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MEDISCHE ABSTRACTS

AA@home, exercise program for frail older adults delivered by volunteers. Protocol of a Randomized Controlled Trial and cost-effectiveness study

Dimitri Vrancken (VUB, Artevelde University of Applied Sciences), Jade Tabeur (VUB), Emma De Keyser (University of Antwerp), Elke De Smedt (UZ Brussel), David Beckwée (University of Antwerp), Dominique Van de Velde (Ghent University), Wim Peersman (Odisee University of Applied Sciences), Lieven Annemans (Ghent University), Siddhartha Lieten (UZ Brussel), Patricia De Vriendt (VUB)

Mail: dimitri.vrancken@arteveldehs.be

Purpose: Between 2020 and 2050, the world's population aged 80 years and over will triple, drastically increasing the prevalence of frailty and associated healthcare costs. Multimodal exercise programs have proven to be an ideal countermeasure for frailty but the current Flemish standard of care does not include them. The purpose of this study is to investigate functional outcomes and cost-effectiveness of the home-based exercise program ACTIVE-AGE@home.

Methods: A pragmatic randomised controlled trial will be conducted with two intervention groups: delivered by professionals versus trained volunteers, and one control group. Participants (n=195) are community-dwelling frail older adults (>70 years) as defined by Fried et al. (2001). The 24-week program consists of three one-hour visits per week and contains aerobic, strength, balance, flexibility, coordination and dual-tasking exercises, accompanied by goalsetting and motivational interviewing. Functional ability, cognition, loneliness, self-management, subjective health, healthcare utilization and meaningful activities will be measured in all groups at 0, 24 and

48 weeks. Time and expenses invested by professionals or volunteers will be kept in diaries for trial and model-based cost-effectiveness analyses, expressed in incremental cost per QALY (quality-adjusted life year). Participants will be randomized into three parallel groups using permuted block randomization. Statistical analysis will be blinded to group allocation and outcome assessors will be blinded to the maximal extent possible.

Conclusions: Positive results will improve negative outcomes of frailty and reduce healthcare costs. It will be the first community-based exercise intervention for frailty, aligning with Flemish an international policy regarding socialization of care.

Applicability of STOPP/START criteria in the Swedish national patient register and a Swedish observational cohort

Cheima Amrouch (Ghent University), Souad Amrouch (University of Antwerp), Lu Dai (Karolinska Institutet), Jonas Wastesson (Karolinska Institutet), Kristina Johnell (Karolinska Institutet), Davide Liborio Vetrano (Karolinska Institutet), Delphine De Smedt (Ghent University), Mirko Petrovic (Ghent University)
Mail: cheima.amrouch@ugent.be

Purpose: The STOPP/START criteria are frequently applied in observational studies to assess potentially inappropriate prescribing in older adults. This study aimed to assess the applicability of the three available STOPP/START versions in two distinct datasets.

Methods: To evaluate the applicability of the three versions, we used: (i) the Swedish national patient register (SNPR) and (ii) an observational cohort study, Swedish National study on Aging and Care in Kungsholmen (SNAC-K). The criteria of each version were automated using R (version 4.2.2) and RStudio (version 2022.12.0+353). The Anatomical Therapeutic Classification code (ATC) was used to categorise medications. Diseases were categorised using the international classification of diseases version 10 (ICD10).

Results: The first STOPP/START version demonstrated an applicability rate of 80% in SNPR and 87% in SNAC-K. The second version showed an applicability of 63% in SNPR and 73% in SNAC-K and the third version showed an applicability of 64% in SNPR and 75% in SNAC-K. SNAC-K displayed higher applicability across all three versions compared to SNPR, with an applicability rate 7 to 11% higher than that of the SNPR. Challenges in applicability included broad definitions, vague terminology, and the absence of ICD10 codes for disease severity, symptomatic traits, and stability status of certain conditions.

Conclusion: The first STOPP/START version seems most applicable in observational studies. The cohort study with comprehensive clinical assessments showed higher criteria applicability compared to the register-based dataset. Future versions of the STOPP/START criteria should prioritise clear and unambiguous definitions to improve their applicability in research and promote result generalisability and comparability.

The effect of exercise on the skin immunity and wound healing: A systematic review

Lene Salimans (Frailty in Ageing Research Group (FRIA) and Gerontology department, VUB), Sofie De Schrijver (SKIN Research Group, Department of Dermatology, UZB/VUB), Rose Njemini (Frailty in Ageing Research Group (FRIA) and Gerontology department (VUB), Inge Kortekaas Krohn (SKIN Research Group, Department of Dermatology, UZB/VUB), Jan Gutermuth (SKIN Research Group, Department of Dermatology, UZB/VUB), Ivan Bautmans (Frailty in Ageing Research Group (FRIA) and Gerontology department, VUB & Geriatrics Department, UZB)

Mail: lene.salimans@vub.be

Background: One of the first visible effects of ageing occurs in the skin. Exercise is the best non-pharmacological method to counteract the ageing effects in the circulation. Whether exercise also affects the skin immunity and wound healing is at this moment unclear. Therefore, the review aim is to perform a systematic literature analysis regarding the exercise effects on the skin immunity and wound healing in humans.

Methods: The review protocol was registered with PROSPERO (ID:CRD42021248948). PubMed and Web-of-Science were systematically searched for relevant articles using the keywords: humans, exercise, skin immunity, and wound healing. Exercise intervention studies including endurance, resistance, flexibility or a combination of these exercise types, which investigated skin immunity and wound healing in humans were eligible. Articles were screened for eligibility by two independent reviewers. ROB-2 and ROBINS-I were used to assess internal validity.

Results: The searchstream of databases Pubmed and Web-of-Science yielded respectively, 953 and 844 articles, of which 386 were duplicates. Sixteen articles were eligible of which 11 RCTs, 2 non-RCTs, and 3 intervention studies with a control group. The most frequently studied outcome was wound healing. Most studies showed a positive influence of exercise on wound healing. Other investigated outcomes were delayed-type cell-mediated immunity, skin function, and changes in skin histology.

Conclusion: The exercise effects on skin immunity and wound healing are becoming more interesting to investigate. The included studies are heterogeneous in exercise intervention type, study population, and outcomes. These review results showed that exercise has beneficial effects on both wound healing and other skin-related outcomes.

The effect of a combined lifestyle intervention with and without protein drink on inflammation in older adults with obesity and type 2 diabetes

Robert Memelink (Amsterdam University of Applied Sciences and VUB), Rose Njemini (VUB), Minse de Bos Kuil (Amsterdam University of Applied Sciences), Suzan Wopereis (TNO, Netherlands), Johan de Vogel-van den Bosch (Danone Nutricia Research, the Netherlands), Josje Schouffour (Amsterdam University of Applied Sciences), Michael Tieland (Amsterdam University of Applied Sciences), Peter Weijs (Amsterdam University of Applied Sciences, University of Amsterdam), Ivan Bautmans (Vrije VUB/UZB and SOMT University of Physiotherapy, the Netherlands)
Mail: r.g.memelink@hva.nl

Purpose: To investigate whether hypocaloric diet combined with resistance exercise and interval training, with or without consumption of a protein drink, affected inflammatory profile in older adults with type 2 diabetes.

Methods: 114 Adults (≥ 55 years) with obesity and type 2 (pre-)diabetes had measurements of CRP, pro-inflammatory cytokines (interleukin (IL)-6, tumor-necrosis-factor (TNF)- α , monocyte chemoattractant protein (MCP)-1), anti-inflammatory cytokines (IL-10, IL-1 receptor antagonist (RA), soluble tumor-necrosis-factor receptor (sTNFR)1), adipokines (leptin, adiponectin), and glycation biomarkers (carboxymethyl-lysine (CML), soluble receptor for advanced glycation end products (sRAGE)) from fasting blood samples. A linear mixed model was used to evaluate change in inflammatory biomarkers after lifestyle intervention and effect of the protein drink. Linear regression analysis was performed with parameters of body composition and insulin resistance.

Results: IL-1RA, leptin and adiponectin significantly decreased after 13 weeks, while ratios TNF- α /IL-10 and TNF- α /IL-1RA increased. There were no significant differences between the protein and control groups. CRP increased by 12% in participants with low to average chronic low-grade inflammation and decreased by 36% in those with high chronic low-grade inflammation. Change in leptin and IL-1RA was positively

associated with change in fat mass and insulin resistance. Change in lean mass was not associated with any of the biomarkers.

Conclusion: 13 weeks of combined lifestyle intervention, either with or without protein drink, reduced circulating adipokines and anti-inflammatory cytokine IL-1RA, and increased inflammatory ratios TNF- α /IL-10 and TNF- α /IL-1RA in older adults with obesity and type 2 diabetes. CRP was either increased or reduced depending on the level of chronic low-grade inflammation

Is stretching an appropriate control for studies on exercise immunology? A systematic review

Emelyn Mathot (Frailty in Ageing Research group and Gerontology department, VUB), Lene Salimans (Frailty in Ageing Research group and Gerontology department, VUB), Arno Goens (VUB), Ivan Bautmans (Frailty in Ageing Research group and Gerontology department, VUB and Geriatrics Department, UZB)
Mail: Emelyn.Mathot@vub.be

Purpose: Physical exercise recruits immune cells to the blood circulation and can lower ageing-related chronic low-grade inflammation in a dose-response manner. An active muscle contraction is assumed to be essential for these responses. Muscle stretching does not involve active muscle contractions and is therefore often used as a control for exercise immunology studies. However, it has not yet been documented whether stretching influences the inflammatory profile. This systematic review aims to determine if stretching is an appropriate control for exercise studies.

Methods: A systematic search in PubMed and Web Of Science resulted in 9 articles describing the effect of stretching on inflammation (immune cell proportions, cytokines, changes in muscle/immune cell gene expression) in adults aged 65+ (Prospero CRD42023388920). Reviews, case reports and animal studies were excluded. Quality assessment was performed using the Cochrane risk-of-bias tool for randomized (ROB-2) trials.

Results: All articles showed sufficient methodological quality and reported effects on basal levels of inflammation. No effects on the number of naïve, memory and senescence-prone T-cells or on circulating inflammatory markers CRP and IL-6 were observed. One article observed no changes in TNF- α after stretching, while another showed an increase. This increase was also observed at the muscle gene expression level. While one article showed few stretching-induced changes in pro/anti-inflammatory related genes in immune cells, this was not confirmed in a second article.

Conclusion: Based on available literature, muscle stretching elicits no major effects on the immune response in older adults and can therefore be a suitable active control group for exercise immunology studies.

Potentially inappropriate prescribing in multimorbid and poly medicated older adults with atrial fibrillation: a systematic review and meta-analysis

Cheima Amrouch (Ghent University), Delphine Vauterin (Ghent University), Souad Amrouch (University of Antwerp), Maxim Grymonprez (Ghent University), Lu Dai (Karolinska Institutet), Lies Lahousse (Ghent University), Dirk De Bacquer (Ghent University), Davide L. Vetrano (Karolinska Institutet), Delphine De Smedt (Ghent University), Mirko Petrovic (Ghent University)
Mail: cheima.amrouch@ugent.be

Purpose: Polypharmacy in multimorbid older patients with atrial fibrillation (AF) is a risk factor for potentially inappropriate prescribing (PIP). We aimed to systematically assess the evidence on the prevalence of PIP and its impact on adverse health outcomes in this patient group.

Methods: A systematic search of peer-reviewed literature describing the prevalence of PIP and/or its association with adverse health outcomes in multimorbid (AF plus one comorbidity) and polymedicated (≥ 2 drugs) adults ≥ 65 years was done from inception to 31st of March 2023. A meta-analysis of the prevalence of PIP of (direct) oral anticoagulants ((D)OACs) was conducted using a random-effects model.

