Search Results

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3. MEDLINE; Tinetti.af; 356 results.
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5. MEDLINE; 3 AND 4; 7 results.
6. MEDLINE; 1 AND 3; 53 results.
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18. CINAHL; *BALANCE, POSTURAL/; 2671 results.
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1. Towards objective evaluation of balance in the elderly: validity and reliability of a measurement instrument applied to the Tinetti test.

Abstract: The aim of the present study was the validation of an instrument for evaluating balance, applied to the Tinetti test. Trunk inclination was measured by inclinometers during the Tinetti test in 163 healthy participants scoring 28/28 in the Tinetti scale (controls: 92 women, 71 men; age 19-85 years), and 111 residents in old people's homes, able to autonomously perform the test, but scoring less than 28/28 (test group: 78 women, 33 men; age 55-96 years). Trunk inclination was quantified by 20 parameters, whose standardized values were summed and provided an overall performance index (PTOT). PTOT reliability was evaluated by Cronbach's alpha, and its validity by item scale correlation, discriminant validity and concurrent validity. Influence of age and sex was assessed by a logistic regression model. Repeatable and consistent measurements were obtained (Cronbach's alpha=0.88). Parameter distribution was significantly different in controls and patients ($P<0.001$). Optimal PTOT threshold for discriminating between normal and abnormal performance (153.9/200) corresponded to sensitivity of 88.3%, specificity of 84.7% and area under the receiver operating characteristics curve of 0.93. PTOT correlated with the Tinetti scale score, its partial, balance-related score and Barthel's Index, but not with the Mini Mental State score. PTOT correlated with age and level of performance but not with sex; correlation with age did not prevent the possibility of discriminating between different levels of performance and between normal and abnormal performance. The instrument provided objective discrimination between different performance levels, in particular, between normal and altered performance.

Publication Type:	journal article
Subject Headings:	Balance, Postural
	Clinical Assessment Tools
	Geriatric Assessment
	Instrument Validation
	Adult
	Aged
	Aged, 80 and Over
	Barthel Index
	Coefficient Alpha
	Concurrent Validity
	Confidence Intervals
	Data Analysis Software
	Descriptive Statistics
	Discriminant Validity
	Female
	Funding Source
	Internal Consistency
	Italy
	Logistic Regression
	Male
	Middle Age
	P-Value
	ROC Curve
	Scales
	Sensitivity and Specificity
	T-Tests
	Two-Tailed Test
	Validation Studies
	Human

Source: CINAHL

2. Clinimetric properties of the Performance-Oriented Mobility Assessment.

Citation:	Physical Therapy, 01 July 2006, vol./is. 86/7(944-954), 00319023
Author(s):	Faber MJ; Bosscher RJ; van Wieringen PC
Language:	English

Abstract: BACKGROUND AND PURPOSE: The Performance-Oriented Mobility Assessment (POMA) is a widely used instrument that provides an evaluation of balance and gait. It is used clinically to determine the mobility status of older adults or to evaluate changes over time. To support the use of the POMA for these purposes, the clinimetric properties (in particular, responsiveness) were determined. SUBJECTS: Participants (78% female; mean age=84.9 years) were living in either self-care or nursing-care residences. Concurrent and discriminant validity were assessed with the total group (N=245), whereas reliability and responsiveness were determined with a subsample (n=30). Fall-related predictive validity was assessed with a subsample of 72 participants. METHODS: In addition to the POMA, several reference performance tests were administered. The POMA was assessed on 2 consecutive days by 2 raters (observers). The analyses included the calculation of Spearman rank correlation coefficients (R), limits of agreement (LOA) with Bland-Altman plots, minimal detectable changes at the 95% confidence level (MDC(95)), and sensitivity and specificity with regard to predicting falls. When possible, findings for the total scale (POMA-T) were complemented by findings for its balance subscale (POMA-B) and its gait subscale (POMA-G). RESULTS: The interrater and test-retest reliability for the POMA-T and the POMA-B were good (R=.74-.93), whereas for the POMA-G, the reliability values, although high as well, were systematically slightly lower (R=.72-.89). The Spearman correlations with the reference performance tests (R=; .64; - ; .68;) indicated satisfactory concurrent validity for the POMA-T and the POMA-B, but the corresponding findings for the POMA-G (R=; .52; - ; .56;) were less convincing. The discriminant validity values of the 3 scales were about the same. The LOA for the POMA-T were on the order of -4.0 to 4.0 for test-retest agreement and -3.0 to 3.0 for interrater agreement. On the basis of the MDC(95) values, it was concluded that changes in POMA-T scores at the individual level should be at least 5 points and that those at the group level (n=30) should be at least 0.8 point to be considered reliable. Even when optimal cutoff points were used, sensitivity and specificity values (varying between 62.5% and 66.1%) for the POMA-T as well as for its 2 subscales indicated poor accuracy in predicting falls. DISCUSSION AND CONCLUSION: The POMA-T and its subscale POMA-B have adequate reliability and validity for assessing mobility in older adults. The POMA-T is useful for demonstrating intervention effects at the group level. Changes within subjects, however, should be at least 5 points before being interpreted as reliable changes. The accuracy of the POMA-T in predicting falls is poor.

