1. Record Nr. UNINA9910144694403321

Autore	Anderson Sharon <1948->
Titolo	Statistical methods for comparative studies [[electronic resource]] : techniques for bias reduction / / Sharon Anderson ... [et al.]
Pubbl/distr/stampa	New York, : Wiley, c1980
ISBN	1-282-30746-0 9786612307461 0-470-31649-7 0-470-31720-5
Descrizione fisica	1 online resource (309 p.)
Collana	Wiley series in probability and mathematical statistics
Altri autori (Persone)	AndersonSharon <1948->
Disciplina	001.4 001.422 519.5
Soggetti	Mathematical statistics Statistics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographies and index.
Nota di contenuto	Statistical Methods for Comparative Studies; Contents; 1. INTRODUCTION; 1.1 Problems of Comparative Studies: An Overview,; 1.2 Plan of the Book,; 1.3 Notes on Terminology,; 2. CONFOUNDING FACTORS; 2.1 Adjustment for a Confounding Factor,; 2.2 Bias, Precision, and Statistical Significance,; 2.3 Some Qualitative Considerations,; Appendix 2A Bias, Precision, and Mean Squared Error; References,; 3. EXPRESSING THE TREATMENT EFFECT; 3.1 Measures of Treatment Effect,; 3.2 What Happens when there is Confounding,; 3.3 Treatment Effect Dependent on a Background Factor,; References, 4. RANDOMIZED AND NONRANDOMIZED STUDIES4.1 Definition of Randomization,; 4.2 Properties of Randomization,; 4.3 Further Points on Randomization,; 4.4 Reasons for the Use of Nonrandomized Studies,; 4.5 Types of Comparative Studies,; 4.6 Our Attitude toward Nonrandomized Studies,; Appendix 4A The Odds Ratio and the Relative Risk in Case-Control Studies; References,; 5. SOME GENERAL CONSIDERATIONS IN CONTROLLING BIAS; 5.1 Omitted Confounding Variables,; 5.2 Measurement Error,; 5.3 The Regression Effect,; 5.4

Specifying a Mathematical Model,; 5.5 Sampling Error,
5.6 Separation of Groups on a Confounding Factor,5.7 Summary,; References,; 6. MATCHING; 6.1 Effect of Noncomparability,; 6.2 Factors Influencing Bias Reduction,; 6.3 Assumptions,; 6.4 Caliper Matching,; 6.5 Nearest Available Matching,; 6.6 Stratified Matching,; 6.7 Frequency Matching,; 6.8 Mean Matching,; 6.9 Estimation and Tests o Significance,; 6.10 Multivariate Matching,; 6.11 Multiple Comparison Subjects,; 6.12 Other Considerations,; 6.13 Conclusions,; Appendix 6A Some Mathematical Details,; References,; 7. STANDARDIZATION AND STRATIFICATION
7.1 Standardization-Example and Basic Information,7.2 Choice of Standard Population,; 7.3 Choice of Standardization Procedure,; 7.4 Statistical Considerations for Standardization,; 7.5 Extension of Standardization to Case-Control Studies,; 7.6 Stratification,; 7.7 Standardization and Stratification for Numerical Outcome Variables,; 7.8 Extension to More Than One Confounding Factor,; 7.9 Hypothesis Testing,; Appendix 7A Mathematical Details of Standardization,; Appendix 7B Stratified Estimators of the Odds Ratio,; References,; 8. ANALYSIS OF COVARIANCE; 8.1 Background,
8.2 Example: Nutrition Study Comparing Urban and Rural Children,8.3 The General ANCOVA Model and Method,; 8.4 Assumptions Underlying the Use of ANCOVA,; 8.5 Dealing with Departures from the Assumptions,; Appendix 8A Formulas for Analysis of Covariance Calculations,; References.; 9. LOCIT ANALYSIS; 9.1 Developing the Logit Analysis Model,; 9.2 Use of Logit Analysis to Control for a Confounding Variable,; 9.3 Parameter Estimation by Maximum Likelihood,; 9.4 Other Parameter Estimation Procedures,; 9.5 Hypothesis Testing,; 9.6 Case-Control Studies,; 9.7 Checking the Model,
9.8 Multiple Confounding Factors,

Sommario/riassunto

Brings together techniques for the design and analysis of comparative studies. Methods include multivariate matching, standardization and stratification, analysis of covariance, logit analysis, and log linear analysis. Quantitatively assesses techniques' effectiveness in reducing bias. Discusses hypothesis testing, survival analysis, repeated measure design, and causal inference from comparative studies.