

**Latent growth modeling- an application to longitudinal study of  
“HIV<sub>1</sub> and HIV<sub>2</sub>”**

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Latent growth modeling is a statistical technique used in the structural equation modeling framework to estimate growth trajectory. It is a longitudinal analysis technique to estimate growth over a period of time. It is widely used in the field of behavioral science, education and social science. Growth models examine the development of individuals on one or more outcome variables over time. These outcome variables can be observed variables or continuous latent variables. In growth modeling, random effects are used to capture individual differences in development. In a latent variable modeling framework, the random effects are reconceptualized as continuous latent variables, that is, growth factors. Latent Growth Curve Methodology can be used to investigate systematic change, or growth, and interindividual variability in this change. A special topic of interest is the correlation of the growth parameters, the so-called initial status and growth rate, as well as their relation with time varying and time invariant covariates.

Data of 120 HIV positive individuals, from a longitudinal study on “HIV<sub>1</sub> and HIV<sub>2</sub>: Co infection and neurological progression” has been used for this investigation. Latent Growth Curve Methodology had been employed to analyze the change, and the fit indices indicated an excellent fit of the model to the data. The results will be presented .