



The 2nd International Neurotrauma Congress & the 4th International Roads Safety Congress

Shefa Neuroscience Research Center, Tehran, Iran, 18-20 February, 2015

The Neuroscience Journal of Shefaye Khatam

Volume 2, No. 4, Suppl. 3

Poster Presentation

Estimating Bus Driver Fatigue through Performance Measures in a Virtual Driving Environment

Adel Mazloumi^{1*}, Faramarz Gharagozlou², Jabraeil Nasl Saraji¹, Ali Nahvi³, Mohammadreza Ashouri³, Hamed Mozaffari³

¹Department of Occupational Health, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran.

²Department of Occupational Health, School of Public Health, Kermanshah University of Medical Sciences, Iran.

³Department of Mechanical Engineering, K.N. Toosi University of Technology, Tehran, Iran.

Published: 18 February, 2015

Abstract

Driver fatigue is one of the main causes of road accidents. This study aimed to estimate bus driver fatigue through performance measures in a virtual driving environment. The study was conducted on thirty professional male bus drivers participated in a two-hour drive session. The driver subjective fatigue was assessed by Fatigue Visual Analogue Scale (F-VAS) on 10 min intervals. At the same time, the performance measures of lane drifting as mean and standard deviation of bus lateral position (SDLP) were calculated during the simulated driving task. The findings presented a rising trend in subjective fatigue level with increasing the time-on-task of driving. Time-on-task of driving was the most effective factor on fatigue self-evaluation. The drivers showed a significant correlation between F-VAS score and SDLP. The findings revealed a strong correspondence between SDLP and driver subjective fatigue based on group mean data, but individual differences may affect the driving performance which should not be ignored in future investigation.

Keywords: Bus Driver, Fatigue-Visual Analogue Scale, Road Accident.

***Corresponding Author:** Adel Mazloumi

E-mail: amazlomi@tums.ac.ir