

Introduction

A *literature review* is an overview of the available research for a specific scientific topic. Literature reviews summarize existing research to answer a review question, provide the context for new research, or identify important gaps in the existing body of literature. We now have access to lots of research and know a lot about literature reviews as a scientific method. For students in psychology and the social sciences, conducting a literature review provides a fantastic opportunity to use the existing research evidence and to do so in a way that parallels the methods used to design and execute primary research. However, to do that effectively, it is important to learn strategies for conducting a literature review that leads to reliable and valid conclusions about the research literature.

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Conducting Your Literature Review, by S. Hempel

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TYPES OF LITERATURE REVIEWS

Literature reviews come in different types and formats. All literature reviews are secondary literature because they summarize existing research evidence, that is, primary research. But reviews can serve different functions and use literature very differently.

First, a review may be part of a larger piece of work, such as the background section of a research article, or it may be a stand-alone product with its own research merit, such as a review article. And then there are many different types of standalone literature reviews. Traditional literature reviews, or *narrative reviews*, usually aim to give either an overview or an introduction to a research field. An *expert review* relies heavily on the expertise of the author. Scientific journals may approach a key expert in a research field to write a review (“by invitation only”) and ask this expert for their take on the research topic. *Critical reviews* do not necessarily try to provide a general overview or neutral summary of the existing research; instead, they primarily cite research results to convey a specific message. *Systematic reviews* follow a standardized research methodology that systematically collates and synthesizes existing evidence. Systematic reviews aim to answer a research or policy question with existing research, using rigorous reporting and applying many steps to reduce reviewer errors and bias. *Meta-analyses* summarize published studies statistically by aggregating data across studies. They are often based on a systematic review of the literature. Likewise, many systematic reviews summarize the results of included studies through meta-analysis, also called *statistical pooling*.

This book focuses on the steps needed to conduct a systematic literature review and includes tips for modifying or leaving out steps as needed depending on your audience, purpose, and goal.

WHAT YOU WILL LEARN FROM THIS BOOK

Literature reviews have changed a lot over time and are now much more demanding than just 10 years ago because of the sheer volume of published research. We have access to more research than ever before, and the

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rate of scientific publication as well as database indexing has accelerated considerably in recent years. As just one example, I searched the database PubMed (a process you'll learn more about in Chapter 2) for the term *personality* and found that in early 2019 more than 400,000 articles were published on that topic, whereas in 2003 only half of that number existed (see Figure 1). When you embark on a literature review, you will almost always find a huge amount of available research literature. Reviewing all of it is challenging, and a structured approach is required to handle the volume. This book will help you formulate a strategy within which you can make clear decisions about what to include and not include in your review and thus avoid getting washed away by the torrent of available research.

In addition, our knowledge about literature reviews has also increased. For one thing, we know more now about threats to the validity of literature reviews, that is, factors that contribute to a wrong or misleading overview of the literature. Consequently, we have a better understanding of the steps that are needed to

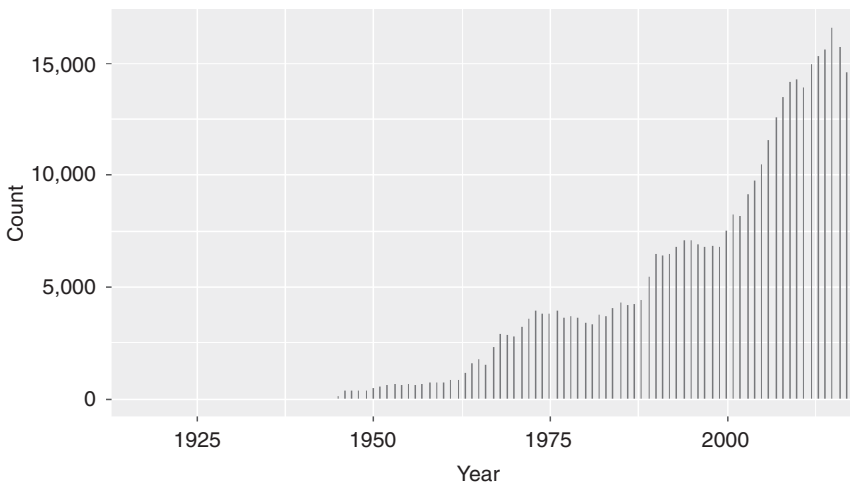


Figure 1

Number of citations published per year reporting on an example research topic (personality).

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produce a reliable and unbiased summary of the existing research. This book will walk you through those steps one by one. Each chapter targets a specific part or stage in the literature review. Throughout this book, the elements and reporting structure of a systematic review serve as a framework for literature reviews.