Publication Type:	journal article
Subject Headings:	Balance, Postural
	Geriatric Assessment
	Physical Mobility
	Instrument Validation
	Scales
	Psychometrics
	Clinical Assessment Tools
	Gait Analysis
	Activities of Daily Living
	Validation Studies
	Wilcoxon Signed Rank Test
	Kruskal-Wallis Test
	Mann-Whitney U Test
	Data Analysis Software
	Spearman's Rank Correlation Coefficient
	Test-Retest Reliability

Interrater Reliability
Intrarater Reliability
Concurrent Validity
Discriminant Validity
Predictive Validity
Human

Source:	CINAHL
Full Text:	Available in *fulltext* at *Highwire Press*
	Available in *fulltext* at *EBSCO Host*
	Available in *fulltext* at *ProQuest*

3. Performance of balance impaired elders on three balance tests under two visual conditions.

Citation:	Journal of Geriatric Physical Therapy, 2006, vol./is. 29/1(5-9), 1539-8412;1539-8412 (2006)
Author(s):	Huang M; Burgess R; Weber M; Greenwald N
Institution:	Department of Physical Therapy, School of Health Related Professions, The University of Mississippi Medical Center, 2500 N State St, Jackson, MS 39216, USA. mhuang@shrp.umsmed.edu
Language:	English

Abstract: PURPOSE: This study compared differences in balance measures among elderly adults with different degrees of balance impairments under different visual conditions. METHODS: This study was conducted on 89 adults (> 60 years) with balance impairments. Subjects were divided into 3 groups based on the initial Tinetti score: low risk of fall (LRF, n=29), moderate risk of fall (MRF, n=30) and high risk of fall (HRF, n=30). Three balance measures-Tinetti, Timed-up and Go (TUG), and Functional Reach-were tested with 2 different visual conditions: eyes open with normal vision (EONV) and eyes open with blurred vision (EOBV). All data were analyzed using repeated measures analysis of variance. RESULTS: Subjects with EOBV had significantly decreased Tinetti ($P < .01$) and Functional Reach ($P < .01$) scores and increased TUG ($P < .01$) scores regardless of fall group. Subjects in the LRF group performed better in all 3 tests than those in MRF ($P < .01$) and HRF ($P < .01$) groups. Subjects in the MRF group performed better in all 3 tests than those in HRF ($P < .01$). There were significant interactions between vision and risk of falls in Tinetti ($P < .01$) and TUG ($P < .01$) scores. However, there was no significant interaction between vision and risk of falls in Functional Reach ($P > .05$) scores. CONCLUSION: Blurred vision significantly altered all 3 balance measure scores in all risk groups. However, blurred vision had a greater influence on Tinetti and TUG scores than Functional Reach scores in subjects with higher risk of falls.

Country of Publication:	United States
Publication Type:	Journal Article
Subject Headings:	*Accidental Falls/pc [Prevention & Control]
	Aged
	Aged, 80 and over
	*Aging/ph [Physiology]
	Analysis of Variance
	Biomechanics
	Female
	*Geriatric Assessment/mt [Methods]
	Humans
	Male
	Middle Aged
	*Postural Balance/ph [Physiology]
	Risk Factors
	*Vision Disorders/pp [Physiopathology]
	Vision, Ocular

Source:	MEDLINE
Full Text:	Available in *fulltext* at *ProQuest*

4. A comparison of gait assessment methods: Tinetti and GAITRite electronic walkway.

Citation:	Journal of the American Geriatrics Society, November 2005, vol./is. 53/11(2044-5), 0002-8614;0002-8614 (2005 Nov)
Author(s):	Shore WS; deLateur BJ; Kuhlemeier KV; Imteyaz H; Rose G; Williams MA
Language:	English
Country of Publication:	United States
Publication Type:	Comparative Study; Letter; Research Support, Non-U.S. Gov't
Subject Headings:	Aged
	Analysis of Variance
	Cerebrospinal Fluid Shunts
	*Exercise Test/is [Instrumentation]
	Exercise Test/sn [Statistics & Numerical Data]
	*Gait
	*Gait Disorders, Neurologic/di [Diagnosis]
	Gait Disorders, Neurologic/et [Etiology]
	*Geriatric Assessment/sn [Statistics & Numerical Data]
	Humans
	Hydrocephalus, Normal Pressure/di [Diagnosis]
	Hydrocephalus, Normal Pressure/et [Etiology]
	Postoperative Complications/di [Diagnosis]
	*Postural Balance
	*Signal Processing, Computer-Assisted/is [Instrumentation]
	Statistics as Topic
Source:	MEDLINE
Full Text:	Available in *fulltext* at *EBSCO Host*

