

# Cognitive, Mobility and Balance Performance of Elders with Dementia

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## Introduction

There is empirical support for exercise in improving physical and mental function of elders with dementia. Nevertheless, relatively little has been done to examine physical performance and intervention strategy for this special population. To better understand and monitor physical healthy profile of elders with dementia, a set of reliable and valid tests is mandatory so that more appropriate and specific exercise can be prescribed to meet their individual health needs.

## Purpose of the Project

This study examined reliability of few commonly used clinical measurements, and their abilities in differentiating the cognitive, mobility and balance performance of elders with dementia as compared to those of healthy peers and frail older adults.

## Materials and Methods

103 subjects composed of 53 healthy, 22 frail, and 28 elders with dementia were assessed twice within a two-week period using the Chinese Mini-Mental State Test (CMMSE), handgrip, Timed-chair-rise, Timed-Up and Go (TUG) , Berg Balance Scale (BBS), scan test and 2 or 6 minutes walk test.

## Results

All measurements exhibited high test-retest reliability. TUG and BBS scores of elders with dementia were similar to those of the frail elders but were significantly lower than those of healthy elders ( $p$  values  $<0.0001$ ) to an extent that they were classified as "at high risk of fall". Poorer cognitive function were found to correlate with lower mobility (higher TUG scores) and balance function (lower BBS scores).

## Conclusions

Findings of study suggest provisions of appropriate physical intervention to address the balance and mobility impairments of elders with dementia to promote activity and prevent injury for a quality life.

