

Safety Literature 26th July 2020

A qualitative study of nursing students' experiences in fall prevention for older home care clients

Turjamaa R, Äijö M, Tervo-Heikkinen T, Silén-Lipponen M. J. Aging Res. 2020; 2020: e7652623.

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Abstract

The aim of this study was to describe the experiences of nursing students in fall prevention during clinical practice in the context of older home care clients.

This was a qualitative focus group study of nursing students (n = 9) who had completed clinical practice in older clients' home care. The data were analysed using inductive content analysis. The nursing students described their experiences regarding falls and fall prevention in older clients' home care from two perspectives: evaluation of falls at older people's homes and fall prevention during home visits. Systematic evaluation of falls was based on physical examination and is the basis of fall prevention. However, evaluation of nutrition and adverse drug effects seemed to be ignored. In addition, fall prevention during home visits included concrete fall prevention in authentic client situations, confidential relationships with older clients, and evidence-based knowledge. From the perspective of fall prevention, there was a lack of comprehensive evaluation and understanding of the meaning of psychological factors, such as fear of falling.

In order to be able to prevent falls in the older client population, students need more guidance regarding a comprehensive approach based on evaluation of falls. In addition, there is a need for continuous collaboration between education and home care services to develop educational approaches that interlink knowledge and skills in fall prevention.

Language: en

Community care staff attitudes towards delivering a falls prevention exercise intervention to community care clients

Burton E, Boyle EJ, O'Connell H, Lewin G, Petrich M, Hill KD. Health Soc. Care Community 2020; ePub(ePub): ePub.

(Copyright © 2020, John Wiley and Sons)

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Abstract

Millions of older people world-wide receive community care services in their home to assist them to live independently. These services often include personal care, domestic assistance and social support which are delivered by non-university trained staff, and are frequently long term. Older people receiving community care services fall 50% more often than individuals of similar age not receiving services. Yet, few ongoing community care services include exercise programs to reduce falls in this population. We conducted an earlier study to examine the feasibility of community care staff delivering a falls prevention program. A critical finding was that while some of the assessment and support staff responsible for service delivery delivered the falls prevention exercise program to one or two clients, others delivered to none. Therefore, the aim of this qualitative sub-study was to understand reasons for this variation. Semi-structured interviews were conducted with 25 participating support staff and assessors from 10 community care organisations. Staff who had successfully delivered the intervention to their clients perceived themselves as capable and that it would benefit their clients. Older clients who were positive, motivated and wanted to improve were perceived to be more likely to participate. Staff who had worked at their organisation for at least 5 years were also more likely to deliver the program compared to those that had only worked up to 2 years. Staff that did not deliver the intervention to anyone were more risk averse, did not feel confident enough to deliver the program and perceived their clients as not suitable due to age and frailty. Experienced staff who are confident and have positive ageing attitudes are most likely to deliver falls prevention programs in a home care organisation.

Language: en

Keywords

qualitative; falls; older people; home care; attitudes; motivation; staff perceptions

Effectiveness of home-based rehabilitation program in minimizing disability and secondary falls after a hip fracture: protocol for a randomized controlled trial

Sadrudin Pidani A, Sabzwari S, Ahmad K, Mohammed A, Noordin S. *Int. J. Surg. Protoc.* 2020; 22: 24-28.

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Abstract

INTRODUCTION: Hip fractures are a major health problem globally and are associated with increased morbidity, mortality, and substantial economic costs. Successful operative treatment of hip fracture patients is necessary for the optimization of post-op mobility and functional recovery of the patient. Rehabilitation after surgical stabilization of a hip fracture is crucial in order to restore pre-fracture function and to avoid long-term institutionalization. In particular ongoing exercise which targets balance can prevent up to 40% of falls. Therefore, we have designed a post-discharge home-based physical rehabilitation intervention program to minimize disability and falls in this high-risk elderly population.

