Systematic Reviews' Impact and the Role of the Medical Librarian

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Introduction

• Systematic reviews are widely considered the highest standard of Evidence-Based Medicine. They address clearly formulated clinical questions by collating all of the primary studies on a topic and synthesizing the evidence.

• Librarians play an important role in the systematic review process by conducting complex literature searches to retrieve relevant studies. However, librarians are not always utilized, which can lead to publication bias within a systematic review as novice searchers may not retrieve all relevant studies.

• We hypothesized that the overall impact (measured by Web of Science citation counts) of systematic reviews published by authors at our institution would be higher when a librarian or information scientist conducted the literature searches.

Objective

• To assess the impact of systematic reviews that applied a comprehensive, reproducible, published search strategy, conducted by a librarian or information specialist, compared to those that used less rigorous information retrieval methods.

Methods

• A literature search, completed in November 2014, was conducted in Web of Science to find systematic reviews published in the last 10 years, that included Duke researchers as authors.

• Reviewers identified Systematic Reviews (labeled as such by the study’s authors); reviewed the search methods to determine if the search strategy was reproducible (per PRISMA guidelines) – the full electronic search strategy should be reported for at least one major database; and checked to see if collaboration with a librarian was mentioned in the methods section or acknowledgements, or if a Duke librarian was listed as an author.

• In May 2015, a citation report of the included studies was conducted in Web of Science Core Collection covering a span of the last ten years.

Summary of Search and Selection

1,180 Records identified through Web of Science search

352 studies included in analysis

- All Systematic Reviews with a Duke author (n=352)
  - Any Librarian Noted (n=65)
  - Any Librarian Not Noted (n=287)
  - Duke Librarian Noted (n=33)
  - Search Reported (n=111)
  - Search Reported, Librarian Noted (n=40)
  - Search Reported, Librarian Not Noted (n=71)
  - Search Not Reported (n=241)
  - Search Not Reported, Librarian Noted (n=25)
  - Search Not Reported, Librarian Not Noted (n=216)

969 Full-text articles assessed for eligibility

617 Full-text articles excluded

Web of Science Search Strategy

#1 AD=(duke or DUMC or (durham same nc) or 27710 or 27708 or 27706 or 27705) 82,276

TOPIC: (systematic review*) OR TOPIC: (meta analysis or meta analyses or (meta analysis) or (meta analyses)) OR TOPIC: (meta synthesis or meta syntheses) OR TOPIC: (literature review) OR TOPIC: (evidence synthesis) OR "evidence syntheses"

#2 AND #1 151,884

#3 AND #1 1,303

#2 AND #1 82,276

#4 Refined by: [excluding]: DOCUMENT TYPES: (MEETING ABSTRACT OR EDITORIAL MATERIAL OR REPRINT OR LETTER OR BOOK CHAPTER) 1,180

Citation Reports (May 2015)

Average Number of Times Systematic Reviews were Cited (2005-2015)

Search Not Reported, Any Librarian Not Noted

Search Not Reported, Any Librarian Noted

Search Not Reported

Search Reported, Any Librarian Not Noted

Search Reported, Any Librarian Noted

Search Reported

Any Librarian Noted

Any Librarian Not Noted

Duke Librarian Noted

Duke Librarian Noted

All Systematic Reviews with a Duke author

Average Times Cited per Year

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Conclusion

• Running two sample z-tests showed no significance between any groups.

• We did not find a correlation between Duke librarian collaboration on systematic reviews and number of times an article was cited.

• There is no dedicated space in publications where authors can disclose who conducted the literature searches, so that information is frequently unreported.

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The authors have nothing to disclose; no external funding sources were received and no conflicts of interest were reported.