5. Prevalence and severity of gait disorders in Alzheimer's and non-Alzheimer's dementias.

Citation:	Journal of the American Geriatrics Society, 01 October 2005, vol./is. 53/10(1681-1687), 00028614
Author(s):	Allan LM; Ballard CG; Burn DJ; Kenny RA
Language:	English
Abstract:	Objectives: To compare the prevalence, severity, and type of gait and balance disorders in Alzheimer's disease (AD), vascular dementia (VaD), Parkinson's disease with dementia (PDD), dementia with Lewy bodies (DLB), Parkinson's disease without dementia (PD), and age-matched controls. Design: Cross-sectional. Setting: Secondary care clinics in geriatric psychiatry, neurology, and geriatrics. Participants: Two hundred forty-five participants aged 65 and older (AD, n=40; VaD, n=39; PDD, n=46; DLB, n=32; PD, n=46; and controls, n=42). Measurements: Prevalence and severity of gait and balance disorders were assessed using the Tinetti gait and balance scale. The types of gait disorders in each diagnostic group were classified using the Nutt et al. classification. Results: Gait and balance disorders were more common with PDD (93%), VaD (79%), and DLB (75%) than with PD (43%) and AD (25%) and in controls (7%). The risk of gait and balance disorder was higher in the non-Alzheimer's dementia groups (VaD, PDD, and DLB) than in the AD group (odds ratio=15 (95% confidence interval=6-37). If a gait disorder was present in mild dementia (Cambridge Examination for Mental Disorders of the Elderly cognitive subsection score >65), this was diagnostic of non-Alzheimer's dementia, with sensitivity of 78% and specificity of 100%. Non-Alzheimer's dementia groups had worse Tinetti gait and balance scores than the AD group (all P<.001). The types of gait disorders discriminated between non-Alzheimer's dementias. Conclusion:

The findings support the idea that gait and balance assessment may augment the diagnostic evaluation of dementia.

Publication Type:	journal article
Subject Headings:	Alzheimer's Disease
	Balance, Postural
	Balance, Postural
	Dementia
	Gait Analysis
	Gait
	Geriatric Assessment
	Movement Disorders
	Movement Disorders
	Parkinson Disease
	Accidental Falls
	Aged
	Aged, 80 and Over
	Analysis of Variance
	Clinical Assessment Tools
	Comparative Studies
	Confidence Intervals
	Cross Sectional Studies
	Female
	Fisher's Exact Test
	Kruskal-Wallis Test
	Logistic Regression
	Male
	Mann-Whitney U Test
	Multiple Regression
	Neuropsychological Tests
	Odds Ratio
	Scales
	Severity of Illness Indices
	Severity of Illness
	T-Tests
	Human
Source:	CINAHL
Full Text:	Available in *fulltext* at *EBSCO Host*

6. [Evaluation of balance in neurologic and geriatric disorders]. [French] Evaluation de l'equilibre en pathologie neurologique et geriatrique.

Original Title:	Evaluation de l'equilibre en pathologie neurologique et geriatrique.
Citation:	Annales de Readaptation et de Medecine Physique, July 2005, vol./is. 48/6(317-35), 0168-6054;0168-6054 (2005 Jul)
Author(s):	Perennou D; Decavel P; Manckoundia P; Penven Y; Mourey F; Launay F; Pfitzenmeyer P; Casillas JM
Institution:	Poles reeducation-readaptation et geriatrie, CHU et Inserm ERM207, 23, rue Gaffarel, BP 77908 F, 21079 Dijon cedex, France. dominic.perennou@chu-dijon.fr
Language:	French
Abstract:	OBJECTIVE: To analyse the clinical usefulness and metrological properties of the main techniques and indices used to assess balance disorders. METHODS: More than 4000 abstracts referenced in MEDLINE and dealing with postural control and postural disorders (wide screening) were reviewed to determine the main postural techniques and indices used in a clinical context. We retained abstracts with a high citation frequency and those with interesting findings. Corresponding key words were identified for a specific search of articles that we analysed. RESULTS: Postural assessment tools can be classified as scales of ordinal items, tests based on metric or chronometric measurement,

posturography, and verticality perception. These techniques are complementary, and their association is recommended in a clinical context. Regarding generic tools, the Falls-related Efficacy Scale (FES) and the Activities-specific Balance Confidence scale (ABC scale) would be enhanced if comparatively analysed and reworked to allow for a feasible and reliable assessment of the fear of falling. Despite a wide diffusion in numerous postural fields worldwide, the Berg Balance Scale (BBS) and the Functional Reach Test (FRT) do not have the required criteria to remain the gold standards they were in the 1990s. Static posturography should be normalised and yield more reliable indices. The clinical relevance of the subjective assessment of visual, haptic, and postural verticals are questionable, especially to explain postural disability. Regarding specific tools, the Tinetti test (TT) and the Time Up and Go test (TUG) are the most suited to assess postural capacities in very elderly people, in whom the predictive validity of the postural assessment of falls is still modest. In stroke patients, the Postural Assessment Scale for Stroke (PASS), posturography, lateropulsion assessment, and vertically perception are interesting and complementary techniques. Postural assessment relies mainly upon the 5 postural items of the Unified Parkinson Disease Rating Scale (UPDRS) in people with Parkinson disease and upon the Romberg test and posturography in patients with cerebellar or proprioceptive ataxia. Some novel postural scales for patients with multiple sclerosis or spinal cord injury are also emerging. CONCLUSION: Among numerous tools that contribute to the assessment of postural disorders, only the most recent ones (developed in the last 10 years) have undergone complete validation. It is now crucial to compare these tools, not only in terms of reproducibility and internal consistency, but also overall, in terms of feasibility, responsiveness, and predictive validity for a given population.