Methods and analysis: The study will be an open label, simple randomized controlled trial at a single hospital. The two arms will be equally allocated on a 1:1 ratio into intervention and control groups. The control arm will receive the usual standard postoperative rehabilitation. The intervention group will receive an extended home-based rehabilitation program twice a week continued for 3 months (12 weeks) after discharge. The Primary outcome of the study is occurrence of falls. Falls will be measured at 3, 6, 12, and 24 months by research-assistant follow-up telephone calls for both the groups. Mobility-related disability will be measured with a self-reported test at every routine follow-up for up to two years using a performance-based short battery tool. Negative binomial regression model will be used to compare number of falls in both the groups by computing incidence ratio rates.

Ethics and dissemination: Approval for the conduction of this study has been taken from the Ethical Review Committee (ERC) of the institution. Evidences which will be obtained from this study will facilitate to propose changes in existing guidelines and policies for treating fall and hip fracture patients. Trial registration This trial is registered on clinicaltrials.gov ID: NCT04108793.

Language: en

Keywords

Physical activity; Disability; Rehabilitation; CTU, Clinical trial unit; Elderly population; ERC, Ethical Review committee; Hip fracture; Secondary falls; THR, Total hip replacement

Effects of a 16-week multimodal exercise program on gait performance in individuals with dementia: a multicenter randomized controlled trial

Trautwein S, Barisch-Fritz B, Scharpf A, Ringhof S, Stein T, Krell-Roesch J, Woll A. *BMC Geriatr.* 2020; 20(1): e245.

(Copyright © 2020, Holtzbrinck Springer Nature Publishing Group - BMC)

DOI 10.1186/s12877-020-01635-3 PMID 32677897

Abstract

BACKGROUND: There is a high prevalence of gait impairments in individuals with dementia (IWD). Gait impairments are associated with increased risk of falls, disability, and economic burden for health care systems. Only few studies have investigated the effectiveness of physical activity on gait performance in IWD, reporting promising but inconsistent results. Thus, this study aimed to investigate the effectiveness of a multimodal exercise program (MEP) on gait performance in IWD.

METHODS: In this parallel-group randomized controlled trial, we enrolled 319 IWD of mild to moderate severity, living in care facilities, aged ≥ 65 years, and being able to walk at least 10 m. The control group (n = 118) received conventional treatment, whereas the intervention group (n = 201) additionally participated in a 16-week MEP specifically tailored to IWD. We examined the effects of the MEP on spatiotemporal gait parameters and dual task costs by using the gait analysis system GAITRite. Additionally, we compared characteristics between positive, non-, and negative responders, and investigated the impact of changes in underlying motor and cognitive performance in the intervention group by conducting multiple regression analyses.

RESULTS: Two-factor analyses of variance with repeated measurements did not reveal any statistically significant time*group effects on either spatiotemporal gait parameters or dual task costs. Differences in baseline gait performance, mobility, lower limb strength, and severity of cognitive impairments were observed between positive, non-, and negative responders. Positive responders were characterized by lower motor performance compared to negative and non-responders, while non-responders showed better cognitive performance than negative responders. Changes in lower limb strength and function, mobility, executive function, attention, and working memory explained up to 39.4% of the variance of changes in gait performance.

CONCLUSIONS: The effectiveness of a standardized MEP on gait performance in IWD was limited, probably due to insufficient intensity and amount of specific walking tasks as well as the large heterogeneity of the sample. However, additional analyses revealed prerequisites of individual characteristics and impacts of changes in underlying motor and cognitive performance. Considering such factors may improve the effectiveness of a physical activity intervention among IWD.

TRIAL REGISTRATION: DRKS00010538 (German Clinical Trial Register, date of registration: 01 June 2016, retrospectively registered, https://www.drks.de/drks_web/setLocale_EN.do).

