

Task 4: Latent Growth Curve Modelling

Introduction

A researcher was interested to know how aggressive behavior changed over time in a sample of children in care. In total, 405 children met study criteria they had levels of aggressive behavior measured every year for four years. In addition, on the first measurement occasion, the researchers recorded the amount of emotional support given by the child's carer. The researchers reasoned that aggression would increase over time in the sample, but that some children would experience steeper increases than others. They speculated that those who had more emotional support from their carer would have shallower increases in aggression than those who experienced less emotional support, who would have steeper increases. Your task is to address these questions using latent growth curve modelling. In your answer, please provide details about:

- 1) The data analysis methodology and justification (15%)
 - How the student intends to analyze the data and why this approach is chosen.
- 2) The preliminary analyses (10%)
 - Means and SD for time points and predictor.
- 3) The primary analyses (60%)
 - The primary data analysis (unconditional and conditional growth models) with findings supplemented using relevant Tables and Figures.
- 4) The interpretations for each research question (15%)
 - What do the analyses reveal in terms of each of the research questions?

Research Questions

- 1) Is child aggression changing over time among children in care?
- 2) Do levels of carer emotional support explain variance in the change trajectories of aggression among children in care?

Participants

- 405 children in care

Measured on the variables of interest:

- id: is the child identification number unique to each child in the study;
- support: is the measure of carer support (runs from 1 to 15, with higher scores indicating more support)
- t0,t1,t2,t3: are the time point measures of aggressive behavior (runs from 0 to 8, with higher scores indicating more aggression)
- gender: is the child gender (0 = male, 1 = female);
- age: is the child's age;

Assignment structure

Please structure your assignment using the following headings:

[TITLE]

[RESEARCH QUESTIONS]

[DATA ANALYSIS METHOD AND JUSTIFICATION]

[PRELIMINARY ANALYSES]

[PRIMARY ANALYSES]

[INTERPRETATIONS]

Data file

The data file is called 'aggression_wide.csv' and can be downloaded from [here](#). It can also be accessed on the github in PB230 → Secondary Data Analysis → Task 4 → aggression_wide.csv.