E79 Development of Baseline Performance Levels for Standardized Field Sobriety Tests in Sober Individuals

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Learning Overview: After attending this presentation, attendees will better understand the standard procedures used for the administration of field sobriety tests and the validity of the Horizontal Gaze Nystagmus (HGN), Walk And Turn (WAT), and One Leg Stand (OLS) tests at assessing impairment through the development of baseline performance levels in sober individuals.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by examining how sober individuals perform on the Standardized Field Sobriety Test (SFST) to determine if the currently used battery of tests is fit for its purpose of identifying an impaired driver.

According to the Substance Abuse and Mental Health Services Administration (SAMHSA), in 2013, approximately 28.7 million people admitted driving while under the influence of alcohol at some point during the year.[1] One of the ways law enforcement has chosen to combat this problem is through the use of observations and qualitative tests to determine if a driver could potentially be impaired. The qualitative tests have become known as the SFST battery. The three components of the official SFST battery include HGN, WAT, and OLS. Law enforcement officers began to use the National Highway Traffic Safety Administration's (NHTSA) SFST battery in the 1970s, and they went into widespread use in the 1980s.[2-3] The purpose of the three tests is to assist law enforcement officers in determining whether or not an individual suspected of driving while impaired by alcohol should be arrested. In this manner, SFSTs are used as a pre-arrest screen. Limited research exists regarding baseline performance levels on these tests in a sober population. Additionally, there are numerous factors that the current battery of tests does not take into account. This research project examined the prevalence of a number of these variables, including age, sleeping habits, medical/physical history, recreational drug and alcohol use, and caffeine and nicotine intake, to determine if any correlation could be found between specific physical or physiological factors and how one performs on the SFSTs.

This research project focused on using sober volunteers to develop baseline performance levels for each test to determine if the SFSTs are valid and fit for their purpose of identifying an impaired driver. The purpose was to determine if a sober population can successfully meet the current standards and criteria used by law enforcement when evaluating the SFSTs. Participants in this study completed a questionnaire describing their medical history and various lifestyle choices. After having completed the questionnaire, the SFSTs were administered by a certified SFST practitioner to each volunteer in a controlled, isolated classroom setting to prevent any external variables from affecting the results. A group of participants underwent a second round of testing in a parking lot located next to a relatively busy road. This setting included distractions that may be present during real-life, drunk driving traffic stops. A separate cohort of individuals was also tested under two conditions: sober and after consuming alcohol. After all of the tests were completed, the results were evaluated to determine if the currently used three components of the SFSTs are fit for their purpose or if they are affected by other variables that are not commonly associated with driving impairment.

Reference(s):

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2. Rubenzer S. The psychometrics and science of standardized field sobriety tests, part 1. *The Champion*. 2003 May:48.
3. Stuster J., Burns M. Validation of the standardized field sobriety test battery at BACs below 0.10 percent: Final report. *PsycEXTRA Dataset*. 1998.

Standardized Field Sobriety Test, DUI, Sober

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