Language: en

Keywords

Physical activity; Cognition; Walking; Dual task; Neurodegenerative disorder; Physical functional performance



Falls in older adults with cancer: an updated systematic review of prevalence, injurious falls, and impact on cancer treatment

Sattar S, Haase K, Kuster S, Puts M, Spoelstra S, Bradley C, Wildes TM, Alibhai S. Support. Care Cancer 2020; ePub(ePub): ePub.

(Copyright © 2020, Springer International)

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Abstract

PURPOSE: This update of our 2016 systematic review answers the following questions: (1) How often do older adults with cancer fall? (2) What are the predictors for falls? (3) What are the rates and predictors of injurious falls? (4) What are the circumstances and outcomes of falls? (5) How do falls in older patients affect subsequent cancer treatment? and a new research question, (6) Which fall reduction interventions are efficacious in this population?

METHODS: MEDLINE, PubMed, CINAHL, and Embase were searched (September 2015-January 25, 2019). Eligible studies included clinical trials and cohort, case-control, and cross-sectional studies published in English in which the sample (or subgroup) included adults aged ≥ 60 , with cancer, in whom falls were examined as an outcome.

RESULTS: A total of 2521 titles were reviewed, 67 full-text articles were screened for eligibility, and 30 new studies were identified. The majority involved the outpatient setting ($n = 19$) utilizing cross-sectional method ($n = 18$). Sample size ranged from 21 to 17,958. Fall rates ranged from 1.52 to 3.41% per 1000 patient days (inpatient setting) and from 39%/24 months to 64%/12 months (outpatient setting). One out of the 6 research questions contributed to a new finding: one study reported that 1 in 20 older patients experienced impact on cancer treatment due to falls. No consistent predictors for falls/fall injuries and no studies on fall reduction interventions in the geriatric oncology setting were identified.

CONCLUSION: This updated review highlights a new gap in knowledge pertaining to interventions to prevent falls. Additionally, new knowledge also emerged in terms of impact of falls on cancer treatment; however, further research may increase generalizability. Falls and fall-related injuries are common in older adults with cancer and may affect subsequent cancer treatment. Further studies on predictors of falls, subsequent impacts, and fall reduction in the oncology setting are warranted.

Language: en

Keywords

Falls; Systematic review; Cancer treatment; Geriatric oncology

Is fear of falling associated with incident disability? A prospective analysis in young-old community-dwelling adults

Belloni G, Büla C, Santos-Eggimann B, Henchoz Y, Fustinoni S, Seematter-Bagnoud L. J. Am. Med. Dir. Assoc. 2020; ePub(ePub): ePub.

(Copyright © 2020, Lippincott Williams and Wilkins)

DOI 10.1016/j.jamda.2020.05.051 PMID 32693997

Abstract

OBJECTIVES: Fear of falling (FOF) is common in older people and is related to negative outcomes. This study aimed to investigate whether 2 different instruments, the Falls Efficacy Scale-International (FES-I) and the single question on FOF and activity restriction (SQ-FAR), were associated with incident disability at 3 years.

DESIGN: Prospective observational study.

SETTING AND PARTICIPANTS: Participants (n = 1219, 57.4% women) were disability-free community-dwelling persons enrolled in the Lausanne cohort 65+, aged 66 to 71 years, in 2005.

MEASURES: Baseline covariates included demographic, cognitive, affective, and health status. Basic activities of daily living (BADL) assessment was recorded annually from a self-administered questionnaire. Disability outcome was defined as reporting difficulty or help needed in ≥ 1 of 5 BADL in ≥ 2 consecutive years, or being institutionalized during follow-up.

RESULTS: At 3 years, disability was reported by 77 participants (6.3%). Reporting the highest level of fear at FES-I [adjusted odds ratio (aOR) 5.14, 95% confidence interval (CI) 1.82-14.55, P = .002] or "FOF with activity restriction" with SQ-FAR (aOR 3.23, 95% CI 1.29-8.08, P = .012) were both associated with increased odds of disability even after adjusting for covariates. The FES-I model explained incident disability slightly better than the SQ-FAR one [Bayesian information criterion (BIC) values of 466.70 and 469.43, respectively].