Country of Publication:	France
Publication Type:	English Abstract; Journal Article; Review
Subject Headings:	Aged *Disability Evaluation *Gait Disorders, Neurologic/pp [Physiopathology] *Gait Disorders, Neurologic/rh [Rehabilitation] *Geriatric Assessment Humans *Postural Balance/ph [Physiology] Posture/ph [Physiology]
Source:	MEDLINE

7. Controlled whole body vibration to decrease fall risk and improve health-related quality of life of nursing home residents

Citation:	Archives of Physical Medicine and Rehabilitation, February 2005, vol./is. 86/2(303-7), 0003-9993 (2005 Feb)
Author(s):	Bruyere O; Wuidart MA; Di Palma E; Gourlay M; Ethgen O; Richy F; Reginster JY
Language:	English
Abstract:	OBJECTIVE: To investigate the effects of whole body vibration in the elderly. DESIGN: Randomized controlled trial. SETTING: Nursing home. PARTICIPANTS: Forty-two elderly volunteers. INTERVENTIONS: Six-week vibration intervention plus physical therapy (PT) (n=22) or PT alone (n=20). MAIN OUTCOME MEASURES: We assessed gait and body balance using the Tinetti test (maximum scores of 12 for gait, 16 for body balance, 28 for global score), motor capacity using the Timed Up & Go (TUG) test, and health-related quality of life (HRQOL) using the Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36). RESULTS: After 6 weeks, the vibration intervention group improved by a mean +/- standard deviation of 2.4+/-2.3 points on the gait score compared with no score change in the control group (P <.001). The intervention group improved by 3.5+/-2.1 points on the body balance score compared with a decrease of 0.3+/-1.2 points in the control group (P <.001). TUG test time decreased by 11.0+/-8.6 seconds in the treated group compared with an increase of 2.6+/-8.8 seconds in the control group (P <.001). The intervention group had significantly greater improvements

from baseline on 8 of 9 items on the SF-36 compared with the control group. CONCLUSIONS: Controlled whole body vibration can improve elements of fall risk and HRQOL in elderly patients.

Publication Type:	Randomized Controlled Trial; Clinical Trial

Subject Headings:	Accidental falls
	Vibration
	Gait analysis
	Balance
	Health status
	Physiotherapy
	Treatment outcome
	Nursing homes
	Prevention
	Risk
	Aged
	Clinical assessment scales
	Rehabilitation

Source:	AMED

8. Detection and management of falls and instability in vulnerable elders by community physicians.

Citation:	Journal of the American Geriatrics Society, 01 September 2004, vol./is. 52/9(1527-1531), 00028614

Author(s):	Rubenstein LZ; Solomon DH; Roth CP; Young RT; Shekelle PG; Chang JT; MacLean CH; Kamberg CJ; Saliba D; Wenger NS

Language:	English

Abstract:	OBJECTIVES: To investigate quality of care for falls and instability provided to vulnerable elders. DESIGN: Six process of care quality indicators (QIs) for falls and instability were developed and applied to community-living persons aged 65 and older who were at increased risk of death or decline. QIs were implemented using medical records and patient interviews. SETTING: Northeastern and southwestern United States. PARTICIPANTS: Three hundred seventy-two vulnerable elders enrolled in two senior managed care plans. MEASUREMENTS: Percentage of QIs satisfied concerning falls or mobility disorders. RESULTS: Of the 372 consenting vulnerable elders with complete medical records, 57 had documentation of 69 episodes of two or more falls or fall with injury during the 13-month study period (14% of patients fell per year, 18% incidence). Double this frequency was reported at interview. An additional 22 patients had documented mobility problems. Clinical history of fall circumstances, comorbidity, medications, and mobility was documented from 47% of fallers and two or more of these four elements from 85%. Documented physical examination was less complete, with only 6% of fallers examined for orthostatic blood pressure, 7% for gait or balance, 25% for vision, and 28% for neurological findings. The evaluation led to specific recommendations in only 26% of cases, but when present they usually led to appropriate treatment modalities. Mobility problems without falls were evaluated with gait or balance examination in 23% of cases and neurological examination in 55%. CONCLUSION: Community physicians appear to underdetect falls and gait disorders. Detected falls often receive inadequate evaluation, leading to a paucity of recommendations and treatments. Adhering to guidelines may improve outcomes in community-dwelling older adults.

Publication Type:	journal article

Subject Headings:	Accidental Falls
	Accidental Falls
	Balance, Postural
	Clinical Indicators
	Frail Elderly
	Geriatric Assessment
	Geriatric Assessment
	Gerontologic Care

Health Screening
Physicians, Family
Accidents, Home
Activities of Daily Living
Aged
Aged, 80 and Over
Clinical Assessment Tools
Community Living
Interrater Reliability
Interviews
Managed Care Programs
Medical Records
New England
Outcomes (Health Care)
Outpatients
Physical Examination
Questionnaires
Record Review
Southwestern United States
Human

Source:	CINAHL
Full Text:	Available in *fulltext* at *EBSCO Host*

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9. Use of clinical and impairment-based tests to predict falls by community-dwelling older adults.

