

2025年高校图书馆发展论坛

美国研究型图书馆证据合成服务研究

Exploration on the Evidence Synthesis Service of Research Libraries in the United States



西安交通大学图书馆 张一翠

2025年6月 南昌



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- 1 研究背景
- 2 研究内容
- 3 研究启示



Part 01

研究背景

时代背景

概念背景

适配性

时代背景

趋势

开放科学

资源获取“去中心化”

交叉学科

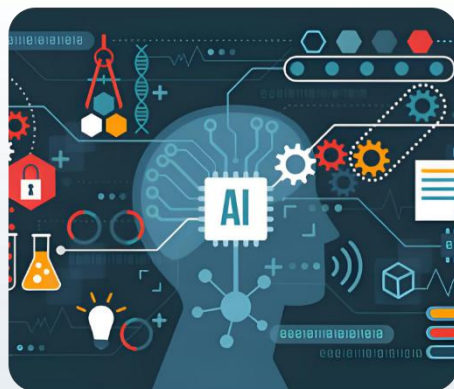
要求图书馆提供高附加值研究支持

新兴技术

突破传统行业边界和服务深度

政策指引

有组织科研、教育科技人才一体化



挑战

资源控制力弱化

失去“资源垄断”优势

传统服务需升级

藏---用---信息---智慧

角色定位模糊

馆员=管理员?
大学的“心脏”?



图书馆该如何转型，才能有效应对时代发展趋势，与时代发展同频共振？

概念背景

概念

方法

组织

证据合成 (Evidence Synthesis) , 又称知识合成 (Knowledge Synthesis) 或研究合成 (Research Synthesis)

英国皇家学会

通过识别、选择和组合多项研究结果，为特定问题的辩论和决策提供信息的方法

Cochrane组织

涉及将调查同一主题的多项研究的信息结合起来，以全面理解研究发现

Evidence Synthesis International

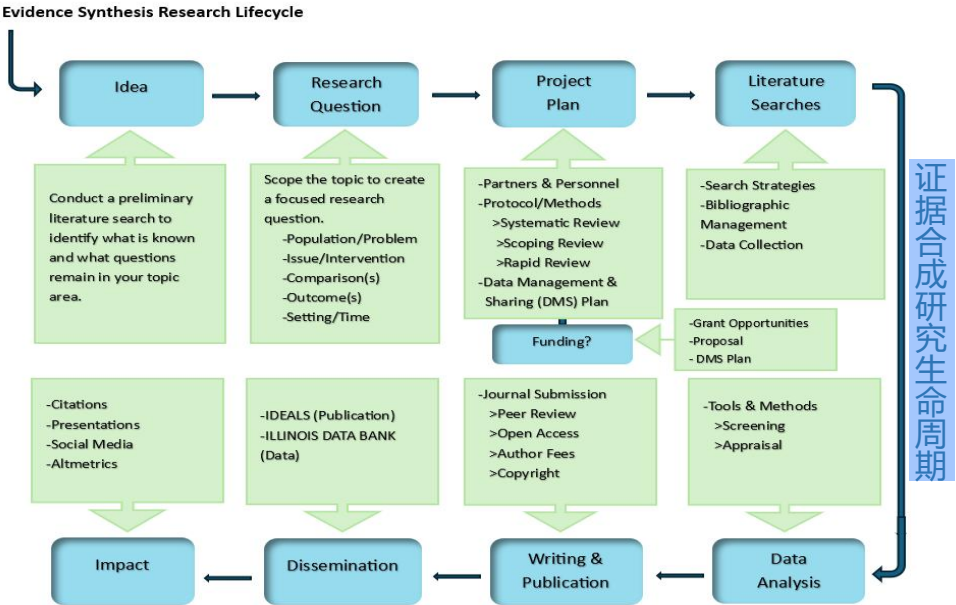
在特定主题的全球知识背景下对个别研究的解释，其核心在于采用明确、透明的方法进行问题界定、研究识别、选择、评估和分析