CONCLUSIONS AND IMPLICATIONS: High FOF and related activity restriction, assessed with FES-I and SQ-FAR, are associated with incident disability in young-old community-dwelling people. The SQ-FAR is suitable as a screening tool to proactively detect a potentially reversible risk factor for disability. Using the FES-I may serve additional clinical purposes, such as FOF characterization and management.

Language: en

Keywords

disability; older adults; FES-I; functional impairment; healthy ageing

Ocular trauma associated with falls in older people: a 10-year review from a state trauma service

Lee WS, McNamara P, English J, Meusemann R. *Injury* 2020; ePub(ePub): ePub.

(Copyright © 2020, Elsevier Publishing)

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Abstract

BACKGROUND: Falls are the leading cause of injury-related emergency presentations, hospital admissions and deaths in Victorians over the age of 65. While there is extensive literature analysing traumatic injuries resulting from falls in older patients, there is little data on ocular injuries in this patient group.

METHODOLOGY: A retrospective audit of all patients over 65 years referred to the Ophthalmology Department of a tertiary hospital following fall from standing height between January 2009 and December 2018 to determine the demographics, injury setting, ophthalmic injuries, interventions and outcomes of ocular trauma secondary to falls.

RESULTS: Two hundred and seventy patients (F = 155, M = 115) were included, with a mean age of 81 years. 180 falls (66.7%) occurred in a residential environment. The most common reason for referral was orbital fracture (n = 155). Severe ocular injuries included globe rupture (n = 23), retro-bulbar haematoma (n = 22), retinal detachment (n = 6) and traumatic optic neuropathy (n = 6). Forty patients (14.8%) presented with a visual acuity (VA) below 6/60 while 34 patients (12.5%) had a non-assessable VA secondary to delirium or intubation. Of these 34, 9 had a significant ocular injury. A total of 28 patients (10.4%) were permanently blinded by their injuries. Twenty-three patients (8.5%) required admission to ICU and 16 patients (5.93%) died during their in-hospital stay. Thirty-six injuries were referred beyond the 24-hour mark, including a globe rupture and a case of traumatic optic neuropathy. With the exception of the missed globe rupture, all other injuries requiring emergency surgery were operated on within 24 h.

CONCLUSION: Falls in older people may be associated with sight-threatening ocular injuries which are common and easy to miss in this population demographic. The presence of ocular injuries in this patient group is associated with significant rates of in-hospital mortality and poor functional outcomes. It is therefore essential for trauma practitioners to perform a detailed and systematic assessment in order to identify sight-threatening ocular injuries and allow for expedient sight-saving intervention to be performed.

Language: en

Keywords

Aged; Trauma; Fall; Globe rupture; Ocular; Orbital; Orbital fracture; Retrobulbar haematoma; Visual impairment

Prevalence of cognitive and vestibular impairment in seniors experiencing falls

Varriano B, Sulway S, Wetmore C, Dillon W, Misquitta K, Multani N, Anor C, Martínez M, Cacchione E, Rutka J, Tartaglia MC. Can. J. Neurol. Sci. 2020; ePub(ePub): ePub.

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Abstract

[Abstract unavailable]

Language: en

Risk factors for future falls among community-dwelling older adults without a fall in the previous year: a prospective one-year longitudinal study

Porto JM, Iosimuta NCR, Freire Junior RC, Braghin RMB, Leitner, Freitas LG, de Abreu DCC. Arch. Gerontol. Geriatr. 2020; 91: e104161.

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DOI 10.1016/j.archger.2020.104161 **PMID** 32688105

Abstract

INTRODUCTION: One of the main risk factor for falls is a history of falls itself. Henceforth, preventing a fall is an important strategy for the prevention of new ones. The objective of the present study was to determine whether personal self-perception questions and functional tests might represent risk factors for a fall during the year following a year without any falls among independent community-dwelling older adults, considering a period of 12 prospective months.

