# Scoping Reviews and Structured Research Synthesis in Sport: Methods, Protocol and Lessons Learnt

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# Abstract

Research synthesis is an essential part of the research process that we argue has been underutilized by sport policy and management researchers. This commentary seeks to advance the discussion surrounding research synthesis by introducing scoping reviews as a potentially useful approach to synthesizing research evidence. In doing so, we provide an overview of current methods and protocols of the scoping approach and critically reflect upon the value and utility of scoping reviews by highlighting the lessons learnt from two previous scoping studies within the field. Our analysis indicates that scoping reviews provide a useful alternative approach to synthesizing research for select research topics providing that strict protocol are adhered to and are appropriately operationalized. More broadly, our intention is to generate further discussion and debate surrounding research synthesis within the sport policy and management domain and to encourage sport scholars to adopt more structured approaches to synthesize research evidence.

*Keywords*: research synthesis, scoping review, protocol, reviewing, methods

# Scoping Reviews and Structured Research Synthesis in Sport: Methods, Protocol and Lessons Learnt

Research synthesis is an integral part of the research process that involves the integration of existing knowledge and research findings relevant to a particular topic. It is an important component of any research project. Despite this, we argue that the process of structured research synthesis remains underutilized by sport policy and management researchers. Weed (2005) recognized this issue nearly 15 years ago when he drew upon Forscher’s (1963) analogy of ‘Chaos in Brickyard,’ to argue that structured research synthesis had not been embraced by sport policy/management researchers. The inherent danger forewarned by Forscher (and indeed Weed) was that builders and bricklayers (researchers) might continue to produce studies (bricks) that would be thrown onto a pile of research without any consideration of how they contribute to a body of knowledge (edifices). Weed’s review identified the most common employed methods in structured research synthesis (systematic review, meta-analysis, and meta-interpretation) in social sciences at that time and discussed their utility and benefit to sport policy/management. Despite Weed’s challenge to the sport policy/management enterprise, there are many reasons for why it is necessary to revisit the importance and the value of structured research synthesis within the field.

First, there have been a number of attempts to conduct structured reviews within the field (e.g. Ciomaga, 2013; Filo, 2015; Tacon & Vainker, 2017). While these studies and dedicated journal space collectively serve to demonstrate an increasing awareness of, and interest in, the potential value of structured reviews, utilization of structured reviewing within the field still remains limited, especially when compared to other disciplines (Cooper, Hedges, & Valentine, 2019). Second, there have been a number of advancements in structured review protocol and methodology over the past two decades. Not only has structured reviewing become increasingly more important and prevalent across many scientific disciplines in general (Chalmers & Fox, 2016), but considerable advancements have been made in terms of developing standardized protocols for structured reviewing (PRISMA statements/protocols and the Cochrane Database). Third, although wider debates and discussions regarding research synthesis protocol and methodology continue, there seems to be a broader acceptance by many scholars of other types of structured reviews beyond the traditional systematic review. These include, but are not limited to: bibliometric reviews, state-of-the-art reviews, overview reviews, integrative reviews, mapping reviews, rapid reviews, realist reviews, meta-analysis, meta-synthesis, and umbrella reviews (Grant & Booth, 2009); some of which have yet to be employed by sport policy/management scholars. One recent advancement, of which this article focuses, is the increasing use and protocol establishment of *scoping reviews* (Peters et al., 2015; Pham et al., 2014; Tricco et al., 2016). Fourth, and linked to the above, as the sport policy/management field continues to grow and mature, the importance of research synthesis is only likely to become more pronounced as scholars continue to make sense of what is increasingly becoming a larger body of knowledge spanning across a wider range of research domains. This issue is particularly pronounced for applied and multi-disciplinary fields like sport policy/management. The use of research synthesis is therefore an important step in ensuring we continue to build edifices (i.e. good theory) within the field rather than a pile of bricks and to be able to effectively demonstrate the contribution of the sport policy/management domain to other fields.

