Comprehensive Literature Searching

Adhering to Reporting Guidelines &
Maintaining Awareness of Flawed Science

Amy Riegelman, aspringe@umn.edu
Social Sciences Librarian
Wilson Library

Collections
● arts humanities
● social sciences
● special collections

Spaces
● Collaboration Studio
● SMART Learning Commons
● Meeting rooms
● Labs
● Dunn Bros.
Comprehensive Literature Searching

What does this mean?
"published materials that provide examination of recent or current literature. Can cover wide range of subjects at various levels of completeness and comprehensiveness" (Grant & Booth, 2009)
The numbers: based on a title search for “systematic review” OR “meta-analysis”
Systematic Review

What is a systematic review?
A systematic review is a research method in which a team formulates a research question, searches, selects, and appraises the literature in order to test and evaluate in order for researchers, practitioners, and policy-makers to make evidence based decisions.

Unlike other types of reviews, this research method includes a reproducible and transparent methodology. For help differentiating between the various types of reviews (e.g., literature review, scoping review), consult *A Typology of Reviews* (Grant & Booth, 2009).

How can the libraries help?
Librarians have skills to assist you throughout the process especially in helping you develop and report a comprehensive and reproducible search strategy.

1: Planning
- Guidance on SR process and steps
- Background searching for current and upcoming reviews
- Help with development or refinement of review topic

2: Searching
- Identification of databases for searches
- Development and execution of searches
- Documentation of search strategies
- Management of search results
- Guidance on methods for study review and data management

3: Reporting
- Drafting of literature search description in methods section
- Drafting of literature search appendix
- Guidance for complying with reporting guidelines (e.g., PRISMA)
- Review of manuscript drafts
<table>
<thead>
<tr>
<th>Examples of research synthesis*</th>
<th>Reference to expert searching, involvement of information specialist, or similar concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campbell (systematic) reviews</td>
<td>The Campbell Collaboration states that “[r]elevant methodological expertise includes: information/library science (searching and text retrieval)”</td>
</tr>
<tr>
<td>Cochrane (systematic) reviews</td>
<td>“If a [Cochrane Review Group] is currently without a Trials Search Co-ordinator authors should seek the guidance of a local healthcare librarian or information specialist, where possible one with experience of conducting searches for systematic reviews.” (Lefebvre, Manheimer, and Glanville 6.1.1.1)</td>
</tr>
<tr>
<td>Effectiveness and comparative effectiveness reviews</td>
<td>In “Finding Evidence for Comparing Medical Interventions” published by the Agency for Healthcare Research and Quality (AHRQ, US), Relevo and Balshem state that “[a] librarian or other expert searcher should be involved in the development of the search”</td>
</tr>
</tbody>
</table>
Where to search
Selected Resources for: Educational Psychology

Subject Librarian: Amy Riegelman
aspringe@umn.edu

This subject covers: counseling and student personnel psychology, psychological foundations of education, school psychology, and special education.

Table of Contents
- Article Databases and Indexes
- General Reference Sources
- Internet Resources
- Multimedia Materials

Article Databases and Indexes
* Premier Resources *

Education Source (EBSCOHost)

ERIC (Access via Ebscohost)
Where to search for peer-reviewed articles

**Subject databases**
- Education Source
- ERIC
- PsycINFO
- SPORT Discus

**Multidisciplinary databases**
- Web of Science
- Scopus
- Academic Search Premier
- Google Scholar
General tips for searching

- **Phrasing** e.g., “educational psychology,” “special education,”
- **Wildcard** e.g., psych* or counsel*
- **Boolean operators** AND, OR, NOT e.g., ASD OR Autis* AND "therap*" NOT “Acute Stress Disorder”
Search records & fields

What are you actually searching?