Results: Of the 12 studies included, only one reported overall PIP prevalence (65%). Most studies ($n = 7$) used clinical guidelines to assess PIMU. Summary of Product Characteristics ($n=5$), explicit ($n=4$) and implicit screening tools ($n=1$) were used to a lesser extent. The meta-analysis of 10 studies assessing PIP of (D)OACs produced a pooled prevalence (95% confidence interval, CI) of 35% [30%-40%], with significant heterogeneity between the included studies ($I^2=95\%$). No statistically significant association was reported in three studies between PIP of (D)OACs, cardiovascular (CV) and all-cause mortality, hospital readmission, CV hospitalisation and stroke. Reported associations between PIP and major bleeding differed, with only one study demonstrating a significant association (odds ratio 2.17, 95%CI 1.14-4.12).

Conclusion: This systematic review and meta-analysis highlight the scarce evidence on PIP prevalence and its association with adverse health outcomes in multimorbid older adults with AF. Large, prospective and better-designed studies are needed.

How do relatives experience palliative care on the acute geriatric ward? A telephone survey

Tim Biesbrouck (Department of Public Health and Primary Care, Gerontology and Geriatrics, KU Leuven and Department of Geriatric Medicine, University Hospital Leuven), Els Devriendt (Department of Geriatric Medicine, University Hospital Leuven), Johan Flamaing (Department of Public Health and Primary Care, Gerontology and Geriatrics, KU Leuven and Department of Geriatric Medicine, University Hospital Leuven), Maaïke L De Roo (Department of Public Health and Primary Care, Gerontology and Geriatrics, KU Leuven and Department of Geriatric Medicine, University Hospital Leuven)
Mail: tim.biesbrouck@uzleuven.be

Background: Over ten per cent of patients admitted to an acute geriatric ward die during hospitalisation. Healthcare workers on geriatric wards are expected to combine palliative care with geriatric care to give these patients a comfortable death.

Methods: To assess relatives' experiences with palliative care on geriatric wards a structured telephone survey was conducted. Relatives of patients who had an expected death on acute geriatric wards from November 2022 to June 2023 were contacted four to eight weeks after the death of the patient.

Results: Fifty-one of the Ninety-three contacted relatives participated in the study. Nearly all relatives judged that the patient died peacefully. Eighty per cent of relatives felt they were adequately supported by the care team and sufficiently involved and informed on medical decisions. According to the relatives, care was adequately adapted to the patients' needs. This, despite the fact that in the relatives' perception patients' wishes at the end of life were only assessed in half of the patients. Almost all patients were prescribed "as needed" medication for expected symptoms at the end of life. Sixteen relatives felt symptoms were only partially or not sufficiently managed. Overall care received a mean score of nine out of ten. Relatives mentioned several suggestions for improvement regarding communication, care and facilities for relatives.

Conclusion: This telephone survey found that relatives were satisfied with the palliative care provided on the geriatric ward. This is a way to get insights into the perception of care and to receive suggestions for improvement.

Pharmacological treatment of pain, dyspnea, death rattle, fever, nausea and vomiting in the last days of life in older people: a systematic review

Tim Biesbrouck (Department of Public Health and Primary Care, Gerontology and Geriatrics, KU Leuven, Department of Geriatric Medicine, University Hospital Leuven and Department of Geriatrics, Ghent University Hospital),
Dine AD Jennes (Department of Geriatric Medicine, Antwerp University Hospital),
Nele Van Den Noortgate (Department of Geriatrics, Ghent University Hospital),
Maaïke L De Roo (Department of Public Health and Primary Care, Gerontology and Geriatrics, KU Leuven and Department of Geriatric Medicine, University Hospital Leuven)
Mail: tim.biesbrouck@uzleuven.be

Background: Due to altered pharmacokinetics and pharmacodynamics in the geriatric population the pharmacological treatment of physical symptoms during the last days of life in older people requires a custom approach.

Methods and objectives: This systematic review searched MEDLINE and EMBASE from inception till 09/03/2023 for evidence on the pharmacological treatment of pain, dyspnea, death rattle, fever and nausea & vomiting in the last days of life in older people. It focuses on the recommended pharmacological treatment, its effectiveness and the occurrence of undesirable side effects.

Results: Concerning pain and dyspnea, four studies were found for each symptom. These were predominantly descriptive studies on the use of opioids for the treatment of pain or dyspnea, without clear evidence for the choice of one specific opioid, nor a specific opioid dose. For death rattle, five randomised controlled trials and two retrospective studies were retrieved. These provide evidence for the prophylactic treatment of death rattle with hyoscine butylbromide. However, no clear evidence was found for the treatment of death rattle once it has occurred. For fever, or nausea and vomiting no articles were withheld.

Conclusion: Limited evidence exists on the pharmacological treatment of pain, dyspnea, death rattle, fever, nausea and vomiting in the last days of older people. Other than the general use of opioids for pain and dyspnea and the prophylactic administration of hyoscine butylbromide to decrease the likelihood of developing death rattle, no specific recommendations can be made based on current available evidence.

High blood pressure variability is associated with increased risk for negative health outcomes in people aged 65 and over

Jordy Saren (VUB), Aziz Debain (VUB), Fien Loosveldt, Ivan Bautmans (VUB)
Mail: jordy.saren@vub.be

Background: Ageing may increase blood pressure variability (BPV) because of a rise in arterial stiffness and a decline in baroreflex.

Purpose: To systematically review the association between BPV and negative health outcomes in older adults.

Methods: For this systematic review, the PubMed, and Web of Science databases were systematically screened. After the selection procedure, 109 articles were included. The quality of the included studies was assessed. Review Manager was used to perform meta-analyses comparing the high BPV group with middle and low BPV groups. Additionally, meta-analyses comparing the low BPV group with the middle BPV group were performed. 18 retrospective, 69 prospective and 22 cross-sectional studies were included.

Results: High BPV is associated with a higher risk for all-cause mortality (OR=1.95 (95% CI 1.56-2.42), $p<0.00001$) and the occurrence of cardiovascular events (OR=2.32 (95% CI 2.00-2.71), $p<0.00001$) in older persons. Furthermore, our meta-analysis demonstrated that older adults with low BPV have a 26% decreased risk for cardiovascular events (OR=0.74 (95% CI 0.62-0.87), $p=0.0004$).

Conclusion: Older persons with high BPV show a 2-fold higher risk of mortality and cardiovascular events, and the latter risk is 26% lower in those with a low BPV. Because there is currently no gold- standard for measuring BPV, we give an overview of cut-off values for the most often reported BPV parameters in the literature.

Agreement and Predictive Value of the Clinical Frailty Scale in hospitalized older patients

Liese Lanckmans (Ghent University), Ruth Piers (University Hospital Ghent),
Nele Van Den Noortgate (Ghent University)
Mail: liese.lanckmans@ugent.be

Purpose/Methods: The Clinical Frailty Scale (CFS) was developed to summarize a Comprehensive Geriatric Assessment. A classification tree was designed to assist with CFS scoring. This prospective multicenter observational study examined agreement between the classification tree and clinical scoring by geriatric residents and

geriatricians. Furthermore, the predictive value for 6-month mortality was investigated. It included patients 75 and older admitted to an acute geriatric unit.

Results: We included 97 patients, 66% were female, mean age was 86 years. The intraclass correlation coefficient (ICC) for the classification tree CFS was 0.526 when compared to the geriatrician's CFS and 0.573 when compared to the resident. The ICC for the resident's CFS when compared to the geriatrician's CFS was 0.643. The logistic regression model showed good predictive value for 6-month mortality (AUC 0.774, 0.774, 0.719 for the geriatrician's CFS, resident's CFS and classification tree CFS respectively). A cut-off of CFS 6 or higher resulted in a specificity of 0.544 and sensitivity of 0.833. A cut-off of CFS 7 or higher showed a specificity of 0.897 and sensitivity of 0.458.

Conclusions: Agreement between the geriatrician and the geriatric resident regarding the CFS is average. The classification tree is of limited added value for physicians with geriatric experience though might be beneficial for health care workers with limited experience. The predictive value of the CFS for 6-month mortality is good.

Orthogeriatric co-management for older patients with a major osteoporotic fracture: An observational pre-post study

Sigrid Janssens (Department of Public Health and Primary Care, Gerontology and Geriatrics, KU Leuven), An Sermon (Department of Development and Regeneration, KU Leuven), Mieke Deschodt (Department of Public Health and Primary Care, Gerontology and Geriatrics, KU Leuven), Katleen Fagard (Department of Geriatric Medicine, University Hospitals Leuven), Marie Cerulus (Department of Public Health and Primary Care, Gerontology and Geriatrics, KU Leuven), Heidi Cosyns (Department of Geriatric Medicine, University Hospitals Leuven), Johan Flamaing (Department of Geriatric Medicine, University Hospitals Leuven), Michiel Herteleer (Department of Development and Regeneration, KU Leuven), Marian Dejaeger (Department of Geriatric Medicine, University Hospitals Leuven)

Mail: sigrid.janssens@kuleuven.be

Purpose: The aim of this study was to investigate whether nurse-led orthogeriatric co-management in patients with a major osteoporotic fracture is more effective than inpatient geriatric consultation.

Methods: We performed an observational pre-post study on the traumatology ward of University Hospitals Leuven in Belgium including 108 patients aged 75 years and older hospitalized with a major osteoporotic fracture in each cohort. The intervention group received proactive geriatric care based on automated protocols and

comprehensive geriatric assessment (CGA). The primary outcome was the proportion of patients having one or more in-hospital complications, results were compared with χ^2 testing. Additionally, a process evaluation was performed.

Results: In the intervention group, 8% fewer patients experienced in-hospital complications (46% vs. 38%; $p=0.215$) with a significant decrease in delirium incidence (34% vs. 21%, $p=0.033$). Congestive heart failure decreased by 3% (8% vs 5%; $p=0.269$), and pneumonia by 5% (10% vs. 5%, $p=0.119$). The prevalence of deep venous thrombosis, urinary tract infection, pulmonary embolism, myocardial infarction, and in-hospital mortality was not altered. Regarding the process evaluation, dysphagia screening and daily recording of dietary intake were more frequently performed (0% vs 70%, 0% vs 52%), laxatives were more frequently prescribed in patients without bowel movement (67% vs 94%), and more patients were started on calcium-vitamin D supplements (20% vs 58%), all findings were significant ($p<0.001$).

Conclusions: Proactive geriatric care based on automated protocols and CGA resulted in an overall reduction in in-hospital complication rate and a significant reduction of in-hospital delirium incidence.

Hospitalizations for major osteoporotic fractures in Belgium: trends between 2010 and 2021

Sigrid Janssens (Department of Public Health and Primary Care, KU Leuven),
Evelien Gielen (Department of Public Health and Primary Care, KU Leuven),
Michael Laurent (Department of Geriatric Medicine, Imelda Hospital), An Sermon
(Department of Development and Regeneration, KU Leuven), Michiel Herteleer
(Department of Development and Regeneration, KU Leuven), Marian Dejaeger
(Department of Public Health and Primary Care, KU Leuven)
Mail: sigrid.janssens@kuleuven.be

Purpose: The aim of this study was to describe the incidence and trends of major osteoporotic fractures (MOF) in patients aged 50 years and over in Belgium between 2010 and 2021.

Methods: Population-based, retrospective study based on hospitalization data extracted from the national database NIHDI and demographical data from the Belgian Federal Bureau for Statistics. Data were combined to determine the crude and age-standardized incidence of fractures of the hip, distal femur, pelvis, humerus, wrist, and vertebrae using 2010 as the reference year.

Results: A total of 445,234 osteoporotic fractures were reported between 2010 and 2021 (excluding 2015). Hospitalizations for MOF increased by 5.8% between 2010 and 2021 ($p = 0.013$) with a higher increase in men (12.1%; $p = 0.001$) compared to women

(4.1%; $p = 0.041$). The crude incidence per 100,000 for all MOF decreased from 990 to 910 between 2010 and 2021 ($p = 0.572$). The age-standardized incidence for any MOF in men declined from 5.30/1,000 to 4.42/1,000 ($p = 0.010$). In women, a very similar decrease of 16.0% was observed (13.84 to 11.62; $p = 0.003$). Both hip and non-hip MOF showed a decrease in both sexes.