加拿大卫生研究院

将单个研究结果置于更大知识体系中的背景化整合

	SYSTEMATIC REVIEW	SCOPING REVIEW	RAPID REVIEW	NARRATIVE REVIEW
Description	Comprehensive and exhaustive review and analysis of literature related to a focused clinical question using pre-determined criteria and methodology	Preliminary assessment of size and scope of evidence to address health issue	Assessment of knowledge related to medical policy or practice using systematic methods for search and synthesis of literature	A survey of literature related to an issue or topic and collates major themes or findings.
Purpose	Aim is to systematically acquire and appraise all literature that addresses a narrowly focused clinical issue	Aims to identify nature and extent of research evidence; informs future research	Aim is to address a critical topic with quick turnaround	Aim is to provide a general overview of what is known about a topic
Timeframe	12+ months	9 – 24 months	1-6 months	2+ months
Question	PICO framework – focused, answerable	Exploratory	Scoped for rapid turnaround	No formal research question
Search	Systematic, comprehensive, exhaustive, explicit, reproducible	Systematic, comprehensive, explicit & reproducible	Systematic; determined by time constraints and scope of question	Not comprehensive or exhaustive
Appraisal	Rigorous appraisal of quality and validity of evidence	Critical appraisal not required nor expected;	Time limited formal or informal assessment of quality and validity of evidence	No critical appraisal or consideration of bias
Synthesis	Tabular & narrative; Meta-analysis includes quantitative analysis of key data points	Tabular & narrative; reports characteristics of literature; themes, gaps & opportunities	Tabular & narrative	Tabular & narrative
Considerations	Personnel, time, resources, value	Personnel, time, resources; no discussion of bias expected	May be prone to bias; discuss methodological limitations	Prone to bias
Guidelines & Guidance	PRISMA Cochrane Library Campbell Collaboration PRESS Guidelines	PRISMA for Scoping Reviews JBI Scoping Review Network	Rapid Review Guidebook Cochrane Methods Rapid Reviews (PRISMA-RR under development)	
Registries	OFS - Open Science Framework PROSPERO	OFS - Open Science Framework	OFS - Open Science Framework PROSPERO	

证据合成典型方法



证据合成研究生命周期



Trusted evidence.
Informed decisions.
Better health.



证据合成与图书馆员的适配性

馆员专业能力

高级检索 (检索策略、灰色文献)
文献管理 (文献管理、筛选标注)
数据处理 (数据清洗、可视化等)
对学术资源的深刻认识

研究需求

组建多学科团队
制定研究主题
确定研究方案 (注册)
文献检索
数据提取
综合分析
形成综述报告

高度匹配
减少偏倚, 提高质量, 提升效率

Potential roles for librarians

- Class presentations
- Workshops
- Teach any client groups

Instructor



- Guidance on search development
- How to select software
- Journal selection

Consultant



- Join a review project
- Contribute to grant applications

Collaboration



- Study info retrieval
- Participate in standards
- Peer review

Researcher



- Admin for software
- Other infrastructure needs

Administrator



GORE G C, JONES J. Systematic Reviews and Librarians: A Primer for Managers[J]. Partnership The Canadian Journal of Library & Information Practice & Research, 2015,10(1)

NNLM https://lor.nnlm.gov/op/op.Download_Share.php?documentid=5843

ALA's Core Competences of Librarianship

Final version

Approved and adopted as policy by the ALA Council, January 28, 2023

The ALA Core Competences (ALACCs) reflect basic knowledge gained through LIS education, job on-boarding, and ongoing professional development early in a library career. It is essential that library professionals working throughout their careers in school, academic, public, special, and governmental libraries be life-long learners to acquire specialized and advanced knowledge beyond those specified in this Core Competences document.

7. Research and Evidence-Based Practice

Rationale: Library professionals need to be able to discover, interpret, and generate research in relation to efforts that support their institutions, the profession, and/or their own professional development. Library professionals should be able to demonstrate a range of data, evidence, and research skills that include, but are not limited to, the

ALA图书馆事业核心竞争力

Research and Evidence-Based Practice



加拿大研究型图书馆馆员能力

Knowledge of evidence-based assessment strategies



COMPETENCIES FOR LIBRARIANS IN CANADIAN RESEARCH LIBRARIES

Prepared by the CARL Competencies Working Group

- Knowledge of institutional teaching and learning programs, goals and outcomes, as well as evidence-based assessment strategies and tools to effectively connect with user communities;

Evidence synthesis for policy

A STATEMENT OF PRINCIPLES

THE ROYAL SOCIETY

The Academy of Medical Sciences



英国皇家学会

Universities could consider employing information specialists (currently often employed in university libraries) who are expert in searching databases...