METHODS: A total of 101 community-dwelling older adults without a fall in the previous year underwent an initial evaluation (sample characterization, self-perception questionnaire and functional tests) and monthly monitoring of prospective fall episodes by telephone contact. We determined the association between the occurrence of prospective falls (dependent variable) and personal questions and functional tests (independent variables) with multiple binary logistic regression adjusted for confounding variables.

RESULTS: Only age ($p = 0.005$) and self-perception of general health ($p = 0.019$) showed association with the occurrence of prospective falls.

CONCLUSION: Our results showed that the only factors bearing an association with the occurrence of prospective falls were age and general health self-perception, which demonstrates the importance of administrating self-perception measures in clinical practice or in epidemiological studies for the prevention of a fall during the year following a year without any falls in older adults.

Language: en

Keywords

Fall; Rehabilitation; Functional tests; Prevention of falls; Risk of falls

The effect of vibratory stimulation on the timed-up-and-go mobility test: a pilot study for sensory-related fall risk assessment

Toosizadeh N, Wahlert G, Fain M, Mohler J. *Physiol. Res.* 2020; ePub(ePub): ePub.

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DOI unavailable PMID 32672046

Abstract

Effects of localized lower-extremity vibration on postural balance have been reported. The purpose of the current study was to investigate the effect of low-frequency vibration of calf muscles on the instrumented Timed-Up-and-Go (iTUG) test among older adults. Older adults were recruited and classified to low ($n=10$, age= 72.9 ± 2.8 years) and high fall risk ($n=10$, age= 83.6 ± 9.6) using STEADI. Vibratory system (30Hz or 40Hz), was positioned on calves along with wearable motion sensors. Participants performed the iTUG test three times, under conditions of no-vibration, 30Hz, and 40Hz vibration. Percentage differences in duration of iTUG components were calculated comparing vibration vs no-vibration conditions.

Significant between-group differences were observed in iTUG ($p=0.03$); high fall risk participants showed reduction in the duration of turning (-10 % with 30Hz; $p=0.15$ and -15 % with 40Hz; $p=0.03$) and turning and sitting (-18 % with 30Hz; $p=0.02$ and -10 % with 40Hz; $p=0.08$). However, vibration increased turning (+18 % with 30Hz; $p=0.20$ and +27 % with 40Hz; $p=0.12$) and turning and sitting duration (+27 % with 30Hz; $p=0.11$ and +47 % with 40Hz; $p=0.12$) in low fall risk participants.

FINDINGS suggest that lower-extremity vibration affects dynamic balance; however, the level of this influence may differ between low and high fall risk older adults, which can potentially be used for assessing aging-related sensory deficits.

Language: en

The effectiveness of exercises on fall and fracture prevention amongst community elderlies: a systematic review and meta-analysis

Wong RMY, Chong KC, Law SW, Ho WT, Li J, Chui CS, Chow SKH, Cheung WH. J. Orthop. Translat. 2020; 24: 58-65.

(Copyright © 2020, Elsevier Publishing)

DOI 10.1016/j.jot.2020.05.007 PMID 32695605

Abstract

OBJECTIVE: To analyze the effectiveness of exercise interventions on falls and fall-related fracture prevention among community-dwelling elderlies.

Methods: Literature search was conducted in Pubmed and Embase. Keywords used for literature search were "fracture" AND "fall" AND "exercise". Randomized controlled trials involving community-dwelling elderlies older than 60 years old with physical exercises as intervention were included. A systematic review and meta-analysis was performed. The primary outcomes were falls and fractures.

