QUALITY TIME

How Health Librarians are Engaging with Critical Appraisal

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First:
Why the honey bee?

Introduction

The EBM Cycle

ASK the question → ACQUIRE the evidence → APPRAISE the evidence → APPLY the Evidence → ASSESS → (back to ASK the question)

Our Research Questions

Why are we asking this question? →

- Health librarians are taking part in courses on evidence appraisal
- We are also constantly seeking ways to develop collaboration with our health professional colleagues
- Is critical appraisal (stage 3 of EBM) the next big opportunity for health librarians?
- Are health librarians genuinely engaging with this opportunity?
- We thought there was little literature on the subject

Our Research Questions

To what degree are health sciences librarians engaging in critical appraisal of the medical evidence?

What attitudes do health sciences librarians display to this engagement?

Methodology

The study is a scoping review conducted according to Arksey & O'Malley's guidelines (2005).

Methodology #1

What is a scoping review? → Scoping reviews are a type of literature review that aims to provide an overview of the type, extent and quantity of research available on a given topic

Search Strategy → Two concepts:

LIBRARIAN +
CRITICAL APPRAISAL/EBM/EBHC

Methodology #2

Search Strategy (LISTA)

Searches executed 31 March 2014.

S1	SU librarians
S2	SU information
S3	TX librarian#
S4	TX informationist#
S5	SU occupational roles
S6	SU medical librarianship
S7	TX information professional*
S8	SU knowledge workers
S9	SU librarians attitudes
S10	TX information specialist#
S11	TX information provider#
S12	TX medical librarian*
S13	TX hospital librarian*
S14	TX informaticist#
S15	TX knowledge worker#
S16	SU medical libraries
S17	OR/S1-S16

S18	SU evidence-based medicine
S19	TX critical* apprais*
S20	TX critical* think*
S21	TX evidence-based
S22	TX systematic* review*
S23	TX evaluat* evidence
S24	TX EBM
S25	TX EBMP
S26	TX EBHC
S27	TX evidence N3 apprais*
S28	TX quality N3 assess*
S29	TX quality N3 apprais*
S30	OR/S18-S29
S31	S17 AND S30

Methodology #3

**Inclusion/
Exclusion
Criteria**

Inclusion:

Health Librarianship

Stage 3 of the EBM cycle (APPRAISE)

Language:

- English, French, German, Spanish, Italian

Exclusion:

Research synthesis not librarianship

Not health librarianship (including EBL not EBM)
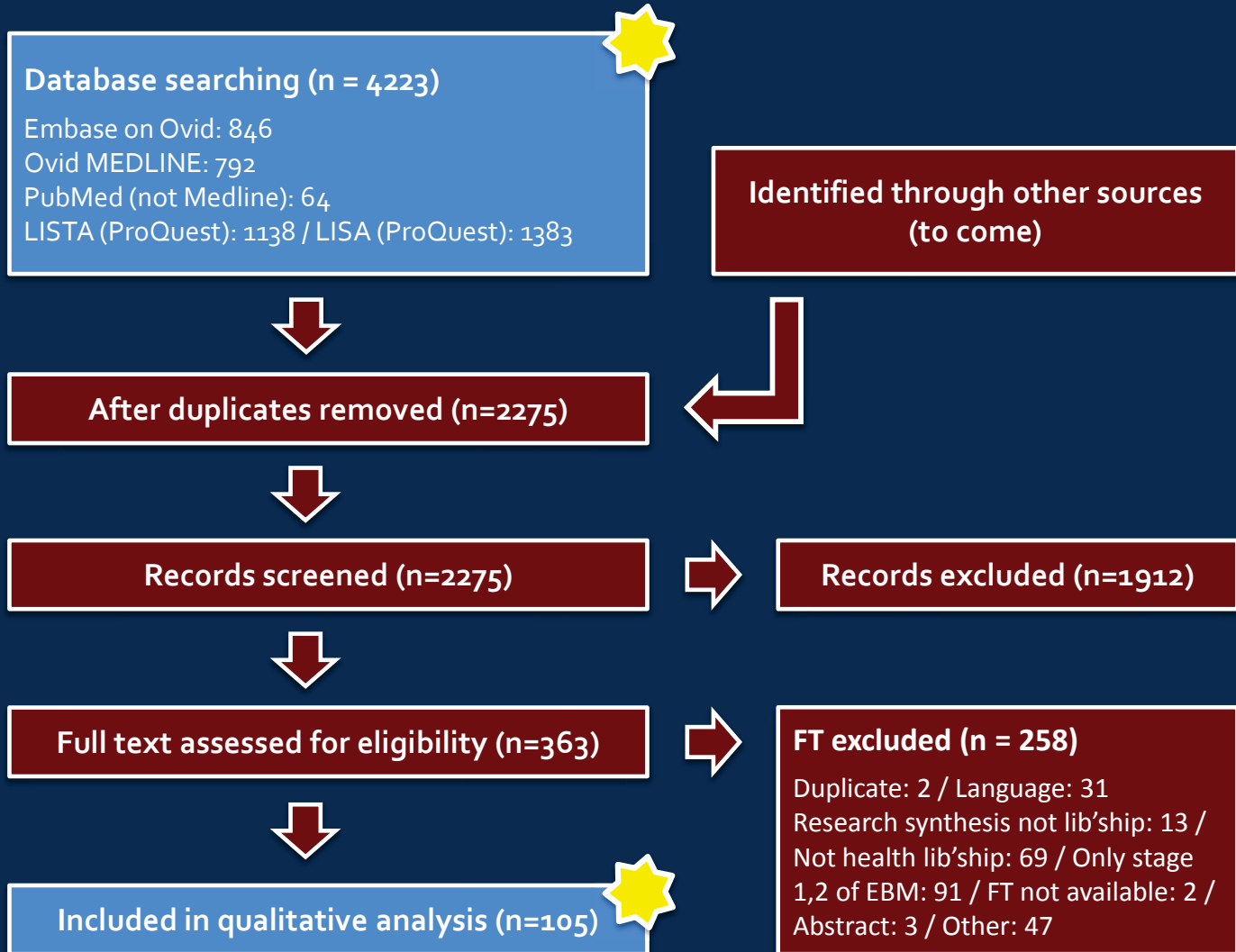
Only stage 1,2 of EBM (ASK, ACQUIRE)