Part 02

研 究 内 容

我国概况

样本选择

研究内容

我国概况

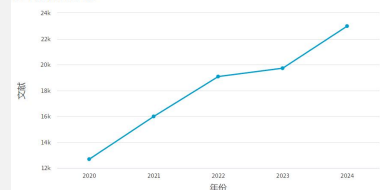


我国概况

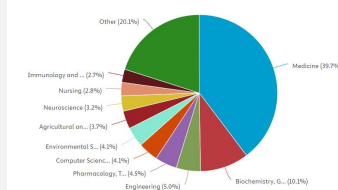
01 需求潜力

学术发文 Scopus 2020-2024 (共90,000余篇)

按年份划分的文献



按学科类别划分的文献



发文量持续增长

呈现多学科特点

02 实践现状

医学院校五年ASTEM排行榜前20所

循证医学信息服务

北京协和医学院图书馆

数据库检索使用培训

MJ Best Practice UpToDate
Clinical key Cochrane Library

专题报告和研讨会

- 循证医学检索方法
- 循证医学研究方法

研究现状

- 我国医学图书馆证据合成服务的初步构想 (本世纪初起)
- 对国外证据合成服务的经验介绍 (缺乏整体研究)
- 医学图书馆服务循证医学模式构建 (缺乏具体实践案例)
- 国内图书馆证据合成服务的实践 (实践内容仅限于文献检索及分析)