Conclusions: Although a declining trend in the crude incidence per 100,000 and age-adjusted incidence of MOF was observed, the absolute number of MOF will continue to rise due to demographic changes in Belgium.

Risk Factors and Mortality of Infective Endocarditis in the Elderly: A Belgian Single-Center Retrospective Study

Joséphine Mennig (Department of Geriatrics, Cliniques Universitaires Saint-Luc, Université Catholique de Louvain, Bruxelles), Marin Boute (Department of Cardiology, Cliniques Universitaires Saint-Luc, Université Catholique de Louvain, Bruxelles), Elodie De Groote (Department of Infectious disease, Grand Hôpital de Charleroi, Charleroi), Pierre Hanotier (Department of Geriatrics, Pôle Hospitalier Jolimont, Réseau HELORA, La Louvière)
Mail: josephine.mennig@gmail.com

Purpose: Infective endocarditis (IE) is increasingly observed in the elderly, leading to high morbidity and mortality. Objectives were threefold: to characterize an elderly cohort with IE, to assess the impact of frailty on 30-day mortality, and to identify other geriatric features predictive of 30-day mortality.

Methods: Patients aged ≥ 75 , diagnosed with IE according to Dukes criteria were enrolled in a retrospective, single-centre study from January 2016 to August 2021. A retrospective comprehensive geriatric assessment (CGA) was performed, including frailty (Clinical Frailty Scale, CFS), dependency ((Instrumental) Activities of Daily Living), cognitive function (Mini-Mental State Examination), nutritional status (short-form Mini Nutritional Assessment, MNA_{sf}), and functional status (ability to walk). Based on CFS, patients were categorized as “frail” (CFS > 4) or “robust” (CFS ≤ 4).

Results: Of the 41 included patients, 30 were classified as frail and 11 as robust. Frail patients were older (84.9 ± 5.2 vs 78.3 ± 3.8 years old, $p < 0.001$), with similar comorbidities (overall Charlson score 7.6 ± 2.6 , $p = 0.63$) and a higher CFS (6.1 ± 0.8 vs 3.4 ± 1.0 , $p < 0.001$). Both groups showed equivalent 30-day mortality (46.7 vs 45.5%), and the frail group did not correlate with increased mortality (OR = 1.05, 95%CI [0.26 – 4.37], $p = -0.95$). Among the geriatric features, only nutritional status suggested a relationship with 30-day mortality (MNA_{sf} $< 8/14$: OR = 3.44, 95%CI [0.83 – 16.48], $p = 0.1$; hypoalbuminemia (< 30 g/L): OR=3.05, 95%CI [0.91-10.89], $p = 0.076$).

Conclusions: Our study provides insights into the relationship between geriatric features and IE mortality. While frailty (CFS) did not significantly correlate with higher mortality, nutritional status potentially did. Further studies are essential to corroborate these results

Comparison of protein intake assessed from weighed protein powders, food diaries and 24-hour urine samples in community-dwelling sarcopenic adults

Nadjia Amini, Anouk Devriendt, Laurence Lapauw, Jolan Dupont, Laura Vercauteren, Kristin Verbeke, Sabine Verschueren, Jos Tournoy, Evelien Gielen (all KU Leuven)
Mail: nadjia.amini@kuleuven.be

Purpose: (1) To determine protein intake by nitrogen excretion in 24-hour urine samples in older adults with/without protein supplementation (objective method). (2) To validate protein intake estimated from a combination of 4-day food diaries (dietary protein) and weighed protein powders (supplemental protein) against protein intake estimated from 24-hour urine samples (dietary+ supplemental protein).

Methods: Longitudinal data of the Exercise and Nutrition for Healthy Ageing (ENHANce) study were used. ENHANce, a 5-armed triple blinded RCT, in older adults (≥ 65 years) with sarcopenia (EWGSOP2-criteria) aims to assess the effect of 12 weeks of combined anabolic interventions (protein supplement, omega-3 supplement, physical exercise) versus placebo/no intervention on physical performance. Protein intake was determined by nitrogen excretion in 24-hour urine samples and by a combination of weighed protein powders and 4-day food diaries. Mean differences and correlation coefficients were used to assess agreement between the two methods.

Results: Nitrogen analysis showed that the mean protein intake was 1.30g/kg/BW (protein powder group; n=34) and 0.85g/kg/BW (placebo group; n=16). Mean protein intake according to the combined method was overestimated by 7.7 g/day compared to 24-hour urine samples (87.0 g/day versus 79.3g/day). Correlations between protein intake derived from the combined method and 24-hour urine samples were in the order of 0.480-0.785 at different time points during the study.

Conclusions: Protein supplementation increased protein intake to meet the daily recommended amount of protein intake for older adults (1.0-1.2 g/kg BW), but not that for sarcopenic older adults (1.5 g/kg BW). Protein intake in sarcopenic older adults can be estimated with fair to moderate accuracy by the combination of food diaries and weighed powders.

The interrelationship between sarcopenia and mild cognitive impairment, Alzheimer's disease and other forms of dementia: a meta-analysis

Nadjia Amini, Mounir Ibn Hach, Laurence Lapauw, Laura Vercauteren, Jolan Dupont, Sabine Verschueren, Jos Tournoy, Evelien Gielen (all KU Leuven)
Mail: nadjia.amini@kuleuven.be

Purpose: This systematic review aims to clarify the existing evidence on the interrelationship between sarcopenia and MCI, AD and other forms of dementia.

Methods: Databases including PubMed, EMBASE, CINAHL, SCOPUS, Web of Sciences, ClinicalTrials.gov, PEDro, Sportdiscus and the Cochrane Central register of Controlled Trials were used to search for studies that reported on the association and prevalence of sarcopenia in MCI, AD or non-AD dementia from inception to 8th June 2023. Observational studies (cross-sectional and cohort) and interventional studies in adults ≥ 50 years were included.

Results: Seventy-seven studies (92 058 subjects) were included in the qualitative analysis (71 cross-sectional, 4 cohort and 2 interventional studies). Studies were heterogeneous, using different diagnostic criteria to define sarcopenia or cognitive status. The majority of studies ($n=38$) included Asian community-dwelling older adults. Most studies investigated the association of sarcopenia with AD(33/77) and MCI(32/77). For studies focusing on non-AD dementia, two studies included Lewy body dementia and one study included Parkinson's dementia, whereas the remaining studies did not specify dementia aetiology($n=21$). Results from the meta-analysis ($n=26$) showed that sarcopenia was significantly associated with MCI (pooled OR= 1.58, 95% CI 1.42-1.76)($n=14$), AD (pooled OR=2.97, 95% CI 2.15-4.08)($n=3$) and non-AD dementia (pooled OR=1.68, 95% CI 1.09-2.58) ($n=9$). The significance and magnitude of the associations differed in subgroup analyses by study design, study population and definition of sarcopenia or cognitive status.

Conclusions: This meta-analysis showed that sarcopenia is significantly associated with having MCI, AD and non-AD dementia. Further longitudinal research is needed to clarify the causal relationship.

Establishing age-dependent reference values for ultrasonographic muscle mass measurement in a Belgian population

Emilie Mylemans (University of Antwerp, ZNA Middelheim), Femke Ariën, Sophie Bastijns, Anne-Marie De Cock, Stany Perkisas
Mail: emilie.mylemans@student.uantwerpen.be

Background: Ultrasonographic muscle assessment has been proven to be an easy screening method for early muscle mass alterations. In order to use this technique in clinical practice, there is a need for age-dependent reference values.

Purpose: This study aims to compare ultrasound with BIA, an already established method of muscle mass measurement, in order to validate the former and incorporate it into official guidelines for routine muscle screening in clinical practice.

Methods: A total of 120 patients per age group (decade) will be included. The data are collected through the University of Antwerp and ZNA Middelheim hospital. Muscle ultrasound is performed measuring following characteristics: muscle thickness, muscle cross-sectional area, echo intensity, muscle fascicle length and pennation angle.

Results: Currently, preliminary data from 90 persons from all age cohorts and both sexes is presented. In women, muscle thickness (PCC 0.508), cross-sectional area (PCC 0.454) and pennation angle (PCC 0.539) have good correlations with appendicular skeletal muscle mass. In men, muscle thickness (PCC 0.613), cross-sectional area (PCC 0.524) and pennation angle (PCC 0.474) have good correlations with appendicular skeletal muscle mass.

Conclusion: These data already give an insight in the projected outcome of the study: clear cut-off values at which early conclusions can be made regarding muscle assessment and possible sarcopenia diagnosis. Hence, an early treatment can prevent further physical decline, leading to less morbidity, mortality and an improved quality of life. This study will give a clear boost to sarcopenia research in clinical practice as ultrasound provides an easy bedside screening method.

Associations between gut microbiota and sarcopenia or its defining parameters: a systematic review

Laurence Lapauw (Department of Public Health and Primary Care, Division of Gerontology and Geriatrics, KU Leuven), Aurélie Rutten (Department of Geriatric Medicine, Zuyderland Academic Center, Sittard, The Netherlands), Jolan Dupont (Department of Public Health and Primary Care, Division of Gerontology and Geriatrics, KU Leuven), Lenore Dedeyne, Nadjia Amini (Department of Public Health and Primary Care, Division of Gerontology and Geriatrics, KU Leuven), Laura Vercauteren (Department of Public Health and Primary Care, Division of Gerontology and Geriatrics, KU Leuven), Jeroen Raes (Department of Public Health and Primary Care, Division of Gerontology and Geriatrics, KU Leuven), Evelien Gielen (Department of Geriatric Medicine, UZ Leuven)
Mail: laurence.lapauw@kuleuven.be

Purpose: This systematic review aims to clarify possible associations between sarcopenia or its defining parameters (muscle mass, strength, physical performance) and gut microbiota (GM).

Methods: This systematic review was conducted according to the PRISMA-reporting guideline and pre-registered on PROSPERO (CRD42021259597). PubMed, Web of Science, Embase, ClinicalTrials.gov and Cochrane library were searched until July 20th 2023. Included studies reported on GM and sarcopenia or its defining parameters. Observational studies were included with populations of mean age ≥ 50 years.

Results: Thirty-two studies with 10,781 persons (58.56% female) were included. Thirteen studies defined sarcopenia as a construct. Nineteen studies reported at least one sarcopenia-defining parameter. Most studies included Caucasian community-dwelling persons.

Studies found GM-taxa to be associated at multiple levels with sarcopenia (n=4), muscle mass (n=14), strength (n=7) and physical performance (n=2). Muscle strength was associated with α -(within-sample) and β -(between-sample) diversity, and muscle mass additionally with Firmicutes/Bacteroidetes (F/B)-ratio.

Alpha-diversity was decreased in persons with sarcopenia, low muscle mass or strength. GM of persons with sarcopenia and decreases in one of its parameters clustered differently compared to persons with preserved muscle status. F/B ratio was decreased in persons with sarcopenia or low muscle mass. All reported results were significant ($p < 0.05$).

Conclusions: Sarcopenia and its defining parameters were associated with GM-taxa. GM diversity was lower in persons with sarcopenia, low muscle mass or strength and clustered differently compared to persons with preserved muscle status. However, results were heterogeneous and no causal conclusions were drawn. This emphasizes

the need for uniformly designed longitudinal trials in large samples to explore GM as possible sarcopenia biomarkers.

Mixed-Reality induced balance perturbation in fallers: study protocol

Eugénie Lambrecht (University of Antwerp), Willem De Hertogh (University of Antwerp), David Beckwée (VUB/University of Antwerp), Luc Vereeck (University of Antwerp), Jacob Struye (University of Antwerp), Ann Hallemaans (University of Antwerp)

Mail: eugenie.lambrecht@uantwerpen.be

Purpose: This study aims (1) to profile postural balance reactions in older adults with fall history by use of mixed-reality and (2) to examine whether these reactions relate to sensory function in older adults, taking frailty into account as a potential influencing factor.

