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*On Covariance Misspecification in Repeated Measures Discriminant Analysis*

Repeated measures discriminant analysis (RMDA) models have been developed for predicting group membership in multivariate repeated measures data. But these procedures are sensitive to departures from the multivariate normality assumption. This study investigates the effects of covariance structure misspecification on the predictive performance of the RMDA procedures based on Kronecker product covariance structures in non-normal repeated measures data using Monte Carlo techniques. The RMDA procedures exhibited inflated predictive accuracies when the covariance structures are misspecified under normally distributed data but becomes attenuated in non-normal repeated measures data. Some relevant guidelines for choosing among these proposed procedures are discussed.