Results: Twelve studies were included and 4784 participants were involved with a mean age of 75.4. The most common exercise interventions were strength and balance exercises. The results of meta-analysis of 11 studies showed that exercise intervention had beneficial effect on fall prevention (RR = 0.71, 95% CI, 0.62-0.82; I2 = 24%, $p < 0.0001$). The effect was better when exercise intervention applied to women participants (RR = 0.64, 95% CI, 0.49-0.83; I2 = 28%, $p = 0.00009$) compared to men and women participants (RR = 0.75, 95% CI, 0.64-0.89; I2 = 24%, $p = 0.001$). The results of meta-analysis of seven studies showed that physical exercise had significant effect on fracture prevention (RR = 0.54, 95% CI, 0.35-0.83; I2 = 25%, $p = 0.005$). However, the effect was significant when exercise intervention applied to women participants only (RR = 0.37, 95% CI, 0.20-0.67; I2 = 0%, $p = 0.001$) but not significant when exercise intervention applied to both genders (RR = 0.80, 95% CI, 0.58-1.09; I2 = 0%, $p = 0.15$).

Conclusion: Exercise interventions, especially the combination of strength and balance training, were effective in preventing falls. Resistance exercises and jumping exercises were effective for fracture prevention among community-dwelling older population. The effectiveness of exercise interventions on fracture prevention have more significant effect on women. Further studies are needed to test the effectiveness of exercise interventions in men.

Translational potential: The use of effective exercises or biophysical interventions including vibration therapy can be incorporated into Fracture Liaison Services to prevent future fall and fracture.

Language: en

Keywords

Prevention; Systematic review; Exercise; Fall; Fracture

The kinematics and strategies of recovery steps during lateral losses of balance in standing at different perturbation magnitudes in older adults with varying history of falls

Batcir S, Shani G, Shapiro A, Alexander N, Melzer I. BMC Geriatr. 2020; 20(1): e249.

(Copyright © 2020, Holtzbrinck Springer Nature Publishing Group - BMC)

DOI 10.1186/s12877-020-01650-4 PMID 32689965

Abstract

BACKGROUND: Step-recovery responses are critical in preventing falls when balance is lost unexpectedly. We investigated the kinematics and strategies of balance recovery in older adults with a varying history of falls.

METHODS: In a laboratory study, 51 non-fallers (NFs), 20 one-time fallers (OFs), and 12 recurrent-fallers (RFs) were exposed to random right/left unannounced underfoot perturbations in standing of increasing magnitude. The stepping strategies and kinematics across an increasing magnitude of perturbations and the single- and multiple-step threshold trials, i.e., the lowest perturbation magnitude to evoke single step and multiple steps, respectively, were analyzed. Fall efficacy (FES) and self-reported lower-extremity function were also assessed.

RESULTS: OFs had significantly lower single- and multiple-step threshold levels than NFs; the recovery-step kinematics were similar. Surprisingly, RFs did not differ from NFs in either threshold. The kinematics in the single-step threshold trial in RFs, however, showed a significant delay in step initiation duration, longer step duration, and larger center of mass (CoM) displacement compared with NFs and OFs. In the multiple-step threshold trial, the RFs exhibited larger CoM displacements and longer time to fully recover from balance loss. Interestingly, in the single-stepping trials, 45% of the step-recovery strategies used by RFs were the loaded-leg strategy, about two times more than OFs and NFs (22.5 and 24.2%, respectively). During the multiple-stepping trials, 27.3% of the first-step recovery strategies used by RFs were the loaded-leg strategy about two times more than OFs and NFs (11.9 and 16.4%, respectively), the crossover stepping strategy was the dominated response in all 3 groups (about 50%). In addition, RFs reported a lower low-extremity function compared with NFs, and higher FES in the OFs.

CONCLUSIONS: RFs had impaired kinematics during both single-step and multiple-step recovery responses which was associated with greater leg dysfunction. OFs and NFs had similar recovery-step kinematics, but OFs were more likely to step at lower perturbation magnitudes suggesting a more "responsive" over-reactive step response related from their higher fear of falling and not due to impaired balance abilities. These data provide insight into how a varying history of falls might affect balance recovery to a lateral postural perturbation.