In recognition of the above*,* the purpose of this commentary is to extend the discussion surrounding research synthesis within the field by introducing scoping reviews as a potentially useful approach to synthesizing research evidence and to critically reflect upon its potential value and utility for synthesizing research within the sport policy/management domain. In doing so, we provide an overview of current methods and protocols of the scoping approach and critically reflect upon the value and utility of scoping reviews by highlighting the lessons learnt from two previous scoping studies within the field. More broadly, our intention is to generate further discussion and debate surrounding research synthesis within the sport policy/management domain and to encourage sport scholars to adopt more structured approaches to synthesize research evidence.

Our commentary is structured as follows: we begin by distinguishing between structured and unstructured reviews and discussing the benefits of conducting structured reviews. Next, we provide an overview of scoping review protocol and method and discuss how it might be applied to the sport policy/management domain. We then critically reflect upon the potential value and utility of scoping reviews through highlighting the benefits and challenges and general lessons learnt from two recent scoping review studies within sport. We conclude with a discussion regarding the potential next steps for encouraging further research synthesis within the field.

# Structured versus Unstructured Reviewing

It is necessary at this juncture to clarify what is meant by structured reviewing. Structured reviewing refers to any review of the literature that employs systematic search strategy protocol to gather evidence (Booth et al., 2013; Grant & Booth, 2009). Structured reviewing can be contrasted with unstructured reviewing or the more traditional ‘narrative review’ which involves a deliberate selection of previous studies utilizing a non-systematic approach (Fink, 2019). We recognize, however, that this distinction is somewhat artificial. Fink (2019), for example, defines a literature review as “a systematic, explicit, and reproducible method for identifying, evaluating and synthesizing the existing body of work produced by researchers, scholars and practitioners” (p. 6). This definition suggests that all reviews, whether narrative or structured, should employ a systematic, explicit and reproducible methods to synthesize previous research. Hammersely (2013) argues:

who would want reviews to be unsystematic, if by ‘systematic’ we mean no more than properly carried out, taking account of all the relevant evidence, and making reliable judgements about its validity and implication? On this definition, to produce a systematic review is simply to do the job of reviewing well. (p. 110)

A further compounding issue is that structured reviewing is also sometimes referred as systematic reviewing, which not to be confused by, but often conflated with, systematic reviews as a specific type of review. We therefore prefer the term ‘structured,’ as opposed to ‘systematic’ reviewing, as an umbrella term to describe all structured review types that employ a systematic search strategy protocol including systematic reviews as one of many sub-types (Booth et al., 2013; Grant & Booth, 2009).

**\*\*\*insert Figure 1 (structured vs. unstructured reviewing) about here\*\*\***

The distinction between structured and unstructured reviewing is illustrated in Figure 1. Figure 1 highlights the most common structured based reviews. Distinguishing between different structured review types is also a challenging task, as they share many characteristics but have different aims and employ a range of protocols. For example, systematic reviews provide a saturated review of the existing literature and to make observations on what is known with a focus on a comprehensive coverage of the literature. In contrast, scoping reviews are typically employed as a preliminary assessment of the field, whereby the boundaries of a particular domain are unclear. Both systematic and scoping reviews employed structured protocol in order to search for and identify literature, however, unlike systematic reviews, scoping reviews often do not involve an assessment of research quality. It is for this reason that scoping reviews can be completed in a shorter timeframe (3-6 months) compared to a systematic review (12-18 months). Table 1 outlines the distinction between scoping and systematic reviews. We also recommend Munn et al. (2018) for a detailed discussion of the differences between systematic and scoping reviews.

**\*\*\*insert table 1 (key differences between systematic and scoping reviews) about here\*\*\***

Ultimately, the decision of which structured review type to employ should be “based on the nature of your research question and the purpose of your research, as well as the time and resources available to you” (Booth et al., 2013, p. 2). Like Grant and Booth (2009), we recognize:

only a handful of review types possess prescribed and explicit methodologies and many labels used fall short of being mutually exclusive … [we recognise] that there is a lack of unique distinguishing features for most common review types, whilst highlighting that some common features do exist. (p. 106)

The overlap of features and characteristics, along with the continually expanding portfolio of review types and evolving protocol of structured reviewing has led to some scholars confusing (or at least conflating) the different review types. Nonetheless, we view this increasing plurality and proliferation of structured approaches to synthesizing research as further evidence of the increasing importance and need to synthesize research evidence.

