Validity of activity monitors in wheelchair users: A systematic review
KaLai Tsang, BS, et al.

Portable physical activity monitors have become popular for measuring daily activity among the general public. Devices have been evaluated in the ambulatory population, and they show fair accuracy. However, the performance of these monitors in manual wheelchair users remains unknown. There are many manual wheelchair users in the United States who do not engage in regular physical activity because of their physical limitations and, as a result, are more likely to develop secondary health problems, such as obesity and diabetes. Accurate measurement of physical activity in manual wheelchair users could help providers and users evaluate the effectiveness of physical activity programs. Therefore, the validity of the portable physical activity monitors in tracking wheelchair-related activities needs to be examined.

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Iraq/Afghanistan-era Veterans with back pain: Characteristics and predictors of compensation and pension award
Carine J. Sakr, MD, MPH, et al.

Back conditions are common among younger Veterans, and many receive disability compensation for them. In this study, we reviewed the medical records of Veterans applying for compensation for back conditions at the Department of Veterans Affairs Connecticut Healthcare System. Approximately 74 percent of Veterans were awarded compensation, and 62 percent had backs that did not function properly. Receiving service connection was associated with having an impaired back and not with depression or substance use or whether the Veteran worked for pay. These Veterans had considerable pain and other conditions that might benefit from treatment, and the service-connection evaluation may be an opportunity to engage these Veterans in needed services.

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Caring for our wounded warriors: A qualitative examination of health-related quality of life in caregivers of individuals with military-related traumatic brain injury
Noelle E. Carozzi, PhD, et al.

Caring for wounded warriors with traumatic brain injury is a complex experience and can both positively and negatively affect caregiver health-related quality of life (HRQOL). Focus groups were conducted to identify the diverse aspects of HRQOL that are most relevant to these caregivers. Areas of discussion that were somewhat unique to this population (relative to other caregiving populations) included anger regarding barriers to physical and mental health services (for caregivers and servicemembers), emotional suppression (putting on a brave face for others, even when things are not going well), and hypervigilance (controlling one’s behavior/environment to prevent upsetting the servicemember). Future work is needed to address the complicated issues that face these caregivers and the servicemembers for whom they provide care.

http://dx.doi.org/10.1682/JRRD.2015.07.0136

Perceived health, caregiver burden, and quality of life in women partners providing care to Veterans with traumatic brain injury
Karen L. Saban, PhD, APRN, RN, CNRN, FAHA, et al.

Females providing informal care to Veteran partners/spouses with traumatic brain injury (TBI) reported moderately low levels of quality of life (QOL) as well as symptoms associated with stress, such as...
fatigue and sleep disturbances. The most commonly reported health problems were low back pain and high blood pressure. Stress related to financial problems contributed to lower QOL. However, women who placed greater value on their roles as caregivers reported higher levels of QOL. These findings have implications for development of family-centered interventions to enhance the QOL of informal caregivers of Veterans with TBI.

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A conceptual model for vision rehabilitation

Pamela S. Roberts, PhD, OTR/L, SCFES, FAOTA, CPHQ, FNAP, et al.

Vision impairments can occur after various degrees of stroke and/or brain injury. Many stroke patients will have some form of vision dysfunction. While the negative effects can be extensive and potentially disabling, the clinical presentation can be subtle and take time to diagnose correctly. Additionally, the functional implications of visual deficits may limit recovery during standard rehabilitation and decrease overall quality of life. A conceptual model to guide clinicians and rehabilitation professionals in vision assessment and treatment could help in generating accurate diagnoses, making appropriate referrals, and providing timely care to Veterans.

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Chronic effects of exposure to high-intensity blasts: Results of tests of central auditory processing

Frederick J. Gallun, PhD, et al.

Recently blast-exposed patients have been found to perform abnormally on tests of central auditory processing. This report extends these results to Veterans who have been exposed to high-intensity blasts at least 4 yr prior to testing. Results indicated that this blast-exposed group, like those tested previously, was significantly more likely to perform in the abnormal range than was an age- and hearing-matched control group. This pattern of results suggests that auditory processing dysfunction may be a chronic effect of blast exposure even in the absence of significant peripheral hearing loss.

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Prosthesis management of residual-limb perspiration with subatmospheric vacuum pressure

Glenn K. Klute, PhD, et al.

