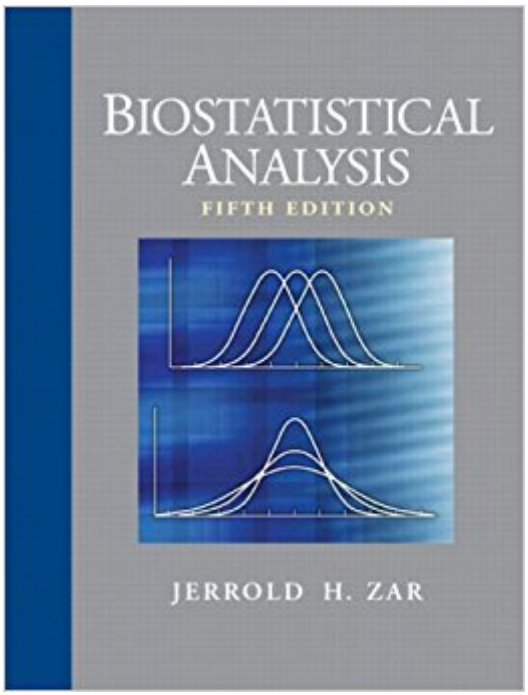
Biostatistical Analysis (5th Edition)



Synopsis

Zarâ ™s Biostatistical Analysis, Fifth Edition, is the ideal book for readers seeking practical coverage of statistical analysis methods used by researchers to collect, summarize, analyze and draw conclusions from biological research. The latest edition of this best-selling textbook is both comprehensive and easy to read. It is suitable as an introduction for beginners and as a comprehensive reference book for biological researchers and other advanced users. Â Introduction; Populations and Samples; Measures of Central Tendency; Measures of Dispersion and Variability; Probabilities; The Normal Distribution; One-Sample Hypotheses; Two-Sample Hypotheses; Paired-Sample Hypotheses; Multisample Hypotheses: The Analysis of Variance; Multiple Comparisons; Two-Factor Analysis of Variance; Data Transformations; Multiway Factorial Analysis of Variance; Nested (Hierarchical) Analysis of Variance; Multivariate Analysis of Variance; Simple Linear Regression; Comparing Simple Linear Regression Equations; Simple Linear Correlation; Multiple Regression and Correlation; Polynomial Regression; Testing for Goodness of Fit; Contingency Tables; More on Dichotomous Variables; Testing for Randomness; Circular Distributions: Descriptive Statistics; Circular Distributions: Hypothesis Testing Â For all readers interested in biostatistics.

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Customer Reviews

Zar'sBiostatistical Analysis, Fifth Edition, is the ideal book for readers who seek practical coverage of statistical analysis methods used by researchers to collect, summarize, analyze, and draw conclusions from biological research. The latest edition of this best-selling textbook is both

comprehensive and easy to read. It is suitable as an introduction for beginning students and as a comprehensive procedural reference for today's practitioners.Â Introduction; Populations and Samples; Measures of Central Tendency; Measures of Dispersion and Variability; Probabilities; The Normal Distribution; One-Sample Hypotheses; Two-Sample Hypotheses; Paired-Sample Hypotheses; Multisample Hypotheses: The Analysis of Variance; Multiple Comparisons; Two-Factor Analysis of Variance; Data Transformations; Multiway Factorial Analysis of Variance; Nested (Hierarchical) Analysis of Variance; Multivariate Analysis of Variance; Simple Linear Regression; Comparing Simple Linear Regression Equations; Simple Linear Correlation; Multiple Regression and Correlation; Polynomial Regression; Testing for Goodness of Fit; Contingency Tables; More on Dichotomous Variables; Testing for Randomness; Circular Distributions: Descriptive Statistics; Circular Distributions: Hypothesis TestingÂ For all readers interested in biostatistics.

Jerrold H. Zar received his undergraduate degree in Biological Sciences from Northern Illinois University in 1962. He later earned his M.S. and Ph.D. degrees in biology and zoology from the University of Illinois at Urbana-Champaign. Zar then returned to Northern Illinois University for 34 years to serve in a variety of capacities. He joined the faculty at NIU as an Assistant Professor in 1968 and quickly rose through the ranks of associate and full professor to become Chair of the Department of Biological Sciences in 1978. He served two terms as Chair of the Department and then, became the Vice ProvostÂ for Graduate Studies and ResearchÂ and Dean of the Graduate School.Â HeÂ was a founderÂ of the Illinois Minority Graduate Incentive Program and the Illinois Consortium for Educational Opportunities Program, where he helped create and protect fellowship opportunities for minority graduate students at universities across the state. Zar is a member of 17 professional scientific societies, including being an elected fellow of the American Association for the Advancement of Science. His many research publications cover a range of topics, from statistical analysis to physiological adaptations of animals to their environment.

