



## Healthy Ageing Current Awareness Update

March 2024

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**We need your views:** The software KLS currently use to produce our Current Awareness products is being decommissioned shortly and we need to upgrade to a more expensive system to provide continuation of service. To ensure that our current awareness products are meeting your needs, we are taking this opportunity to review their use. **Please take a few moments to complete our survey.**

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Welcome to the monthly **Healthy Ageing Current Awareness Update** (HACAU), produced by **UKHSA Knowledge and Library Services**. The purpose of this update is to provide you with the latest, best evidence about healthy ageing and dementia risk reduction, to help you make informed decisions.

If you have any queries, please contact us at [libraries@ukhsa.gov.uk](mailto:libraries@ukhsa.gov.uk), and if you would like to request a literature search, please use the **Knowledge and Library Services Enquiries Portal**.

Please note that not all the articles and resources referred to in this alert are freely available. Some articles may require an Athens username and password. For further information on Athens accounts please visit [here](#). If you are not eligible to access our library services, then you may want to approach your **local NHS library service**.

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- 
- COVID-19 and ageing - 17
  - Healthy lifestyle and dementia prevention - 200
  - Living well with dementia - 23
  - Mental health and ageing - 72
  - Physical activity and ageing - 59
  - Employment, volunteering and ageing - 41
-

- Musculoskeletal health, falls prevention and ageing - 42
- Ageism and discrimination - 11

COVID-19 and ageing

#### Four Defining Health Issues of the 2024 Presidential Election

This Viewpoint discusses 4 defining health issues that will likely influence not only the 2024 presidential election but also congressional and state races.

#### What the Latest Research Says About Paxlovid

This Medical News story examines the latest information about rebound, treatment eligibility, optimal dosing, and other questions related to nirmatrelvir-ritonavir for treating COVID-19.

#### Missed Vaccine Doses Tied to Worse COVID-19 Outcomes

People in the UK who did not receive all the doses of the vaccine for which they were eligible had up to 4 times the risk of being hospitalized or dying from COVID-19 compared with those who were fully vaccinated, according to electronic health record data taken from the entire population aged 5 years or older

#### Seven days in medicine: 7-13 February 2024

Covid-19 Spring vaccine is offered to people most at risk. The UK government has accepted the advice of the Joint Committee on Vaccination and Immunisation that a covid vaccine should be offered to the people most at risk of serious illness this spring

#### High Prevalence of Echinostoma mekongi Infection in Schoolchildren and Adults, Kandal Province, Cambodia

B. Jung et al.

#### Biphasic MERS-CoV Incidence in Nomadic Dromedaries with Putative Transmission to Humans, Kenya, 2022–2023

B. Ogoti et al.

#### Experts Tackle Racial Bias in Clinical Algorithms

This Medical News article discusses efforts to evaluate the inclusion of race as a factor in widely used clinical decision-making algorithms.

#### Wastewater Surveillance for Identifying SARS-CoV-2 Infections in Long-Term Care Facilities, Kentucky, USA, 2021–2022

J. W. Keck et al.

#### Systematic Review of Scales for Measuring Infectious Disease–Related Stigma

A. Paterson et al.

#### Introduction to JAMA Climate Change and Health Series

This JAMA Insights introduces the new series on climate change intended to inform readers about the associations between climate change and health.

## Lessons From the Mpox Response

This Viewpoint discusses 3 key lessons from the mpox response that can help better manage infectious disease outbreaks in the future.

## CDC Warns of Low Vaccination Rates Amid Spike in Respiratory Diseases

From November to December 2023, US hospitalization rates increased by 200% for influenza, 51% for COVID-19, and 60% for respiratory syncytial virus (RSV) among all age groups, according to a Centers for Disease Control and Prevention (CDC) advisory

## Neonatal Outcomes After COVID-19 Vaccination in Pregnancy

This cohort study evaluates the risks of neonatal adverse events after exposure to COVID-19 vaccination during pregnancy.

## How COVID-19 Might Be Tied to Other Respiratory Disease Outbreaks

This Medical News story discusses the relationship between the COVID-19 pandemic and recent increases in other respiratory diseases.

## What to Know About JN.1, the Latest SARS-CoV-2 “Variant of Interest”

This Medical News story discusses JN.1, recently classified as a SARS-CoV-2 “variant of interest” by the World Health Organization.