Methods: A cross-sectional case-control study will be carried out in community-dwelling adults ≥ 65 years old with ≥ 2 fall incidents (fallers) or none (non-fallers) in the last 12 months. Recruitment will take place in community centres, service flats and through 1st line practitioners until a sample size of 74 is reached. Data will be collected at the UA-UZA movement analysis lab and consists of 3 categories. (1) 3D-biomechanical movement analysis where an augmented-reality set of goggles projects a hologram moving in different directions. The participant is then ought to follow this projection with eyes and head while standing or walking. Postural balance reactions will be mapped based on biomechanical marker data and electromyography. (2) Frailty assessment using the Fried criteria. (3) Sensory function testing including cervical sensorimotor control using the Head repositioning and Fly test. Vestibular function with vestibulo-ocular reflex testing by the video Head impulse test and visual acuity measurement through the functional Head impulse test.

Hypotheses: We hypothesize higher instability levels and lower efficiency in muscle reactive strategies during standing and locomotion in fallers. Additionally, lower sensory function and higher frailty levels are expected in fallers, correlated with higher instability levels in this group.

Identifying clinical tools related to one-year mortality in older heart failure patients. A multicentre, observational, prospective study

Lore en Sarah Kestens en Billet, Ruth Piers, Anja Velghe (all UZ Ghent)
Mail: sarah.billet@ugent.be

Purpose: Heart failure is a prevalent condition amongst older people and has a poor prognosis. The purpose of this study is to identify prognostic factors which can help clinicians to identify older heart failure patients at high risk for one-year mortality.

Methods: Multicentre, observational, prospective study which included 147 heart failure patients aged ≥ 75 years, hospitalized on the cardiology or the geriatric department in two hospitals. One-year survival status was the main outcome measure. For univariate analysis Chi square test and independent sample T-test was used; for multivariate analysis logistic regression.

Results: One-year mortality was 28% (41/147). One-year survivors and non-survivors did not differ in following characteristics: age, gender, sodium level at hospital discharge, ejection fraction, NYHA Class, KATZ scale, iADL and GRP. There was a significant lower systolic blood pressure at discharge in non-survivors compared to one-year survivors ($p = 0.002$). Non-survivors had more severe underlying comorbidities according to the Charlson Comorbidity index (CCI) ($p = 0.002$).

Logistic regression showed a lower risk of mortality with increasing systolic blood pressure at hospital discharge (OR 0.960, 95% CI [0.938 – 0.983]) and a higher risk with increasing CCI (OR 1.262, 95% CI [1.032– 1.544]); the other variables were not significantly related.

Conclusion: Lower blood pressure and more severe comorbidity, but not functionality neither geriatric risk profile, are related to one-year mortality in older heart failure patients

Validatie van de Osteoporosis Health Belief Scale in het Nederlands om te peilen naar de gezondheidsovertuigingen bij de oudere populatie

Lynn Longueville (Universitair Centrum Geriatrie, Antwerpen), Michel Schellemans (Sint-Franciscusziekenhuis, Heusen-Zolder), Stany Perkisas (Universitair Centrum Geriatrie, Antwerpen), Sophie Bastijns (Universitair Centrum Geriatrie, Antwerpen), Femke Ariën (Universitair Centrum Geriatrie, Antwerpen), Anne-Marie De Cock (Universitair Centrum Geriatrie, Antwerpen)
Mail: lynnlongueville@hotmail.com

Doel: Osteoporose blijft een onderbehandelde aandoening. Literatuurnazicht leert dat patiënten zich weinig bezig houden met gezondheidspreventieve maatregelen ten aanzien van osteoporose. De Osteoporosis Health Belief Scale (OHBS) werd ontwikkeld om te peilen naar de gezondheidsovertuigingen over osteoporose. Dit is een vragenlijst met 42 vragen die worden ingedeeld in 7 subschalen over ernst, vatbaarheid, gezondheidsmotivatie, calcium en lichaamsbeweging. Het doel van deze studie was om de OHBS te valideren in het Nederlands om zo te kunnen peilen naar de gezondheidsovertuigingen bij de oudere populatie.

Methodologie: Nederlandstalige patiënten ouder dan 65 jaar, zonder cognitieve problemen, werden geïncludeerd in de studie. Vertaling van de OHBS in het Nederlands gebeurde o.b.v. de internationale richtlijnen over het omzetten van een gevalideerde vragenlijst in een andere taal.

Resultaten: Het gebruik van de Nederlandstalige versie van de OHBS bij de ouderen toonde algemeen een correct begrip en duidelijke verstaanbaarheid. Er was enig verschil in mening omtrent de interpretatie van vraag 13 "Calciumrijke voeding bevat u niet goed". Een gebrek aan kennis over osteoporose werd aangehaald als een limiterende factor voor het invullen van de vragenlijst. De resultaten tonen een sterke test-hertest-betrouwbaarheid en interne consistentie. De invultijd varieerde tussen de 5 en 7 minuten.

Conclusies: De Nederlandstalige versie van de OHBS is een duidelijk en begrijpelijk instrument met een goede test-hertest-betrouwbaarheid en goede interne consistentie. Deze validatie zorgt ervoor dat de OHBS kan worden gebruikt om te peilen naar de gezondheidsovertuigingen over osteoporose bij de Nederlandstalige geriatrische populatie. Meer kennis hieromtrent kan helpen om de communicatie en aanpak van osteoporose te verbeteren.

Prevalence and appropriateness of antimicrobial therapy in nursing homes – a point prevalence study in Belgium

Indira Coenen (KU Leuven), Lotte Vander Elst (UZ Leuven), Isabel Spriet (KU Leuven), Matthias Gijssen (KU Leuven), Veerle Foulon (KU Leuven), Jan De Lepeleire (KU Leuven), Katrien Latour (Sciensano), Veerle Cossey (KU Leuven), Annette Schuermans (KU Leuven), Charlotte Quintens (UZ Leuven)
Mail: indira.coenen@kuleuven.be

Purpose: Overall prevalence of antimicrobial therapy in nursing homes is well described in literature. However, less is known about the appropriateness of antimicrobial therapy in residents. Therefore, this study aimed to investigate both prevalence and appropriateness of antimicrobial therapy in Belgian nursing homes.

Methods: In a prospective, observational point prevalence study, researchers documented prevalence and identified potentially inappropriate prescriptions (PIPs) by evaluating antimicrobial therapy according to national guidelines. The severity of inappropriateness was assessed using a modified Delphi expert panel.

Results: Eleven nursing homes, including 1178 residents, participated in this study. On the survey day, 8.0% of residents received systemic antimicrobial therapy, primarily for urinary tract infections (54.2%), respiratory tract infections (36.5%) or skin and soft tissue infections (6.3%). However, 89.2% of these therapies did not align with national guidelines, resulting in 171 PIPs, with 49 being unique PIPs. Among these, 26.5% were assessed with a mean severity score of four or higher. The most inappropriate practices were initiating antimicrobial prophylaxis for recurrent urinary tract infections with insufficient episodes (n=25) and starting therapy for cough without other symptoms (n=3). Inappropriate timing of time-dependent antimicrobial therapy was common but was assessed with moderate severity. Additionally, one-third of systemic antimicrobial therapy exceeded the recommended duration.

Conclusion: Antimicrobial therapy in nursing homes is often not prescribed according to national guidelines, highlighting the need for future interventions to promote the rational use of antimicrobial therapy in this setting.

“Onze viervoeter collega”: over de relevantie van een therapiehond bij de behandeling van gedragsstoornissen in onze zorgcentrum

Ariane Renel (MRS Les Eglantines)

Mail: arianneclaire.renel@cpasbxl.brussels

Doel: De gedragsproblemen die geassocieerd worden met cognitieve stoornissen, worden goed gedocumenteerd in de literatuur: agitatie, verbale of fysieke agressie, apathie, weigering van zorg of voedsel, geremdheid, angst- of depressieve stoornissen, enz. Deze situaties hebben een sterke invloed op de residenten, maar ook op het zorgpersoneel. Om een holistisch antwoord te bieden op deze problemen, combineren we medicamenteuze en niet-medicamenteuze benaderingen. De niet-medicamenteuze benaderingen omvatten motorische en zintuiglijke stimulatie, cognitieve stimulatie, relationele ondersteuning en passende training voor zorgteams. We wilden de waarde van een therapeutisch dier in onze instelling beoordelen, als aanvulling op andere niet-medicinale benaderingen.

De afgelopen twee jaar heeft onze instelling een hond gebruikt die speciaal is getraind in dierondersteunde therapie. Onze hond werkt onder begeleiding van een speciaal opgeleid persoon. We wilden de relevantie van dierbemiddeling beoordelen in de context van gedragsstoornissen verbonden met cognitieve stoornissen.

Methodologie: Kwalitatief onderzoek (case study), klinische observaties vanuit een multidisciplinair perspectief, vragenlijst.

Resultaten: We constateerden een vermindering van gedragsproblemen. De hond hielp de stemmingen van de bewoners te reguleren door ze te stimuleren of te kalmeren. We zagen een vermindering van agitatie en agressief gedrag. De verzorgers constateerden een aanzienlijke verbetering van hun werkomstandigheden.

Conclusies: De waarde van de aanwezigheid van een hond in onze instelling lijkt te worden ondersteund door klinische observaties. Grotere studies zouden nuttig zijn om deze trends te bevestigen.

Zorgpad gynaeco-geriatrie: geïntegreerde zorg voor de oudere vrouw in het ziekenhuis

Wim Janssens (UZ Gent, Dienst Geriatrie), Maryam Shiri (AZ Oudenaarde, Dienst Gynaecologie)

Mail: wim.janssens@ugent.be

Doel: Specifieke pathologieën zoals borstkanker, pelviene oncologie, prolaps, perimenopauzale klachten, urinaire incontinentie, en vulvovaginale klachten zijn frequent bij geriatrische patiënten. Met het uitwerken van dit zorgtraject willen we de zorg voor de oudere vrouw in het ziekenhuis optimaliseren.

Methodologie: Bij een gynaecologische opname van een oudere patiënte wordt zij, adhv de Geriatric Risk Profile (GRP), gescreend op een geriatrisch profiel. Deze screening gebeurt, indien mogelijk, reeds ambulantly. Zo de GRP-score ≥ 2 , wordt de patiënte opgenomen op de afdeling gynaeco-geriatrie, waarbij de geriater en de gynaecoloog, in onderling overleg, het behandelingsschema opstellen. Verpleegkundigen krijgen hiertoe de nodige opleiding. Alternatieven voor het klassiek gynaecologisch onderzoek, met meer aandacht voor het comfort van de patiënten, worden toegepast.

Bij elke geriatrische opname wordt, binnen het comprehensive geriatric assessment, aandacht besteed aan gynaecologische klachten.

Resultaten: Door opname van geriatrische patiënten met gynaecologische problemen op de afdeling gynaeco-geriatrie, kunnen zowel het comfort als de outcome van de patiënten verbeteren. Door toepassing van het comprehensive geriatric assessment, kan gynaecologische en oncologische zorg meer worden toegespitst op het profiel van de patiënte. Op financieel vlak kan dit project een positieve invloed hebben op de inkomsten van het ziekenhuis, o.a. via de impact op de verantwoorde ligdagen.

Conclusie: Door in te zetten op een meer gecoördineerde en gestructureerde aanpak van geriatrische patiënten met gynaecologische problemen, kunnen comfort en outcome van de patiënten verbeteren. Daarnaast kan dit een positieve invloed hebben op de financiële toestand van het ziekenhuis. Om dit te bereiken, kan dit zorgpad gynaeco-geriatrie een eerste stap zijn.

Opioids in geriatric units in 14 Belgian hospitals: prevalence, dosage and associated factors

Wim Janssens, Nele Van Den Noortgate, Ruth Piers (all UZ Ghent, Geriatrics Department)

Mail: wim.janssens@ugent.be

Purpose: To examine the prevalence of opioid use among older in-patients and identify factors associated with both opioid usage and dosage.

