

ABSTRAK

Penelitian ini bertujuan untuk menganalisis tingkat keselamatan lalu lintas pada simpang empat tak bersinyal menggunakan metode *Traffic Conflict Technique* (TCT), dengan studi kasus di Simpang Cicariang, Kawalu, Tasikmalaya. Simpang ini memiliki arus lalu lintas yang padat, terutama saat jam sibuk, yang sering menimbulkan konflik antar pengguna jalan dan berpotensi menyebabkan kecelakaan lalu lintas.

Metode TCT digunakan untuk mengidentifikasi konflik lalu lintas dengan memperhatikan kecepatan kendaraan, jarak antar kendaraan, serta *Time to Accident* (TA). Data dikumpulkan melalui survei lapangan selama dua hari, di mana dilakukan pengamatan terhadap geometri jalan, kecepatan kendaraan, dan klasifikasi konflik. Hasil penelitian menunjukkan bahwa konflik terbanyak terjadi pada sesama sepeda motor, dengan perilaku kendaraan yang dominan berupa pengereman mendadak.

Penelitian ini menemukan bahwa kecepatan kendaraan pada saat konflik di Simpang Cicariang paling sering berada di kisaran 20–30 km/jam, dengan 64 konflik, sementara kecepatan paling jarang terjadi adalah 40–50 km/jam dengan 9 konflik. Tanpa adanya lampu lalu lintas, risiko kecelakaan meningkat, terbukti *dari Time to Accident* (TA) yang hanya 0,00–0,5 detik untuk 124 konflik. Terdapat 126 konflik serius dan 73 konflik tidak serius, menunjukkan tingginya tingkat keseriusan konflik di simpang ini. Oleh karena itu, direkomendasikan peningkatan keselamatan melalui penambahan perangkat pengendalian lalu lintas.

Kata kunci: keselamatan lalu lintas, simpang empat tak bersinyal, *Traffic Conflict Technique* (TCT), *Time to Accident*

ABSTRACT

This study aims to analyze traffic safety levels at an unsignalized four-way intersection using the Traffic Conflict Technique (TCT) method, with a case study at the Cicariang Intersection, Kawalu, Tasikmalaya. This intersection experiences high traffic density, especially during peak hours, which often leads to conflicts between road users and the potential for traffic accidents.

The TCT method was used to identify traffic conflicts by observing vehicle speed, the distance between vehicles, and Time to Accident (TA). Data were collected through field surveys over two days, during which road geometry, vehicle speed, and conflict classification were observed. The study results showed that most conflicts occurred between motorcycles, with the predominant vehicle behavior being sudden braking.

This study found that the speed of vehicles during conflicts at the Cicariang intersection most often ranged between 20–30 km/h, with 64 conflicts, while the lowest speed was 40–50 km/h with 9 conflicts. Without traffic lights, the risk of accidents increases, as evidenced by a Time to Accident (TA) of only 0.00–0.5 seconds for 124 conflicts. There were 126 serious conflicts and 73 non-serious conflicts, indicating a high level of conflict severity at this intersection. Therefore, it is recommended to improve safety through the addition of traffic control devices.

Keywords: *traffic safety, unsignalized four-way intersection, Traffic Conflict Technique (TCT), Time to Accident*