Growth Mixture Models: A Structural Equation Modeling Approach

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Course Description

Growth Mixture Models (GMMs) are an extension of Latent Growth Models (LGMs) that identify subgroups of a population that follow different trajectories and allow individuals to vary around subgroup-specific mean trajectories. This three-day workshop provides hands-on training in fitting GMMs to analyze trajectories of social processes. The material is divided into five modules and includes a series of exercises to provide experience specifying and interpreting GMMs. The workshop relies on Mplus to fit GMMs.

Tentative Schedule of Topics

Day 1

1. Unconditional Linear Growth Mixture Model
   a) Introduction
   b) Building blocks
      i. Latent Growth Model
      ii. Repeated Measures Latent Class Analysis Model
      iii. Latent Class Growth Model
c) Unconditional Linear Growth Mixture Model

2. Fitting Models in Mplus
   a) Preliminaries and data preparation
   b) Mplus Input Files
   c) Mplus Output Files
   d) Extended Analysis Example

Day 2
1. Unconditional Nonlinear Growth Mixture Model
   a) Unconditional Quadratic Growth Mixture Model
   b) Unconditional Latent Basis Growth Mixture Model

2. Growth Mixture Model with Covariates
   a) Conditional Growth Mixture Model
   b) Growth Mixture Model with Distal Outcomes

Day 3
1. Advanced Topics with Growth Mixture Models
   a) Categorical Repeated Measures
   b) Parallel Process Model
   c) Growth Mixture Model for Missing Data

2. Question and Answer Period for Individual Projects
Resources

Growth Mixture Models

Overviews


Technical Details


Latent Growth Model


Repeated Measures Latent Class Analysis


Latent Class Growth Model