Comparison of observed and self-reported restraint use by rear passengers before and after compulsory use.

Zambon Francesco, Marchesan Maria, Visentin Cristiana, Schievano Elena, Alba Natalia, Ferro Antonio, Spolaore Paolo

Introduction

Several studies have shown that self-reported seat belt use estimates exceed observed ones. The extent to which such a tendency specifically applies to rear passengers has not been investigated yet. With this study we evaluated if such overreporting applies to rear passengers and if it varies under different compulsory use conditions.

Material and Methods

Self-reported data on safety belt use for rear passengers were obtained through a slightly modified and validated version of the Behavioral Risk Factor Surveillance System; the observational study was designed conforming to the National Highway Traffic Safety Administration's Uniform Criteria for observational surveys. The two cross-sectional studies were carried out in the Veneto Region (North-East of Italy, 4,7 million inhs) in 2003 and 2005, before and after seat belt use become compulsory with primary enforcement. The ratio of self-reported to observed belt use and chi-square test was computed for each period and gender.

Results

9.138 observations and 7.902 interviews were considered. Observed seat belt use rates for rear passengers rose from 11,2% to 26,4%, in 2003 and 2005 respectively. Self-reported rates were always higher than the observational ones, with an overreporting factor of 1,5 and 1,4, respectively before and after restraint use for rear seats become mandatory. A greater overreporting factor was found when seat belt use was lower. Gender differences were significant (p value<0,05) for self-reported estimates in both periods, but not for observational rates.

Conclusions

Self-reported seat belt use represents an efficient alternative to observational study for tracking changes in actual behaviour of rear passengers; however, self-reported estimates need to be adjusted by an appropriate overreporting factor in order to represent actual seat belt use.