

EFFECT OF THE ZERO TOLERANCE DRINKING AND DRIVING LAW ON MORTALITY DUE TO ROAD TRAFFIC ACCIDENTS IN RIO DE JANEIRO, BRAZIL: AN INTERRUPTED TIME SERIES

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Apresentação/Introdução

As the first Brazilian capital to implement systematic and regular monitoring of compliance of the zero tolerance drinking and driving law, Rio de Janeiro is an important test case about the effectiveness of this law on mortality due to road traffic accidents.

Objetivos

To estimate the effect of the Brazilian zero tolerance drinking and driving law on mortality rates due to road traffic accidents in Rio de Janeiro.

Metodologia

Yearly mortality rates due to road traffic accidents in the Rio de Janeiro city before and after the zero tolerance drinking and driving law that came into effect on June 19, 2008 were compared, according to the type of victim: pedestrian, cyclist, motorcyclist, and vehicle occupant. We used the Prais-Winsten procedure of auto-regression in the analysis of time series. The outcome of this analysis was the rate of yearly increase, presented in percent with their respective confidence intervals of 95%. Stratified analysis was conducted to investigate whether may have had a distributional effect on sex and age group.

Resultados

From 2000 to 2015, 14,074 individuals living in the Rio de Janeiro city died by road traffic accidents. The immediate effect of the zero tolerance drinking and driving law on mortality rates due to road traffic accidents was -159.7% (95%CI -271.7%; -47.8%) among female vehicle occupants and -173.5% (95%CI -266.6%; -80.7%) among vehicle occupants of age group of 40-59 years. Its gradual effect also was to decrease at yearly rate mortality due to road traffic accidents among victims of all types, except pedestrian, of both sexes and among those with ≥ 20 years of age.

Conclusões/Considerações

Using a quasi-experimental design, our study highlights that there is evidence of reduced mortality rates due to road traffic accidents among cyclist, motorcyclist, and vehicle occupant of both sexes and among those with ≥ 20 years of age in Rio de Janeiro eight years after the Brazilian zero tolerance drinking and driving law was adopted.

Tipo de Apresentação

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