Citation:	Physical Therapy, 01 April 2003, vol./is. 83/4(328-339), 00319023
Author(s):	Boulgarides LK; McGinty SM; Willett JA; Barnes CW
Language:	English

Abstract: BACKGROUND AND PURPOSE: Few tests have been found to be strongly predictive of falls in community-dwelling older adults. The purpose of this study was to determine whether data from 5 balance tests-combined with data regarding fall history, number of medications, dizziness, visual problems, use of an assistive device, physical activity level, sex, and age-could predict falls in community-dwelling older adults who were independent. SUBJECTS: Ninety-nine community-dwelling older adults aged 65 to 90 years (X =74.02, SD=5.64) were tested. METHODS: Subjects were tracked for falls over a 1-year period following testing. Impairment-based tests, which are tests that attempt to specifically identify which sensory systems are impaired or how motor control is impaired (eg, speed, accuracy of movement), were the Modified Clinical Tests of Sensory Interaction for Balance (Modified CTSIB) and the 100% Limits of Stability Test, both of which were done on the Balance Master 6.1. Performance-based tests, which are functional tests that identify functional limitations without necessarily identifying their causes, were the Berg Balance Scale, the Timed "Up Go" Test, and the Dynamic Gait Index. Demographic and health data included age, sex, number of medications, physical activity level, presence of dizziness, vision problems, and history of falls over the previous year. Logistic regression was used to determine which combinations of data from balance tests, demographics, and health factors were predictive of falls. RESULTS: Two models-(1) the "standing on a firm surface with eyes closed" (FEC) condition of the Modified CTSIB and (2) the FEC combined with age and sex-were predictive of falls, but predicted only 1 and 2 subjects who were at risk for falling, respectively, out of 20 people who were at risk for falling. DISCUSSION AND CONCLUSION: Five balance tests combined with health and demographic factors did not predict falls in a sample of community-dwelling older adults who were active and independent.

Publication Type:	journal article
Subject Headings:	Accidental Falls
	Psychomotor Performance
	Geriatric Assessment
	Balance, Postural

Risk Assessment
Accidental Falls
Clinical Assessment Tools
Intraclass Correlation Coefficient
Logistic Regression
Data Analysis Software
Kendall's Tau
Interrater Reliability
Interviews
Test-Retest Reliability
Aged
Aged, 80 and Over
Funding Source
Human

Source:	CINAHL
Full Text:	Available in *fulltext* at *Highwire Press*
	Available in *fulltext* at *EBSCO Host*
	Available in *fulltext* at *ProQuest*

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10. Effect of two exercise programs on balance scores in elderly ambulatory people

Citation:	Physical and Occupational Therapy in Geriatrics, 2001, vol./is. 19/4(49-57), 0270-3181 (2001)
Author(s):	Urbscheit NL; Wiegand MR
Language:	English

Abstract:

The purpose of this study was to determine the effect of two exercise programs on balance in elderly, ambulatory people. Thirteen residents of a long term care facility were randomly assigned to a control (N = 7) or experimental group (N = 6). Both groups received supervised exercise twice each week for eight weeks. The control group performed 'traditional' exercises while the experimental group performed the same traditional exercises plus exercises on a Swiss gymnastics ball. Each subject's balance was tested before and after the exercise program using the Tinetti Assessment Tool. Both groups demonstrated non-significant increases in balance scores following completion of the exercise program. Individuals with initial balance scores less than 19 did not improve regardless of the exercise program. Subjects with initial scores greater than 21 displayed improvements in their final scores. These findings suggest the initial balance score, not the type of exercise program, may be a critical factor for improving balance in the elderly.

Publication Type:	Journal Article
Subject Headings:	Balance
	Exercise therapy
	Locomotion
	Treatment outcome
	Clinical assessment scales
Source:	AMED

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11. Measurement on Tinetti test: instrumentation and procedures.

Citation:	Technology & Health Care, 2001, vol./is. 9/5(403-15), 0928-7329;0928-7329 (2001)
Author(s):	Lombardi R; Buizza A; Gandolfi R; Vignarelli C; Guaita A; Panella L
Institution:	Dipartimento di Informatica e Sistemistica, University of Pavia, Pavia, Italy.
Language:	English

Abstract:

A measurement system and associate signal processing procedures for quantifying subject's performance during the performance-oriented assessment of balance as defined in Tinetti test (TT) is described. It is based on two inclinometers measuring trunk inclination in two orthogonal planes. Signals from the transducers are acquired by a PC

through A/DC board. Signal processing consists in computing morphological parameters describing the main features of subject movement during the different TT maneuvers. The system is simple, cheap, user friendly, causes no discomfort to the patient and can easily be modified to comply with either new requirements or the needs of other performance tests dealing with trunk movement. Preliminary results of measurements on both normals and patients suggest the viability of this approach and the possibility of discriminating normal from abnormal performance, based on the values of the morphological parameters.

Country of Publication:	Netherlands
Publication Type:	Journal Article; Research Support, Non-U.S. Gov't
Subject Headings:	Aged *Diagnostic Techniques and Procedures/is [Instrumentation] *Geriatric Assessment Great Britain Humans *Motor Activity/ph [Physiology] *Postural Balance/ph [Physiology] Posture *Signal Processing, Computer-Assisted/is [Instrumentation]
Source:	MEDLINE
Full Text:	Available in *fulltext* at *EBSCO Host*