## Effectiveness of Bivalent mRNA Vaccines in Preventing SARS-CoV-2 Infection in Children

This study uses data from 3 prospective cohort studies conducted in the US to assess vaccine effectiveness of bivalent COVID-19 vaccines against SARS-CoV-2 infection and symptomatic COVID-19 among children and adolescents.

## Effect of Pneumococcal Conjugate Vaccine on Pneumonia Incidence Rates among Children 2–59 Months of Age, Mongolia, 2015–2021

C. von Mollendorf et al.

[\[back to top\]](#)

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Healthy lifestyle and dementia prevention

## Clinical Trials Studying Suicide Risk Reduction: Who is Excluded From Participation

**CONCLUSIONS:** Recent clinical trials studying suicide risk reduction have low generalizability to emergency psychiatry patients with high suicide risk. Trials enrolling persons with psychosis and substance use in particular are needed to improve generalizability to this clinical population.

## Cortical Changes of Dual Cognitive-Task Balance Training in Patients with Chronic Ankle Instability: A Randomized Trial

**CONCLUSIONS:** A six-week balance training program or balance combined with cognitive training could improve the functional deficits associated with CAI. Meanwhile, the dual-task training could improve cortical activity and lower extremity function.

### **Association between Dyslipidaemia and Cognitive Impairment: A Meta-Analysis of Cohort and Case-Control Studies**

**CONCLUSIONS:** Dyslipidaemia was strongly associated with cognitive impairment, and elevated TC levels were a risk factor for cognitive impairment. Furthermore, the damaging effects of elevated TC levels on cognition were more pronounced in older and male populations.

### **CancerSupportSource-Spanish: Development of a Distress Screening Measure for Spanish-Speaking Hispanic and Latino Individuals with Cancer**

**Introduction:** CancerSupportSource (CSS), a distress screening and referral program, identifies unmet needs of people with cancer and links them to resources and support. We developed and validated a Spanish-language version (CSS-Spanish) to better serve Hispanic and Latino communities and promote health equity

### **Symptoms, Mental Health, and Quality of Life Among Patients After COVID-19 Infection: A Cross-sectional Study in Vietnam**

**CONCLUSIONS:** The study investigated the prevalence rates of various symptoms following COVID-19 infection. These findings underscore the need to prioritize comprehensive care for individuals recovering from COVID-19 and to implement strategies to mitigate the long-term impact of the disease on mental health and QoL.

### **A nomogram prediction model for mild cognitive impairment in non-dialysis outpatient patients with chronic kidney disease**

**CONCLUSION:** The nomogram prediction model demonstrates good performance and can be used for early screening and prediction of MCI in non-dialysis patients with CKD. It provides valuable reference for medical staff to formulate corresponding intervention strategies.

### **Valid olfactory impairment tests can help identify mild cognitive impairment: an updated meta-analysis**

**CONCLUSION:** Valid olfactory tests can be complementary tools for accurate screening of MCI in older adults.

### **The role of glial cells in mental illness: a systematic review on astroglia and microglia as potential players in schizophrenia and its cognitive and emotional aspects**

Schizophrenia is a complex and severe mental disorder that affects approximately 1% of the global population. It is characterized by a wide range of symptoms, including delusions, hallucinations, disorganized speech and behavior, and cognitive impairment

### **Tetrahydrocannabinol and dopamine D1 receptor**

Dopamine is a hormone that is released by the adrenal gland and influences motor control and motivation. Dopamine is known to have 5 receptors which are D1, D2, D3, D4 and D5, which are further categorized into 2 families: D1 family and D2 family. The D1 family is known to play a role in motivation and motor control whereas the D2 family is known to affect attention and sleep

## **Case report: Exploring chemoradiotherapy-induced leukoencephalopathy with 7T imaging and quantitative susceptibility mapping**

Chemotherapy and radiotherapy are widely used in the treatment of central nervous system tumors and acute lymphocytic leukemia even in the pediatric population. However, such treatments run the risk of a broad spectrum of cognitive and neurological deficits

## **Barriers and Facilitators to Exercise in Older Adults Awaiting Kidney Transplantation and Their Care Partners**

**CONCLUSIONS:** Although patients and care partners report numerous barriers to pretransplant exercise and activity, they also reported many facilitators. An individualized, structured, home-based exercise program could circumvent many of the reported barriers and allow older patients to improve pretransplant physical function.

## **Perspectives of general practitioners and memory clinic patients on ageing and cognitive decline to inform the design of a decentralised antihypertensive dementia prevention trial**

**CONCLUSION:** The proposed trial design was agreed to be acceptable with some operational considerations, which were incorporated in the trial design.

