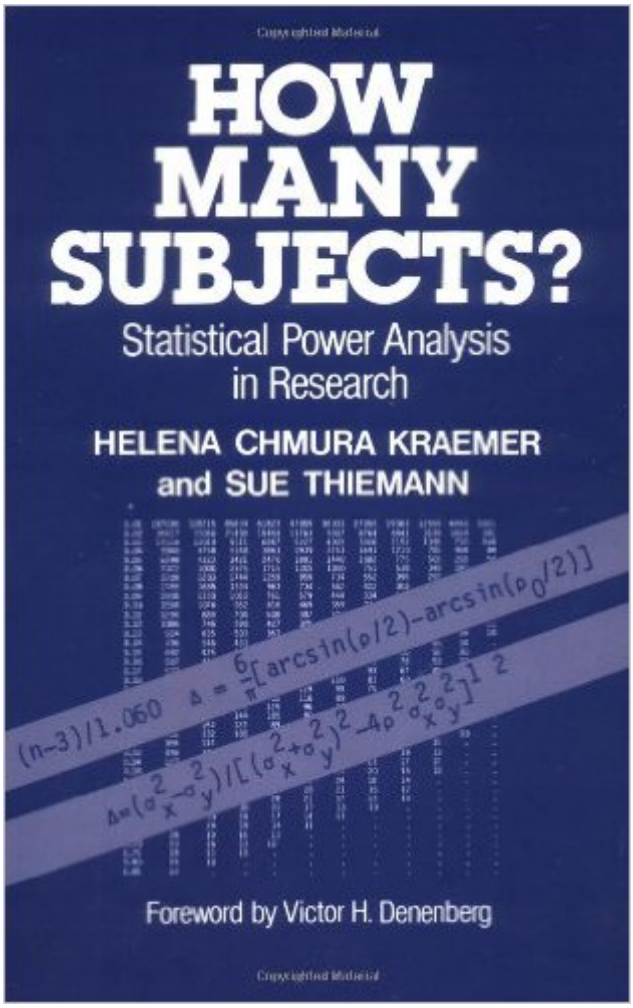
How Many Subjects?: Statistical Power Analysis In Research



Synopsis

How Many Subjects? is a practical guide to sample size calculations and general principles of cost-effective research. It introduces a simple technique of statistical power analysis which allows researchers to compute approximate sample sizes and power for a wide variety of research designs. Because the same technique is used with only slight modifications for different statistical tests, researchers can easily compare the sample sizes required by different designs and tests to make cost-effective decisions in planning a study. These comparisons, emphasized throughout the book, demonstrate important principles of design, measurement and analysis that are rarely discussed in courses or textbooks.

Book Information

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Customer Reviews

Helen Kraemer is a Stanford Professor with a subspecialty in statistics. She wrote this delightful book with the simple title "How many subjects." Along with Jacob Cohen’s book this was one of the first statistical textbooks devoted to the determination of power and sample size in hypothesis testing situations. It is a great reference book on the topic. With the appearance of statistical software to handle the problems addressed in these books and more, the book now serve the purpose of providing a deeper understanding of the issues and an aid to help the user understand what the parameters (e.g. effect size, subject to subject variance) mean.

Whatever your statistical background, the approach of this book to the question of statistical power

is highly illuminating. For instance, I am a poor statistician, primarily an engineer with a mathematical bent. I happen to fall into experimental and, thus, statistical contexts frequently. Nevertheless, this book elucidated the issues surrounding the somewhat ritualistic "receiver operating characteristics" tradeoffs routine of detectability versus false alarm rate more than any text in my experience. It showed how costs of failures factored into the decision threshold, rather than making some routine mimickry of a classroom derivation.So even if statistical power isn't a routine place to visit, this book is worthwhile.I'd say, however, that matters of statistical power ought to be considered more than they are, even if they aren't a natural fit for Bayesian formulations, which seem currently to be in vogue.

Even in the age of on-line power calculators and statistical software (G*Power, the pwr library in R or proc power in SAS) this ancient little book is still great. Recently I needed a power calculation for Kendall tau and I couldn't find a function to do it in the major statistical packages. A colleague suggested I look here and happily the details were nicely laid out.This book is written for people who have had high school math and you need to have access to a calculator (or spreadsheet package) which can do trig functions. To do a power calculation you plug in basic information about your experiment/design into the simple formulas provided and it you get an effect size which you can then look up in the included tables. It sounds a bit complicated but the implementation is simple and everything comes with examples.The gentle introduction to power issues is one of the clearest ever written. So, while much of the work for power calculations can now be done easily with specialized software, this book is still valuable.

Pelican: 100 Subjects In One Box Learn C the Hard Way: Practical Exercises on the Computational Subjects You Keep Avoiding (Like C) (Zed Shaw's Hard Way Series) Cameron Hydraulic Data: A Handy Reference on the Subjects of Hydraulics, Steam, and Water Vapor The Civil War of 1812: American Citizens, British Subjects, Irish Rebels, & Indian Allies The Little Book of Dialogue for Difficult Subjects: A Practical, Hands-On Guide (Little Books of Justice & Peacebuilding) Becoming Black Political Subjects: Movements and Ethno-Racial Rights in Colombia and Brazil People Weekly: Great Cover Subjects: A 25th Anniversary Celebration Temas Sobre Historia Del Arte Y El Diseno/ Subjects on History of the Art and the Design (Spanish Edition) Masking Selves, Making Subjects: Japanese American Women, Identity, and the Body The Complete Three Books of The Treatise of Human Nature: Being An AttemptÂ To Introduce The Experimental Method of Reasoning Into Moral Subjects (With Active Table of Contents) Image Ethics: The Moral Rights of Subjects in Photographs, Film, and Television (Communication & Society)