Methods: In this prospective one-day cross-sectional study, conducted in geriatric units across 14 Belgian hospitals, the primary focus was to assess the prevalence of opioid use and dosage, along with identifying associated factors. Therefore, a multiple binary logistic regression model was fitted for opioid use, and a multiple linear regression model for opioid dose.

Results: Opioids were used in 24.4% of 784 patients, of which 57.9% were treated with tramadol, 13.2% with oxycodone or morphine and 28.9% with transdermal buprenorphine or fentanyl. The odds for opioid use were 4.2 times higher in patients in orthogeriatric units compared to patients on acute or mixed geriatric units (OR=4.2, 95% CI=2.50-7.05) and 34% lower in patients with dementia compared to patients without dementia (OR=0.66, 95% CI=0.46-0.95).

The overall mean daily dosage was 14.07mg subcutaneous morphine equivalent. After adjustment for age, gender and dementia, dosage was only associated with type of opioid: the estimated mean opioid dose was 70% lower with tramadol (mean ratio=0,30, 95% CI=0,23-0,39) and 67% lower with oxycodone and morphine (mean ratio=0,33, 95% CI=0,22-0,48) compared to buprenorphine and fentanyl.

Conclusion: One in four patients received opioid treatment. It is not clear whether this reflects under- or overtreatment, but these results can serve as a benchmark for geriatric units to guide future pain management practices. The utilization of transdermal fentanyl and buprenorphine, resulting in higher doses of morphine equivalent, poses significant risks for side effects.

The role of hypertension control with antihypertensive medications in the occurrence or progression of frailty in community-dwelling older people

Orgesa Qipo, Aziz Debain, Veerle Knoop, Axelle Costenoble, Ivan Bautmans
(all VUB)

Mail: orgesa.qipo@vub.be

Purpose: Hypertension control has been hypothesized as one of the frailty/healthy ageing markers. Several studies have found that frailty and hypertension often coexist, but whether hypertension treatment modifies frailty remains unclear. The aim of this study was to investigate the relationship between hypertension control with antihypertensive medications and frailty decline.

Methods: This was a prospective cohort study. 494 community-dwelling older people aged 80 years and older were recruited. They were reassessed every 6 months for potential early markers of frailty. Data on hypertension control and frailty at baseline and after one-year follow-up was used and their relationship was modelled using multiple logistic regression analyses.

Results: After baseline measurement, 91 participants were excluded according to the in- and exclusion criteria and another 80 participants, could not further continue after one-year follow-up. 101 participants (31.3%) had a decline in frailty status, whereas 222 participants (68.7%) had not. Controlling hypertension was associated with a decreased likelihood of exhibiting frailty decline, with an odd ratio of 0.34 and a significance level of .002. Age and sex were not added significantly into the model but comorbidity index and cholesterol appeared to have a significant predictive value for the occurrence of frailty or maintenance of robustness after one-year follow-up ($p = .007$ and $p = .01$ respectively).

Conclusions: Controlling hypertension with antihypertensive medications could significantly prevent frailty progression or occurrence in older people aged 80 and over.

Referentiearts Dementie: een innovatieve opleiding voor een nieuwe functie: ervaringen en perspectieven

Jan De Lepeleire (Expertisecentrum Dementie & KU Leuven), Emy Kool (Domus Medica), Jurn Verschraegen (Expertisecentrum Dementie), Leentje De Wachter (Expertisecentrum Dementie)

Mail: jan.delepeleire@kuleuven.be

Doel: Doel is om artsen (huisartsen, CRA's, neurologen, psychiaters, gerieters) op te leiden om de functie van 'Referentiearts Dementie' waar te nemen. Dit is een nieuwe functie die in Vlaanderen zal ingebed worden om collega-artsen te adviseren in de zorg voor personen met een ernstige cognitieve problematiek/dementie.

Methodologie: Een online-opleidingscyclus werd opgezet via het platform assessment-Q, begeleid door een stuurgroep en een multidisciplinair samengestelde redactie- en revisiegroep. De cursus bestaat uit 5 online modules: 'setting the scene' (basisinfo over dementie, medische aspecten van de pathologie, hanteren van complexe zorg bij dementie, palliatieve zorg voor personen met dementie, zorg voor de mantelzorger. De zesde module is deels e-learning rond de sociale kaart gecombineerd met een live sessie rond interdisciplinair werken en het uitdiepen van het functieprofiel van de referentie arts. Een kwantitatieve en kwalitatieve evaluatie is gepland met de cursisten en reviewers.

Resultaten: 90 artsen zijn ingeschreven, waarvan 57 huisartsen, 5 CRA's, 2 neurologen, 2 psychiaters en 24 gerieters. Analyse van het verloop en de feedback van de cursisten zal besproken worden op de wintermeeting (momenteel nog niet beschikbaar).

Conclusie: De opleidingscyclus 'Referentiearts dementie' heeft zeer veel artsen aangetrokken. Na de uitrol in 2024 wordt een evaluatie gemaakt van de functie op het terrein.

NIET-MEDISCHE ABSTRACTS

Coaching volunteers delivering the ACTIVE-AGE@home exercise program for frail older adults. Development of a guideline

Dimitri Vrancken (VUB, Artevelde University of Applied Sciences), Jade Tambeur (VUB), Emma De Keyser (University of Antwerp), Elke De Smedt (UZ Brussel), David Beckwée (University of Antwerp), Dominique Van de Velde (Ghent University), Wim Peersman (Odisee University of Applied Sciences), Lieven Annemans (Ghent University), Siddhartha Lieten (UZ Brussel), Patricia De Vriendt (VUB)

Mail: dimitri.vrancken@arteveldehs.be

Purpose: Several studies show that exercise programs, delivered by volunteers, are promising in tackling frailty in community-dwelling older adults. In addition to recruitment, it is also challenging to keep volunteers motivated and aligned with the intervention protocol. This study aimed to face these challenges in the home-based ACTIVE-AGE@home exercise program by developing a practical guideline.

Methods: We used mix methods data triangulation to construct the volunteer guideline: information from a scoping literature search (including scientific and grey literature) to create interview guides for three focus groups (volunteering organizations n=8; informal caregivers (n=8); healthcare professionals (n=5)). The qualitative data from the focus groups was summarized in tables, discussed amongst the researchers and validated in two online interactive co-creation sessions with a panel of stakeholders from the fields of sport, health, care and older adults (n=12). Consensus was noted in an online jam board and meeting report.

Results: Targeted on- and offline RECRUITMENT of external volunteers or informal caregivers with emphasis on word of mouth. Informal caregivers prefer the recruitment of external volunteers rather than delivering the intervention themselves. TRAINING opportunities should be short, in groups and accessible for people without computers. A fixed and single point of contact should offer frequent personal GUIDANCE. For safety and fidelity reasons, volunteers should be screened and frequently EVALUATED. A meaningful and rewarding activity is more APPRECIATED than financial reimbursement. PROTECTION against calamities at the home of the older adults can be provided by a strict definition of tasks, code of conduct and no-fault liability insurance.

Conclusions: Further research can determine how this guideline optimizes volunteering efforts.

Omgaan met psychische kwetsbaarheid bij bewoners in een WZC: Een verkennende mixed-method studie

Maaïke De Maré (Arteveldehogeschool Gent), Riet De Paermentier (Arteveldehogeschool Gent & AZ Maria Middelaars Gent), Nancy Van Ranst (Arteveldehogeschool Gent), Ruben Vanbosseghem (Arteveldehogeschool Gent), Elise Cornelis (Arteveldehogeschool Gent), Nele Van Schelvergem (WZC Domino Gent)
Mail: maaïke.demare@arteveldehogeschool.be

Doel: Door verschillende maatschappelijke evoluties neemt internationaal het aantal ouderen met een (ernstige) psychiatrische kwetsbaarheid in woonzorgcentra toe. Bovendien zijn geestelijke en lichamelijke gezondheid bij ouderen nauwer met elkaar verbonden dan bij jongere personen. VoPoster lager opgeleide zorgverleners, zoals zorgkundigen en logistieke medewerkers, lijken niet over voldoende kennis te beschikken om de zorg voor ouderen met een psychische kwetsbaarheid te waarborgen, wat een negatieve impact kan hebben op de zorgkwaliteit. Langdurig en aanhoudend gedrag in het kader van psychiatrische stoornissen is bovendien belastend voor de zorgverleners.

Methodologie: Door middel van kwalitatief onderzoek met een mixed-method design werden de ervaringen van zorgverleners op twee afdelingen van een Gents WZC verzameld aan de hand van (n=25) logboekregistraties van werkshiften en (n=5) diepte-interviews. Data werden inductief vanuit een fenomenologische benadering geanalyseerd door middel van een thematische inhoudsanalyse.

Resultaten: Zorgverleners vermelden de volgende voorbeelden van storend gedrag van bewoners dat wijst op psychische kwetsbaarheid: achterdocht, seksuele ontremming, psychotische toestand, verslaving, depressie, wanen en dreigen met zelfdoding. Zorgverleners reageren op de volgende wijzen op dit storend gedrag: praten, weggaan, toegeven, uitleg geven, negeren, afleiden en actief ingrijpen in de situatie. Ze geven aan dat de bewoners vaak negatief reageren op hun interventies. Daarenboven roepen deze situaties vaker negatieve gevoelens op bij de zorgverleners.

Conclusie: Zorgverleners ervaren omgaan met psychische kwetsbaarheid bij bewoners als uitdagend. Er ontbreken duidelijke en haalbare interventies die multidisciplinair aangewend kunnen worden om psychische kwetsbaarheid effectief en persoonsgericht aan te kunnen pakken

Omgaan met Somatisch Onvoldoende verklaarde Lichamelijke Klachten (SOLK) bij kwetsbare ouderen op een gerontopsychiatrische afdeling: Een verkennende studie

Riet De Paermentier (Arteveldehogeschool Gent & AZ Maria Middelaes Gent), Maaïke De Maré (Arteveldehogeschool Gent), Nancy Van Ranst (Arteveldehogeschool Gent), Ruben Vanbosseghem (Arteveldehogeschool Gent), Elise Cornelis (Arteveldehogeschool Gent), Franky Campe (Karus Gent)
Mail: riet.depaermentier@arteveldehs.be

Doel: Nederlandse zorgstandaarden beschrijven SOLK als lichamelijke klachten waarbij na adequaat medisch onderzoek geen somatische aandoening wordt gevonden die de klachten voldoende verklaart. SOLK omvat een breed spectrum van klachten die vaak voorkomen bij ouderen, voornamelijk bij ouderen met een psychische kwetsbaarheid. Toch herkennen zorgverleners SOLK bij ouderen onvoldoende en hebben ze nood aan handvaten om er mee om te gaan.

Methodologie: Door middel van kwalitatief onderzoek met een mixed-method design werden de ervaringen van zorgverleners op een gerontopsychiatrische afdeling van een Gents psychiatrisch ziekenhuis verzameld aan de hand van (n=17) logboekregistraties van werkshiften en (n=5) diepte-interviews. Data werden inductief vanuit een fenomenologische benadering geanalyseerd door middel van een thematische inhoudsanalyse.

Resultaten: Zorgverleners worden heel vaak geconfronteerd met onvoldoende verklaarbare lichamelijke klachten bij psychiatrisch kwetsbare ouderen (slapeloosheid, hoofdpijn, tremor, verkrampt gevoel op de borst, duizeligheid, buikpijn, niets meer kunnen, verlamming, misselijkheid, rugklachten) maar hanteren daarvoor de definitie van SOLK niet. Zorgverleners geven aan dat een persoonsgerichte aanpak noodzakelijk is maar dat oudere zorgvragers vaak negatief reageren op hun interventies zoals: blijven klagen, blijven om medicatie vragen, zich niet begrepen voelen; adviezen niet opvolgen en niet aan therapie deelnemen. Daarenboven roepen deze situaties vaker negatieve gevoelens op bij de zorgverleners zoals machteloosheid, frustratie, gevoel de zorgvrager niet te kunnen helpen, vermoeidheid en ongeduld.