12. Balance and ankle range of motion in community-dwelling women aged 64 to 87 years: a correlational study.

Citation:	Physical Therapy, October 2000, vol./is. 80/10(1004-11), 0031-9023;0031-9023 (2000 Oct)
Author(s):	Mecagni C; Smith JP; Roberts KE; O'Sullivan SB
Institution:	Fairlawn Rehabilitation Hospital, Worcester, MA, USA.
Language:	English
Abstract:	BACKGROUND AND PURPOSE: This study investigated the relationship between balance measures and ankle range of motion (ROM) in community-dwelling elderly women with no health problems. Identification of modifiable factors associated with balance may enable clinicians to design treatments to help reduce the risk of falls in elderly people. SUBJECTS: The sample consisted of 34 women between the ages of 64 and 87 years (mean=74.7, SD=6.0). METHODS: Goniometry was used to determine bilateral ankle active-assistive range of motion (AAROM) and passive range of motion. Balance capabilities were measured with the Functional Reach Test (FRT) and the Tinetti Performance-Oriented Mobility Assessment (POMA). Balance data for the FRT, POMA balance subtest, POMA gait subtest, and POMA total score were correlated with ankle ROM using the Pearson product moment correlation coefficient (PCC). RESULTS: Correlations between ROM and balance scores were found, ranging from.29 to.63. The POMA gait subtest and FRT resulted in higher correlations with ROM than did the POMA balance subtest (left total AAROM PCC=.63,.51, and.31). Correlations using composite ankle ROM scores were higher than individual motions. The strongest correlation existed between bilateral, total ankle AAROM and the POMA gait subtest scores (PCC=. 63) CONCLUSION AND DISCUSSION: Correlations exist between ankle ROM and balance in community-dwelling elderly women. Additional research is needed to determine whether treatment directed at increasing ankle ROM can improve balance.
Country of Publication:	UNITED STATES
Publication Type:	Journal Article
Subject Headings:	Accidental Falls Aged Aged, 80 and over *Ankle Joint/ph [Physiology]

Source:	MEDLINE
Full Text:	Available in *fulltext* at *Highwire Press* Available in *fulltext* at *EBSCO Host* Available in *fulltext* at *ProQuest*

13. Mental imagery and mental practice for an individual with multiple sclerosis and balance dysfunction

Citation:	Phys Ther Case Rep, January 2000, vol./is. 3/1(3-10), 1094-0367 (2000 Jan)
Author(s):	Fell NT
Language:	English
Abstract:	Purpose: the purpose of this case report is to review current theories of mental imagery (MI) and mental practice (MP) and to describe the implementation of an MI/MP program fo an individual with multiple sclerosis (MS) and balance dysfunction. Patient: A 53-year-old man was diagnosed with MS 7 years previously. Examination and Intervention: Baseline physical examination indicated significant balance defects with the following results: unilateral stance: (R) less than 1 second; (L) less than 1 second; tandem stance with eyes open: greater than 60 seconds; tandem stance with eyes closed: 28 seconds; bird-dogging: leading with (R)UE=45 second; (L)UE= 7 seconds; tandem walking: 0 consecutive steps; and Tinetti Performance Oriented Mobility Assessment (POMA) (balance portion): 14/16. Intervention consisted of daily relaxation exercises followed by MI and MP for 6 weeks. Outcomes: Six-week evaluaiton found improvement on five of the eight balance measures. Unilateral stanc: (R)14.72 seconds, (L) 11.32 seconds, tandem stance with eyes open: greater than 60 seconds; tandem stance with eyes closed: greater than 60 seconds; bird-dogging leading with (R)UE 75 seconds, leading with (L)UE 44 seconds; tandem walking : 8 consecutive steps; and a single-point improvement in the Tinetti POMA (balance portion): 15/16. Conclusions: This individual showed significant improvement in balance measures over the 6-week treatment period. Relevance: There have been few investigations of MI and MP in physical therapy. For patients with high levels of fatigue that prohibit extended physical practice, MI and MP may be an alternative or adjunct intervention. Additionally, with managed care decreasing time allotted to PT visits, MI and MP may be alternatives for patients to actively participate in independant practice while remaining safe from physical injury.
Publisher:	Phys Ther Case Rep
Publication Type:	Journal Article
Subject Headings:	Multiple sclerosis Balance Imagination Case report Physiotherapy Clinical assessment scales
Source:	AMED

14. Functional tools for assessing balance and gait impairments

Citation:	Topics in Geriatric Rehabilitation, September 1999, vol./is. 15/1(66-83), 0882-7524 (1999 Sep)
Author(s):	Anemaet WK; Moffa-Trotter ME
Language:	English

Abstract:	The use of functional tools in home health care is increasing. Knowing which functional tools to choose in very important for home health care professionals. This article describes important characteristics of functional tools, discusses the various types of functional tools available, and delineates the benefits of utilizing functional tools. It details specific functional tools for assessing gait and balance impairments including the Sharpened Romberg, the One Legges Stance Test, the Functional Reach Test, Timed Stands, the Tinetti Assessment Tool, the Berg Balance Scale, and the Modified Gait Abnormality Rating Scale. In concludes with a discussion of the clinical uses of the information gained from functional tools.
Publication Type:	Journal Article
Subject Headings:	Balance Disability evaluation Gait Delivery of health care Clinical assessment scales Aged
Source:	AMED
Full Text:	Available in *fulltext* at *EBSCO Host*

