ETHIOPIAN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH

eISSN: 2349-5715 pISSN: 2349-5707

Volume: 12, Issue 08, August-2025 SJIF 2019: 4.702 2020: 4.737 2021: 5.071 2022: 4.919 2023: 6.980 2024: 7,662

STUDY OF ROAD ACCIDENTS INVOLVING CYCLISTS

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Annotation. It aims to study the main causes of bicycle-related traffic accidents and effective measures to reduce them.

Keywords: Cyclists, road accidents, bike lanes, road infrastructure, road safety, traffic rules, causes of accidents, safety measures.

INTRODUCTION. In modern cities, cycling is widely used as an environmentally friendly, economically viable and healthy way of life. However, the active participation of cyclists in road traffic increases the likelihood of road accidents. The main causes of road accidents involving bicycles are insufficiently developed infrastructure, non-compliance with traffic rules and the possibility of collisions with vehicles.

Cyclist accidents can occur for a variety of reasons, including poor visibility, driver error, and cyclist error. The most common cause is failure to follow traffic rules. For example, drivers often fail to take into account the presence of cyclists on the road, which is why tragedies occur.

Additionally, cyclists may be at risk of accidents due to the use of headphones, which reduces their alertness. It is important to remember that ignoring road signs and traffic lights increases the likelihood of an accident.

Road traffic accidents (RTAs) involving cyclists are a serious problem, characterized by injuries and deaths of cyclists and a negative impact on the urban transport system. The causes of these accidents are diverse and can be divided into several categories.

1. The problems related to road infrastructure are as follows:

a) Lack of or insufficient bike lanes. Many cities lack or have insufficient dedicated bike lanes. This forces cyclists to share the road with cars and other vehicles, increasing the risk of accidents. **(Figure 1);**

Figure 1. Lack or insufficient bicycle lanes.

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b) Poor road surface quality. Poor quality of bike lanes and road surfaces, potholes, rocks, and other obstacles can cause cyclists to lose their balance and cause accidents;

c) Insufficient road signs. Insufficient road signs that are appropriate for cyclists can lead to cyclists being lost on the road and dangerous situations.

2. Problems related to driver behavior:

a) Not seeing or paying attention to cyclists. Drivers often do not see cyclists or ignore their presence on the road, which leads to collisions;

b) Failure to maintain a safe distance. Drivers may fail to maintain a safe distance from cyclists, make sudden turns, and cross their path (Figure 2);

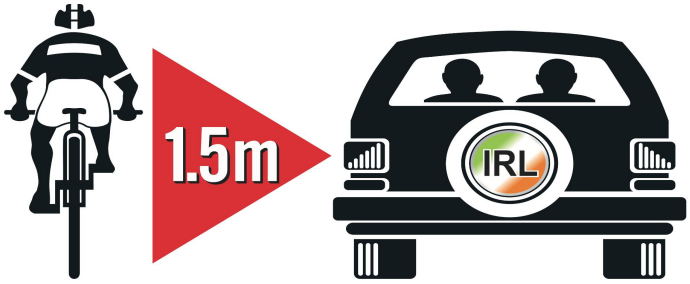

Figure 2. Safety distance between cars and bicycles.

c) Speeding. Speeding by drivers can cause serious injury and death to cyclists;

d) Driving under the influence of alcohol or drugs. Such drivers drive more dangerously on the road and increase the risk of accidents.

3. Problems related to cyclist behavior:

a) Failure to comply with traffic rules. Cyclists' failure to comply with traffic rules, making sudden turns, crossing the road incorrectly, or running red lights can lead to accidents;

b) Failure to use safety equipment. Failure to use helmets, reflective clothing, and other safety equipment by cyclists increases the risk of injury (Figure 3);

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Figure 3. Cyclists' safety equipment.

c) Inattention. Cyclists' inattention, talking on the phone, listening to music, or focusing on other things can lead to accidents.

4. Weather and lighting conditions. Bad weather conditions such as rain, snow, and fog limit visibility, make road surfaces slippery, and increase the risk of accidents. Also, it is difficult for cyclists to see in the dark, which increases the risk of accidents.

4. Other factors:

a) High traffic volume. The high number of vehicles in cities increases the risk of accidents;

b) Damage to the road surface. Potholes, cracks, and other damage can cause cyclists to lose control (Figure 4).

Figure 4. Damage to the road surface.

It also noted that when a car turns right at an intersection, it poses a risk of collision for cyclists traveling straight ahead. This is the most common adverse event involving cyclists (Figure 5).

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Fig 5. Collision risk for cyclists traveling straight while turning right at intersection

RESULTS. According to statistics, about 12% of fatal accidents in our country occur because a car turning right does not notice a cyclist moving parallel or directly. In such cases, the driver is always found guilty. How to avoid accidents: drivers should use turn signals to indicate maneuvers and monitor the situation on the road using mirrors, drivers should be mentally prepared for the possibility that a car in the outer lane may suddenly turn right;

Nowadays, many drivers do not give way to cyclists at intersections. If there is a "give way" sign, the driver must pass not only cars moving along the main road, but also cyclists:

There is no place for bicycles on the sidewalk, which is directly stated in paragraph 9.9 of the Traffic Rules. Although cyclists are treated relatively leniently on the sidewalk, collisions between cyclists and pedestrians can cause more serious injuries than bruises and scratches. Cyclists must ride along the bicycle path, or if there is none, in a single row along the far right lane of the road.

Cyclists ride their bikes through pedestrian crossings. Cyclists are riding their bikes in large numbers through pedestrian crossings without getting off their bikes. Cyclists suddenly stepping out into the road at a crosswalk can cause a collision at high speed and cause serious injury or even death, and the driver will be held liable for this. It is very difficult to prove that the cyclist was on his bike and appeared unexpectedly.

Drivers have hit cyclists with their doors open. Drivers often pull over on the side of the road and carelessly open their doors without looking around. If a cyclist were to pass by at that moment, they could be seriously injured.

CONCLUSION.

Road accidents involving bicycles are caused by various factors, and their prevention plays an important role in ensuring the efficiency of the transport system and the safety of road users. The main causes of accidents include insufficiently developed road infrastructure, lack of coordination between vehicles and cyclists, failure to comply with traffic rules, and insufficient implementation of safety measures.a

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