Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability)

By Michael J. Daniels, Joseph W. Hogan

Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) By Michael J. Daniels, Joseph W. Hogan

Drawing from the authors' own work and from the most recent developments in the field, **Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis** describes a comprehensive Bayesian approach for drawing inference from incomplete data in longitudinal studies. To illustrate these methods, the authors employ several data sets throughout that cover a range of study designs, variable types, and missing data issues.

The book first reviews modern approaches to formulate and interpret regression models for longitudinal data. It then discusses key ideas in Bayesian inference, including specifying prior distributions, computing posterior distribution, and assessing model fit. The book carefully describes the assumptions needed to make inferences about a full-data distribution from incompletely observed data. For settings with ignorable dropout, it emphasizes the importance of covariance models for inference about the mean while for nonignorable dropout, the book studies a variety of models in detail. It concludes with three case studies that highlight important features of the Bayesian approach for handling nonignorable missingness.

With suggestions for further reading at the end of most chapters as well as many applications to the health sciences, this resource offers a unified Bayesian approach to handle missing data in longitudinal studies.

Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability)

By Michael J. Daniels, Joseph W. Hogan

Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) By Michael J. Daniels, Joseph W. Hogan

Drawing from the authors' own work and from the most recent developments in the field, **Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis** describes a comprehensive Bayesian approach for drawing inference from incomplete data in longitudinal studies. To illustrate these methods, the authors employ several data sets throughout that cover a range of study designs, variable types, and missing data issues.

The book first reviews modern approaches to formulate and interpret regression models for longitudinal data. It then discusses key ideas in Bayesian inference, including specifying prior distributions, computing posterior distribution, and assessing model fit. The book carefully describes the assumptions needed to make inferences about a full-data distribution from incompletely observed data. For settings with ignorable dropout, it emphasizes the importance of covariance models for inference about the mean while for nonignorable dropout, the book studies a variety of models in detail. It concludes with three case studies that highlight important features of the Bayesian approach for handling nonignorable missingness.

With suggestions for further reading at the end of most chapters as well as many applications to the health sciences, this resource offers a unified Bayesian approach to handle missing data in longitudinal studies.

Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) By Michael J. Daniels, Joseph W. Hogan Bibliography

- Rank: #835506 in Books
- Published on: 2008-03-11
- Original language: English
- Number of items: 1
- Dimensions: 9.30" h x .89" w x 6.49" l, 1.32 pounds
- Binding: Hardcover
- 328 pages

⬇ **Download** Missing Data in Longitudinal Studies: Strategies f ...pdf

▤ **Read Online** Missing Data in Longitudinal Studies: Strategies ...pdf

Download and Read Free Online Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) By Michael J. Daniels, Joseph W. Hogan

Editorial Review

Review

The authors combine their expertise in longitudinal data and Bayesian inference to missing data problems to give an overview of methods that can be used in various longitudinal studies. … the examples … are very helpful to illustrate the potential of the theory.
?Michael Bücker, *Statistical Papers* (2011) 52

Daniels and Hogan's is the first to explicitly focus on missing data in the context of longitudinal studies. … I found the book extremely clear and illuminating. It is well written, with comprehensive and up-to-date references. The use of example datasets from a number of epidemiological and clinical studies illustrates how the methods and strategies being advocated can be applied in real-life settings. … an extremely valuable resource both to applied statisticians who are faced with analyzing longitudinal data subject to missingness and methodological researchers in the area.
?Jonathan Bartlett, *Statistics in Medicine*, 2011, 30

… They [the authors] have gone further than anyone else in developing methods for the not missing at random (NMAR) case. … The focus on longitudinal studies will attract many readers. … this book is an excellent introduction and is also a first-rate treatment of cutting-edge topics. …
?Paul D. Allison, University of Pennsylvania, *Significance*, September 2010