15. A review of balance instruments for older adults

Citation:	American Journal of Occupational Therapy, September 1998, vol./is. 52/8(666-71) (1998 Sep)
Author(s):	Whitney SL; Poole JL; Cass SP
Language:	English
Abstract:	Objective: The purpose of this article is to review balance instruments developed within the past 10 years that can be used in the clinic or home environment. The use of such instruments may assist in identifying older adults who are at risk for falling, a major problem that can result in impaired function and loss of independence. Method: Six instruments were reviewed: the Berg Balance Scale (Berg), the Clinical Test of Sensory Interaction and Balance (CTSIB), the Functional Reach Test, the Tinetti Balance Test of the Performance Oriented Assessment of Mobility Problems (Tinetti), the Timed 'Up and Go' Test (TU&GT), and the Physical Performance Test (PPT). Considered were what aspects of balance are assessed, time needed to administer the instrument, tools or equipment needed, evidence of reliability and validity, advantages and disadvantages, and the target population. Results: The Berg, Tinetti, and PPT measure a variety of aspects of balance, whereas the Functional Reach, TU&GT, and CTSIB measure more narrow aspects of balance. All six instruments have been used with older adults and do not require much equipment. The instruments differ in their reliability and validity. Conclusion: Familiarity with balance instruments can be helpful in selecting the one most appropriate for clinical setting and clients in order to institute appropriate prevention programs, such as environmental modifications and lifestyle adaptations.
Publication Type:	Journal Article
Subject Headings:	Clinical assessment scales Balance Aged Consistency and reliability
Source:	AMED

16. Interrater reliability of the Tinetti Balance Scores in novice and experienced physical therapy clinicians.

Citation:	Archives of Physical Medicine & Rehabilitation, October 1997, vol./is. 78/10(1160-4), 0003-9993;0003-9993 (1997 Oct)
Author(s):	Cipriany-Dacko LM; Innerst D; Johannsen J; Rude V
Institution:	Physical Therapy Department of Beaver College, Glenside, PA 19038, USA.

Language:	English
Abstract:	OBJECTIVE: To examine interrater agreement of scores by physical therapy novices and experienced clinicians on videotaped and live performances of the balance portion of Tinetti's Performance Oriented Mobility Assessment (BPOMA). DESIGN: A reliability design was used to assess the interrater agreement and consistency of the BPOMA scores in an elderly population. SETTING: General community hospital and skilled nursing facility. PATIENTS: Twenty-six residents of a skilled nursing home, ranging in age from 66 to 99 yrs (mean = 80.4, SD = 6.8), participated in Phase 1. Twenty-four hospital inpatients and five residents of a skilled nursing home, ranging in age from 60 to 92 yrs (mean = 74.7, SD = 7.9), participated in Phase 2. RATERS: Three student physical therapists scored the patients in Phase 1. One student was designated the administrating rater (AR). The AR instructed, guarded, and scored the subjects. The other two students were the observing raters (ORs), whose role was to observe and score the subject's performances. Nine physical therapy clinicians, ranging from 0 to 6 years of experience, rated subjects in Phase 2. MAIN OUTCOME MEASURES: Consistency and agreement of BPOMA scores were compared between clinicians with varying levels of experience. In Phase I, BPOMA was scored on-site by three student physical therapists. In Phase 2, videotaped performances were scored by five physical therapists, one physical therapist assistant, and three student physical therapists. RESULTS: Phase 1 demonstrated fair to excellent kappa coefficients (.40-1.00) in all maneuvers across all raters. The ORs had higher agreement compared with the AR, ranging from good to excellent (.75-1.00). Phase 2 demonstrated fair to good kappa coefficients (.40-.75) in 5 of 8 maneuvers across all nine raters. When comparing proportion of observed agreement to evaluate the years of experience on rater agreement, there was no significant difference between clinician groups. CONCLUSIONS: Fair to good reliability of BPOMA scores occurred across many rates of varied experience with a small amount of training.
Country of Publication:	UNITED STATES
Publication Type:	Journal Article; Research Support, Non-U.S. Gov't
Subject Headings:	Accidental Falls Activities of Daily Living Aged Aged, 80 and over Female *Geriatric Assessment Humans Male Observer Variation Physical Therapy Modalities/ed [Education] *Physical Therapy Modalities *Postural Balance Predictive Value of Tests Reproducibility of Results Students, Health Occupations
Source:	MEDLINE

17. Use of the "fast evaluation of mobility, balance, and fear" in elderly community dwellers: validity and reliability.

Citation:	Physical Therapy, September 1997, vol./is. 77/9(904-17), 0031-9023;0031-9023 (1997 Sep)
Author(s):	Di Fabio RP; Seay R
Institution:	Department of Physical Medicine and Rehabilitation, University of Minnesota, Minneapolis 55455, USA. difab001@maroon.tc.umn.edu
Language:	English
Abstract:	BACKGROUND AND PURPOSE: Identifying elderly community dwellers who are at risk for falling was assessed using a comprehensive screening tool referred to as the "Fast Evaluation of Mobility, Balance, and Fear" (FEMBAF). The purpose of this study was to

evaluate the concurrent validity and reliability of scores on the FEMBAF. SUBJECTS: Thirty-five elderly persons living in the community (4 men, 31 women), with a mean age 79.9 years (SD = 8.5, range = 60-92), participated. METHODS: Subjects were tested using the FEMBAF and three other instruments-the balance subscale of the Tinetti Performance-Oriented Mobility Assessment (B-POMA), the Clinical Test of Sensory Interaction on Balance (CTSIB), and the Timed Up and Go Test. Scores on the FEMBAF were compared with scores on each the other instruments using Spearman rank-order correlation coefficients and analysis of covariance (with age as the covariate) for living status and diagnostic category. A comparison of the number of subjects classified as being at risk for falling was done descriptively for the FEMBAF, B-POMA, and CTSIB. RESULTS: Associations (r > .35) were found between the FEMBAF and each of the other instruments in the areas of FEMBAF risk-factor count, task completion, mobility, and strength. The FEMBAF classified a greater number of subjects as being at risk for falling (89%) compared with the B-POMA (43%) and the CTSIB (63%). The mean chance-corrected percentage of agreement between raters on the FEMBAF was kappa = .95 (SD = .15) for assessment of risk factors and kappa = .96 (SD = .12) for task completion. CONCLUSION AND DISCUSSION: The FEMBAF provides valid and reliable measurements of risk factors, functional performance, and factors that hinder mobility.

