

The
University of Michigan
Department of Biostatistics

Presents

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Speaking On:

Structural equation modeling of latent classes

Latent class analysis typically involves modeling a set of several observed measurements via a single underlying (latent) categorical (class) variable which is meant to capture the associations found amongst the observed variables. This latent class variable can then be modeled as either an outcome or predictor variable to address some research question of interest. Latent class models can be seen applied within the health sciences to multiple diagnostic tests without a gold standard, multiple source or informant data, and multiple symptom assessments. As applications of this type of modeling of a single latent class variable are becoming more common, it is natural to consider models involving multiple latent class variables. In particular, structural equation models (SEM) of latent class variables will be considered, differing from traditional SEM in that all the latent variables are categorical rather than continuous. In addition to basic main effects type models, models involving interactions effects between different latent class variables on outcomes will be demonstrated as well as structural model relationships between multiple latent class processes (over time). Examples of traditional applications of the single latent class variable models will be given and an application relating social, familial, environmental and personal factors associated with adolescent obesity will be used to demonstrate the new SEM of latent classes.

Thursday, November 19, 2009

3:30 p.m. – M1152, SPH II

Coffee and Cookies will be served for seminar guests at

3:00 p.m. in SPH II, Room M4034