Analysis of Pedestrian Walking Speeds at Crosswalks in Taiwan

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Abstract

This paper conducts a field survey with cameras at intersections to collect and analyze pedestrian walking speeds with one factor and multiple factors. Following regression analysis and factor identification, this paper also develops a prediction model for pedestrian walking speed. Results show that the mean speed of male adults is significantly higher than that of female adults in most cases. The mean walking speed of individual crossers is higher than the mean speeds of a group of two people or a group of three or more people. People walk faster on cold days, but slower on rainy days. People tend to increase their walking speed when walking across a wider street or an intersection without pedestrian control devices. In addition, regression analysis shows that the walking speed for pedestrians is significantly affected by the factors of sex, temperature, weather, number of lanes, signal type, and pedestrian phase length.

Keyword：Intersection, Pedestrian, Walking speed