

**Conflict analysis for prediction of fatal crash locations in mixed traffic streams.**

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**ABSTRACT**

This paper reports the results of a study that explored the relationship between fatal crashes and conflict rates at mid-block on 14 locations in Delhi, India.

All locations had a mix of motorized and non-motorized traffic. The sites were selected to represent low, medium and high fatality rates. The analysis was done in two stages. The first stage used recent 3-year statistics along the entire street. The second stage focused on each fatal crash for mid-block segments on those streets. Peak-hour traffic at 14 selected locations was videotaped.

Trained observers recorded traffic compositions at mid-block, average space mean speeds by mode and conflicts by type, reactor mode and cause mode. After converting raw conflict counts to rates, site ranking went from high to low conflict rate sites. The studies showed a weak crash-conflict association.

Conflict data for various sites were compared for different combinations of conflicts. The comparison revealed that the presence of only a few non-motorized modes is enough to cause conflicts between motorized vehicles and on-road non-motorized vehicles. The study did not provide a conclusive relationship between mid-block conflicts and fatal crash sites. However, the conflict study provided useful insights into the interaction between different traffic entities in the traffic streams of 14 sites. An important conclusion of this study is that a traffic-planning emphasis on studying conflict rates may not result in reducing fatality rates on urban roads along mid-block segments.