EXPERIMENTAL COMPARATION OF DISCRIMINANT ANALYSIS VARIABLE SELECTION ALGORITHMS IN KINESIOLOGICAL RESEARCH

Abstract
Researchers have a relatively large number of variables included in the research, appropriate algorithms of variable selection exist in the model. Their aim is to generate an optimal statistical model. The aim of this article was to make parallel analysis of different variable selection algorithms in the discriminant model in the selected kinesiological scientific research. In accordance with that, discriminant analysis was conducted by using a sample of 302 pupils. Categorical grouping variable consisted of 4 groups – first four grades of primary school and predictor variables were a set of 4 morphological variables, 7 standard motor variables and categorical variable – gender. All effects, forward stepwise, forward entry, backward stepwise, backward removal and best subsets algorithms of variable selection in the generalized discriminant model were used and compared. Results clearly indicate that, while using discriminant analysis in the scientific kinesiological research, it is methodologically appropriate test which variable significantly contributes to the model.

Key words: methodology, variable selection, discriminant analysis, algorithm