## **Exploring the relationship between context and obsessions in individuals with obsessive-compulsive disorder symptoms: a narrative review**

Obsessions in obsessive-compulsive disorder (OCD) have long been proposed to differ from intrusive thoughts in unaffected individuals based on appraisal of the thoughts. However, more recent research indicates that cognitive processes behind obsessions may differ significantly from those in healthy individuals concerning their contextual relationship

## **Virtual reality-assisted cognitive behavioral therapy for patients with alcohol use disorder: a randomized feasibility study**

**CONCLUSION:** We demonstrated VR-CBT to be a feasible intervention for patients with AUD which supports continued investigations in a larger randomized clinical trial evaluating the efficacy of VR-CBT.

## **Cross-sectional study on the psychosocial factors, the severity of depression, and coping strategies among patients attempting suicide**

**CONCLUSION:** Patients with depression attempting suicide were found to utilize avoidant-type coping strategies to cope with life stresses. Hence, it is crucial to place greater emphasis on assessing coping strategies and focus on teaching approach-oriented coping strategies as a means to prevent suicidal attempts.

## **Comparing attention, impulsivity, and executive functions between patients with opiate use disorder: Buprenorphine maintenance treatment versus active users, in comparison with healthy controls**

**CONCLUSION:** The data from this study indicate that individuals with OUD exhibit neurocognitive damage, and those in remission from OUD who receive maintenance treatment do not show improvement in this domain. Neurocognitive damages should be considered in long-term treatment planning of patients with OUD.

## **Normal-Pressure Hydrocephalus-Like Appearance in Myotonic Dystrophy Type 1**

Myotonic dystrophy type 1 (DM1) is one of the monogenic neurological diseases that neurologists most often experience. DM1 can develop several symptoms, including muscle weakness, gait disturbance, urinary incontinence, and cognitive decline

## **Neurophysiological correlates of interpersonal discrepancy and social adjustment in an interactive decision-making task in dyads**

**INTRODUCTION:** The pursuit of convergence and the social behavioral adjustment of conformity are fundamental cooperative behaviors that help people adjust their mental frameworks to reach a common goal. However, while social psychology has extensively studied conformity by its influence context, there is still plenty to investigate about the neural cognitive mechanisms involved in this behavior.

## **A Network Analysis Study to Evaluate Obsessive-Compulsive Beliefs/Dimensions and Personality Beliefs in Patients with Obsessive-Compulsive Disorder (OCD): A Cross-Sectional Study in Two Common OCD Subtypes**

**Objective:** Obsessive-Compulsive Disorder (OCD) has been considered a heterogeneous psychiatric disorder. Identifying this heterogeneity can lead to better diagnosis and treatment. The two most common OCD subtypes include contamination/cleaning and danger/checking. This study aimed to identify the network structure of OCD symptoms, personality, and obsessive beliefs in these OCD subtypes

## **Neural Correlates of Social Decision-Making**

**Objective:** Recent studies have utilized innovative techniques to investigate the neural mechanisms underlying social and individual decision-making, aiming to understand how individuals respond to the world. **Method :** In this review, we summarized current scientific evidence concerning the neural underpinnings of social decision-making and their impact on social behavior

## **An integrated human behavioral model for mosquito-borne disease control: A scoping review of behavior change theories used to identify key behavioral determinants**

Mosquito-borne disease (MBD) control depends largely on a range of public health measures aimed at reducing the spread of infected mosquitoes and human-mosquito contact. These public health measures are generally driven by voluntary, though in few occasions obligatory (e.g., indoor residual spraying), self-protective behaviors by individuals and communities

## **"I couldn't connect the wires in my brain." Young adult cancer survivors' experience with cognitive functioning**

**CONCLUSIONS:** YA cancer survivors experience enduring cognitive difficulties after treatment. Specific concerns highlight the importance of attention and executive functioning impairments, long-term memory recall, and sensitivity to distractions. Future work is needed to improve assessment and treatment of CRCI among YA cancer survivors.

## **A novel risk assessment tool for postoperative delirium in vascular surgery: The stress model (Siena posTopeRative dElirium in vaScular Surgery)**

**CONCLUSION:** The STRESS score has a good predictive potentiality for POD occurrence in elective vascular surgery procedures. However, implementation and external validation are needed to be correctly used in everyday clinical practice.

