**Sins of Omission and Commission in Systematic Reviews in Nursing: A commentary on McRae et al.**

It is 22 years since the Cochrane Collaboration came onto the healthcare stage and 14 since the idea of a nursing field within the collaboration was first mooted (Cochrane Nursing Field, 2015). Worldwide, many undergraduates use systematic reviews to inform their thinking and care, and for post graduate students the experience of undertaking a review is often forms part of their scholarly development. As a user and teacher of systematic reviews and the process of reviewing I want to be sure that I can trust what reviews say. In most cases that means assuring myself that the manner in which a review is produced leads to valid and reliable results. The same is true of all research – whether qualitative or quantitative, descriptive or experimental - but systematic reviews have one main advantage: a clear, relatively unambiguous, blueprint for how to conduct them (Higgins et al., 2009, NHS Centre for Reviews and Dissemination., 2009). Moreover, as the journal itself has highlighted (Norman and Griffiths, 2014), whilst the term systematic review is sometimes shorthand for a range of different approaches (narrative, scoping, meta syntheses), each is still accompanied by guidance of varying degrees.

The incorporation of systematic reviews into the armoury of nursing researchers heralded the promise of a step change in the quality of secondary analyses and literature reviews (Griffiths and Norman, 2005). Alongside clear guidance on how to conduct reviews, we also have equally clear guidance on how to report reviews in the form of the PRISMA guidelines (Juni and Egger, 2009). These standards for reporting and conducting reviews make both research sins of “omission” (failing to do what you can and should) and “commission” (knowing that something is wrong and doing it anyway) more difficult. The paper by McCrae and colleagues shows us that whilst difficult, it is not impossible.

Of course, nursing is not the only committer of such research sins; for as long as systematic reviews have been conducted we have known that they are not always conducted perfectly. Olsen and colleagues in 1998 found that almost a third of Cochrane reviews had “major problems”, including unsatisfactory conduct and reporting, and concluded that, “improvement is always possible” (Olsen et al., 2001). Whilst troubling, the picture for non-Cochrane reviews (with their added “flexibility” in methodological application), was much worse; Pettigrew and colleagues (Petticrew et al., 1999) found that almost half of non-Cochrane supported reviews indicated flaws in the conduct of reviewers and the ways in which they were reporting their efforts. Like nurse researchers, physiotherapists have also embraced the potential that systematic reviews might yield for disciplinary knowledge. Moseley and colleagues found that Cochrane guided reviews were of a higher quality than non Cochrane reviews in physiotherapy and that this improvement was attributable to reporting of search strategies, appropriate outcome reporting and analysis, and appropriate quality appraisal using scales (Moseley et al., 2009). It is not unreasonable to expect then that reviewing and reviews would improve over time and that nurses and others would strengthen the evidence base by conducting reviews rigorously and generating trustworthy results.

McCrae and colleagues paper is not alone in highlighting the fact that nursing scholars have not fully assimilated and corrected the lessons relayed so clearly by Olsen, Petticrew and others. Polkki (2014) recently examined the methodological quality of systematic reviews in high impact nursing journals. Whilst not offering much in the way of detailed guidance on *where* nursing’s systematic review evidence base was deficient, they highlighted a number of areas that are often poorly reported: the method of synthesis, how quality of included material was judged, and the relative weighting attached to discussion of strengths and limitations of a review (Polkki et al., 2014). Seo and colleagues have shown that limitations and variability in the quality of reviews is not just a western phenomenon; with only 2 of 22 systematic reviews conducted by South Korean nursing scholars in journals rated as “high quality” (Seo and Kim, 2012).

It would appear then that a high level picture regarding the quality of conduct and reporting of reviews in nursing already exist for scholars to reflect on when planning, conducting and reporting their reviews. What then do McCrae and colleagues (2015) offer that adds value to this meta-picture? For me at least, it is the specifics of the limitations, deviations from PRISMA, and the corrective action required, that is most illuminating: make the eligibility criteria explicit and stand out; specify outcomes (and if you can’t explain why not); make sure any exclusion criteria are justifiable and exception reporting helpful and transparent; ensure that geographical and temporal criteria for inclusion or exclusion make sense and are not just for convenience and that any search strategy is explicit and expressed diagrammatically. PRISMA, of course specifies all of these. McCrae and colleagues (2015) however offer us a picture of the sins that nurse reviewers are prone to and a professionally relevant aide memoir as an aid to avoiding and correcting them. It is here that I must cry “mea culpa”: one of my reviews is on McRae et al’s list of offenders (we restricted our review of educational interventions for improving decision making in nurses to European and Latin databases and search terms). Armed with a nursing-wide picture of adherence to PRISMA standards may well have prevented this particular sin of omission. Equally, it may not, but we might have been less implicit about our language restrictions and our rationale: neither my co-reviewer nor I speak Chinese!

The paper by McCrae et al. (2015) offers no earth shattering conclusions, no paradigmatic step change for increasing the quality and quantity of systematic reviews in nursing; and only a partial insight into the motivations that might lie behind the apparent flaws in the evidence base. What is on offer though is an empirically based, unambiguous, view of the work that nurse researchers still have to do to get our house in order and make the most of the possibilities and promise that systematic reviews can still provide for nurses and nurse researchers.

Carl Thompson, Leeds, Feb 2015

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