This text is the only Bayesian textbook that provides a contemporary and comprehensive treatment of Bayesian approaches to a common and critically important topic. The authors provide a scholarly treatment of Bayesian inference and supplement their treatise with concrete practical examples. The writing is clear, precise and interesting. A particularly innovative and enormously useful contribution is the authors' formalization of sensitivity analyses. They distinguish between local and global sensitivity analyses, providing the reader with examples of each. I have used the techniques proposed in the text with much success, teaching people the importance of separating what is observed from what is assumed. I strongly endorse this book.
?Sharon-Lise Normand, Harvard School of Public Health, Boston, Massachusetts, USA

…the book under review appears to be the first reference that solely focuses on Bayesian approaches to handle missing data in longitudinal studies. … Overall I think this is a well-written technical monograph. The preliminary sections on longitudinal data analysis, Bayesian statistics, and missing data … are well written and serve to make this book a self-contained reference. The models presented to analyze missing data in longitudinal studies cover many ideas from the current literature, and some of the methods are at the cutting edge of research. The book will probably have greatest appeal to statisticians with a research interest in missing data. Although I also think applied biostatisticians who like to use Bayesian approaches and in particular WinBUGS will find this book very useful.
?*Journal of Biopharmaceutical Statistics*, 2009

…a timely and thorough review of this maturing research area. … The book is comprehensive in covering models for both continuous and discrete outcomes from both the pattern mixture and selection modeling perspectives. … The book's composition offers much to admire. The writing is clear and direct, the notation

is sensible and consistent, and tables and figures are simple and uncluttered. Typos are mercifully rare …
Biostatisticians who seek a clear and thorough overview of the state of knowledge in this area would do well
to make this excellent book their first stop.
?*Biometrics*, March 2009

Users Review

From reader reviews:

Christy Brodersen:

Typically the book Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity
Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) has a lot of knowledge on
it. So when you check out this book you can get a lot of profit. The book was published by the very famous
author. The writer makes some research ahead of write this book. That book very easy to read you will get
the point easily after looking over this book.

Bethany Christiansen:

Are you kind of hectic person, only have 10 as well as 15 minute in your moment to upgrading your mind
skill or thinking skill perhaps analytical thinking? Then you have problem with the book compared to can
satisfy your short period of time to read it because this time you only find guide that need more time to be go
through. Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis
(Chapman & Hall/CRC Monographs on Statistics & Applied Probability) can be your answer mainly
because it can be read by anyone who have those short time problems.

Francis Rutland:

As we know that book is very important thing to add our expertise for everything. By a reserve we can know
everything we wish. A book is a list of written, printed, illustrated as well as blank sheet. Every year has
been exactly added. This book Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and
Sensitivity Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) was filled
regarding science. Spend your time to add your knowledge about your science competence. Some people has
diverse feel when they reading the book. If you know how big benefit from a book, you can really feel enjoy
to read a publication. In the modern era like at this point, many ways to get book you wanted.

Marisa Carney:

As a pupil exactly feel bored for you to reading. If their teacher inquired them to go to the library or even
make summary for some e-book, they are complained. Just little students that has reading's soul or real their
passion. They just do what the trainer want, like asked to the library. They go to generally there but nothing
reading really. Any students feel that looking at is not important, boring and can't see colorful images on
there. Yeah, it is for being complicated. Book is very important in your case. As we know that on this time,
many ways to get whatever we really wish for. Likewise word says, many ways to reach Chinese's country.
So , this Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis

(Chapman & Hall/CRC Monographs on Statistics & Applied Probability) can make you feel more interested to read.

Download and Read Online Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) By Michael J. Daniels, Joseph W. Hogan #3JAVFL2GXQU

Read Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) By Michael J. Daniels, Joseph W. Hogan for online ebook

Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) By Michael J. Daniels, Joseph W. Hogan Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) By Michael J. Daniels, Joseph W. Hogan books to read online.

Online Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) By Michael J. Daniels, Joseph W. Hogan ebook PDF download

Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) By Michael J. Daniels, Joseph W. Hogan Doc

Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) By Michael J. Daniels, Joseph W. Hogan Mobipocket

Missing Data in Longitudinal Studies: Strategies for Bayesian Modeling and Sensitivity Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) By Michael J. Daniels, Joseph W. Hogan EPub