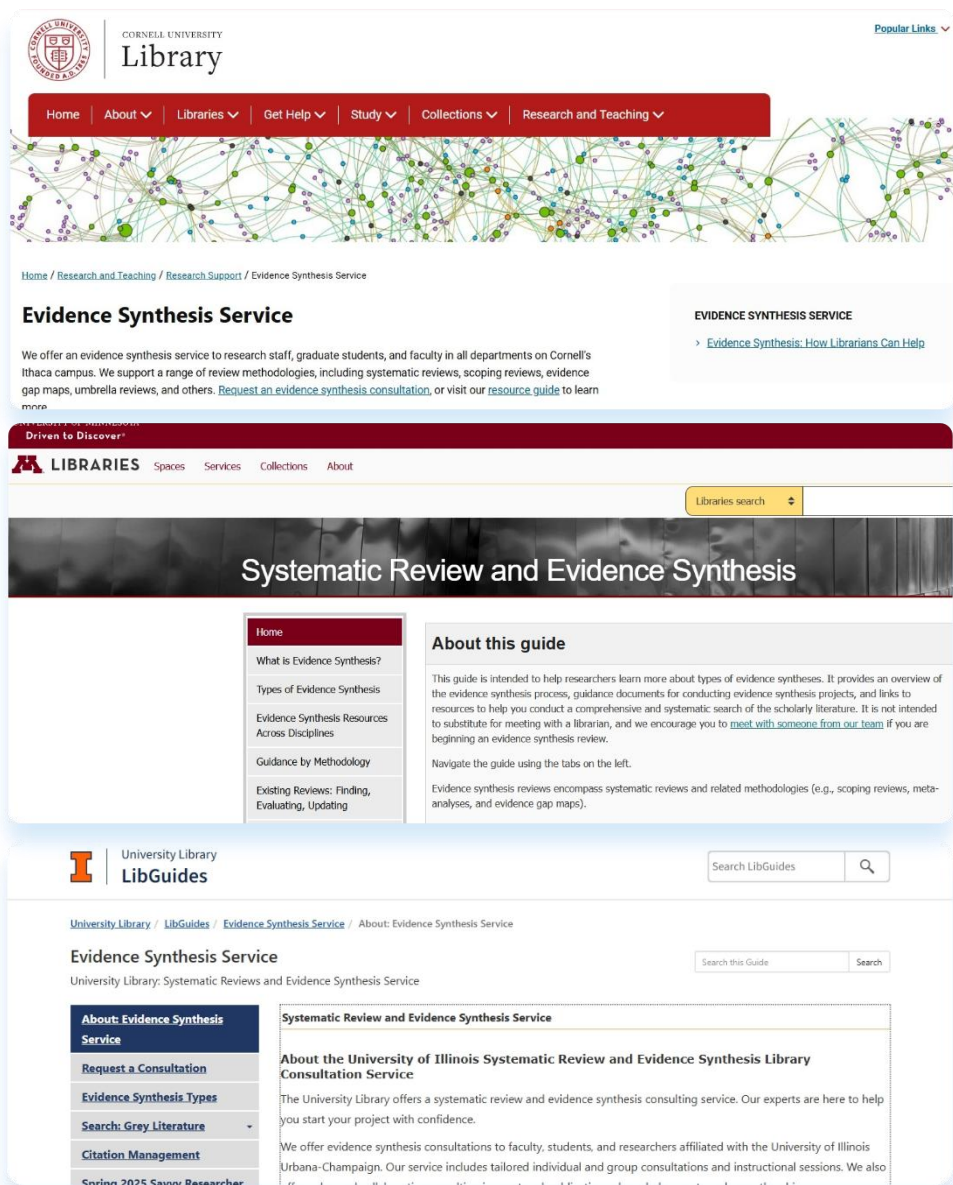
03 研究概览

我国概况总结

- 需求潜力较大
- 未深度参与研究过程
- 探索尝试性研究, 未深度探究



样本选择



2025泰晤士世界大学排名医学健康学科排名

前25名中，美国占11所，占比较高



Bing国际版搜索引擎

Evidence synthesis of University Library
Knowledge synthesis of University Library
Research synthesis of University Library
Systematic review of University Library



文献检索

Web of Science
美国相关发文量占比较高

研究样本

30所证据合成服务开展较为成熟的美国研究型图书馆

研究内容

服务模式

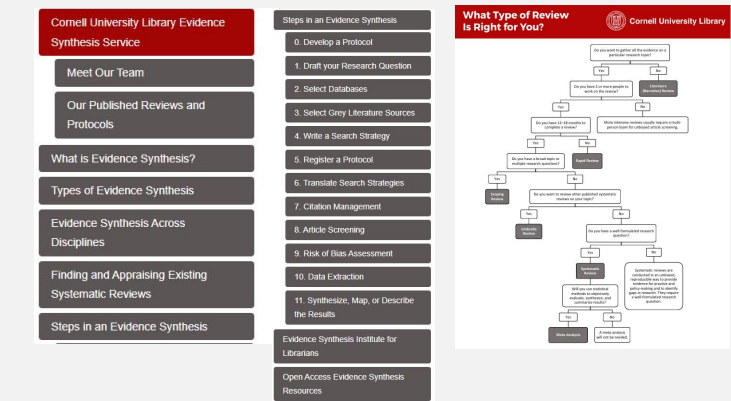
服务成效

服务特点

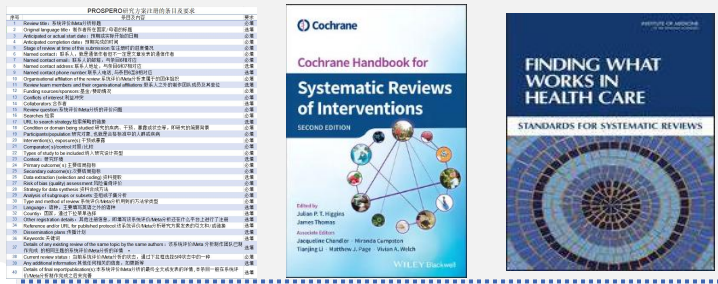
服务模式

标准化服务框架，提供专业服务

完善的证据合成服务指南



服务严格遵循研究标准指南



1. ELIZABETH A. Systematic Review Research Guides and Support Services in Academic Libraries in the US: A Content Analysis of Resources and Services in 2023[J]. Evidence Based Library and Information Practice, 2024.19(2):94-108.
2. <https://guides.library.cornell.edu/evidence-synthesis>

分级服务模型，满足不同研究需求

组建差异化服务团队

依据馆员能力和研究需求组队：提供基础咨询服务、支持证据合成方案设计、专业检索服务及证据合成方案制定、提供前沿方法学支持

犹他大学、天普大学

提供从咨询到合作的多层级专业服务

Tier 1: Consultation and Training

A librarian can consult and/or train about different aspects of conducting a systematic review. This level of consultation or training typically includes 1-2 meetings or train training sessions.

