

1. Record Nr.	UNINA9911020129703321
Autore	Cochran William G (William Gemmell), <1909-1980.>
Titolo	Planning and analysis of observational studies / / William G. Cochran ; edited by Lincoln E. Moses and Frederick Mosteller
Pubbl/distr/stampa	New York, : Wiley, c1983
ISBN	9786612307997 9781282307995 1282307991 9780470316542 0470316543 9780470317280 0470317280
Descrizione fisica	1 online resource (166 p.)
Collana	Wiley series in probability and mathematical statistics, , 0271-6356
Altri autori (Persone)	MosesLincoln E MostellerFrederick <1916-2006.>
Disciplina	001.4/2
Soggetti	Analysis of variance Experimental design
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	Planning and Analysis of Observational Studies; Contents; 1. VARIATION, CONTROL, AND BIAS; 1.1. Introduction; 1.2. Strategy in Controlled Experiments- Sampled and Target Populations; 1.3. The Principal Sources of Variation in the Responses; 1.4. Methods of Control; 1.5. Effects of Bias; 1.6. Summary; References; 2. STATISTICAL INTRODUCTION; 2.1. Drawing Conclusions from Data; 2.2. Tests of Significance; 2.3. Confidence Intervals; 2.4. Systematic Differences Between the Populations; 2.5. The Model When Bias is Present; 2.6. Summary; References; 3. PRELIMINARY ASPECTS OF PLANNING 3.1. Introduktion3.2. The Statement of Objectives; 3.3. The Treatments; 3.4. Measurements of Treatment Levels for Individual Persons and the Effects of Grouping; 3.5. Other Points Related to Treatments; 3.6. Control Treatments; 3.7. The Responses; 3.8. Timing of Measurements; 3.9. summary; References; 4. FURTHER ASPECTS OF PLANNING; 4.1. Sample Size in Relation to Tests of Significance; 4.2. Sample Size for

Estimation; 4.3. The Effect of Bias; 4.4. More Complex Comparisons; 4.5. Samples of Clusters; 4.6. Plans for Reducing Nonresponse; 4.7. Relationship Between Sampled and Target Populations 4.8. Pilot Studies and Pretests 4.9. The Devil's Advocate; 4.10. Summary; References; 5 . MATCHING; 5.1. Confounding Variables; 5.2. Matching; 5.3. The Construction of Matches; 5.4. Effect of Within-Class Matching on x; 5.5. Effect of Caliper Matching on x; 5.6. Effect of "Nearest Available" Matching on x; 5.7. Effect of Mean Matching on x; 5.8. Effects on bias of $y_1 - y_2$; 5.9. Effect of Matching on the Variance of $y_1 - y_2$; 5.10. Introduction to Statistical Analysis of Pair-Matched Samples; 5.11. Analysis with Mean Matching: y Continuous; 5.12. summary; References; 6. ADJUSTMENTS IN ANALYSIS 6.1. Introduction 6.2. y Continuous: x's Classified; 6.3. y Binomial: x's Classified; 6.4. Treatment Difference Varying From Cell to Cell; 6.5. y and x's Quantitative: Adjustments by Regression (Covariance); 6.6. Regression Adjustments with Some x's Classified; 6.7. Effect of Regression Adjustments on Bias in $y_1 - y_2$; 6.8. Effect of Curvature on Linear-Regression Adjustments; 6.9. Effectiveness of Regression Adjustments on Precision; 6.10. Effect of Errors in the Measurement of x; 6.11. Matching and Adjustment Compared: In Experiments 6.12. Matching and Adjustment Compared: In Observational Studies Appendix to Section 6.12; 6.13. A Preliminary Test of Comparability; 6.14. Summary; References; 7. SIMPLE STUDY STRUCTURES; 7.1. Introduction; 7.2. The Single Group: Measured After Treatment Only; 7.3. The Single Group: Measured Before and After Treatment; 7.4. The Single Group: Series of Measurements Before and After; References; INDEX

Sommario/riassunto

Treats studies, primarily in human populations, that show causal effects of certain agents, procedures, treatment or programs. Deals with the difficulties that comparative observational studies have because of bias in their design and analysis. Systematically considers the many sources of bias and discusses how care in matching or adjustment of results can reduce the effects of bias in these investigations.
