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6.3 Bayesian Estimation and Goodness-of-fit6.4 Bayesian Model Comparison; 6.5 Application 1: Bayesian Selection of the Number of Factors in EFA; 6.6 Application 2: Bayesian Analysis of Quality of Life Data; References; 7 Structural Equation Models with Dichotomous Variables; 7.1 Introduction; 7.2 Bayesian Analysis; 7.3 Analysis of a Multivariate Probit Confirmatory Factor Analysis Model; 7.4 Discussion; Appendix 7.1: Questions Associated with the Manifest Variables; References; 8 Nonlinear Structural Equation Models; 8.1 Introduction; 8.2 Bayesian Analysis of a Nonlinear SEM

8.3 Bayesian Estimation of Nonlinear SEMs with Mixed Continuous and Ordered Categorical Variables8.4 Bayesian Estimation of SEMs with Nonlinear Covariates and Latent Variables; 8.5 Bayesian Model Comparison; References; 9 Two-level Nonlinear Structural Equation Models; 9.1 Introduction; 9.2 A Two-level Nonlinear SEM with Mixed Type Variables; 9.3 Bayesian Estimation; 9.4 Goodness-of-fit and Model Comparison; 9.5 An Application: Filipina CSWs Study; 9.6 Two-level Nonlinear SEMs with Cross-level Effects; 9.7 Analysis of Two-level Nonlinear SEMs using WinBUGS

Appendix 9.1: Conditional Distributions: Two-level Nonlinear SEM

Sommario/riassunto

Winner of the 2008 Ziegel Prize for outstanding new book of the year Structural equation modeling (SEM) is a powerful multivariate method allowing the evaluation of a series of simultaneous hypotheses about the impacts of latent and manifest variables on other variables, taking measurement errors into account. As SEMs have grown in popularity in recent years, new models and statistical methods have been developed for more accurate analysis of more complex data. A Bayesian approach to SEMs allows the use of prior information resulting in improved parameter estimates, latent varia