The first four chapters of this book are about identifying material for your literature review, the next four chapters are about what to do with the material that you have assembled, and the final chapter is dedicated to documenting it all. Continuing the cooking metaphor from Arthur M. Nezu's series foreword, think about Chapters 1 through 4 as planning your meal, going shopping, and getting the ingredients. Chapters 5 through 8 are where the actual cooking happens: preparing the food, chopping, and frying. And Chapter 9 is about serving the meal. Each chapter introduces you first to the general ideas or concepts that are important for the step in the literature review. It then explains the procedure and its purpose and outlines the ways to operationalize the step, that is, how you can translate it into conducting your literature review.

Chapter 1 takes you through the question of what you want to achieve. It describes how to formulate review questions and make sure they cover a scope that is neither too broad nor too narrow. It also introduces the idea of a review protocol. Chapter 2 introduces many different sources and search platforms, such as databases, where you can locate studies to use for your literature review. Chapter 3 explains how to develop a search strategy and provides tips and tricks for different research databases. Chapter 4 helps you think through what to look for in the literature. It introduces the concept of inclusion criteria and helps you organize your literature review material. Chapter 5 is all about storing the material for your review, starting with the initial searches. Chapter 6 guides you through the process of data abstraction, that is, note taking when reading through the material you want to summarize. Chapter 7 is about how to critically appraise your literature review material. This step is important because not all the material you include in your review plays an equal role in answering your review question. Some material is the cake, as it were, and other material is the frosting or decoration. Chapter 8 is all

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about your synthesis, your summary of the literature and your answers to the review questions. Chapter 9 is dedicated to translating everything you have done so far into your actual write-up and how to best document your review process and present the results of your literature review.

At times I might point you to a future chapter or a chapter already covered. This is because a literature review is not a fully linear process. Think of it as an iterative process. For example, while reading Chapter 4 on what literature to include, you might reflect on your own in-progress project and realize there was another entire database you intended to search, which would then take you back to Chapter 2, the chapter on where to look for information.

You will see that there are several ways to approach a literature review, as well as different types of literature reviews, and the level of effort and analysis, as well as what sections to include in your final write-up, depends very much on your goal, purpose, and audience for your review. To help you with the decisions, each chapter includes an example of a fictional student who is working on a literature review and who takes a particular approach that fits the purpose of their assignment. Watch out for a text box and the student icon:



Each chapter ends with a series of action steps that you can use as a checklist for your progress. Each chapter provides a lot of information—in some cases maybe more than you had hoped—and the checklist is meant as a tool for deciding the crucial steps. You can also use the checklist items as a guide for ongoing communication with others who may be involved in your project, such as professors, research partners, reference librarians, or subject matter experts, or documenting your progress. Just keep in mind that you may sometimes need to read ahead and then come back to an action step to complete it. This is because of the iterative nature of literature reviews.

There really is no one-method-fits-all approach to literature reviews. Instead, throughout the book, I try to equip you with methods and tools so that you can select the best ones for your specific literature review project. Every chapter describes an important step for conducting

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literature reviews, but all chapters address different types of reviews and levels of effort. The action steps at the end will help you identify the essential steps that apply to all literature reviews.

GUIDING THEMES

Throughout the book are two overall guiding themes. In terms of the big picture, as well as for many specific decisions, one critical theme is to match the conduct and documentation of the literature review to its purpose as well as to the review question you want to answer. The other critical theme is that the literature review process should be transparent and carefully thought through, just like any other scientific work.

You will see throughout the book that I emphasize the scientific nature of a literature review and that I am guiding you through a structured process. The steps in this book are designed to help you draw reliable and valid conclusions about the literature. Literature reviews are susceptible to two main sources of *bias* (i.e., processes that can distort the conclusions of the review):

- selection bias
- reporting bias

Selection bias occurs when you are using a bad selection of the existing literature. Your review does not need to find each and every paper ever published on the topic, but it should not be misleading. Literature reviews can be misleading when they leave out whole categories of studies that could shed light on the review question or when they look at only a haphazard selection of studies. Accordingly, Chapters 1 through 4 are about finding the right material for your review.

Reporting bias occurs when you are summarizing the literature in an unbalanced, inconsistent, or distorted way. Chapters 5 through 8 are about methods to appropriately synthesize the information in the material you have located.

Throughout the book, you will notice a lot of emphasis on documentation. This is because the literature search process is like any other

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scientific process—it should be described clearly and, as far as possible, be reproducible. That is, you should be able to explain what process you went through to find the information that is summarized in your review, and someone else replicating your methods and procedures should find the same material. Then you should be able to describe what you did with the material. Similarly, someone else looking at your material should come to similar conclusions about the literature.

My hope is that by providing you with a description of all the steps involved in a literature review, along with examples and tools, I will help make your literature review project achievable and manageable. It can be challenging to sort through a jungle of research and tame your material into a review with its own internal logic and flow. Rest assured, even those of us who conduct multiple literature reviews per year still learn a lot with every review, and every topic is unique. But it does get easier as you gradually internalize the steps involved and apply them to your project. So, let's get to it!