Country of Publication:	UNITED STATES
Publication Type:	Journal Article; Research Support, Non-U.S. Gov't
Subject Headings:	*Accidental Falls Activities of Daily Living Aged Aged, 80 and over Fear Female *Geriatric Assessment Health Status Indicators Humans Male *Movement Outcome Assessment (Health Care) Pain *Postural Balance Reproducibility of Results Risk Factors Statistics, Nonparametric
Source:	MEDLINE
Full Text:	Available in *fulltext* at *Highwire Press* Available in *fulltext* at *ProQuest*

18. Use of the 'fast evaluation of mobility, balance, and fear' in elderly community dwellers: validity and reliability.

Citation:	Physical Therapy, September 1997, vol./is. 77/9(904-17) (1997 Sep)
Author(s):	Di Fabio RP; Seay R
Language:	English
Abstract:	BACKGROUND AND PURPOSE: Identifying elderly community dwellers who are at risk for falling was assessed using a comprehensive screening tool referred to as the 'Fast Evaluation of Mobility, Balance, and Fear' (FEMBAF). The purpose of this study was to evaluate the concurrent validity and reliability of scores on the FEMBAF. SUBJECTS: Thirty-five elderly persons living in the community (4 men, 31 women), with a mean age 79.9 years (SD = 8.5, range = 60-92), participated. METHODS: Subjects were tested using the FEMBAF and three other instruments-the balance subscale of the Tinetti Performance-Oriented Mobility Assessment (B-POMA), the Clinical Test of Sensory Interaction on Balance (CTSIB), and the Timed Up and Go Test. Scores on the FEMBAF were compared with scores on each the other instruments using Spearman rank-order

correlation coefficients and analysis of covariance (with age as the covariate) for living status and diagnostic category. A comparison of the number of subjects classified as being at risk for falling was done descriptively for the FEMBAF, B-POMA, and CTSIB. RESULTS: Associations were found between the FEMBAF and each of the other instruments in the areas of FEMBAF risk-factor count, task completion, mobility, and strength. The FEMBAF classified a greater number of subjects as being at risk for falling (89%) compared with the B-POMA (43%) and the CTSIB (63%). The mean chance-corrected percentage of agreement between raters on the FEMBAF was kappa = .95 (SD = .15) for assessment of risk factors and kappa = .96 (SD = .12) for task completion. CONCLUSION AND DISCUSSION: The FEMBAF provides valid and reliable measurements (ABSTRACT TRUNCATED)

Publication Type:	Journal Article
Subject Headings:	Accidental falls
	Balance
	Clinical assessment scales
	Independent living
	Aged
	Risk
	Standards
	Fear
	Movement
Source:	AMED
Full Text:	Available in *fulltext* at *Highwire Press*
	Available in *fulltext* at *ProQuest*

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19. Measuring balance in the elderly: validation of an instrument.

Citation:	Canadian Journal of Public Health, 02 July 1992, vol./is. 83/(0-), 00084263
Author(s):	Berg KO; Wood-Dauphinee SL; Williams JI; Maki B
Language:	English

Abstract: This study assessed the validity of the Balance Scale by examining: how Scale scores related to clinical judgements and self-perceptions of balance, laboratory measures of postural sway and external criteria reflecting balancing ability; if scores could predict falls in the elderly; and how they related to motor and functional performance in stroke patients. Elderly residents (N=113) were assessed for functional performance and balance regularly over a nine-month period. Occurrence of falls was monitored for a year. Acute stroke patients (N=70) were periodically rated for functional independence, motor performance and balance for over threee months. Thirty-one elderly subjects were assessed by clinical and laboratory indicators reflecting balancing ability. The Scale correlated moderately with caregiver ratings, self-ratings and laboratory measures of sway. Differences in mean Scale scores were consistent with the use of mobility aids by elderly residents and differentiated stroke patients by location of follow-up. Balance scores predicted the occurrence of multiple falls among elderly residents and were strongly correlated with functional and motor performance in stroke patients.

Publication Type:	journal article
Subject Headings:	Instrument Validation
	Balance, Postural
	Geriatric Assessment
	Canada
	Validation Studies
	Clinical Assessment Tools
	Odds Ratio
	Confidence Intervals
	Pearson's Correlation Coefficient
	Analysis of Variance
	Logistic Regression
	Concurrent Validity

Aged
Aged, 80 and Over
Predictive Validity
Rehabilitation, Geriatric
Stroke
Posture
Accidental Falls
Human

Source: CINAHL

Aged
Aged, 80 and Over
Predictive Validity
Rehabilitation, Geriatric
Stroke
Posture
Accidental Falls