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ANALYZING LONG-DURATION AND HIGH-FREQUENCY DATA USING THE TIME-VARYING EFFECT MODEL

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With the rapid development of methods for electronic data capture, longitudinal data sets with many assessment points have become common in mental health services and addiction research. These data typically exhibit complex and irregular patterns of change and the relationship between variables may also change over time. Existing statistical methods are not flexible enough to capture this complexity, but a new method, the time-varying effect model (TVEM), permits modeling nearly any shape of change and allows the effect of an independent variable on outcome to change over time. This paper introduces TVEM and illustrates its application using data from a 16 year study of 223 participants with serious mental illness and substance abuse.

Note: