Joint Latent Class Profile Analysis for Repeatedly Measured Multiple Latent Class Variables: An Application to Stage-Sequential Process of Drug-Taking Behaviors

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Research on the sequential development of drug-taking behavior can be challenging in part because it may not be possible to observe the particular stage-sequential pattern of drug-taking behaviors directly. In addition, drug-taking behavior may affect or be affected by other drug use and the associations among different drug uses are not likely to be directly observed either. To address this difficulty, we propose a multivariate latent class analysis for longitudinal data, joint latent class profile analysis, which provides a principle for the systematic identification of not only associations among multiple discrete latent variables but sequential patterns of those associations.