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Micro Mobility and Safety



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Abstract

In this study, the advantages of micro mobility in urban transportation and the challenges it poses in terms of security are discussed. While the proliferation of micro mobility vehicles such as electric scooters and bicycles has provided significant benefits in terms of sustainability and transportation efficiency, it has also brought safety issues such as the risk of accidents and injuries. Measures such as user training, infrastructure improvements and technological solutions are necessary to reduce these risks and ensure the safe use of micro mobility vehicles.

Keywords: Accident, Traffic safety, Protective equipment; Collisions; Micro mobility

Introduction

Micro mobility is a form of transportation that revolutionizes urban transportation and offers significant advantages in terms of both sustainability and efficiency. Micro mobility vehicles include electric scooters, bicycles and small electric vehicles. However, with the spread of this innovative form of transportation, security issues have also come to the fore. In this article, the advantages of micro mobility and the challenges it poses in terms of safety will be evaluated, the risk of accidents and injuries will be emphasized, and suggestions will be presented to increase safety.

Advantages of Micro Mobility

Micro mobility vehicles help reduce carbon footprint by reducing fossil fuel use. Electric scooters and bicycles consume less energy and cause less harm to the environment than traditional vehicles. It also contributes to solving air pollution and traffic congestion problems in cities [1]. Micro-mobility vehicles are ideal for short-distance trips and allow users to avoid traffic congestion. These vehicles are also advantageous in terms of integration into public transportation systems [2]. It makes urban transportation more efficient, especially when used to access metro and bus stops.

Accident Risk and Common Injury Types

Single-Sided Accidents

Micro mobility vehicles losing balance, slippery ground, or encountering obstacles may cause serious injury to users. Common

types of injuries include head injuries, arm and leg injuries, and soft tissue injuries. A study conducted in the USA found that 40% of emergency room visits related to electric scooters were related to head injuries [3].

Collisions

Collisions between micro mobility vehicles and motor vehicles, pedestrians, or other bicycles are also common. Such accidents can cause injuries to users as well as other road users. In a study conducted in Europe, it was determined that 29% of electric scooter users were involved in accidents and 80% of these accidents occurred as a result of the user losing control [4].

Safety Precautions and Injury Reduction Methods

- i. Helmet use can significantly reduce head injuries. In order for users to gain the habit of wearing helmets, awareness campaigns should be organized and helmet use should be encouraged.
- ii. Educating users on safe driving techniques plays a critical role in preventing accidents. Issues such as complying with safe speed limits, driving carefully and avoiding driving on pedestrian roads should form the basis of training programs.
- iii. Special roads and parking areas should be created for micro mobility vehicles. This allows users to travel safely and reduces the risk of collisions with other road users.

iv. Technologies that can control the speed and usage areas of vehicles should be developed and used. Additionally, micro mobility service providers can use information and warning systems in their applications to ensure that users comply with safe driving rules.

Conclusion

Micro mobility offers a sustainable and efficient alternative in urban transportation and is expected to become more widespread in the future. However, user training, appropriate infrastructure and effective regulations are required to use these tools safely. Measures on micro mobility and safety are critical to creating a safer and more sustainable transportation system in cities. In this way, the benefits offered by micro mobility vehicles can be

evaluated more effectively in a safe usage environment.

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