Sweat can pool in the bottom of lower-limb prostheses when the users are out in hot weather or performing vigorous activities. When this happens, the prosthesis may become loose and insecure. We demonstrate the use of a novel prosthesis that can expel sweat but otherwise works like a currently available prosthesis.

http://dx.doi.org/10.1682/JRRD.2015.06.0121

Coping with tinnitus

Erin Martz, PhD, CRC; James A. Henry, PhD

Tinnitus (ringing or hissing in the ears not produced by external sound) has been the top service-connected disability in the Department of Veterans Affairs for the past 8 years. In this article, we focused on coping with tinnitus. Fundamentally, coping can be regarded as a person’s efforts to manage stress. Multiple research studies and interventions have been created to help individuals with tinnitus. However, these studies are flawed in several important ways. We suggest ways to improve research on coping with tinnitus in order to develop better interventions for Veterans with tinnitus. Coping is an important aspect of tinnitus research because most types of tinnitus are not curable, and helping individuals learn how to better cope with it may bring relief to those who experience significant distress because of their tinnitus.

http://dx.doi.org/10.1682/JRRD.2015.09.0176
Relationship between symptoms and family relationships in Veterans with serious mental illness

Morgan Haselden, BA, et al.

Veterans with serious mental illnesses (SMI) can benefit from family support; families can also be a source of stress. This study asked how different types of mental health symptoms correlate with how well Veterans report getting along with their families. Among 226 Veterans with SMI, those with more depression reported greater family distress and conflict and poorer family communication and problem solving. Psychotic symptoms such as hearing voices or having unusual thoughts did not uniquely contribute to the Veterans’ perceptions of family. Depression may be especially important in understanding family relationships and requires that clinicians, Veterans, and families anticipate its effect.

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Functional performance differences between the Genium and C-Leg prosthetic knees and intact knees

CPT M. Jason Highsmith, PhD, DPT, CP(USAR), et al.

Persons with transfemoral amputation (TFA) have impaired function that can potentially be improved with interventions including microprocessor knees (MPKs). The Genium offers an advanced sensory array and processing algorithms but has not been tested in functional activities. This study tested 20 persons with TFA using the Genium and C-Leg and compared them with 5 nondisabled control subjects using the Continuously Scaled Physical Functional Performance-10 assessment. The performance of persons with TFA improved with the Genium versus C-Leg and did not differ significantly from nondisabled control subjects. Nonetheless, regardless of knee, persons with TFA did not equal or surpass nondisabled control subjects in any functional domain, suggesting room for improvements in MPK functional performance.

http://dx.doi.org/10.1682/JRRD.2014.06.0149

The Veterans Health Administration’s traumatic brain injury screen and evaluation: Practice patterns

Heather G. Belanger, PhD, et al.

The Veterans Health Administration instituted a traumatic brain injury (TBI) screening and evaluation process in 2007. Studies are just beginning to emerge on its psychometric properties and performance. This study examined practice patterns associated with its use (e.g., what occurs during the evaluation) and subsequent treatments rendered. Findings suggest fairly consistent timeliness (in terms of TBI screening and evaluation) across different Department of Veterans Affairs settings; 79 percent of patients in this national sample were screened within 1 d of their initial healthcare visit, and 65 percent were evaluated via Comprehensive Traumatic Brain Injury Evaluation within 30 d of screening. Some variation in implementation processes was found.

http://dx.doi.org/10.1682/JRRD.2015.09.0187

The influence of physical and mental health symptoms on Veterans’ functional health status

Tong Sheng, PhD, et al.

We studied a sample of 120 Veterans, most having been deployed to combat. Many had some combination of traumatic brain injury, probable depression, posttraumatic stress disorder, and problems in chronic multisymptom illness clusters. Depression and posttraumatic stress symptoms were strongly associated with impairments across all areas of daily functioning. In contrast, severity of traumatic brain injury and the number of chronic multisymptom illness clusters were only associated with limitations related to bodily pain and low energy. These findings suggest that mental health problems play a more pervasive role than physical/bodily medical problems in influencing daily functioning and quality of life.

http://dx.doi.org/10.1682/JRRD.2015.07.0146
Psychometric evaluation of self-report outcome measures for prosthetic applications
Brian J. Hafner, PhD, et al.

Health surveys are well suited to measuring outcomes in people with lower-limb loss. Surveys allow patients to provide their views on their health and the care they receive. Information obtained from health surveys must be reliable so that it can guide clinical decisions. Results of this research can help clinicians select surveys best suited to prosthesis users and can aid clinicians in understanding the information that surveys provide about prosthesis users’ health and function.

http://dx.doi.org/10.1682/JRRD.2015.12.0228

Language treatment prior to anterior temporal lobe surgery: Can naming skills be preserved?
Diane L. Kendall, PhD, et al.

