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Applications of Individual Growth Curve Modeling for Pediatric Psychology Research

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Objective To provide a brief, nontechnical introduction to individual growth curve modeling for the analysis of longitudinal data. Several applications of individual growth curve modeling for pediatric psychology research are discussed.

Methods To illustrate these applications, we analyze data from an ongoing pediatric psychology study of the possible impact of spina bifida on child and family development ($N = 135$). Three repeated observations, spaced by approximately 2 years, contributed to the analyses (M age at baseline = 8.84).

Results Results indicated that individual linear growth curves of emotional autonomy varied as a function of the youth gender by spina bifida group membership interaction. **Conclusions** Strengths of individual growth curve modeling relative to more traditional methods of analysis are highlighted (e.g., completely flexible specification of the time variable, explicit modeling of both aggregate-level and individual-level growth curves).

Key words: Growth curves; trajectories; longitudinal modeling; statistical methods.

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