Consultation

- Help formulate the research question
- Verify question has not recently been addressed in a published systematic review
- Advise on reporting standards and best practices (e.g. PRISMA Guidelines, Cochrane, JOM etc.)
- Advise on database selection
- Provide feedback on your search strategy
- Discuss software tools for organizing systematic reviews

Training

- Perform a reproducible, comprehensive, documented search using multiple databases
- Use of citation management and screening tools for systematic review
- Obtain full-text of published papers

Peer Review of Search

- Librarian provides peer review of existing search strategy
- Librarian receives acknowledgement in final publication

Tier 2: Partnership

A librarian team (two librarians) joins your systematic review as subject experts in search methodology and hours are paid to the library as part of grant, department, or other funding. **Please contact us to discuss costs and FTE prior to submitting your budget.** We cannot guarantee space in our schedule or that work will be conducted within a specified number of hours if your budget has been set without prior consultation.

These services constitute a major contribution to the review for which the librarians are named as co-authors. This tier includes all Searching and Methodology services from Tier 1 in addition to priority scheduling and dedicated librarian time for your project. Depending on the project, negotiation of additional services may also include:

- De-duplication of results
- Assistance with screening of results
- Assistance with data extraction

Tier 2: Partnership

A librarian team (two librarians) joins your systematic review as subject experts in search methodology. The following services constitute a major contribution to the review for which the librarians are named as co-authors.

Searching

- Identify relevant databases to search
- Identify keywords and subject headings
- Develop reproducible, comprehensive search strategies
- Translate strategies for each database
- Conduct searches in multiple databases
- Export results to citation management tool, including removal of duplicate records
- Document search result numbers for PRISMA flow chart and archive search strategies
- Peer review of search strategy

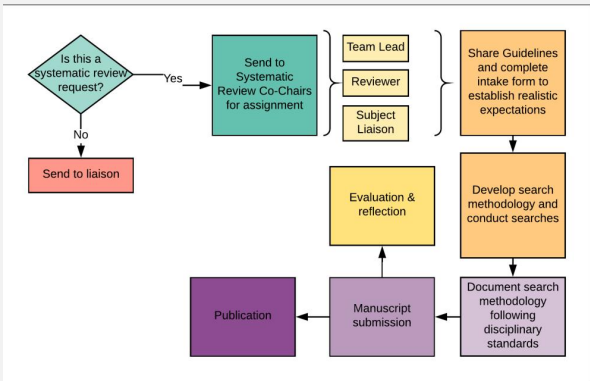
Methodology

- Write Methods section, describing the search strategy and its execution
- Provide appendix with search strategy from all included databases

跨学科服务支持多学科证据合成研究

Cornell University library systematic review service department statistics (2014-2018).

Cornell Department	Number of interactions
Nutritional Sciences	309
Human Development Studies	50
Development Sociology	27
Bronfenbrenner Center for Translational Research	25
Applied Economics & Management	20
Veterinary Population Medicine and Diagnostic Sciences	19
Design & Environmental Analysis	17
Lab of Ornithology	16
Natural Resources	6
Veterinary Medicine Clinical Sciences	4
Policy Analysis & Management	3
Entomology	2
Food Science	2
Communication	2
Biology & Society	2
Animal Science	2
Crop & Soil Sciences	1
Earth & Atmospheric Sciences	1
Institute for Public Affairs	1
Veterinary Medicine Biomedical Sciences	1
Agriculture Sciences	1
Sociology	1
Ecology and Evolutionary Biology	1

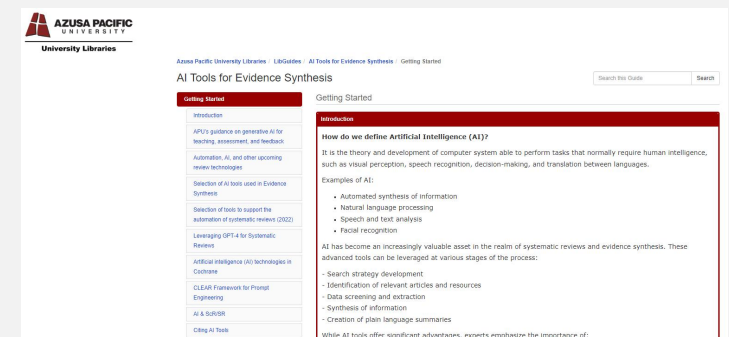


1. LACKEY M J, GREENBERG H, RETHLEFSEN M L. Building the Systematic Review Core in an academic health sciences library[J]. Journal of the Medical Library Association JMLA, 2019, 107(4):588-594.
2. <https://www.dartmouth.edu/library/biomed/services/systematic-review-service.html>.