## **Research Progress of Hippocampal Dopamine System Changes in Perioperative Neurocognitive Disorders**

Perioperative neurocognitive disorders (PND) are a cognitive impairment that occurs after anesthesia, especially in elderly patients and significantly affects their quality of life. The

hippocampus, as a critical region for cognitive function and an important location in PND research, has recently attracted increasing attention

## N2 Responses in Youths With Psychosis Risk Syndrome and Their Association With Clinical Outcomes: A Cohort Follow-Up Study Based on the Three-Stimulus Visual Oddball Paradigm

**CONCLUSIONS:** Youths with psychosis risk syndrome had significant N2 amplitude defects in attention processing with interference stimuli. N2 amplitude shows potential as a prognostic biomarker of clinical outcome in the psychosis risk syndrome.

### Data on Singapore longitudinal early development study (SG-LEADS)

The Singapore Longitudinal Early Development Study (SG-LEADS) seeks to understand factors that can enhance or hinder Singaporean children's early childhood development with an aim to inform public policies that can help each child reach his or her potential. SG-LEADS is a nationally representative household survey that focuses on Singaporean households with children aged 0-6 at the baseline

**Complex executive functions assessed by the trail making test (TMT) part B improve more than those assessed by the TMT part A or digit span backward task during vagus nerve stimulation in patients with drug-resistant epilepsy**

**CONCLUSION:** Performance in all three tests improved at the group level during the follow-up period, with the most robust improvement observed in TMT-B, which requires inhibition control and set-switching in addition to the visuoperceptual processing speed that is crucial in TMT-A and working-memory performance that is essential in DB

### Thyroid dysfunction and Alzheimer's disease, a vicious circle

Recently, research into the link between thyroid dysfunction and Alzheimer's disease (AD) remains a current topic of interest. Previous research has primarily concentrated on examining the impact of thyroid dysfunction on the risk of developing AD, or solely explored the mechanisms of interaction between hypothyroidism and AD, a comprehensive analysis of the mechanisms linking thyroid

### Chronic abdominal pain in inflammatory bowel disease: a practical guide

Pain is common in inflammatory bowel disease (IBD), yet many patients feel their pain is not addressed by healthcare professionals. Listening to a patient's concerns about pain, assessing symptoms and acknowledging the impact these have on daily life remain crucial steps in addressing pain in IBD

**A quasi-experimental mixed-method pilot study to check the efficacy of the "SOUND" active and passive music-based intervention on mental wellbeing and residual cognition of older people with dementia and dementia professionals' burnout: a research protocol**

**CONCLUSION:** The novelty of SOUND is its multicomponent method, including the most evidenced features for improving the wellbeing of participants.

### Self-driven solutions and resilience adapted by people with drug-resistant tuberculosis and their caregivers in Bengaluru and Hyderabad, India: a qualitative study

**BACKGROUND:** One-fifth of people with drug-resistance tuberculosis (DR-TB) who were initiated on newer shorter treatment regimen (with injection) had unfavourable treatment outcomes in India as on 2020

## **The Large Ectodomain of APP Prevents APP from being Directly Cleaved by gamma-Secretase**

**CONCLUSIONS:** Enabling the direct  $\gamma$ -cleavage of APP is a new and valid strategy to reduce A $\beta$ . However, APP does not inhibit  $\gamma$ -cleavage via a specific inhibitory sequence in the ectodomain. Other methods to fulfill the strategy may benefit AD prevention and therapy.

## **Arterial Health Markers in Relation to Behavior and Cognitive Outcomes at School Age**

**CONCLUSIONS:** From our results, we cannot conclude that the associations of blood pressure, carotid intima media thickness, and carotid distensibility at age 10 years with behavior and cognitive outcomes are present in early adolescence. Further follow-up studies are needed to identify the critical ages for arterial health in relation to behavior and cognitive outcomes at older ages.

## **Long-term abacus training gains in children are predicted by medial temporal lobe anatomy and circuitry**

Abacus-based mental calculation (AMC) is a widely used educational tool for enhancing math learning, offering an accessible and cost-effective method for classroom implementation. Despite its universal appeal, the neurocognitive mechanisms that drive the efficacy of AMC training remain poorly understood

## **Absence in CX3CR1 receptor signaling promotes post-ischemic stroke cognitive function recovery through suppressed microglial pyroptosis in mice**

**CONCLUSION:** Our study demonstrated that CX3CR1 gene deletion was beneficial to PSCI recovery. The mechanism might lie in inhibited pyroptosis and enhanced neurogenesis. CX3CR1 receptor may serve as a therapeutic target for improving the PSCI.

