. Key elements of the systematic-narrative hybrid literature review approach.

research questions, followed in sequence by a justification for the literature review methodology, the literature sources, search parameter design, data cleaning, and ending with information synthesis. These six elements of the methodology are outlined in the following discussion.

3.1. Research questions

Research methodologies are selected on their usefulness in answering the research questions (Cipriani & Geddes, 2003), so it is important to include research questions in the methodology section of a manuscript. These should be clearly articulated and ideally presented as a numbered list in the sequence to which they are to be addressed. The use of labels such as ‘RQ1’, ‘RQ2’ is an effective way to convey this

information for studies with more than one research question. Consideration can also be given to the use of tables to display research questions which are comprised of sub-questions. For example, 'RQ1: RQ1.1, RQ1.2; RQ2: RQ2.1, RQ2.2' and so forth. Whatever presentation style is selected, it is important to ensure that research questions are unambiguous and are clearly related to the search criteria identified in the methodology.

3.2. Justification

It is essential to provide some indication as to why a literature review's methodology was appropriate. Explaining to the reader why a particular methodology was adopted is crucial to the representation of a literature review study as a rigorous research endeavor. Narrative literature reviews are of value in providing readers with a broad overview of relevant literature (Rother, 2007; Turnbull et al., 2021a). Narrative review articles usually adopt a qualitative approach toward the presentation of findings and typically do not include a discussion of methods used to locate literature (Rother, 2007).

A justification for the hybrid systematic-narrative approach should include a statement that the search protocols and inclusion/exclusion criteria draw from elements of systematic review practices and applies a narrative approach to analyse the shortlisted articles (see Turnbull et al., 2021b). For example, Best et al. (2014)'s exploration of published literature on the impact of online communication and social media on the well-being of young people, employed systematic review techniques to identify the literature while applying narrative methods to synthesize the results in the discussion section of their paper. In another example, Fleischer (2012), in their study of one-to-one computer projects in Swedish high schools, employed a detailed article selection and exclusion protocol presented in the form of a flowchart to supplement narrative approaches to article analysis based on content analysis of the underlying text. The adoption of a hybrid systematic-narrative style in both of these literature reviews resulted in the inclusion of a dedicated methodology section that clearly laid out the article selection and synthesis approaches applied to their studies.

3.3. Literature sources

Specifying the location of retrieved articles should be included in the methodology section of a literature review. Online databases of published works are among the most common sources of literature, and these should be clearly identified in the methodology section, along with a justification for their choice. As a matter of good practice, it is essential to include more than one bibliographic database to reduce the possibility of publication bias (Paez, 2017). Therefore, a precise listing of all databases used should be specified. Sources of grey literature, not controlled by commercial publishers, could also be included. Such literature can be retrieved using online databases such as EBSCOhost, Gale, Proquest and OpenGrey.

3.4. Search parameters

A measure of a quality literature review is that the search can be replicated to achieve similar results. Therefore, the methodology section needs to provide enough information to enable a reader to implement the search parameters used to extract the included articles (Snyder, 2019). A recommended approach is to specify the Boolean search string developed for each research question, including notes on necessary adjustments made for specific databases. Boolean search strings include operators such as AND, OR and NOT and are useful for incorporating synonyms and antonyms to create a single search operation for each research question. A synonym table could also be included to support the specified search strings. Any restrictions applied to database searches should also be mentioned, such as English-only publications, publication date limitations, and type of literature (e.g., peer-reviewed only).

3.5. Data cleaning

The articles retrieved in the search process need to be further examined to ensure that they are suitable candidates for inclusion in the analysis phase of the review. This *cleaning process* will depend on the research questions and the type and quantity of research articles extracted from specified data sources. For example, article rejection could be based on a thorough review of each document's abstract and conclusion to determine their relevance to the research problem being investigated (Linnenluecke et al., 2020). Alternatively, if the use of specific terminology is crucial to the capacity of an article to address a research question, search functionality such as CTRL-F could be employed to search the text of each document for keywords to justify inclusion in the analysis phase of the review. In this stage, duplicate or redundant articles should also be removed. A flow chart that visually represents the search strategy and article shortlisting process could also be included to add clarity to more complex article selection and cleaning procedures.

3.6. Information synthesis

The final step in formulating the methodology section of a hybrid systematic-narrative literature review is to outline how the retrieved articles were analyzed, and their findings synthesized for presentation in the discussion section. This process will vary depending on the nature of the research problem and methodological choices adopted in each examined article. For example, qualitative studies could be analyzed using content analysis, where the text is carefully categorized against emerging codes to identify significant commonalities and differences between the studies. Gioia (2020) describes an approach to reporting qualitative findings that uses grounded theory to immerse in the research participants' interpretations and experiences using direct quotes. This provides readers with explicit data-theory connections that validate grounded theory models developed from participant statements. Alternatively, a review of quantitative studies may involve a meta-analysis of numerical results from papers that address the same research hypothesis (Gopalakrishnan & Ganeshkumar, 2013). It is also helpful to mention any software (such as NVivo or SPSS) that may have been used to facilitate the analysis process.

4. Conclusion

A literature review study without a clear methodology is like a house without a blueprint: there cannot be confidence that the foundations upon which the literature review was constructed are sufficiently robust to support convincing outcomes. This research note argues that it is just as essential to include an adequate methodology section in a literature review manuscript as in any other study. We propose a hybrid systematic-narrative literature review approach that builds on the best of both systematic and narrative reviews and provides the foundations for a compelling methodology without overburdening researchers. We also provide a framework comprising six elements that can serve as a checklist for ensuring that the essential components of a systematic-narrative hybrid literature review's methodology are included in the manuscript. However, undertaking the proposed hybrid approach can be complex, time-consuming, and often fraught with selection bias and selective reporting risks. Nevertheless, we hope this research note will inspire further reflection on the importance and desired characteristics of robust research methodologies for literature review manuscripts.

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CRediT authorship contribution statement

Darren Turnbull: Conceptualization, Methodology, Writing – original draft. **Ritesh Chugh:** Conceptualization, Methodology, Writing – review & editing. **Jo Luck:** Writing – review & editing.

Declaration of competing interest

None of the authors have any conflicts of interest to report.

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