

Scoping review of mobility scooter-related research studies

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Mobility scooters are three- or four-wheeled mobility devices that are frequently provided to Veterans with mobility limitations. Given the growing popularity of these scooters and concerns around their use, we conducted a scoping review to identify the topics and designs of mobility scooter research studies. Surprisingly little scooter-related research has been conducted. More research is needed in order to develop a better understanding of the frequency and causes of scooter accidents and the efficacy of interventions to improve users' driving skills, mobility, and safety. These studies would have important implications for Veterans who use these devices.

<http://dx.doi.org/10.1682/JRRD.2015.05.0084>

Multivariate assessment of subjective and objective measures of social and family satisfaction in Veterans with history of traumatic brain injury

Henry J. Orff, PhD, et al.

Reintegration of Veterans into civilian life is a complex process that may depend on multiple factors. Given the sparse research on this important issue, we explored one component of reintegration, social and family functioning, in an attempt to determine which clinical variables might have the greatest effect. Our results have significant implications and further illustrate the effect of psychiatric comorbidities (especially depression) on social and family reintegration in Veterans with a history of traumatic brain injury. Evidence-based treatment of both depression and cognitive dysfunction may therefore improve community reintegration, as well as subjective satisfaction with social and family relationships.

<http://dx.doi.org/10.1682/JRRD.2014.11.0295>

Balance confidence and activity of community-dwelling patients with transtibial amputation

Alena Mandel, MScOT, et al.

Twenty-two nonfaller patients with right or left below-knee amputation completed a balance confidence questionnaire and activity monitor for 7 days. Subjects were split into two activity groups: Low (less than 3,000 steps per day) or High (greater than 3,000 steps per day). The low activity group had much poorer balance confidence. It may be that people who are more fearful of falling chose to walk less often as a strategy to limit falling accidents. This information can help determine whether a person is truly at a low risk of falling or whether the clinician should focus on encouraging activity.

<http://dx.doi.org/10.1682/JRRD.2015.03.0044>

Haptic feedback improves surgeons' user experience and fracture reduction in facial trauma simulation

Sabine Girod, MD, DDS, PhD, et al.

Using specialized computer software, surgeons can plan complex facial bone surgery using three-dimensional X-ray data. Current systems do not allow the user to feel when virtual bone segments collide on the screen. Our new software system uses a haptic device connected to the computer, providing a sense of touch and interaction with images on the screen. In this study, the haptic system was significantly better than a nonhaptic system in virtual jaw fracture repair. The haptic system has the potential to benefit Veterans by allowing surgeons to plan complex jaw surgery in a way that is not currently possible.

<http://dx.doi.org/10.1682/JRRD.2015.03.0043>

Postconcussive symptom overreporting in Iraq/Afghanistan Veterans with mild traumatic brain injury

Sarah M. Jurick, MS, et al.

Invalid cognitive and postconcussive symptom tests create difficulty for healthcare providers to accurately diagnose, triage, and treat Veterans with a history of mild traumatic brain injury (mTBI). This study looked at 331 Operation Iraqi Freedom/Operation Enduring Freedom Veterans with a history of mTBI and found an embedded postconcussive symptom reporting measure to be related to depression, posttraumatic stress disorder, Department of Veterans Affairs (VA) service connection, and neuropsychological tests of validity. This quick, embedded measure may help clinicians diagnose and triage Veterans with a history of mTBI and comorbid mental health conditions to more appropriate services within the VA, as well as inform treatment and rehabilitation planning.

<http://dx.doi.org/10.1682/JRRD.2015.05.0094>

Everyday sitting behavior of full-time wheelchair users

Sharon E. Sonenblum, PhD, et al.

The goal of this study was to describe the sitting behavior of individuals who use a wheelchair. Pressure reliefs (fully unloading the buttocks, such as a depression lift or full front lean) and weight shifts (partially unloading the buttocks, such as front or side leans) were measured on 28 individuals in their everyday lives. We found that participants transferred out of their wheelchair 8 times per day, performed 0.4 pressure reliefs per hour, and performed 2.4 weight shifts per hour. Long segments (longer than 1–2 hours) without weight shifts were also common, but small in-seat movements occurred during that time.

<http://dx.doi.org/10.1682/JRRD.2015.07.0130>

Reliability and validity of the inertial sensor-based Timed “Up and Go” test in individuals affected by stroke

Seline Wüest, PhD, et al.

The instrumented Timed “Up and Go” test (iTUG) could potentially provide clinically useful information that cannot be derived from the original Timed “Up and Go” protocol. This study determined the reliability and validity of the iTUG using inertial sensors in patients with stroke. For test-retest reliability analysis, 14 individuals with stroke and 25 nondisabled individuals were assessed. For validity analysis, an age-matched comparison of 12 patients with stroke and 12 nondisabled controls was performed. The positive results warrant the future application of the inertial sensor-based iTUG to assess physical deficits poststroke in longitudinal study designs.

<http://dx.doi.org/10.1682/JRRD.2015.04.0065>

Interagency partnership to deliver Veteran-Directed Home and Community-Based Services: Interviews with Aging and Disability Network agency personnel regarding their experience with partner Department of Veterans Affairs medical centers

Kali S. Thomas, PhD, MA; Susan M. Allen, PhD

Veteran-Directed Home and Community-Based Services (VD-HCBS) is a consumer-directed program that began in 2009 and is jointly administered by the Veterans Health Administration and the Administration for Community Living by its Aging and Disability Network agencies (ADNAs). This article describes the perceptions of the implementation of the VD-HCBS program with partner Department of Veterans Affairs (VA) medical centers from the perspective of the ADNAs. The findings are helpful to agencies looking to form a relationship with the VA to deliver this and other programs.

<http://dx.doi.org/10.1682/JRRD.2015.02.0019>

**Residual limb skin temperature
and thermal comfort in people with amputation
during activity in a cold environment**

Ava D. Segal, MS; Glen K. Klute, PhD

Understanding how activity in realistic extreme ambient environments affects residual-limb skin temperature and perceived thermal comfort may lead to improved prosthetic systems for Veterans with lower-limb amputation. We demonstrated that current prosthetic limb-socket systems insulate the residual limb even in an environment at or below freezing temperatures.

<http://dx.doi.org/10.1682/JRRD.2015.03.0053>

**Randomized controlled trial of a brief
Internet-based intervention for families of
Veterans with posttraumatic stress disorder**

Alejandro Interian, PhD, et al.

Family support is critical for helping Veterans cope with symptoms of posttraumatic stress disorder (PTSD). We evaluated whether a 1 hour, online educational tool can help family members better support their Veterans and communicate about PTSD. We compared the results of family members who completed the educational tool versus those who did not. Those who used the tool showed improvements in their communication with Veterans. Improvements were not seen on other indicators, and one indicator seemed to indicate decreased perceived support. These results provide encouragement for the helpfulness of this tool and also highlight the need for additional research to better understand the changes that occur with this tool.

<http://dx.doi.org/10.1682/JRRD.2014.10.0257>