Title
Publication date
Language
Author
Journal/Source
ISSN
Publication type
Abstract
DOI
Author provided keywords
Subject headings
Controlled Vocabulary

Subject Headings

Subject Descriptors

Back to Search Results

Condoms Distribution (2004) Synonym

Instead of this term use:
Sexually Transmitted Diseases

ED.gov:ies INSTITUTE OF EDUCATION SCIENCES

Scope Note for: Test Anxiety

MAIN TERM: Test Anxiety

DATE OF ENTRY: 1967

SCOPE NOTE:
Fear or tension in anticipation of
How do we find grey lit?

- Library databases (sometimes!)
- Preprint repositories
  - OSF Preprints
  - Preprints.org
  - SSRN
- Proquest Digital Theses/Dissertations
Citation Managers

zotero

Mendeley

ENDNOTE® basic
Exporting results to a citation manager.
# PRISMA Reporting Guidelines

## Introduction

<table>
<thead>
<tr>
<th>Objective</th>
<th>Description</th>
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<tbody>
<tr>
<td>Rationale</td>
<td>Describe the rationale for the review in the context of what is already known.</td>
</tr>
<tr>
<td>Objectives</td>
<td>Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).</td>
</tr>
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</table>

## Methods

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
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<tbody>
<tr>
<td>Protocol and registration</td>
<td>Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, registration information including registration number.</td>
</tr>
<tr>
<td>Eligibility criteria</td>
<td>Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.</td>
</tr>
<tr>
<td>Information sources</td>
<td>Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.</td>
</tr>
<tr>
<td>Search</td>
<td>Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.</td>
</tr>
<tr>
<td>Study selection</td>
<td>State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).</td>
</tr>
<tr>
<td>Data collection process</td>
<td>Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any procedures for obtaining and confirming data from investigators.</td>
</tr>
<tr>
<td>Data items</td>
<td>List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions, simplifications made.</td>
</tr>
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</table>

![PRISMA Flowchart](chart.png)
Before you submit your manuscript,

.. check to make sure that the research hasn't been retracted or corrected.

6.4.10 Identifying fraudulent studies, other retracted publications, errata and comments

When considering the eligibility of studies for inclusion in a Cochrane review, it is important to be aware that some studies may have been found to be fraudulent or may for other reasons have been retracted since publication. Reports of studies indexed in MEDLINE that have been retracted (as fraudulent or for other reasons) will have the Publication Type term ‘Retracted Publication’ added to the record. The article giving notice of the retraction will have the Publication Type term ‘Retraction of Publication’ assigned. Prior to any decision being taken to retract an article, articles may be published that refer to an original article and raise concerns of this sort. Such articles would be classified as a Comment. The US National Library of Medicine’s (NLM’s) policy on this is that “Among the types of articles that will be considered comments are: ...... announcements or notices that report questionable science or investigations of scientific misconduct (sometimes published as ‘Expression of concern’).”
Retraction: The action of withdrawing a statement, accusation, etc., which is now admitted to be erroneous or unjustified; disavowal; recantation; an instance of this; a statement making such a withdrawal.
How do we find out about retractions?

- Journals publish a notice
- Retraction Watch (blog)
- News sources (e.g., Wakefield’s now retracted autism-vaccine article)
- Ideally: notice is featured in library databases or aggregators

Reasons for Retraction

- 21.3% error
- 67.4% misconduct
  - 43.4% fraud
  - 14.2% duplicate publication
  - 9.8% plagiarism

Fang, Steen & Casadevall, 2012
2% to 4% of researchers admit having fabricated, falsified, or altered data or results

Discovering Retractions while using Library tools
The Life of an Article

Article → Journal → Database → Aggregator

Images: Document by Michael Loupos, Book by Chris Homan, Carousel by Lil Squid, Database by Shmidt Sergey
Acamprosate and its efficacy in treating alcohol dependent adolescents
Niederhofer, H., Staffen, W.
Christian Doppler-Klinik, 5020 Salzburg, Austria

Abstract
Background: About 50% of adult alcoholic patients relapse within 3 months of treatment. Previous studies to assess the efficacy and safety of long-term acamprosate treatment in alcohol dependence of adult 16-19 years, with chronic or episodic alcohol dependence. Patients were randomly allocated treatment started and on days 30, and 90 by interview, self-report, questionnaire, and laboratory screen: phase of those withdrawn, 11 (1 vs 6) relapsed, 5 (3 vs 2) refused to continue treatment, 3 (1 vs 2) acamprosate treated and 2 placebo-treated patients had been continuously abstinent (p = 0.0076). Mean placebo group (79.8 [SD 37.5] vs 32.8 [19.0] days; p = 0.012). Interpretation: Acamprosate is an effective treatment in alcohol dependence of adolescents.