Conclusie: Zorgverleners ervaren omgaan met SOLK bij psychisch kwetsbare ouderen als uitdagend en kennen de definitie of internationale zorgstandaarden rond SOLK onvoldoende. Ze hebben nood aan adequate assessmentmethodes en therapeutische interventies die multidisciplinair aangewend kunnen worden om SOLK effectief en persoonsgericht aan te kunnen pakken.

Strategies for engaging community-dwelling older adults in research, insights from the ACTIVE-AGE@home trial

Emma De Keyser (University of Antwerp), Jade Tambre (VUB), Dimitri Vrancken (VUB, Artevelde University of Applied Sciences), Elke De Smedt (UZB), Wim Peersman (Odisee, Ghent University), Dominique Van de Velde (Ghent University), David Beckwée (University of Antwerp/VUB), Siddharta Lieten (UZB), Lieven Annemans (Ghent University), Patricia De Vriendt (VUB, Artevelde University of Applied Sciences)

Mail: emma.de.keyser@vub.be

Purpose: Researchers rarely report on recruitment strategies used to obtain the necessary sample size of frail older adults in trials. This study aims to fill this gap and seeks to identify the appropriate channels and methods to reach out to frail older adults in Ghent and Leuven (Belgium).

Methods: In the context of the study ACTIVE-AGE@home, a recruitment strategy based on the TIBaR principles (Trust, Incentives, Barriers and Responsiveness) was set out with the goal of reaching community-dwelling frail older adults. Public documents were used to determine the amount of possible recruitment partners. The usefulness of these partners was determined at three levels: macro (broad-scale approaches), meso (community-level strategies), and micro (individual-level tactics).

Results: During 6 months, we contacted 44 out of the 50 (macro), 83 out of the 170 (meso) and 476 out of the 2207 (micro) potential recruitment partners. Respectively 0, 50 and 49 partners referred potentially frail older adults to us. Of these potential participants, only 1 at the meso-level and 11 at the micro-level older adults were frail and did meet the inclusion criteria.

Conclusions: Micro-level partners are best suited to identify and reach frail older adults. Therefore, warm referral (personal contact, regular visits) appears to be of great importance. Nevertheless, contacts at macro and meso-levels are also important to get in touch with local partners. Despite our extensive efforts, our recruitment strategy for frail older adults fell short. Future research should share experiences and best practices, aiding those working with this hard-to-reach population.

Long-term preservation of lean mass and loss of fat mass after intensive lifestyle intervention in older adults with obesity and type 2 diabetes

Robert Memelink (Amsterdam University of Applied Sciences/VUB), Aveline Hijlkema (Amsterdam University of Applied Sciences), Bas Valentin (Amsterdam University of Applied Sciences), Martinet Streppel (Amsterdam University of Applied Sciences), Wilrike Pasman, Suzan Wopereis (TNO, the Netherlands), Johan Wopereis (Danone Nutricia Research, the Netherlands), Michael Tieland (Amsterdam University of Applied Sciences), Josje Schouffour (Amsterdam University of Applied Sciences), Ivan Bautmans (VUB/UZB/SOMT University of Physiotherapy, the Netherlands), Peter Weijts (Amsterdam University of Applied Sciences/VU Amsterdam)
Mail: r.g.memelink@hva.nl

Purpose: To evaluate body composition, physical functioning and quality of life (QoL) 6 months after completion of a 3-month lifestyle intervention with or without supplementation of a protein drink, in older adults with obesity and type 2 diabetes.

Methods: Adults (n=123) aged ≥ 55 years with obesity and type 2 diabetes were enrolled in a 3-month intensive lifestyle intervention with hypocaloric diet, resistance exercise and high-intensity interval training. Participants were randomised to either receive a leucine and vitamin D-enriched protein drink or isocaloric control drink. The 3-month intervention was followed by 6 months without intervention. At baseline, 3 and 9 months (follow-up), body composition, physical functioning, and QoL were assessed. Statistical analysis was performed using a linear mixed model.

Results: Body weight loss was largely sustained at follow-up (-2.11 kg compared to baseline, 95% CI -2.77 to -1.45), and comprised a sustained loss of fat mass (-2.57 kg, 95% CI -3.17 to -1.97) with simultaneous gain of lean mass (+0.69 kg, 95% CI +0.24 to +1.15). Improvements in 400m walk speed (+0.05 m/s, 95% CI +0.03 to +0.08) and chair stand test time (- 1.5 s, 95% CI -1.9 to -1.1) were sustained at follow-up. Protein supplementation had not affected the outcomes at follow-up.

Conclusion: Older adults with obesity and type 2 diabetes preserved their lean mass, their loss of fat mass, and their improvements in physical functioning, 6 months after completion of a 3-month intensive lifestyle intervention. Addition of the protein drink during the intervention did not modify outcomes at follow-up.

Instruments for measuring the neuromuscular function domain of vitality capacity in older persons: an umbrella review

Francis Louter (Frailty in Ageing research group (FRIA),VUB), Veerle Knoop (FRIA,VUB), Jeroen Demarteaue (FRIA,VUB), Ellen Freiberger (Institute for Biomedicine of Aging, University of Erlangen-Nuremberg, Germany), Mylene Aubertin-Leheudre (Centre de Recherche de l'Institut Universitaire de Gériatrie de Montréal, Canada), Andrea B Maier (Department of Human Movement Sciences, @AgeAmsterdam, Amsterdam Movement Sciences, VU Amsterdam, the Netherlands), Jotheeswaran Amuthavalli Thiyagarajan (Ageing and Health Unit, Department of Maternal, Newborn, Child and Adolescent Health & Ageing, WHO HQ, Geneva, Switzerland), Ivan Bautmans (FRIA,VUB)
Mail: francis.louter@vub.be

Purpose: Neuromuscular function (NF) is a part of vitality capacity (VC) which is a key domain of intrinsic capacity. Recently, the international expert panel that generated the consensus definition of VC proposed hand grip strength, knee extensor strength, and respiratory muscle strength as excellent candidate biomarkers for NF. This umbrella review aimed to identify the available assessments to measure NF and critically review the measurement properties of the identified assessments in community-dwelling older adults.

Methods: The databases Pubmed, Web of Science and Embase were systematically screened for systematic reviews and meta-analyses reporting on neuromuscular assessments, resulting in 7555 articles (last search March 2023). The COSMIN checklist was used to appraise the psychometric properties of the identified assessments and the AMSTAR checklist for assessing methodological quality.

Results: 27 systematic reviews described assessments for either hand grip strength, knee extensor strength or respiratory muscle strength. Some of the identified reviews described the psychometric properties of the assessment tools. Five assessments were selected as good instruments to measure NF. These are the hand-held dynamometer for hand grip strength, the dynamometer for knee extensor strength and the sniff nasal inspiratory pressure, maximal inspiratory pressure (MIP), and maximal expiratory pressure (MEP) for respiratory muscle strength.

Conclusion: The identified assessments, including hand-held dynamometer, dynamometer for knee extensor strength, sniff nasal inspiratory pressure, MIP, and MEP, offer valuable tools for identifying community-dwelling older adults at risk for declining NF within the broader context of healthy ageing. These findings contribute to enhancing targeted interventions and promoting proactive healthcare strategies for older adults.

Reablement in Flanders

Mike Jarrey (Artevelde University of Applied Sciences)

Mail: mike.jarrey@arteveldehs.be

Purpose: Reablement is a person-centred, goal-oriented approach aimed at enhancing engagement in daily activities and social networks. In the context of primary care service reform, this study seeks to understand stakeholder perspectives for successful implementation.

Methods: Using a two-stage phenomenological qualitative design, Stage 1 involves interviews and focus groups with primary care stakeholders and clients, analyzed using interpretative phenomenological methods. Stage 2 introduces the Reable-Lab approach, evaluating the challenges and needs of a reablement team with a real-life client. Data analysis combines thematic analysis of team interviews, focus group discussions, and diaries.

Results: Findings reveal challenges faced by professionals, including time constraints and financial models, while emphasizing the value of teamwork and the importance of understanding clients' capacities and contexts. Skilled staff and appropriate tools are essential.

From the clients' perspective, flexibility and autonomy are vital, as their daily activities define their individual identity and social role.

Conclusion: This research offers valuable insights for implementing reablement in primary care, aligning stakeholder needs and challenges, ultimately contributing to the improvement of primary care services.

EFORTO®: an innovative e-health system to monitor intrinsic capacity

Liza De Dobbeleer (Gerontology Department, Faculty of Medicine and Pharmac and Frailty in Ageing Research (FRIA) Group, Faculty of Medicine and Pharmacy, VUB/Department of Geriatrics, UZB), Rudi Tielemans (UniWeb, Meise), Siddhartha Lieten (Gerontology Department, Faculty of Medicine and Pharmacy and FRIA Group, Faculty of Medicine and Pharmacy, VUB/Department of Geriatrics, UZB), Ivan Bautmans (Gerontology Department, Faculty of Medicine and Pharmacy and FRIA Group, VUB/Department of Geriatrics, UZB/SOMT University of Physiotherapy, Amersfoort, The Netherlands)
Mail: liza.de.dobbeleer@vub.be

Purpose: Eforto®, an innovative e-health system to (self-)monitor intrinsic capacity by measuring maximal handgrip strength (GSmax) and muscle fatigability (fatigue resistance (FR = time until grip strength decreased to 50% of maximum during sustained contraction) and grip work (GW = area under the strength-time curve)) has been developed. We compared GSmax and muscle fatigability obtained with the standard analog system Martin Vigorimeter (MV) and Eforto®.

Methods: In 61 community-dwelling older persons (mean age = 85.6±3.2 years, 55.7% women) GSmax and muscle fatigability were measured twice in a random order (once with MV, once with Eforto®). Immediately after each test, the experienced pain, its intensity and whether pain hindered participants to sustain the contraction were questioned. Additionally, the Borg scale perceived exertion was assessed to obtain rate of perceived exertion (RPE) scores.

Results: No significant differences in GSmax and muscle fatigability between MV and Eforto® were found (all $p < 0.05$). Besides, there were significant correlations between GSmax ($r = 0.935$), FR ($r = 0.718$) and GW ($r = 0.593$) (all $p < 0.001$). Moreover, there were no differences in pain variables between both systems. Based on the RPE scores participants were pushed to the same maximal fatigue level when performing the muscle fatigability test with MV compared to Eforto® (5.3/10 and 5.4/10, $p = 0.569$).

Conclusion: We can conclude that Eforto® is a promising and innovative e-health system that can be used for monitoring the intrinsic capacity. No significant differences were found in GSmax, muscle fatigability results, pain experiences and level of exertion between both systems.

Physiotherapy in Geriatric Hospital Wards: What (De) Motivates Patients? A Qualitative Study Based on Self-Determination Theory

Lucie Vancraeynest (KU Leuven), Didier Schoevaerdt (KU Leuven/CHU UCL Namen (site van Godinne)
Mail: lucie.vancraeynest@gmail.com

Purpose: To quantify the motivation of hospitalized elderly people (HEP) in their participation in activities of daily living (ADL) and physiotherapy, and to explore the motivating factors behind their participation in physiotherapy, using a qualitative methodology.

Methods: The motivation of 60 elderly people hospitalized in a geriatric ward was quantified using the Scale of Demotivation Assessment (SDA). Out of these, 14 were interrogated through individual semi-structured face-to-face interviews. After transcription, data was analyzed according to Self-Determination Theory, which has been proven effective in understanding motivational mechanisms.

Results: The prevalence of demotivation ranged from 34% to 60% for activities of daily living and from 23% to 48% for physiotherapy. The main demotivating factors were the feeling of external control (lack of autonomy) and dependence experienced by HEP, as well as the limited availability of staff during hospitalization. Conversely, feelings of competence, security, respect for limits, and human investment from the healthcare team members (HTM) were important motivating factors.

