

The effect of “Structured Neuro-muscular Postural Training” in balance modulation and fall prevention strategy in osteoarthritis knee

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Article Authorship & Affiliation Details

Communication Date: Feb. 1, 2015

Acceptance Date: Feb.. 10, 2015

UAIC: 97302332020

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Key Words: Modified WOMAC (Western Ontario McMaster Universities Osteoarthritis Index (Indian); Structured Neuromuscular postural training; Timed Up and Go test; Berg Balance test

To cite this article:

Singh, O. P.; Gambhir, I. S.; Singh, Gaurav; Saraf, S. K.; Deshpande; S.B. and Singh, T.B. The effect of “Structured Neuro-muscular Postural Training” in balance modulation and fall prevention strategy in osteoarthritis knee. [online]. *Journal of Exercise Science and Physiotherapy*. Vol. 11, No. 1, June 2015: 43-51.

Availability:

Abstract: <http://www.efha.in/wp-content/uploads/2015/01/ABSTRACT-UAIC-97302332020.1.pdf>
Full Text: <http://www.efha.in/wp-content/uploads/2015/01/FULL-TEXT-UAIC-97302332020.pdf>

Abstract

Background and purpose: Postural impairments and functional limitations are linked to osteoarthritis knee adults. The purpose of this study was to identify the balance & postural impairments in osteoarthritis adults and compare the efficacy of two treatment strategies, Structured Neuromuscular Postural Training (SNPT) with conventional treatment (CT). **Methods:** In a prospective study design, Fifty-seven osteoarthritis knee subjects were evaluated and analyzed for balance variables such as viz. Timed up and go test (TUG), Berg balance test (BBT), Modified WOMAC (MW) and its subgroups pain (WP), stiffness (WS) and physical function (WPF) at the baseline and after 6-weeks of treatment. Data were analyzed to determine treatment efficacy. **Results:** The application of SNPT had statistical significance for the balance variable TUG, at baseline and 6 weeks follow up for both pre elderly and elderly subjects. Further, SNPT shows non- statistically significant higher scores for other qualitative balance variables in pre elderly osteoarthritis knee. However, conventional groups demonstrated better efficacy for the qualitative parameters MS, WS and WPF than SNPT in elderly group. **Conclusion:** SNPT treatment intervention has better efficacy for pre elderly and conventional for elderly in osteoarthritis knee subjects. Hence present study concludes that one should use treatment strategy depending upon the age i.e. SNPT intervention in pre elderly and conventional in elderly subjects. Further, blending strength training (CT) with balance training (SNPT) may have better functional outcome for individuals >40 years of age.

Introduction

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