# Scoping Reviews - Protocol and Method

One increasingly prominent structured approach for synthesizing research evidence is the adoption of scoping review protocol and methodology (Tricco et al. 2016). Scoping reviews have emerged as an increasingly popular form of knowledge synthesis (cf. Colquhoun et al. 2014; Tricco et al. 2016) that can be influential to policy and practice. A scoping review is a “preliminary assessment of potential size and scope of available research literature [that aims] to identify nature and extent of research” (p. 101). Recently, Tricco et al. (2018) have provided a more detailed description of the scoping review:

They [researchers] may examine the extent (that is, size), range (variety), and nature (characteristics) of the evidence on a topic or question; determine the value of undertaking a systematic review; summarize findings from a body of knowledge that is heterogeneous in methods or discipline; or identify gaps in the literature to aid the planning and commissioning of future research. (p. 467)

Scoping reviews therefore have varying objectives. Moreover, they are rapidly increasing in popularity. In 2009, less than 10 scoping reviews were published in the scientific literature annually and since 2009 yearly increase have been observed with 85 scoping reviews published in 2013 alone (Colquhoun et al., 2014). Similarly, Tricco et al’s (2016) scoping review of scoping reviews identified 494 scoping reviews were published between 1999 and 2014 with 45% disseminated since 2012. The authors also identified that only 13% of scoping reviews reported the use of protocol. The increasing interest in scoping reviews can in part be explained by the increasing need to synthesize research domains in a robust and rapid manner but also due to ongoing recent efforts to establish clear and comprehensive guidelines for how to conduct scoping reviews. In elaborating on the latter point, with the burgeoning interest in the scoping review the method by which it is carried out should be consistent. There are established guidelines and protocol for carrying out scoping studies. For example, the Joanna Briggs Institute (JBI, 2015) published a guidance document for the conduct of scoping reviews (see also Peters et al., 2015). These protocols were developed based on earlier frameworks by Arksey and O'Malley (2005) and Levac et al. (2010), constituting six key steps: (a) identifying the research question, (b) sourcing relevant studies, (c) study selection, (d) charting the data, (e) collating, summarizing and reporting the results, and (f) consultation (see Table 2 for an overview of each step).

\*\*\*insert table 2 (overview of scoping review protocols) about here\*\*\*

# Concluding Comments – Revisiting the Brickyard

This commentary has sought to extend the discussion surrounding research synthesis within the field by introducing scoping reviews as a potentially useful approach to synthesizing research evidence and to critically reflect upon its potential value and utility for synthesizing research within the sport policy and management domain. Our analysis and experience of utilizing scoping reviews within the field is that they provide a useful alternative approach to synthesizing research for select research domains/topics providing that strict protocol are adhered to and are appropriately operationalized. In this sense, much like Forscher (1963) we recognizethe inherent danger of conducting research synthesize without the appropriate research tools or consideration of its implications or impact to the broader enterprise. As our knowledge and understanding of sport continues to grow and evolve, there will also be an increasing need to synthesize research within and across the field more effectively. As characterized by most structured reviews, the benefit of the scoping approach as a form of research synthesis lies in its ability to identify relevant research gaps, avoid duplication of effort, demonstrate the contribution of the field to broader disciplines, and help translate research into practice more efficiently and effectively. It is the latter two of these contributions that we see particular merit given the current evolution of the sport policy and management scholarship. We also hope that our comments here are viewed as a starting point to generate further discussion and debate surrounding research synthesis within the sport policy/management domain and to encourage sport scholars to adopt more structured approaches to synthesize research evidence. We think that the field would benefit from much explicit discussion surrounding and utilization of structured reviewing. It is through the utilization of research synthesis that we can ensure that we are building useful edifices in order to move the sport policy/management research forward.

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