

Prediction logit model for severity of rural road accidents the case study in ILAM province

Mohamad Javad Asadi¹, Mohamad Raza Jafarian², Leila Nasrolahi³

1. Department of Safety, Traffic and Road Safety, Road Administration and Urban Development Office of Ilam Province, Iran
2. Faculty member, University of Ilam, Iran
3. Student, Department of Civil Engineering, Graduate School of South Tehran Branch, Islamic Azad University, Tehran, Iran

Abstract

With increasing the length and number of rural roads network and the increasing of car ownership in the country's villages, unfortunately the number of accidents has increased in these ways. In this study, the first, about the effecting factors of severity roads crashes are discussed. Then by using statistical of rural roads accident for ILAM province (ILAM one province of IRAN) from police's reports (2009-2012), Characteristics of geometric design (radius of curvatures, width of roads, width of the shoulder width and...) from GIS software (administration of road and transportation ILAM province), logit model for severity crashes was designed for these roads. The results show that the accident day, driver's education, conditional of pavement road, type of geometric design (curvature or straight), driver's age were significant impact on the severity of accidents. The most important parameter affecting the severity crash was crashes day, because of these roads had more traffic in holiday and young drivers ran faster.

Key words: rural roads, logit model, severity accidents

1. Introduction

This About 1.2 million people die each year by accidents in the worldwide and about 50 million people are injured. [1]. about 55% of these statistics happen in rural roads, and this means that crashes in these types of roads are almost twice as many roads.[2]. The main parameter is, rural roads are not designed for high-speed. Other factors including damage of road's surface, wake of road safety equipment, obstacles on the roadside, blind curvatures, often no shoulder, wake of absence sign-road and usually steep hill make these roads hazard locations.in Germany's roads network,73916 accidents occurred on rural roads which 2019 human killed and 25971 persons were injured. [3]. these statistics can also be considered for the whole of Europe, fatal rural roads accident were 51% Europe accidents in 2008. [4]. In 32675 fatal accidents occurred in united stated and 51% of these crashes have occurred in rural road. [5]. In IRAN, about 55to 60 percent accident occur in two-lane roads, which include 75% fatal accident. Rural two-lane roads were classified that rural village's roads (RVR) that destination of these road is village and these roads are one of most important of