Fundamental Epidemiology Study Designs

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Preface

I am on a journey to pursue my master's degree. I started writing this book as a way to summarize what I have learned from the course. It will be basic and may contain some errors or mistakes. If you have time to go through it, I would be grateful for your feedback. Most of the content here is taken from the Distant Learning Epidemiology Master's Programme provided by London School of Hygene and Tropical Medicine, with some modifications taken from the Introduction to Biostatistics course provided by Prof. Ronald Geskus and his team at Oxford University Clinical Research Unit, Ho Chi Minh.

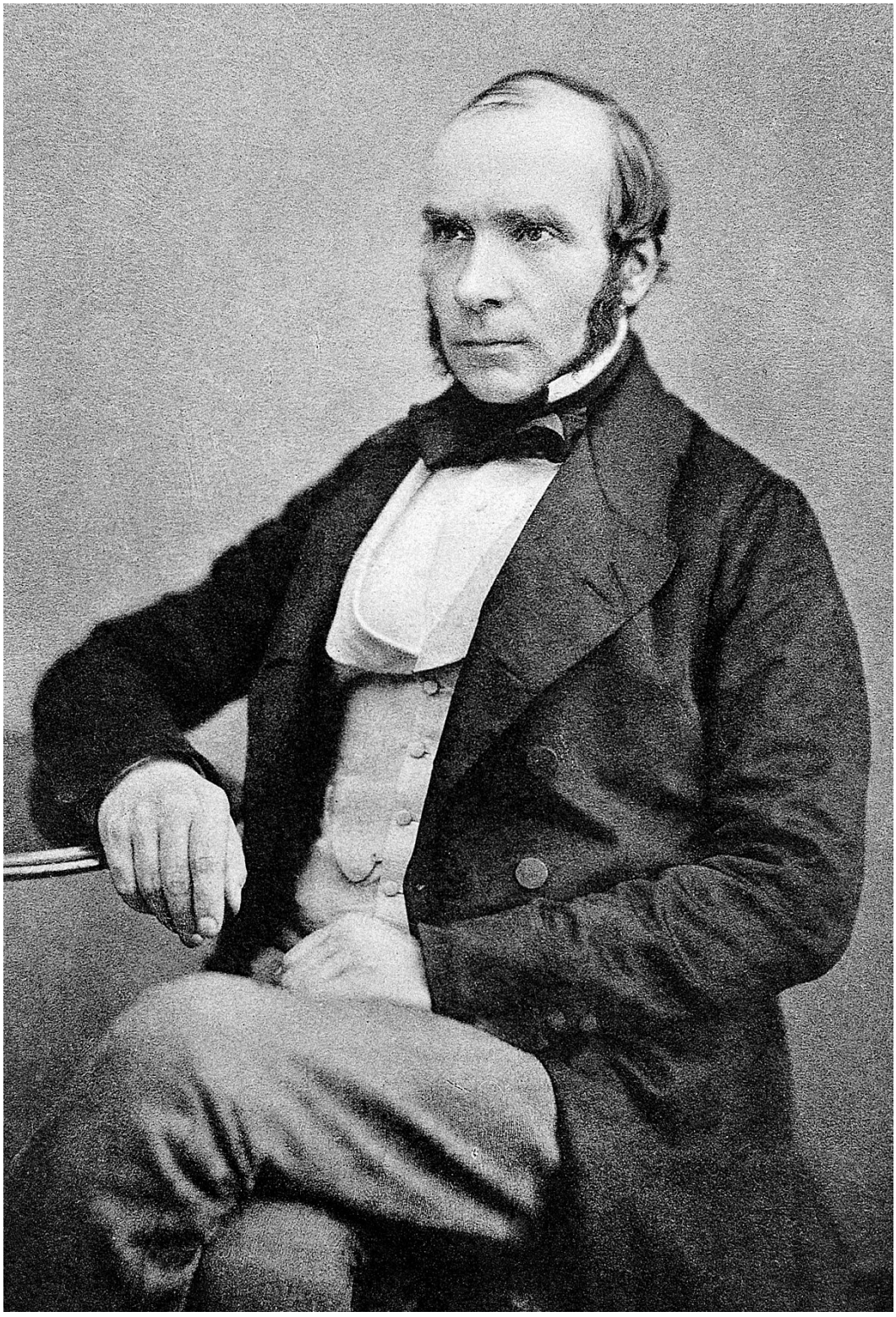
Part I

Introduction

What is Epidemiology?

> "The study of the occurrence and distribution of health-related events, states, and processes in specified populations, including the study of the determinants influencing such processes, and the application of this knowledge to control relevant health problems." (Porta 2014)

Comparison is fundamental to epidemiology Example: ::::: grid ::: g-col-6



::::: **The two key elements** that we measure in most epidemiological studies are the exposure and the outcome.

- The exposure (sometimes called risk factor or determinant) is any factor that may influence the outcome.
- The outcome is the disease, or event, or health-related state, that we are interested in.

what is the role of Epidemiology?

Epidemiology has four major functions:

- to **describe** patterns of health and disease within populations
- to **interpret** these differences
- to **apply** our results to public health practice, and
- to **evaluate** the effect of health-related interventions

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