Full text not available

Abstract only

Findings

Database searching (n = 4223)

Embase on Ovid: 846
Ovid MEDLINE: 792
PubMed (not Medline): 64
LISTA (ProQuest): 1138 / LISA (ProQuest): 1383

Identified through other sources (to come)

After duplicates removed (n=2275)

Records screened (n=2275)

Records excluded (n=1912)

Full text assessed for eligibility (n=363)

FT excluded (n = 258)

Duplicate: 2 / Language: 31
Research synthesis not lib'ship: 13 /
Not health lib'ship: 69 / Only stage
1,2 of EBM: 91 / FT not available: 2 /
Abstract: 3 / Other: 47

Included in qualitative analysis (n=105)

Emerging Themes

Emerging Themes

1. How does the literature define Critical Appraisal?

CA in the literature

There is a lack of rigour in the literature regarding the meaning of CA, from:

- General checks of quality from an info lit point of view, to

- Biostatistical appraisal of study quality

- And various other levels in between

CA in the literature

- The concept of CA is referred to in many ways in the literature and it is frequently unclear which level of CA is intended

- The term CA predates the term EBM.

- Some of our 105 studies may include a lower level of CA

Emerging Themes

2. What attitudes do librarians have towards Critical Appraisal?

Attitudes to CA

- **We tallied positive and negative librarian attitudes towards CA**
  - We noticed that more librarians reported positive attitudes than negative. But the reports are highly self-selecting

- **We did the same, where possible, for collaborator attitudes**
  - We saw no clear picture. However, collaborators regularly develop positive attitudes after working with a librarian who conducts CA

Attitudes to CA #2

- **Maden-Jenkins summarises attitude barriers to librarian involvement in CA teaching which we also saw reflected in the literature:**
  - "Lack of confidence"
  - "Lack of willing", not wanting to take the lead
  - Perceived attitude of others
    - Concern about resistance from medical staff
  - Fear
    - Of the unknown, of statistics

Attitudes to CA #3

- **She also reports perceived skills/knowledge barriers to librarian involvement:**
  - Lack of knowledge, not sure what it is
    - Resulting in perceived lack of facilitation/teaching skills
  - Lack of specific statistical, mathematical knowledge
  - Difficulty of understanding or "getting your head around it"
  - Few opportunities to practice

Emerging Themes

3. **What real-world examples are there of librarians getting involved in Critical Appraisal?**

CA in context #1

- Clinical Librarians
- Informationist trends

CA in context #2

- We spotted many types of librarian engagement with CA:
  - Librarians taking part in training, learning how to conduct CA at various levels
  - Librarians conducting training
- Librarians conducting CA in various contexts
  - Filtering/evaluating the literature (rarely clear what this means)
  - Biostatistics, medical statistics, etc.

CA in context #3

- Vanderbilt: From Clinical Librarians to Informationists to Information Specialists: The Clinical Informatics Consult Service (CICS)
  - "Information specialists" synthesise the literature, analyse study methodology.

Emerging Themes

4. If we ignore Critical Appraisal, will we become irrelevant?

Staying Relevant

- CA appears to be expected more and more in certain contexts.

- Do health librarians need to routinely learn this in order to stay relevant?

- Non-librarian, medical info specialists: We noticed various non-librarian informaticists and knowledge brokers conducting CA.

Emerging Themes

5. **Is there really a lack of relevant literature and a need for further research in this area?**

(Clue: Yes)

Lack of literature

- There is no seminal article on this subject

- Maden-Jenkins conducted research into librarians and CA (as quoted earlier). But she limited her research to training and her work is now 5 years old.

- Research is needed into the broader field, and with a consistent definition of CA.

Limitations

Limitations

- During screening, particularly FT screening, we found other terms for CA which were not used in the original search strategies
- The grey lit search was not completed in time for this presentation (of NHS, Canadian provincial health authorities, etc.)
- Snowball searching also not complete

Next Steps

What next?

- We need more evidence to find out what health librarians really think about CA
  - Diffusion of Innovation approach
  - What about collaborators?
  - Do collaborators really want librarian involvement?

References

Listing of the 105 articles we selected for data extraction: *http://bit.ly/1mWvC2x*

Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology, 8*(1), 19-32.

Maden-Jenkins, M. (2010). Healthcare librarians and the delivery of critical appraisal training: Attitudes, level of involvement and support. *Health Information and Libraries Journal, 27*(4), 304-315.

Maden-Jenkins, M. (2011). Healthcare librarians and the delivery of critical appraisal training: Barriers to involvement. *Health Information and Libraries Journal, 28*(1), 33-40.

Thank you for listening!