Homicide Rate as a Predictor of Traffic Fatality Rate

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Abstract

Background: In the United States, traffic fatality rates per distance driven vary greatly from state to state, with the maximum rate being 2.9 times the minimum rate. This study was designed to examine factors associated with this variability.

Method: A multiple regression was performed on the 2006 state data. The dependent variable was the fatality rate per distance driven. There were 10 independent variables.

Results: The analysis identified seven statistically significant factors: homicide rate per capita (used in the analysis as a proxy for aggression), physicians per capita, safety-belt usage rate, proportion of male drivers, proportion of drivers over 64 years of age, income per capita, and deaths caused by alcohol-related liver failures per capita (a proxy for the extent of intoxicated driving). These seven factors accounted for 71 percent of the variance in the traffic fatality rates. The strongest predictor of the traffic fatality rate was the homicide rate.

Conclusion: This finding suggests that social aspects of human interaction may play an important role in traffic safety.

Keywords: Road safety, Fatality rate, Variation across states