TRIAL REGISTRATION: This study was registered prospectively on November 9th, 2011 at clinicaltrials.gov (NCT01439451).

Language: en

Keywords

Falls; Balance recovery reaction; Multiple-step threshold; Recurrent fallers; Single-step threshold

Which balance subcomponents distinguish between fallers and non-fallers in people with COPD?

Chauvin S, Kirkwood R, Brooks D, Goldstein RS, Beauchamp MK. *Int. J. Chron. Obstruct. Pulmon. Dis.* 2020; 15: 1557-1564.

(Copyright © 2020, Dove Press)

DOI 10.2147/COPD.S253561 PMID 32669841

Abstract

Rationale: Chronic obstructive pulmonary disease (COPD) is an increasingly prevalent lung disease linked to dysfunctional balance and an increased risk of falls. The Balance Evaluation Systems Test (BESTest) evaluates the six underlying subcomponents of functional balance. The aim of this study was to determine the specific balance subcomponents and cut-off scores that discriminate between fallers and non-fallers with COPD to guide fall risk assessment and prevention.

Methods: A secondary analysis of cross-sectional data from two prior studies in COPD was performed. Independent samples t-tests were used to explore the differences in the BESTest sub-system scores between fallers and non-fallers. Receiver operating characteristic curves were used to determine the optimal subcomponent cut-off scores that identified fallers, and the area under the curve (AUC) was used to assess test accuracy.

Results: Data from 72 subjects with COPD (mean age, 70.3 ± 7.4 y; mean forced expiratory volume in 1 second, $38.9 \pm 15.8\%$ predicted) were analyzed. Two BESTest subcomponents, stability limits/verticality (fallers: 75.4%, non-fallers: 83.8%; $p=0.002$) and postural responses (fallers: 67.5%, non-fallers: 79.7%; $p=0.008$) distinguished between fallers and non-fallers. Stability limits/verticality had an AUC of 0.70 and optimal cut-off score of 73.8% for identifying fallers; postural responses had an AUC of 0.67 and optimal cut-off score of 69.4%.

Conclusion: The stability limits/verticality and postural responses subcomponents of the BESTest distinguished between fallers and non-fallers with COPD. The stability limits/verticality subcomponent can also be used to identify whether an individual with COPD is at risk of falling using a cut-off score of 73.8%. These findings suggest that specific subcomponents of balance could be targeted to optimize fall risk assessment and prevention in COPD.

Language: en

Keywords

falls; rehabilitation; balance; BESTest; chronic obstructive pulmonary disease

Outcomes associated with scale-up of the Stepping On falls prevention program: a case study in redesigning for dissemination

Mahoney JE, Gangnon R, Clemson L, Jaros LV, Cech S, Renken J. J. Clin. Transl. Sci. 2020; 4(3): 250-259.

(Copyright © 2020, Cambridge University Press)

DOI 10.1017/cts.2020.17 PMID 32695497

Abstract

INTRODUCTION: Translating complex behavior change interventions into practice can be accompanied by a loss of fidelity and effectiveness. We present the evaluation of two sequential phases of implementation of a complex evidence-based community workshop to reduce falls, using the Replicating Effective Programs Framework. Between the two phases, workshop training and delivery were revised to improve fidelity with key elements.

Methods: Stepping On program participants completed a questionnaire at baseline (phase 1: n = 361; phase 2: n = 2219) and 6 months post-workshop (phase 1: n = 232; phase 2: n = 1281). Phase 2 participants had an additional follow-up at 12 months (n = 883). Outcomes were the number of falls in the prior 6 months and the Falls Behavioral Scale (FaB) score.