## **Sleep and APOE-epsilon4 have a synergistic effect on plasma biomarkers and longitudinal cognitive decline in older adults**

**CONCLUSION:** Our study highlights sleep disorder was associated with cognitive decline, with plasma NfL playing a partial mediating role. These findings explain how sleep disorders affect cognitive function and emphasize the importance of healthy sleep for older adults.

## **Educational intervention for the prevention of internet addiction disorder among 15-19-year-old adolescents in Colombo district, Sri Lanka**

**CONCLUSIONS:** The developed educational package was found effective for the prevention of Internet Addiction Disorder and recommended to use in future prevention programs and to aid the policymakers and administrators in the prevention, diagnosis, and management of Internet addiction disorder among this age group.

## **Therapeutic effects of resveratrol on epigenetic mechanisms in age-related diseases: A comprehensive review**

Recently, various studies have shown that epigenetic changes are associated with aging and age-related diseases. Both animal and human models have revealed that epigenetic processes are involved in aging mechanisms. These processes happen at multiple levels and include histone modification, DNA methylation, and changes in noncoding RNA expression

## **TERT mediates the U-shape of glucocorticoids effects in modulation of hippocampal neural stem cells and associated brain function**

**CONCLUSION:** The bidirectional regulation of TERT by different GCs concentrations is a key mechanism mediating the U-shape of GC effects in modulation of hippocampal NSCs and associated brain function. Replenishment of TERT could be a common treatment strategy for GC dysfunction-associated diseases.

### **Entorhinal-based path integration selectively predicts midlife risk of Alzheimer's disease**

**INTRODUCTION:** Entorhinal cortex (EC) is the first cortical region to exhibit neurodegeneration in Alzheimer's disease (AD), associated with EC grid cell dysfunction. Given the role of grid cells in path integration (PI)-based spatial behaviors, we predicted that PI impairment would represent the first behavioral change in adults at risk of AD.

### **Considerations Regarding Management of Heart Failure in Older Adults**

Understanding noncardiovascular comorbidities and geriatric syndromes in elderly patients with heart failure (HF) is important as the average age of the population increases. Healthcare professionals need to consider these complex dynamics when managing older adults with HF, especially those older than 80

### **Chronic exercise and neuropsychological function in healthy young adults: a randomised controlled trial investigating a running intervention**

Despite the well-known physical and mental health benefits of regular exercise, many of the world's population, including healthy young adults, grossly undershoot recommended physical activity levels. Chronic exercise has potential to improve cognitive performance and affect in most age groups

### **Pharmacological and Non-pharmacological Approaches for the Management of Neuropathic Pain in Multiple Sclerosis**

Multiple sclerosis is a chronic inflammatory disease that affects the central nervous system and can cause various types of pain including ongoing extremity pain, Lhermitte's phenomenon, trigeminal neuralgia, and mixed pain

### **Internet-based acceptance and commitment therapy for transdiagnostic treatment of comorbid posttraumatic stress disorder and chronic pain: A development pilot study**

**CONCLUSIONS:** These results add to previous research where face-to-face ACT has been shown to be of benefit to individuals with either chronic pain or PTSD. The findings also suggest that iACT can be delivered to individuals with comorbid PTSD and chronic pain with an effectiveness that is comparable to other cognitive behavioral therapy-based treatments for somatic and psychiatric disorders

### **Mortality Outcomes in a Large Population with and without Covert Cerebrovascular Disease**

Covert cerebrovascular disease (CCD) is frequently reported on neuroimaging and associates with increased dementia and stroke risk. We aimed to determine how incidentally-discovered CCD during clinical neuroimaging in a large population associates with mortality

### **The ASPREE Healthy Ageing Biobank: Methodology and participant characteristics**

ASPIrin in Reducing Events in the Elderly (ASPREE), a placebo-controlled prevention trial of low dose aspirin, provided the opportunity to establish a biospecimen biobank from initially healthy persons aged 70+ years for future research

### **Fuzzy cognitive maps for municipal governance improvement**

This paper applies Fuzzy Cognitive Maps (FCMs) to understand the diverse behavior of municipal governments in Ecuador to find common elements that influence the well-being of citizens in the short and long term

### **Metabolic-dysfunction associated steatotic liver disease-related diseases, cognition and dementia: A two-sample mendelian randomization study**

**CONCLUSIONS:** This two-sample MR analysis suggests that genetically predicted MASLD and liver fibrosis and cirrhosis may increase the VD risk. Nonetheless, the causal effects of NAFLD-related diseases on VD need more in-depth research.

