Influence of the factors associated with suicides: A case study in the Kelaniya police division in Sri Lanka

JLSM Kumara and NV Chandrasekara

Department of Statistics and Computer Science, Faculty of Science, University of Kelaniya, Sri Lanka
<kumarajlsm.kln@gmail.com>

Suicide is a major public health and social problem. In this context, the importance of the statistical determination of the factors associated is important. The present study covered twelve police stations under Kelaniya Police Division of Sri Lanka. Secondary data were collected from the police stations from 2013 to 2017. Addiction to narcotic drugs, chronic disease, economic problems, loss, love affairs, mental disorder and family disputes were considered as explanatory variables. The significantly associated explanatory variables were identified using a univariate analysis and included in the multivariate analysis to perform multinomial logistic regression. Results indicated that, civil status, age and gender influenced both chronic diseases and mental disorders. Economic problems were influenced by age and gender. Civil status had an impact on loss. Moreover, Education level, civil status, gender and age impacted on love affairs. Due to classification problems and lack of significance in high number of coefficients, dependent variables were re-categorized based on the influence on suicide. It led to fit a binary logistic regression model. Based on the results of binary logistic regression model, civil status, education level, occupation and age were identified as factors influencing suicides with 72.6% of classification accuracy.

Keywords: suicide, multinomial logistic regression, binary logistic regression