I hated this book (first edition) as a text in grad school because it did not go through derivations or explain any of the background where all the formulas came from. Then the second edition turned out to be an extremely useful reference book when doing research and actually using the various statistical procedures. I am an epidemiologist but also do other types of statistical analyses. The many examples are very helpful if you have a dataset that is similar enough. The book covers a broad range of statistical procedures, not including epidemiologic statistics such as incidence, prevalence, relative risk/rate, Odds Ratios, Cox Proportional Hazards regression, Poisson

regression. I have bought and used all 4 of the previous editions over the years and Zar has become the first book I look at when trying to decide which procedures are appropriate for the data at hand (non-epidemiologic data). From a quick perusal of the 5th edition, I still would hate to have to learn this stuff from this book, I need to go through the derivations and assumptions in detail to really learn, and deriving proofs of even the simplest procedures from the sketchy descriptions in this book is very difficult or impossible for me. I much prefer the approach of Hogg and Craig, Breslow and Day and other more mathematically detailed books that outline derivations and show the curious reader where the formulas and procedures come from and what assumptions need to be made for them to be valid. In fairness, Zar is well referenced so you can often find an article or book that does provide more mathematical detail. So the 4 stars is a weighted average of 5 stars for usability as a reference text and 2 stars for the usefulness of this book as a primary textbook when first learning the material. Also, the book title implies coverage of epidemiologic statistics, which are not covered at all.Incidentally, I ordered the hardcover version new and it arrived in terrible condition. The binding was separated from the cover in both front and back. I could not find the option to call for customer service to request a replacement so I mentioned this complaint in my review, but have not factored it into the 4 star rating.ADDENDUM: With a little searching of the website, I finally found the customer service line for , called them, re-examined the damaged binding and now believe the book actually was damaged in shipping. On closer examination, the binding does appear to be of reasonable quality but it seems the book was dropped on its open side which tore the binding at both front and back covers. offered me a partial refund to compensate for the damage to the book, which I believe is a fair amount. I will repair the binding myself, which I prefer to the hassle of returning the book and getting a replacement sent. Five stars for ’s response to this problem.

Supplier: Prompt and received well ahead of schedule!Book: This is a classic. Some stated that it was high level, but I didn’t see it that way. He provides great examples with good details on the exact calculations. One should be able to perform all calculations with any usual calculator or spreadsheet. He does not delve into any derivations or higher level math such as derivatives and integrals. In fact, the entire book is very practical.This book covers from Biostatistics approach which means that there is more dealing with the nonparametric side and more dealing with metrics for species, diseases, etc. not usually found in statistical texts. He covers that same areas as the usual texts, but adds better examples, detail calculations and includes good interpretations. The emphasis was more on "use" rather than subtle statistical basics for the methods.One of the great

features was inclusion of Circular Statistics, which to date his is the only one I've come across that actually provides great coverage of this area. This is not covered in any texts that I've owned, except the original works by Mardia. And the examples are very good in how to use and applications. This area is surprisingly encountered more often than not and is always overlooked. I would buy this book just for that section alone. In fact this approach solves a lot of those periodic, seasonal variation problems I ran across in industry.Overall, he covers the usual stats, adds a lot of features (similarity, diversity, various indices, etc.), covers "random", added chapters on circular, added "intraclass correlation" which is also overlooked, and still covers the basic stats that all need to know. It's more like a "handbook" with great examples, and does not approach from a Math-Stat-Must Derive Foundation from Theorems. Sometimes all we want to do is solve the problem, understand the assumptions included in the method, and not dwell on deriving and interpreting or deriving from some high level, fundamental theorem. I've always hated "theorem-speak" where they provide 2 theorems, 5 corollaries, and then hand you a practical problem to solve (where the derivation of the connection between theory and application was "left to the student!" -- my major was not math; but in sciences sometimes you just need to use the methods correctly and do not need to carry all the deriviations. I think that when I see the methods in a rep. text, I found that I can usually trust the integrity of the authors. Past that point, I just need to apply the methods and not make mistakes.)I started with 2nd ed, bought the 3rd and 4th. I don't see that the 5th offered much more than the 4th. And the price of the 4th (because the 5th is out there) is reasonable. This is one of the standard texts I keep in my library; I will be getting rid of some of those standard texts.

The text is a bit dry, formulaic and encyclopedic - but thorough in what it covers with good examples and tables. It also requires minimal background in science and mathematics. I have used it as a reference to bone up on statistical inference and some of the basic methodology used in clinical trials, medicine and genetics.Like: The price was just a couple of bucks - well worth it for a reference and much cheaper than the ink and paper used in an ink jet. Good for us old-timers who prefer written texts over ebooks.Dislike: I personally prefer more sophisticated treatments that are more suitable for physics, physical sciences and engineering. I would not recommend purchasing the newest edition for which the cost increases by 100x.It is well-suited for all levels of education and fields requiring only high-school algebra II/pre-calculus, and non-mathematically intensive areas, specifically in biology, health-science, nursing and/or medicine. It is also of value for business, economics, and as an aid for data analysis in general. It may be of some value as background

material for information/communication theory, statistical mechanics/optics,etc.

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