Conclusions: Appropriate space organizing and the provision of suitable equipment, combined with a caring and respectful attitude from the HTM, could considerably encourage the expression of intrinsic motivation, and the involvement of HEP in their own care program.

Moral Case Deliberation: evaluation of a 2-year training program for MCD-facilitators

Sophia Grevisse, Karen Versluys, Ruth Piers (all Ghent University)
Mail: sophia.grevisse@ugent.be

Purpose: In recent years Moral case deliberation (MCD) has been increasingly used in health care services as a means of dealing with daily ethical issues. MCDs are usually led by a facilitator. Not much is known about what constitutes a good facilitator and what sort of training program he or she should complete. In this paper, we aim to answer these questions.

Methods: A training program was set up over 2 years that focused on how to train a facilitator to conduct a MCD and how to implement MCD in daily practice. Fifty-two participants, working in different healthcare organisations completed the training program. Through a written anonymised questionnaire and focus groups discussions, participants were given the opportunity to evaluate the training program and the extent to which participants could facilitate patient-centred care in their practice using MCD.

Results: After completing the program most participants didn't feel confident to lead MCDs. Most of them reported needing more practice to develop their skills and demanded additional feedback from colleagues or other participants in the training program. To successfully implement MCD in health care services they mentioned needing more support from higher-ups, more specifically in terms of financial resources, time, and recognition.

Conclusions: To successfully implement MCD in daily practice it is important that the practice is recognized by higher-ups in healthcare organizations. It is equally important that the healthcare professionals who are trained as facilitator are given sufficient practice opportunities and feedback for them to feel comfortable in their role.

Prevention of constipation in patients with a geriatric profile: a scoping review

Elias De Coninck, Laura Massant, Els Steeman (all KU Leuven)

Mail: elias.deconinck@kuleuven.be

Background: Constipation is prevalent among geriatric patients (30%-50%). While standard preventive measures like hydration, exercise, and fibre intake are recommended, their effectiveness in frail older adults remains uncertain. Hence, tailored guidelines are vital. This scoping review provides an overview of non-medicated constipation prevention strategies in the geriatric population, offering essential guidance for healthcare providers.

Methods: This scoping review identified preventive approaches for constipation in geriatric patients. Searches in PubMed, CINAHL, Embase, Web of Science, and Cochrane Library were conducted between February and March 2023. Inclusion criteria involved individuals aged 65+, constipation prevention as the outcome, and articles in Dutch or English. Studies specific to medical conditions causing constipation or involving pharmacological interventions were excluded. Study quality was evaluated using RoB2 and ROBINS-I, with results presented through Robvis.

Results: Among 15 954 studies, nine primary studies and five reviews were included. These explored constipation's relationship with high-fibre diets, hydration, exercise,

and abdominal massages. The validity and reliability of included studies were moderate, with a lack of a uniform constipation definition impacting result reliability. Findings were inconsistent and inadequately focused on geriatric profiles.

Conclusion: Limited evidence supports high-fibre diets, hydration, exercise, and abdominal massages as geriatric constipation prevention methods. Conducting more targeted research is crucial to developing specific preventive strategies for this unique population. However, in the meantime, exploring abdominal massage as an innovative practice could be a valuable step forward.

Active and healthy ageing: co-creative holistic educational program for socially vulnerable elderly

Pieterjan Verschelden, Julie Vanderlinden, Sabine Lambers, Eva Es (all Odisee University of Applied Sciences, Department of Health Care)
Mail: pieterjan.verschelden@odisee.be

Purpose: This research project aimed to identify the healthy lifestyle needs of socially vulnerable elderly. Sequentially, a healthy lifestyle program was developed in co-creation with the participants.

Methods: Socially vulnerable elderly were approached and recruited by means of a neighbourhood analysis. By means of focus groups, participants were asked about their motivators and barriers in terms of taking up health lifestyle behaviour. Subsequently, as a result of co-creation, a 10-week healthy lifestyle program was developed by the participants, partners and a multidisciplinary research team.

Results: The developed program consisted of 10 weekly group sessions, which focused on different pillars within a holistic lifestyle. Nine centres for community-dwelling elderly in Flanders and Brussels were included. In total, 93 elderly were recruited to participate out of which 76 elderly completed the full program.

The main identified motivators for participation were to acquire more knowledge, staying and becoming fit, expanding their social network, escaping loneliness and positive ageing.

Conclusions: The identification and recruitment of socially vulnerable elderly was a challenging process during the trial of the program. First, as this population often remains under the radar of both formal and informal organizations, it was not always possible to include all participants during the entire scope of the program. As a result of that, efforts are made to decrease dropout in future implementation of this program. Second, the social aspect of small groups, the catering and the 'fun' factor during activities turned out to be critical success factors for the adherence of participants during the program.

Empowering Healthy Aging with Exoskeletons: A State-of-the-art of Assistive Technology to Augment Older Adults' Functional Ability and Intrinsic Capacity

Reinhard Claeys, Rebeca Alejandra Gavrila Laic, Mahyar Firouzi, Eva Swinnen, David Beckwée (all VUB)

Mail: david.beckwee@vub.be

Purpose: The global ageing population faces significant health challenges, increasing vulnerability to disability due to natural ageing processes. Wearable lower limb robotic exoskeletons (LLE) have emerged as a promising solution to enhance physical function in older individuals. This systematic review synthesizes the use of LLE in alignment with the WHO's healthy ageing vision, examining their impact on intrinsic capacities and functional abilities.

Methods: We conducted a comprehensive systematic literature search in 6 databases, yielding 36 relevant articles covering various health conditions, including sarcopenia, stroke, Parkinson's disease, osteoarthritis, and more.

Results: The interventions, spanning 1 to 40 sessions, utilized a range of LLE technologies such as Ekso®, HAL®, Honda Walking Assist®, Lokomat®, Walkbot®, Healbot®, Keeego Rehab®, Stride Management Assist®, overground wearable exoskeletons, Eksoband®, powered ankle-foot orthoses, HAL® lumbar type, Human Body Posturizer, Gait Enhancing and Motivation System®, soft robotic suits, active pelvis orthoses, and EX1® exoskeleton. The findings revealed substantial positive outcomes across diverse health conditions. LLE training led to improvements in key performance indicators, such as the 10-Meter Walk Test, Five Times Sit-to-Stand test, Timed Up and Go test, and more. Additionally, enhancements were noted in gait quality, joint mobility, muscle strength, and balance. These improvements were accompanied by reductions in sedentary behaviour, pain perception, muscle exertion, and metabolic cost during gait.

Conclusion: In summary, this review demonstrates consistent and significant enhancements in critical parameters across a broad spectrum of health conditions following LLE interventions in older adults.

Music interventions and aromatherapy as strategies to reduce preoperative anxiety: an umbrella review

Kelu Yang (Department of Public Health and Primary Care, Academic Center for Nursing and Midwifery, KU Leuven), Elke Detroyer (Department of Public Health and Primary Care, Academic Center for Nursing and Midwifery, KU Leuven/ Department of Geriatric Medicine, University Hospitals Leuven), Danny Hoogma (Department of Anesthesiology, University Hospitals Leuven & Department of Cardiovascular Sciences, KU Leuven), Jinhui Tian (Evidence-Based Medicine Center, School of Basic Medical Sciences, Lanzhou University, China), Steffen Rex (Department of Anesthesiology, University Hospitals Leuven/Department of Cardiovascular Sciences, KU Leuven), Koen Milisen (Department of Public Health and Primary Care, Academic Center for Nursing and Midwifery, KU Leuven/ Department of Geriatric Medicine, University Hospitals Leuven)
Mail: kelu.yang@kuleuven.be

Purpose: We aimed to conduct an umbrella review of systematic reviews (SRs) studying the evidence about music interventions or aromatherapy in reducing Preoperative anxiety (PA) among adult patients.

Methods: We retrieved MEDLINE via PubMed, EMBASE, CINAHL, and Cochrane Library from inception until July 13th, 2023, to identify SRs assessing the effects of music interventions or aromatherapy on PA in adult surgical patients. Primary outcome was the efficacy of music interventions and aromatherapy in reducing PA levels. The details of music interventions and aromatherapy implementation were also summarized. We assessed the quality of included SRs using the MeaSurement Tool to Assess Systematic Reviews checklist (AMSTAR 2).

Results: Eight eligible SRs (67 primary studies) were included, with four SRs for music interventions (1 high quality, 2 moderate, and 1 low), three for aromatherapy (all low quality) and one for both (moderate quality). The reporting of intervention content and implementation process was unsatisfactory, with numerous key messages missing. The pooled results on reducing PA using music interventions or aromatherapy were statistically significant (MD=-4.53, 95%CI (-5.83, -3.23), I²=58%; MD=-7.70, 95%CI (-13.02, -2.39), I²=98%, respectively). Subgroup analyses found that music interventions had greater effects when the duration of intervention was 20 minutes or longer (subgroup differences $p < 0.01$) and in patients younger than 60 years of age (subgroup differences $p = 0.02$).

Conclusions: Both music intervention and aromatherapy may have a beneficial effect on reducing preoperative anxiety levels. More rigorous direct comparative studies are needed addressing the individual components of the intervention, especially regarding different elements of music or essential oil and different delivery methods.

User experience of older adults with Alzheimer's disease or mild cognitive impairment on technology-supported physical interventions

Eugénie Lambrecht (University of Antwerp), Josefien Van Olmen (University of Antwerp), Eline Heylen (University of Antwerp), Maxine Claes (University of Antwerp), Jana Brabants (University of Antwerp), David Beckwée (VUB/ University of Antwerp)

Mail: eugenie.lambrecht@uantwerpen.be

Purpose: The aim of this systematic review is to cluster user experience of older adults with Alzheimer's disease or mild cognitive impairment on technology-supported interventions aimed at improving physical activity.

Methods: Potentially relevant primary studies were identified by an intensive search of the Pubmed (Medline) and WOS databases up to March 2023. A first screening on title and abstract and a second screening on full text was conducted by at least two authors in a blinded manner, by the use of predetermined eligibility criteria. All results on user experience (usability, feasibility, acceptability and tolerability) of the individual studies were presented in an evidence table. The articles were evaluated and graded on their methodological quality using the QUALSYST TOOL and the GRADE-CERQual respectively.

Results: 19 studies (645 participants, mean age 68) were included, investigating VR, video screens, apps, robots, calls, sensors and one on technology in general. The various technologies in the studies were all described as usable, tolerable, feasible and acceptable with moderate to high confidence. For each article, the different positive and negative factors in user experience were described.

Conclusion: Despite its negative factors, different types of technology with a physical component are feasible, usable, tolerable and acceptable for persons with Alzheimer's disease or mild cognitive impairment. This positive experience provides a rationale for future research where more large-scale studies including severe cases of dementia are needed.

ClarEToL: Verheldering van de complexe ervaring van levensmoeheid bij bewoners van woonzorgcentra

Elisa Van Wiele, Stefanie Meul, Hannah Thys, Tinne Claes, Bernadette Diercks de Casterlé, Veerle Foulon, Kaat Wils, Jessie Dezutter (all KU Leuven)
Mail: elisa.vanwiele@kuleuven.be

Doel: Hoewel levensmoeheid bij ouderen geregeld in de pers beschreven wordt als een complexe problematiek en tegenwoordig ook bredere maatschappelijke erkenning krijgt, is er nog nauwelijks wetenschappelijk onderzoek verricht naar wat het fenomeen nu precies inhoudt. Daarom wilt ClareToL op interdisciplinaire wijze tot een verheldering van het fenomeen van levensmoeheid bij bewoners van woonzorgcentra komen

Methodologie: Het project bestaat uit verschillende studies. In een eerste kwalitatieve fase worden bewoners en hun zorgverleners geïnterviewd over hun ervaringen. Deze gegevens zullen gebruikt worden om levensmoeheid te differentiëren van depressie en/of existentieel lijden. Daarnaast hebben mondelinge geschiedenis-interviews met nabestaanden en gepensioneerde zorgverleners tot doel om aan de huidige ervaring van levensmoeheid een cultuurhistorische dimensie toe te voegen. In een tweede kwantitatieve fase zal er een schaal ontwikkeld worden om levensmoeheid bij woonzorgcentrabewoners te meten. Dit instrument zal toelaten om een mogelijke samenhang van levensmoeheid met andere (psycho)geriatrie thema's, zoals bijvoorbeeld medicatiegebruik, te toetsen. Deze methodiek beoogt een maximale integratie en triangulatie van de verschillende perspectieven, disciplines (zorgethisch, psychologisch, farmacologisch en cultuurhistorisch) en methoden om zo een diepgaand begrip van het fenomeen te bekomen.

