

Exploring factors distinguishing car-versus-car from car-versus motorcycle in intersection crashes

Published in: Transportation Research Part F: Traffic Psychology and Behaviour, Volume 17, February 2013, Pages 145-153

Author Information: D. Walton , J. Buchanan , S.J. Murray

Abstract

This research examines a case-control (N = 305) for CVC (car versus car) and CVM (car versus motorcycle) crashes from the New Zealand drawing from the 2004 to 2009 police reports entered into the Crash Analysis Systems (CASs) database. The characteristics of the rashes are compared across the vehicle configurations to distinguish the features of CVM crashes. The analyses show that CVM-type crashes are not easily distinguished from CVC type crashes. The two crash types are similar, contrary to overseas recent findings but consistent with those reported nearly 20 years ago by Cercarelli, Arnold, Rosman, Sleet, and Thornett (1992).

Four exceptions are that CVM-type crashes occur more often than expected in urban speed zones, between the times of 4–7 pm, and at uncontrolled intersections. CVM crashes occur less often in merging traffic. These findings are discussed in the context of the conspicuity hypothesis that posits that crashes with motorcycles occur more frequently because they are harder to detect.

Key Points

- Police crash records for cars versus cars and cars versus motorcycles are compared.
- Factors distinguishing cars versus cars and cars versus motorcycles are sought.
- Time of day (4–7 pm); speed zone, 50 kph and uncontrolled intersections are factors.
- Cars versus motorcycles crashes occur less frequently in merging traffic.