

An Investigation on Aging with Principal Component Analysis

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Abstract

Principal component analysis is a technique commonly used in reducing the dimensionality in data sets containing numerous response variables by capturing most of the variability with much fewer variables. This method will be explained and illustrated briefly for the purpose of investigating response variables related to health characteristics within age decade categories using data from the Louisiana and Healthy Aging Project. An emphasis will be placed on extracting the first and second principle components using eigenvalues, eigenvectors and the sample variance covariance matrix.