Resultaten: Voorlopige resultaten tonen de gelaagdheid van de problematiek, waarbij zowel cultuurspecifieke factoren als individuele levensgebeurtenissen een belangrijke rol lijken te spelen in de manier waarop ouderen hun leven op hoge leeftijd ervaren en omgaan met de daarmee gepaard gaande veranderingen en beperkingen.

Conclusie: Dit interdisciplinaire project wil enerzijds tot een conceptbepaling van levensmoeheid komen via de ervaringen van ouderen en hun zorgverleners en anderzijds deze beleving historisch kaderen in de westerse welvaartmaatschappij.

ClarEToL: Clarifying the complex and multilayered experience of tiredness of life by a multi-informant interdisciplinary approach

Hannah Thys, Stefanie Meul, Elisa Van Wiele, Veerle Foulon, Jessie Dezutter, Kaat Wils, Tinne Claes, Bernadette Dierckx de Casterlé (all KU Leuven)
Mail: hannah.thys@kuleuven.be

Purpose: To clarify the experience of tiredness of life in nursing home residents.

Methods: A grounded theory approach was used. Data was collected in five different nursing homes using face-to-face semi-structured, in-depth interviews. Nursing home residents (NHRs) were recruited by purposive and theoretical sampling, after preliminary conversations and observations, imbuing this study with an ethnographic dimension. Data was analyzed using the QUAGOL method.

Results: Preliminary results suggest tentatively that a feeling of meaninglessness seems to be central in the experience of tiredness of life (tol). Suffering and experiences of loss seemingly play a role in the experience of tol as well, as the feeling of losing one's own identity and self-worth, loss of connection with the outside world and a lack of future perspective. In addition, the transition to, and life within a nursing home seem to serve as potential reinforcing factors for this experience. However, further data analysis is required to provide more clarity on what particular roles each of the mentioned elements play, and how exactly they are interconnected.

Conclusion: Our initial findings suggest that the experience of tol among NHRs is a multilayered and complex experience, still surrounded by uncertainty. Given this lack of clarity and the amount of distress experienced by residents suffering from tiredness of life, further research seems crucial to deepen our understanding of the phenomenon in order to be able to provide adequate advice for nursing homes in the care for these residents.

Assessment of suicidality in community-dwelling older adults – a systematic review

Beau Nieuwenhuijs, Nico De Witte, Ellen Gorus (all VUB)
Mail: beau.michele.nieuwenhuijs@vub.be

Purpose: Older adults have high rates of suicide. If older adults with suicidal ideation and behaviour could be identified early, deaths by suicide could be prevented. To date, there is no golden standard for assessment instruments specifically tested with

community-dwelling older adults. Therefore, a systematic review was conducted to provide an overview of assessment methods for suicidal ideation and behaviour for this population and to review their quality, effectiveness and practical utility.

Methods: PubMed, Web of Science, PsychInfo and Sociological Abstracts were searched until summer 2023. Studies were included if they assessed: instruments to detect suicidal ideation and behaviour, tested with community-dwelling older adults, and evaluated psychometric properties, effectiveness, or practical utility of the instrument. Risk of bias was evaluated with the JBI checklist for diagnostic accuracy studies. Results were synthesised narratively.

Results: 14 studies were included, their methodological quality and risk of bias were overall acceptable. A total of 16 different assessment instruments were discussed, falling into three categories: assessment of suicidal ideation and behaviour directly; assessment of depression; assessment of known risk factors for suicide. Psychometric properties and effectiveness were generally good. However, significant variety in the use of reference standards prohibited conclusive comparative statements. Most instruments were intended for use in primary care settings.

Conclusions: while instruments of acceptable psychometric and practical standards exist to detect suicidality in community-dwelling older adults, more research is required to test and adopt them outside of a research environment.

A wish to die in community-dwelling, older adults - prevalence and key risk factors

Beau Nieuwenhuijs (VUB), Ellen Gorus (VUB), Gwendolyn Portzky (Ghent university), Nico De Witte (VUB)

Mail: beau.michele.nieuwenhuijs@vub.be

Purpose: Older adults have the highest suicide rates of all age groups. The objective of this study is to identify risk and protective factors for a wish to die in older adults in Flanders.

Methods: Data for this study comes from the Belgian Ageing Studies (BAS) (total N=82580), a cross-sectional project that monitors the needs and quality of life of community-dwelling older adults across Flemish municipalities. Items on suicidality were added in 2016, giving this research a representative sample of (N=3050). This study focuses on older adults reporting a current wish to die. Examples of other measures are depression, loneliness, physical frailty and ageism. Descriptive statistics determine the prevalence and the spread of risk and protective factors. Logistic regression identifies risk and protective factors.

Results: 4.8% (N=148) of the sample reported having a current wish to die. Of these, a majority also reported a history of suicidal ideation and/or suicide attempts. Descriptive statistics showed people with a wish to die were more often female and older (80+), as well as widowed or divorced. Significant risk factors were a history of suicidal ideation or behaviour, depression, subjective cognitive complaints, requiring support on multiple domains and elder abuse.

Conclusions: Results confirm existing literature on risk factors, but add new knowledge on the influence of subjective cognitive complaints and the experience of elder abuse as risk factors. Furthermore, results provide evidence for importance of dependency on others for support as a significant risk factor. No modifiable protective factors were found, highlighting a clear direction for future research.

Assessment tools and incidence of hospital-associated disability in older adults: a rapid systematic review

Katia Giacomino (Department of Physiotherapy, Human Physiology and Anatomy, Faculty of Physical Education and Physiotherapy, Rehabilitation Research (RERE) Research Group, VUB/School of Health Sciences, HES-SO Valais-Wallis, Leukerbad, Switzerland), Roger Hilfiker (School of Health Sciences, HES-SO Valais-Wallis, Leukerbad, Switzerland), David Beckwée (Department of Physiotherapy, Human Physiology and Anatomy, Faculty of Physical Education and Physiotherapy, Rehabilitation Research (RERE) Research Group, VUB), Jan Taeymans (Division of Physiotherapy, Department of Health Professions, University of Applied Sciences Bern, Switzerland/Faculty of Physical Education and Physiotherapy, VUB), Karl Martin Sattelmayer (School of Health Sciences, HES-SO Valais-Wallis, Leukerbad, Switzerland)
Mail: katia.giacomino@vub.be

Background: During hospitalization, older adults have a high risk of developing hospital-associated disability (HAD). This systematic review aimed to assess the incidence of HAD in older adults admitted to acute care with two outcomes: firstly in at least one activity of daily living (ADL) from a set of functional tasks (e.g., Katz Index) and secondly the incidence of functional decline in an individual functional task, and to identify any tools or functional tasks used to assess ADL in hospitalized older patients.

Methods: A literature search was performed in three databases. Inclusion criteria: older adults (≥ 65 years), assessment of individual items of ADL at baseline and discharge. Exclusion criterion: studies investigating a specific condition that could

affect functional decline and studies that primarily examined a population with cognitive impairment.

Results: Ten studies were included. Incidence of HAD (overall score) was 37% (95% CI 0.30–0.43). One study provided sufficient data to calculate the incidence of individual items, with the following values: 32% for bathing, 27% for dressing, 27% for toileting, 30% for eating and 27% for transferring. The review identified four assessment tools, two sets of tasks, and individual items assessing ADL in such patients.

Conclusions: Incidence of HAD in older patients might be overestimated, due to the combination of disease-related disability and HAD. The tools used to assess these patients presented some limitations. These results should be interpreted with caution as only one study reported adequate information to assess the HAD incidence. This review highlights the lack of systematic reporting of data used to calculate HAD incidence.

Estimating premorbid functioning: Does the Questionnaire of Intellectual Status fill the gap?

Jean-Philippe van Dijck, Noortje Hermans (both Thomas More)

Mail: jean-philippe.vandijck@thomasmore.be

Background: For optimal neuropsychological rehabilitation planning, understanding a patient's premorbid functioning is crucial. In Flanders, there is currently no contemporary tool to estimate premorbid functioning (Hermans & van Dijck, 2022). Typically, this involves collecting key demographic information such as education level and job history. Our study aimed to modernize, condense, and validate the "Questionnaire Intellectual Status" (Mas, 1979), which systematically assesses various aspects of a patient's personal, educational, and professional history to gauge premorbid functioning.

Methods: After a rigorous qualitative review and data-driven selection process, the initial 105-item questionnaire was condensed to 16 items (QIS-R) with a new scoring system. To assess its validity, two independent samples of participants aged 40-65 (48 and 58 participants) completed both QIS-R and WAIS-IV. Forty participants (ages 40-65) retook the QIS-R after 3 months to evaluate test-retest reliability. All participants were free from neurological/psychiatric issues and medication influence during testing.

Results: Participant responses were scored, generating QIS-IQ estimates. Strong correlations were observed between these estimates and WAIS-IV full-scale IQ in both samples ($r(58)=.74, p<.001$; $r(48)=.71, p<.001$). Additionally, high test-retest reliability ($r=.94, N=40$) confirmed response consistency.

Conclusion: The robust correlation between WAIS full-scale IQ and high test-retest stability supports the psychometric adequacy of the QIS-R. Further studies are required to assess its clinical utility, but our current research represents an encouraging initial stride towards a dependable tool for estimating the premorbid functioning of neurological patients. Currently, norms are being made and we are examining the feasibility of having a partner or sibling complete the QIS-R for the patient while maintaining psychometric integrity.

The Role of Maladaptive Personality in Behavioural and Psychological Symptoms in Dementia

Kato Dero (VUB), Sebastiaan P.J. van Alphen (Mondriaan, Heerlen, the Netherlands), Esther Hoogenhout (GGzE Nestor, Eindhoven, the Netherlands), Gina Rossi (VUB)
Mail: katodero@icloud.com

Purpose: Although research demonstrated a significant link between adaptive premorbid personality traits and the severity of behavioural and psychological symptoms in dementia (BPSD) and associated emotional burden of the caregiver, little is known about the relationship of BPSD symptoms and associated burden with maladaptive traits.

Methods: Informants (N = 182) of Dutch nursing home residents with dementia aged 65+, completed the Neuropsychiatric Inventory Questionnaire (NPI) to assess the severity of BPSD and associated emotional burden. Premorbid maladaptive personality traits were evaluated using informant versions of a brief version of the Personality Inventory for DSM-5 (PID-5-BF), and two age-specific personality measures, the Informant Personality Questionnaire (HAP), and Gerontological Personality disorder Scale (GPS). Relationships between premorbid personality and BPSD were investigated with correlational and multiple regression analyses.

Results: BPSD severity and burden were associated with medium-sized correlations to Negative Affectivity, Antagonism and indications of personality disorder presence. The emotional burden also correlated with a medium effect with Detachment. All measures of maladaptive personality predicted BPSD severity and burden.

Conclusions: Results found with age-specific personality measures were in line with results found with other measures of (mal)adaptive traits. Several maladaptive personality traits had a significant relationship with the BPSD severity and associated emotional burden. We therefore encourage to implement personality assessment within BPSD treatment strategies. This way care becomes more person-focused and more tailored to the specific needs of patients and caregivers.