AMY R, MEGAN K. A Model for Developing and Implementing a Systematic Review Service for Disciplines outside of the Health Sciences[J]. Reference & User Services Quarterly.2018,58(1):22-27.

服务模式

建设AI与证据合成研究指南



AI to Support Evidence Synthesis

The guide and the map of the AI tools.

Start

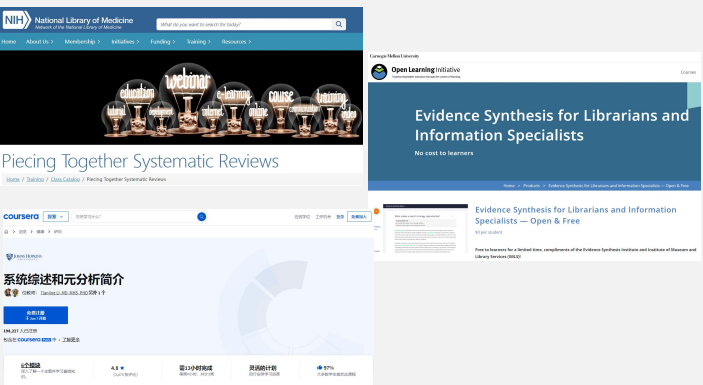


BY DR. OLGA KOZ, ALUMNI OF ESI, 2021

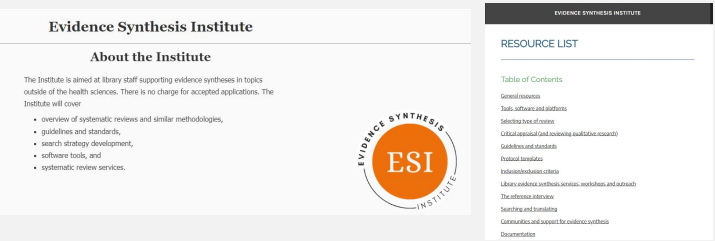
1. <https://guides.lib.unc.edu/AI-ML/overview>
2. <https://apu.libguides.com/AItoolsforES#s-lg-box-33615889>
3. <https://libguides.library.ohio.edu/SR/AI>

打造图书馆员证据合成能力培育体系

基础能力培训和实践指导



跨学科服务研修班



1. <https://pressbooks.umn.edu/evidencesynthesisinstitute/>
2. <https://www.nlm.gov/training/class-catalog/piecing-together-systematic-reviews>
3. <https://www.lib.umn.edu/about/evidence-synthesis-institute>

提供面向师生的证据合成研究方法教学

Figure 1. A screenshot from the webinar with international researchers via the WebEx platform.

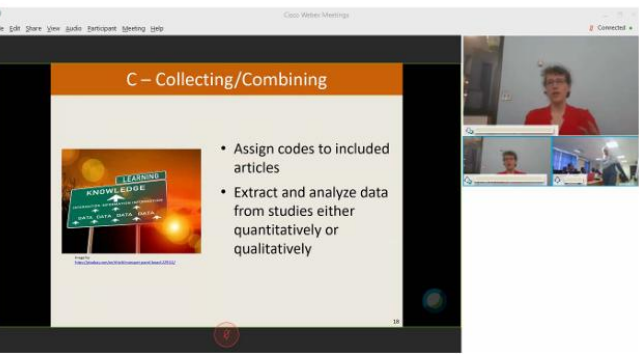
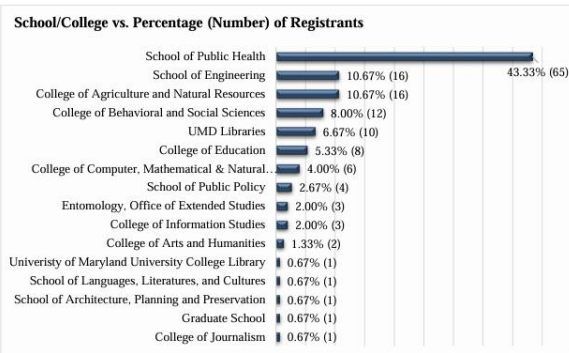


Figure 2. Workshop attendees' affiliations.



