International Centre for Allied Health Evidence

University of South Australia

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iCAHE

A member of the Sansom Institute

*i*CAHE JC Critical Appraisal Summary

Journal Club Details

Journal Club location	**Flinders Medical Centre**
JC Facilitator	**Alexandra Lekis**
JC Discipline	**Physiotherapy**

Question

"Which outcome measures best predict falls in a geriatric population and what is their validity/reliability/specificity/sensitivity?"

Review Question/PICO/PACO

P: Patients aged >65 years

I/E: Outcome measure predicting falls

C: N/A

O: No. of Falls

Article/Paper

Hofheinz M, Mibs M. The prognostic validity of the timed up and go test with a dual task for predicting the risk of falls in the elderly. Gerontology and geriatric medicine. 2016 Mar 12;2:2333721416637798.

Please note: due to copyright regulations CAHE is unable to supply a copy of the critically appraised paper/article. If you are an employee of the South Australian government you can obtain a copy of articles from the DOHSA librarian.

Article Methodology: Cohort Study

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Ques No.	Yes	Can't Tell	No	Comments
1	✓			**Did the study address a clearly focused issue?** The aim is to examine the prognostic validity of the Timed Up and Go Test with a cognitive and a manual dual task for predicting the risk of falls.
2	✓			**Did the authors use an appropriate method to answer their question?** A follow-up study was performed. The data were recorded for 120 volunteers in an outpatient physiotherapy center, with a 12-month follow-up. The sample included 120 elderly men and women aged 60 to 87 years (M age = 72.2 years) living at home. **Is it worth continuing?** Yes
3	✓			**Was the cohort recruited in an acceptable way?** Community-dwelling older persons were recruited by means of information letters, posters in doctors' practices, and get-togethers for elderly people in a community center and therapy center. In total, 130 persons attended a personal informational talk regarding the study in the therapy center. We made appointments for testing with 128 persons, and two persons elected not to participate in the study.
4	✓			**Was the exposure accurately measured to minimize bias?** The participants in the study must, to their knowledge, have been free of neurological or musculoskeletal diagnoses that could influence the fall risk and the measurement results including a cerebrovascular insult, Parkinson's disease, a transitory ischemic attack, and cardiovascular problems.
5	✓			**Was the outcome accurately measured to minimize bias?** At the baseline, we used an intake questionnaire (the Health and Physical Activity Questionnaire of the Division of Physical Therapy, University of Washington; the Mini Mental State Examination; and the Falls Efficacy Scale–International Version), the BBS, TUG, TUGman, and TUGcog. The questionnaires, the Berg Balance Scale (BBS), and all of the TUG tests were administered in different rooms by three blind raters. The participants did not know the results of their individual tests during the testing day, so that they could not inform the rater. The TUG, TUGman, and TUGcog were assessed 3 times, in random order, after a practice trial by the participants. In the 1-year follow-up after the baseline exploration, the participants were interviewed by phone monthly with a standardized questionnaire regarding any falls they had experienced, including the causes and circumstances of any falls that occurred. The questionnaire that had been used at the baseline was administered for the follow-up questionnaire to evaluate the occurrence of falls
6			✓	**Have the authors identified all important confounding factors? Have they taken account of the confounding factors in the design and/or analysis?** Identified the limitation of gender difference, but no other confounding factors were identified or addressed as part of the design or analysis.

7	✓			**Was the follow up of subjects complete enough?** 1-year follow-up was utilized for this study, which is appropriate for the type of study (cohort) and what is being assessed (risk of falls)
8				**What are the results of this study?** In the 12-month follow-up, 37 persons (30.8%) had a locomotive fall. The receiver operating characteristic (ROC) curve shows significant results for the TUGcog. The area under the curve is 0.65 (p = .008), with a 95% confidence interval (CI) = [0.55, 0.76]. For the TUGman, the area under the curve is 0.57 with a 95% CI = [0.45, 0.68], which is not significant (p = .256). For the TUG, the area under the curve is 0.58, which is not significant (p = .256), 95% CI = [0.47, 0.69]. The TUGcog is a valid prognostic assessment to predict falls in community-dwelling elderly people
9				**How precise are the results?** 95% Confidence Intervals and P Values were both reported.
10	Journal Club to discuss			**Do you believe the results?**
11				**Can the results be applied to the local population?** **CONTEXT ASSESSMENT (please refer to attached document)** – *Infrastructure* – *Available workforce (? Need for substitute workforce?)* – *Patient characteristics* – *Training and upskilling, accreditation, recognition* – *Ready access to information sources* – *Legislative, financial & systems support* – *Health service system, referral processes and decision-makers* – *Communication* – *Best ways of presenting information to different end-users* – *Availability of relevant equipment* – *Cultural acceptability of recommendations* – *Others*
12				**Were all important outcomes considered?**
13				**Are the benefits worth the harms and costs?**
14				**What do the study findings mean to practice (i.e. clinical practice, systems or processes)?**
15				**What are your next steps?** ***ADOPT, CONTEXTUALISE, ADAPT*** **And then (e.g. evaluate clinical practice against evidence-based recommendations; organise the next four journal club meetings around this topic to build the evidence base; organize training for staff, etc.)**
16				**What is required to implement these next steps?**

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