A REVIEW ON: EFFECTS OF ON STREET PARKING ON DIFFERENT FACTORS

Mayank A. Gaodi¹, Prathmesh Thakre², Devendra Nikhade³, Nayan Charanwar⁴
Anand Ghate⁵, Sushant Lokhande⁶, Saurabh Kamble⁷, Rushikesh Deshmukh⁸

¹ Mayank A. Gaodi, Assistant Professor, Mechanical Engineering, DMIETR, Maharashtra, India
² Prathmesh Thakre, Student, Mechanical Engineering, DMIETR, Maharashtra, India
³ Devendra Nikhade, Student, Mechanical Engineering, DMIETR, Maharashtra, India
⁴ Nayan Charanwar, Student, Mechanical Engineering, DMIETR, Maharashtra, India
⁵ Anand Ghate, Student, Mechanical Engineering, DMIETR, Maharashtra, India
⁶ Sushant Lokhande, Student, Mechanical Engineering, DMIETR, Maharashtra, India
⁷ Saurabh Kamble, Student, Mechanical Engineering, DMIETR, Maharashtra, India
⁸ Rushikesh Deshmukh, Student, Mechanical Engineering, DMIETR, Maharashtra, India

ABSTRACT

On-street parking is a common form of parking, known for its efficiency in terms of land use and convenience to motorists as it allows them to park their vehicles nearer to their destinations. In a developing country like India, in spite of having strong regulatory rules, on street parking is more common. On street parking has many disadvantages related with it. On street parking hampers the carrying capacities of the roads which results in traffic jams and sometimes may also cause casualties. Taking into account the consequences related with on street parking, it becomes very essential to study the effects of on street parking, factors affecting it and remedial solutions required for on street parking. Also it is found that the existing methods to eliminate on street parking are not that much efficient. This paper focuses on finding out the effects of on street parking, existing methods to prevent on street parking and possible solutions to avoid the problems caused by on street parking.

Keyword: - On street parking

1. INTRODUCTION

It has been observed that the automobile sales is increasing year by year in India and comparatively the parking space is decreasing due to which parking vehicles illegally is increasing which leads to lot of accidents and traffic jams causing trouble in daily routine of people. Road safety is an issue of national concern, considering its magnitude and gravity and the consequent negative impacts on the economy, public health and the general welfare of the people. Road Traffic Injuries are one of the leading causes of deaths, disabilities and hospitalizations, with severe socioeconomic costs, across the world. Most people resolve their parking violations on their own, but some need a more compelling method of ensuring they pay their debts. When these rules are not enforced, those that follow the rules are forced to carry the burden for those that don’t. There are several traditional method to resist the violators from violating the traffic rules, these methods are now outdated comparative to the advanced methods which several other countries are using. The current methods which we are being used are:

1.1 Wheel Clamping

A wheel clamp, also known as wheel boot, parking boot, or Denver boot, is a device that is designed to prevent vehicles from being moved. In its most common form, it consists of a clamp that surrounds a vehicle wheel, designed to prevent removal of both itself and the wheel.
1.2 Towing

Towing is coupling two or more objects together so that they may be pulled by a designated power source or sources. The towing source may be a motorized land vehicle, vessel, animal, or human, the load anything that can be pulled. These may be joined by a chain, rope, bar, hitch, three-point, fifth wheel, coupling, drawbar, integrated platform, or other means of keeping the objects together while in motion.

Although these methods are being used to punish the violators and control the consequences of on street parking, they are not serving the purpose effectively. To overcome all the issues related with on street parking, an efficient way has to be find out.

2. LITERATURE REVIEW

Subhadip Biswas et al[1], have arrived at the conclusion that on-street parking should be restricted along major streets. It can be allowed on minor streets as it has the potential to provide a safer environment for road users in that context. When allowed, on-street parking should be parallel, not angled, because later is hazardous in all respects. The study also recommends the prohibition of on-street parking near some specific locations like designated pedestrian crossing, intersection, school etc.

Jessica Edquist et al[2], carried out studies on the effects of on-street parking and road environment visual complexity on travel speed and reaction time. These results support theoretical positions that proffer workload as a mediating variable of speed choice. However, drivers in this study did not modify their speed sufficiently to maintain safe hazard response times in complex environments with on-street parking. This inadequate speed compensation is likely to affect real world crash risk.

Charles Peprah et al[3], have suggested that although many benefits are accrued to on-street parking, it can pose danger to the safety of road users if not managed properly. Behavioural and cultural attitude are among factors that create problems of congestion, danger to pedestrian safety and inconveniences among many other issues. It is therefore vital to focus on culture and attitudinal change rather than relying only on visible and factual information in promoting a successful on-street parking and pedestrian safety. Influencing culture and attitudinal change of road users in turn requires education, sensitization and enforcement of on-street parking regulation.

Yashaswini Rajendra Bhat et al[4], in their paper dealt with reasons and solutions for the road traffic accidents in India in the form of a review article using the available statistics in the literature.

Sahan Wijayaratna et al[5], conducted a study on on-street parking. The results of the study clearly indicate that the reduction in capacity of the lane adjacent to a parking lane is greater when the time restriction of an on-street parking zone is short. The study suggests possible reduction factors that can be used in road capacity estimations when on-street parking is allowed in an urban transport corridor. Once the adjustment factors developed in this study are refined and validated, they can be incorporated within transport guidelines and road infrastructure standards to appropriately account for the impacts of on-street parking on road capacity. This study has the potential to improve the assessment of traffic impacts from land use developments and take appropriate steps to alleviate congestion throughout the network.

3. FINDINGS OF LITERATURE

I. Whenever and wherever possible on street parking should be avoided, if not possible it should be parallel and not angled.
II. Behavioural and cultural attitude of people should be changed promoting a successful on-street parking and pedestrian safety.
III. There is a need to develop a more sophisticated and safer way to avoid the hazards caused by on street parking.
4. REFERENCES