Epilepsy is a condition of recurrent, unprovoked seizures that affects 1 percent of the general population. That said, there is a high prevalence of epilepsy in U.S. Veterans who served in Operation Iraqi Freedom, Operation Enduring Freedom, and Operation New Dawn. In medically intractable epilepsy with unilateral temporal lobe onset, surgical removal of the anterior temporal lobe (ATL) is a highly effective treatment, with class I clinical evidence supporting its use in specific circumstances. One significant consequence of ATL treatment is difficulty recalling names of people and places. The purpose of this neurorehabilitation protocol is to remediate such linguistic deficits.

http://dx.doi.org/10.1682/JRRD.2014.12.0310

Preliminary findings of a novel measure of driving behaviors in Veterans with comorbid TBI and PTSD
Elizabeth K. Whipple, MS, et al.

Driving difficulties are commonly reported by servicemembers after they return home from combat. Traumatic brain injury (TBI), posttraumatic stress disorder (PTSD), military driver training, risk-seeking, and warzone experiences are all theorized to play a role in these driving difficulties. We surveyed 33 Operation Iraqi Freedom/Operation Enduring Freedom/Operation New Dawn combat Veterans (10 nondisabled, 23 with TBI/PTSD) to better understand Veterans’ driving experiences following military separation. We found that despite similarities in combat experience and training, drivers with TBI and PTSD reported higher levels of anxiety in response to specific roadside triggers than nondisabled combat Veterans. These data can help focus future Veteran driving rehabilitation efforts.

http://dx.doi.org/10.1682/JRRD.2015.09.0172

The effects of prosthetic ankle stiffness on stability of gait in people with transtibial amputation
Matthew J. Major, PhD, et al.

Persons with lower-limb amputation are at increased fall risk compared with nondisabled persons. This study observed the influence of prosthetic ankle stiffness on walking stability as measured by symmetry and variability. Five men walked uphill, downhill, and on a level treadmill surface while prosthetic ankle stiffness was altered between low and high stiffness. Low rearfoot stiffness reduced time to foot-flat, which was perceived as more stable by the subjects, and produced walking patterns that suggested improved stability. Clinicians may enhance gait safety of Veteran below-knee prosthesis users who are at risk of falls by recommending prosthetic feet with low ankle stiffness.

http://dx.doi.org/10.1682/JRRD.2015.08.0148
Implementation of a prediabetes identification algorithm for overweight and obese Veterans

Tannaz Moin, MD, MBA, MSHS, et al.

Type 2 diabetes prevention is an important national goal, particularly for the Veterans Health Administration, in which one in four Veterans has diabetes. However, most Americans do not know whether they have prediabetes. When designing and implementing a prediabetes screening program in a health system, decisions related to logistical factors such as who to screen, when to screen, and how to screen may have a significant effect on screening program reach as well as on rates of detected prediabetes.

http://dx.doi.org/10.1682/JRRD.2015.06.0104

Cognitive reserve and executive function: Effect on judgment of health and safety

Kristin H. Hinrichs, MS, et al.

This study explored the relationships between intellectual ability, problem-solving skills, and judgment of health and safety issues among a sample of older Veterans with chronic medical conditions. Results of our tests showed that Veterans with high intellect made healthy and safe decisions, even with impaired problem-solving skills. However, among Veterans with low intellect, intact problem-solving skills were necessary to make appropriate health and safety decisions. These results will help Veterans, families, and doctors create individualized discharge plans for older Veterans that could increase the likelihood of safe and healthy living with conservation of independence when possible.

http://dx.doi.org/10.1682/JRRD.2015.04.0073

Reliability and factor structure of the Hospital Anxiety and Depression Scale in a polytrauma clinic

Laura Boxley, PhD, et al.

This article is intended for mental health clinicians who work with Veterans. Our research shows that the Hospital Anxiety and Depression Scale is a short, reliable measure of symptoms of anxiety and depression in Veterans who are referred to polytrauma clinics.

http://dx.doi.org/10.1682/JRRD.2015.05.0088

Sociotechnical probabilistic risk modeling to predict injurious falls in community living centers

Gail Powell-Cope, PhD, ARNP, FAAN, et al.

Researchers used a sophisticated engineering risk modeling technology called sociotechnical probabilistic risk assessment to model serious injurious fall risks in nursing home patients. The injurious fall-risk models included several staff-identified high fall-risk patient transfer situations. Fall-risk clinical situations involved patient transfers, wheelchairs, alarm technologies, and patient and staff behaviors. The analyses showed that a 26 percent reduction in injurious falls could be achieved by simultaneously addressing staff response time to alarms identifying unassisted patient transfer attempts, installing wheelchair brake locks, improving wheelchair maintenance, and enhancing proper patient transfer techniques.

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