WEI HAO (DAVID) DAI, University of Toronto

Composite Indices for High-Dimensional Questionnaire Data

In large-scale cohort studies, questionnaires are often used to capture multi-dimensional characteristics of measures of interest, such as indoor mold exposure for infants with asthma. In an attempt to develop composite indices as practical solutions for dealing with considerably large numbers of highly correlated variables and domains, we consider a few commonly used dimension-reduction approaches, including principal component analysis and canonical correlation analysis. We present empirical comparisons via an illustrating example using an indoor home environmental questionnaire from the Canadian Healthy Infant Longitudinal Development (CHILD) Study.