



Archives of Physical Medicine and Rehabilitation

Editors' Selections From This Issue: Volume 101 / Number 2 / February 2020

TOP PAPERS IN THE ARCHIVES

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REHABCAST

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The Archives of Physical Medicine and Rehabilitation at 100: A Century of Authorship

Dr. Marcel Dijkers describes the authors who have contributed to the Archives of Physical Medicine and Rehabilitation (APM&R) over the 100 years of its existence. Dr. Dijkers found that 4933 authors contributed to 1787 articles. The number of authors per article increased from 1.1 on average in 1922 to 5.8 in 2017. The percentage of women authors grew from under 5% to about 40%. While over 90% of authors were from the United States in APM&R's early years, this percentage went into a steep decline beginning in about 1997, and now is around 35%. He concludes that the *Archives* has seen major transformations in the nature of its contributors over a century of publication; many of these parallel the changes seen in other areas of health care and medical science, but some characteristics and shifts appear to be unique. ■ SEE THE FULL ARTICLE AT PAGE 179

A Randomized Controlled Trial of the Lateral Push-Off Skater Exercise for High-Intensity Interval Training Versus Conventional Treadmill Training

Soh and colleagues examined the therapeutic effects of the lateral push-off skater exercise versus conventional treadmill training on health-related quality of life, cardiorespiratory fitness (CRF), and balance. People with minor stroke participated in either an intervention group (n=18) or a control group (n=18). The intervention group performed thirty-minute sessions of the skater exercise 3 times weekly for 12 weeks. The control group participated in conventional treadmill aerobic exercise. Between-group comparisons demonstrated greater improvements in Euro-Quality of Life-5 Dimension, peak oxygen consumption, peak oxygen pulse, peak minute ventilation, Dynamic Gait Index, and Berg Balance Scale in the intervention group over the control group. These improvements were sustained at 4 weeks after the intervention. The authors conclude that the skater exercise improved health-related quality of life, cardiorespiratory fitness, and balance in minor stroke patients more effectively than conventional treadmill-based aerobic exercise. ■ SEE THE FULL ARTICLE AT PAGE 187

Home-based Upper Extremity Stroke Therapy Using a Multi-user Virtual Reality Environment: A Randomized Trial

Theilbar and colleagues compared participation and the subjective experience of participants in both home-based multi-user (MU) virtual reality (VR) therapy and home-based single-user (SU) VR therapy. Stroke survivors with chronic upper extremity impairment (n=20) participated in 4 weeks of in-home treatment using a custom, multi-user virtual reality system. The order of presentation of SU and MU versions was randomized such that participants were divided into two groups, first multi-user (FMU) and first single-user (FSU). Subjectively, participants rated experiences with the SU and MU modes similarly. Fugl-Meyer Upper-Extremity (FMUE) score improved significantly across all participants. The authors conclude that the ability to alternate between SU and MU modes may be beneficial for a number of users and facilitate the customization of therapy paradigms. ■ SEE THE FULL ARTICLE AT PAGE 196

Low-Intensity Versus High-Intensity Home-based Treadmill Training and Walking Attainment in Young Children With Spastic Diplegic Cerebral Palsy

Mattern-Baxter and colleagues compared the effect of low-intensity (LI) versus high-intensity (HI) treadmill training (TT) on walking attainment and overall walking activity in children with cerebral palsy (CP). Nineteen children with spastic diplegic CP participated in either LI TT (2x/week for 6 weeks) (n=10) or HI TT (10x/week for 6 weeks) (n=9). The TT was carried out by the families with weekly instruction by the researchers. Children in the HI group made relatively smaller improvements in Gross Motor Function Classification System E scores immediately following the intervention as compared to children in the LI group but showed similar skills at follow-up assessments. In contrast, children in the HI group showed more accomplished walking independence compared to children in the LI group. The researchers conclude that a more conventional twice-weekly dosage of TT leads to similar results as a higher dosage and can more easily be implemented into clinical practice. ■ SEE THE FULL ARTICLE AT PAGE 204