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Study To Identify How Sleep Disorders Affect Risk Perception When Driving

By SELENA CHAVIS
Reviewed by John M. Grohol, Psy.D. on November 1, 2010

[Sleep](#) disorders can have far-reaching effects on an individual's awareness and ability to function in the day-to-day world. In fact, research indicates that those who have certain types of sleep disorders can have performance deficiencies and decreased energy for response to stimulus.

As part of a unique study that aims to analyze how sleep disorders affect a person's perception of risk when driving, University of Granada researchers will use innovative software developed by Honda Motor Company to simulate road situations a person with a sleep disorder may encounter.

The university currently provides the only research center in Europe that focuses on how mental mechanisms of the brain lead individuals to risky behaviors when riding a motorcycle. Researchers believe that the findings of this study could provide insight into modifying risky behaviors associated with sleep disorders going forward.

Previous studies have found a clear association between sleep-related breathing disorders and traffic accidents, according to researchers. It has also been suggested by a number of authors that different types of sleep patterns produce different types of performance, attention and energy.

Those with sleep-related breathing disorders have been found to be two to three times as likely to have a traffic accident.

The research group is led by Gualberto Buena Casal of the University of Granada Psychophysiology Laboratory and the Department of Experimental Psychology professor Antonio Cándido. Other researchers include Leandro L. Di Stasi, Carolina Díaz, Raúl Quevedo Blasco and David Montalbán.

Researchers note that the first study will be used to specifically analyze how obstructive sleep apnea (OSA) impacts a person's ability to identify risk when driving. It will also test the efficacy of current therapies that are in development to treat it.

It is the hope of researchers at the University of Granada that the study will identify how these treatments currently in development for OSA will improve risk perception in simulated driving.

As part of the study, faculty in the psychology department have employed the motorcycle simulator Honda Riding Trainer (HRT) using a multidimensional methodology. This methodology will encompass psychological, physical, behavioral and subjective measurements.

Estimates suggest that there are currently more than 18 million Americans who suffer from sleep apnea, and an estimated 10 million remain undiagnosed with the disorder. The vast majority of cases—more than 50%—are diagnosed in people over 40.

Currently, 84 classifications of sleep disorders exist. Sleep experts recommend that adults receive an average of eight hours of sleep per night.

Source: [University of Granada](#)

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