NEDELINA T, EILEEN G H, STEPHANIE R. et al. Working Across Disciplines and Library Units to Develop a Suite of Systematic Review Services for Researchers[J]. Collaborative Librarianship,2020(11).

服务成效及服务特点

服务成效



科研效能提升



COVID-19大流行期间，健康科学图书馆员高质量的证据筛选和合成，帮助科研人员和政策制定者做出了快速准确的响应



2025年1月初，本课题组调研中发现，布朗大学图书馆、犹他大学图书馆、耶鲁大学Cushing/Whitney医学图书馆证据合成服务工作量均已达到饱和状态。



研究表明, 图书馆员的参与显著提高了检索质量, 减少了研究偏倚, 遵循PRISMA等国际报告规范。

图书馆价值 重构



Publications with a Cornell Librarian Co-author

- [illegible]

Harvey Cushing/John Hay Whitney
Medical Library

Library Staff Publications

The following is a list of publications authored and co-authored by Harvey Cushing/John Hay Whitney Medical Library staff. The evidence synthesis and comprehensive searching projects would not be possible without a team of dedicated support staff who facilitate article retrieval and citation management: Vermetta Polite, Vasean Durbale, Denise Sullivan, Pamela O'Brien, and Lisa Kaufman.

Last updated 1/2/12

2025

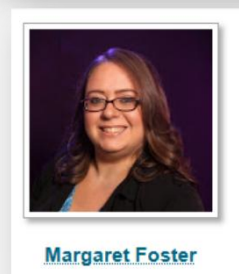
1. Hazzen SL, **Futares MC**, Sirhan VU. (2023). "Measurement properties of instruments to assess insight in psychosis: a systematic review protocol" *PLoS One*, 20(10):e028447.

2. Miao P, Hazzen S, Quan T, Hazzen S, Zelenko J, Tanaka T, Grotzer JC, Khan E, Bhalnani H, **Futares MC**, Peris S, Dew V, Larson D, Hazzen T, Lieberman JD, Yasuda CL, Altshuler HH, Zaveri HO, Elshahhat A, Hazzen G, Wang YF, Kitagawa K, Pathak A, Scaife J, Ihara M, Poonneehager S, Walters MM, Zhao Y, Jetts N, Kasser SE, Kwon M, **Mahsa NC**. (2023). "Assessive behaviors in schizophrenia: a systematic review and network meta-analysis." *Neurology*, 104(3):e202031.

3. Padilla-Samuel A, Oliva-Hernández TP, Klinekhan R, Noriega EJ, Hagg C, **Futares MC**, Wernoff J, Niz AB, Argentea DA. (2023). "Effects of psychotropic on opioid use disorder: a scoping review of preclinical studies." *Colloidal J de Sci*, 82(1):40.

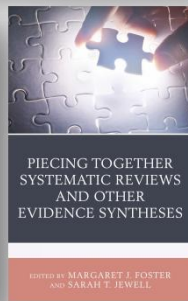
从
“研究支持者”
到
“研究合著者”

图书馆员专业 能力拓展



**ASSEMBLING THE PIECES
OF A SYSTEMATIC REVIEW:
A GUIDE FOR LIBRARIANS**

Edited by MARGARET J. FOSTER AND SARAH T. JEWELL



德克萨斯 A&M 大学的总统影响力奖

Lucretia W. McClure
卓越教育奖

服务特点



服务内容丰富且系统

资源+工具+培训+咨询+合作



提供差异化个性化服务

馆员能力：差异化服务团队
服务需求：个性化服务层级



积极响应AI技术发展

AI资源指南+AI工具使用指导+AI伦理倡导



注重素养和能力培养

发挥学术图书馆的教育职能
对内：图书馆员证据合成能力培训；对外：信息素养教育



具备自上而下的支持体系

高校基础设施支持：犹他大学、伊利诺伊大学等
学/协会：基础资源和培训支持



服务成效显著促图书馆价值提升



Part 03

研 究 启 示

研究启示



2025年高校图书馆发展论坛

THANKS FOR YOUR
ATTENTION!



zhang.yicui@163.com
598575161@qq.com