



Home

Mission

Scope

Editorial Board

For Reviewers

Submission

Statistics

Contact

Back Issues



The Effect of Chinese Yuanji-Dance on Dynamic Balance and the Associated Attentional Demands in Elderly Adults

Wen-Lan Wu¹, Ta-Sen Wei², Shen-Kai Chen^{1,3}, Jyh-Jong Chang⁴, Lan-Yuen Guo¹, Hwai-Ting Lin¹

[More Information >>](#)

¹ Department of Sports Medicine, Kaohsiung Medical University, Taiwan

² Department of Rehabilitation Medicine, Changhua Christian Hospital, Taiwan

³ Department of Orthopaedic, Kaohsiung Medical University, Taiwan

⁴ Department of Occupational Therapy, Kaohsiung Medical University, Taiwan

Wen-Lan Wu

Department of Sports Medicine, Kaohsiung Medical University Kaohsiung City, TAIWAN 701
 Email: wenlanwu@kmu.edu.tw

Received: 17-06-2009 -- Accepted: 11-01-2010 -- Published (online): 01-03-2010

ABSTRACT

Walking performance changes with age. This has implications for the problem of falls in older adults. The aim of this study was to investigate the effects of Yuanji-Dance practice on walking balance and the associated attention demand in healthy elderly. Fifteen community-dwelling elderly (comparison group, no regular exercise habit) and fifteen Yuanji-Dance elderly (exercise group, dancing experience: 5.40 ± 1.95 years), aged 60-70 years, were included in this study. The subjects in exercise group participated in a 90-minute Yuanji-Dance practice at least three times per week and the comparison group continued their normal daily physical activity. Walking balance measures (including walking velocity, step length, step width, and percentage of time spent in double limb support, COM velocity and COM-COP inclination angles) and attentional demand tests (button reaction time and accuracy) were conducted under different conditions. Our results showed that stride lengths, walking velocities, peak A/P velocities (AP V) of the COM, medial COM-COP inclination (M angle) angles, reaction time, and accuracy decrease significantly as the dual-task (walking plus hand button pressing tasks) applied for either the comparison or exercise groups. These results demonstrated that walking performance is attenuated in our elderly participants as the cognitive tasks applied. Analysis also identified a significantly faster RT for our exercise group both in standing and walking conditions. This may indicate that physical exercise (Yuanji-Dance) may have facilitating effects on general cognitive and perceptual- motor functions. This implies that Chinese Yuanji-Dance practice for elderly adults may improve their personal safety when walking especially under the condition of multiple task demand.

Key words: Yuanji-Dance, exercise, balance, attention

Key Points

- The purpose of this study was to investigate the training effects of a Chinese traditional exercise, Yuanji-Dance, on walking balance and the associated attention demand in the healthy elderly.

Article Tools

- PDF Download
- Full Text
- How to Cite
- Citations in ScholarGoogle
- Email link to this article

Hwai-Ting Lin,
 Lan-Yuen Guo, Jyh-Jong Chang, Shen-Kai Chen, Wen-Lan Wu, Ta-Sen Wei, (2010) The Effect of Chinese Yuanji-Dance on Dynamic Balance and the Associated Attentional Demands in Elderly Adults. *Journal of Sports Science and Medicine (09), 119 - 126.*

Your name:
 Your E-mail:
 Recipient's E-mail:

- Statistics
- New content alert
- Tweet

Related articles by
[Yuanji-Dance](#)
[exercise](#)
[balance](#)
[attention](#)

Other articles by
[Wen-Lan Wu](#)
[Ta-Sen Wei](#)
[Shen-Kai Chen](#)