**Using the time-varying vector autoregressive model to study dynamic changes in situation perceptions and emotional reactions**

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The use of intensive longitudinal data in psychological research has greatly increased in the last decade. In parallel, vector autoregressive models have been developed to study temporal dynamics in such data. However, standard vector autoregressive models assume that parameters are time-invariant. This is problematic if changing dynamics govern the time series. We introduce the semi-parametric Time-VARying autoregressive model (TV-VAR) as a new way to study the dynamic fluctuation of intra-individual phenomena over time. This model takes into account the non-stationarity of psychological processes by considering one subject at a time. We tested the TV-VAR model on data gathered through Ecological Momentary Assessment on adolescents, who for 5 times a day for 14 days, provided their perceptions of a situation just experienced using the DIAMONDS as well as their emotional reactions. The TV-VAR model allowed us to explore how adolescents differed from one another in their dynamic situation perception and emotion over time. We also investigate how variations in emotional reactions related to variations in the subjective perception of the situation. Results are discussed in terms of the potential advantages of the TV-VAR model in identifying individual trends that describe changes in how each person reacts to situational events.