Author keywords
Acamprosate; Adolescents; Alcohol

Indexed keywords
EMTREE drug terms: acamprosate
EMTREE medical terms: abstinence; adolescent; adult; alcoholism; article; clinical article; clinical trial; laboratory test; male; questionnaire; randomized controlled trial; side effect; treatment outcome

Chemicals and CAS Registry Numbers: acamprosate, 77337-73-6; acamprosate, 77337-76-9; Alcohol

ISSN: 10188827 CODEN: EAPSE Source Type: Journal Original Language: English DOI: 10.1007/s00787-003-0327-1 PubMed ID: 12758452 Document Type: Article
What We Did

- Examine a study of retracted mental health literature identified through Retraction Watch
- Document how these retractions are represented across a variety of resources relevant to the discipline

Publisher sites
- PsycINFO via OVID
- EBSCOhost
- Scopus

Web of Science
Medline via PubMed
Out of these 812 records, 487 (60%) indicated that the article had been retracted
Retracted Publications in Mental Health Literature: Discovery across Bibliographic Platforms

INTRODUCTION Retractions are a mechanism by which science corrects itself, withdrawing statements or claims that have proven to be erroneous. However, this requires that such corrections be displayed clearly and consistently. This paper considers how retracted publications in the mental health literature are represented across different platforms. METHODS Using Retraction Watch, we identified 144 retracted articles in the mental health field. We looked at seven platforms to determine the consistency and clarity of the retracted status of these publications. RESULTS Of the 812 records for retracted publications, 40.0% (n=325) did not indicate that the paper had been retracted. Of all PDFs, 26.3% (53/201) did not indicate that the paper had been retracted. Of the 144 articles studied, only 10 were represented as being retracted across all resources through which they were available. DISCUSSION Retracted publications in this sample were inconsistently represented across library resources. While technical solutions, such as Crossmark by CrossRef, may help mitigate these challenges, the inconsistent display of retractions has implications for education and outreach. CONCLUSION Our study found that the retractions in our sample were not clearly and consistently represented across sources; libraries, which provide access to and training in these resources, have a responsibility to raise awareness of these inconsistencies and to advocate for more timely and accurate metadata.
Tools for discovering corrections and retractions
Document is current

Any future updates will be listed below

David Mishali MD, Michael Glikson MD
<table>
<thead>
<tr>
<th>Title/Subject(s)/Journal — Publisher/Affiliation(s)/Retraction Watch Post URL(s)</th>
<th>Reason(s)</th>
<th>Author(s)</th>
<th>Original Paper Date/PublicID/DOI</th>
<th>Retraction or Other Notices Date/PublicID/DOI</th>
<th>Article Type(s)</th>
<th>Nature of Notice</th>
<th>Countries Paywalled?</th>
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<tbody>
<tr>
<td>Cognitive impairment in HIV and HCV co-infected patients: a systematic review and meta-analysis</td>
<td>Error in Results</td>
<td>Renato Filho</td>
<td>11/05/15</td>
<td>01/13/16</td>
<td>Meta-Analysis</td>
<td>Retraction</td>
<td>United Kingdom, Portugal</td>
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<tr>
<td></td>
<td>Unreliable Results</td>
<td>Marco Pereira</td>
<td>2015.05.05</td>
<td>2015.01.13</td>
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<td>Mikaela Bower</td>
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<td>Matthew Falote</td>
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<td>Richard White</td>
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Questions?

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