11.1.2 Scoping reviews and evidence based practice

The synthesis of evidence in the form of the systematic review is at the center of evidence-based practice (Pearson et al. 2005). Systematic reviews traditionally bring together evidence from quantitative literature to answer questions on the effectiveness of a specific intervention for a particular condition. Beyond effectiveness, JBI is also interested in the context of care delivery, its cost-effectiveness, as well as patient, carer and healthcare provider preferences. These foci are explored in terms of the appropriateness, meaningfulness, and feasibility of healthcare practices and delivery. These sorts of questions are most commonly answered by consideration of other forms of primary evidence found in qualitative and economic research. The results of well-designed research studies of any methodology are regarded by JBI as potential sources of credible evidence. To match this broader and more inclusive view of evidence, JBI has developed a number of methodologies and methods for the synthesis of evidence to support healthcare decision-making.

All JBI systematic reviews – including scoping reviews – begin with the development of an a-priori protocol with inclusion and exclusion criteria that relate clearly to the objective/s and review question/s. A typical systematic review aims to answer a specific question (or series of questions) based on very precise inclusion criteria, for example, a systematic review may pose the following precise question based upon the PICO (Population, Intervention, Comparator, and Outcome) elements of its inclusion criteria:

“What is the effectiveness of the Gardasil vaccine compared with the Cervarix vaccine in preventing Human Papillomavirus infection in adolescent and young adult women?”

It is clear from this question that only certain types of quantitative evidence and data would be relevant and that the review will be very specific in terms of the population, intervention, comparator, and kinds of outcomes against which it will measure effectiveness.

A scoping review will have a broader “scope” with correspondingly less restrictive inclusion criteria. The following question based upon the PCC (Population, Concept and Context) elements of the inclusion criteria may be posed:

“What types of neurological reactions to the Human Papillomavirus vaccination have been reported?”

This question leaves the population rather “open” and implies that both men and women of any age will be suitable for inclusion as long as they have received a HPV vaccination. The intervention in this example is also ‘open’ to any kind of HPV vaccine and does not stipulate that there will be any kind of measurement of outcomes or comparison involved. The “concept” of this scoping review (neurological reactions) is also broad, and could cover any kind of neurological outcome as long as it is a reaction to HPV vaccination. For this particular question, the ‘context’ has also been left open, so the evidence may come from any context (e.g. geographical, healthcare setting, sociocultural).

An especially important point is that the scoping review question may draw upon data from any type of evidence and research methodology, and is not restricted to quantitative studies (or any other study design) alone. This however is not prescriptive; reviewers may decide that particular study designs are beyond the scope of their review, or not be appropriate or useful for consideration. For example, in the protocol, this scoping review example may specify that opinion literature will not be included. Because of the broad nature of scoping reviews, they are particularly useful for bringing together evidence from disparate or heterogeneous sources. In the example scoping review question regarding HPV vaccination above, reports of neurological side effects such as syncope (fainting) from randomized controlled trials can be considered side by side with qualitative accounts of patients’ experiences of paralysis following HPV vaccination.

It is important to highlight the distinction between scoping reviews and “mixed methods” systematic reviews that also rely on evidence from a number of different study designs (Pearson et al. 2015). While the aim of a scoping review is to determine what kind of evidence (quantitative and/or qualitative) is available on the topic and to represent this evidence by mapping or charting the data, mixed methods systematic reviews are designed to answer a question or questions based on the synthesis of evidence from for example qualitative, quantitative and economic research (Reilly et al. 2016). For example:

“What is the effectiveness, cost effectiveness, acceptability and implementation barriers/enablers for chronic kidney disease management programs for Aboriginal and Torres Strait Islander Australians?”
The goal of this mixed methods systematic review was to: i) report on the effectiveness of chronic kidney disease management programs from quantitative evidence of effectiveness, ii) report on the relative cost-effectiveness of chronic kidney disease management programs from economic evidence, and to iii) examine the experiences of Aboriginal and Torres Strait Islander Australians and healthcare providers regarding chronic kidney disease management programs in terms of acceptability as well as barriers and enablers of implementation. Following separate methodological quality assessment, data extraction and synthesis, the results of each synthesis were then brought together in a comprehensive synthesis using evidence from each research type to answer a specific question. In this example, the knowledge gained from the qualitative and economic evidence can be used to enhance the knowledge gained from the quantitative evidence.

Another important distinction between scoping reviews and systematic reviews is that, unlike systematic reviews, scoping reviews provide an overview of the existing evidence, regardless of quality. This is because scoping reviews aim to provide a map of what evidence has been produced as opposed to seeking only the best available evidence to answer more specific questions related to policy and practice. Hence, unless otherwise specified, a formal assessment of methodological quality of the included studies of a scoping review is generally not performed or congruent with the purpose of scoping reviews.

While recommendations for research, including for primary research, other scoping reviews, or systematic reviews, may be generated from the results of a scoping review – especially those conducted with the objective of being precursors to systematic reviews, recommendations for practice are limited by the fact that a formal assessment of methodological quality of the included studies of a scoping review is generally not performed. If recommendations for practice are developed, it is expected that they will clearly flow from the objectives of the scoping review.