Results: Workshop participation in phase 1 was associated with a 6% reduction in falls (RR = 0.94, 95% CI 0.74-1.20) and a 0.14 improvement in FaB score (95% CI, 0.11- 0.18) at 6 months. Workshop participation in phase 2 was associated with a 38% reduction in falls (RR = 0.62, 95% CI 0.57-0.68) and a 0.16 improvement in FaB score (95% CI 0.14-0.18) at 6 months, and a 28% reduction in falls (RR = 0.72, 95% CI 0.65-0.80) and a 0.19 score improvement in FaB score (95% CI 0.17-0.21) at 12-month follow-up.

Conclusions: Effectiveness can be maintained with widespread dissemination of a complex behavior change intervention if attention is paid to fidelity of key elements. An essential role for implementation science is to ensure effectiveness as programs transition from research to practice.

Language: en

Keywords

falls prevention; Implementation; dissemination; evidence-based programs; fidelity

Postural control data from prevalent kidney transplant patients with and without history of falls

Gobbo S, Zanotto T, Bullo V, Roma E, Duregon F, Ermolao A, Bergamin M. Data Brief 2020; 31: e105970.

(Copyright © 2020, Elsevier Publishing)

DOI 10.1016/j.dib.2020.105970 PMID 32695852

Abstract

This article presents data from a research paper entitled "Postural balance, muscle strength, and history of falls in end-stage renal disease patients living with a kidney transplant: a cross-sectional study" available in Journal Gait and Posture [1]. In this article, we reported the minimal detectable changes at the 95% level of confidence (MDC95) of postural balance variables measured in eyes open (EO) and eyes closed (EC) conditions, with a stabilometric platform, in 59 kidney transplant (KT) recipients (mean age= 53.2 ± 11 years). In addition, we also performed receiver operating characteristics (ROC) curve analysis to explore the ability of postural balance measures to discriminate fallers and non-fallers (history of falls: yes or no). Sensitivity, specificity and area under the curve (AUC) of mean center of pressure velocity (CoPv), sway area (SA), center of pressure range of displacement in the anterior-posterior (AP) and medio-lateral (ML) directions were calculated. These data can be used by researchers aiming to design psychometric studies of postural balance in KT patients and they also provide clinicians with information on possible prioritization of outcome assessment for future fall-risk research in this clinical population.

Language: en

Keywords

Accidental falls; End-stage renal disease; Kidney transplantation; Postural balance

Prevalence of cognitive and vestibular impairment in seniors experiencing falls

Varriano B, Sulway S, Wetmore C, Dillon W, Misquitta K, Multani N, Anor C, Martínez M, Cacchione E, Rutka J, Tartaglia MC. Can. J. Neurol. Sci. 2020; ePub(ePub): ePub.

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DOI 10.1017/cjn.2020.154 **PMID** 32684199

Abstract

[Abstract unavailable]

Language: en

Which interventions are effective in preventing falls in people with multiple sclerosis? A Cochrane Review summary with commentary

Amatya B, Khan F. NeuroRehabilitation 2020; ePub(ePub): ePub.

(Copyright © 2020, IOS Press)

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Abstract

BACKGROUND: Falls are common and serious health concern in people with Multiple Sclerosis (MS). Various types of falls prevention interventions are currently investigated in people with MS.

OBJECTIVE: To assess the effectiveness of interventions to reduce falls in people with MS.

METHODS: To summarize falls prevention interventions from the published Cochrane Review "Interventions for preventing falls in people with multiple sclerosis" conducted by Hayes et al. Best available evidence was discussed from the rehabilitation perspective.

RESULTS: Overall 13 RCTs with 839 participants were included. The interventions evaluated included: exercise, education, and functional electrical stimulation alone or in combination. Majority of the included studies demonstrated high risk of bias. The findings suggest that the evidence was uncertain regarding the effects of evaluated interventions on preventing or reducing falls.

CONCLUSIONS: The evidence for any falls prevention interventions in people with MS is sparse and uncertain, and more robust studies are needed.

Language: en

Keywords

falls; rehabilitation; Multiple sclerosis