### **Access to primary eye care for people living with dementia: a call to action for primary care practitioners to 'think vision'**

Access to allied health services offers significant benefits for people living with dementia, yet access is currently fragmented and inconsistent. The 2023-2024 budget allocated AU\$445million to further enable general practice-led, multidisciplinary teams, with integrated care located within practices, including employment of allied health professionals

### **Orthostatic Hypotension and Cognitive Function in Individuals 85 Years of Age: A Longitudinal Cohort Study in Sweden**

Orthostatic hypotension (OH) is more common in the elderly and associated with increased mortality. However, its implications for 85-year-olds are not known. In the prospective observational cohort study Elderly in Linköping Screening Assessment (ELSA 85), 496 individuals in Linköping, Sweden, were followed from age 85 years with cognitive assessments

### **A Toxicogenic Interaction between Intracellular Amyloid- $\beta$ and Apolipoprotein-E**

Alzheimer's disease (AD) is associated with the aggregation of amyloid  $\beta$  (A $\beta$ ) and tau proteins. Why ApoE variants are significant genetic risk factors remains a major unsolved puzzle in understanding AD, although intracellular interactions with ApoE are suspected to play a role

### **A cluster-randomized controlled trial of a nurse-led artificial intelligence assisted prevention and management for delirium (AI-AntiDelirium) on delirium in intensive care unit: Study protocol**

**BACKGROUND:** Delirium is a common complication among intensive care unit (ICU) patients that is linked to negative clinical outcomes. However, adherence to the Clinical Practice Guidelines for the Prevention and Management of Pain, Agitation/Sedation, Delirium, Immobility, and Sleep Disruption in Adult Patients in the ICU (PADIS guidelines), which recommend the use of the ABCDEF bundle, is

### **Contamination fear and attention bias variability early in the COVID-19 pandemic**

The onset of the COVID-19 pandemic resulted in a dramatic increase in the salience and importance of information relating to both the risk of infection, and factors that could mitigate against such risk. This is likely to have contributed to elevated contamination fear concerns in the general population

### **Association between chronic pain classes and cognitive function in older adults: A cross-sectional study based on latent class analysis**

The purpose of this study was to identify latent classes of chronic pain in older adults based on perceptual, cognitive, behavioral, emotional and social factors, and to explore the

associations between each class of chronic pain and different cognitive domains. A total of 629 participants were included

### **Fear of falling and common symptoms of multiple sclerosis: Physical function, cognition, fatigue, depression, and sleep - A systematic review**

**CONCLUSION:** Evidence indicates significant correlational and bidirectional predictive relationships exist between FOF and common MS symptoms. A comprehensive conceptual framework accounting for the interaction between FOF and MS symptoms is needed to develop effective falls prevention strategies.

### **Effect of icariin on depressive behaviour in rat pups. Evidences for its mechanism of action by integrating network pharmacology, metabolomics and gut microbiota composition**

**CONCLUSION:** In this study, the antidepressant mechanism of ICA was clarified with a strategy of integrating metabolomics, network pharmacology and gut microbiota. ICA has a good effect on improving metabolism and increasing the abundance of probiotics in the intestine. The present research provided new insights into the anti-depressant mechanism of ICA.

### **Cognitive, Emotional and Dependency Level on Institutionalized Older Adults**

**CONCLUSIONS:** The more deteriorated cognitive state will be associated with a higher level of depression and lower functional capacity in daily life activities.

### **Generation of an induced pluripotent stem cell line (UMi043-A) from an African American patient with Alzheimer's disease carrying an ABCA7 deletion (p.Arg578Alafs)**

The ATP-binding cassette, subfamily A (ABC1), member 7 (ABCA7) gene is associated with Alzheimer's disease (AD) risk in populations of African, Asian, and European ancestry<sup>(1-5)</sup>. Numerous ABCA7 mutations contributing to risk have been identified, including a 44 base pair deletion (rs142076058) specific to individuals of African ancestry and predicted to cause a frameshift mutation (p

### **Adverse outcomes of intrinsic capacity in older adults: A scoping review**

**Background and Purpose** Intrinsic capacity (IC) has been shown to have the greatest impact on an individual's health status and health trajectory and can independently predict adverse outcomes such as mortality and care dependency in older adults. However, the current understanding of adverse outcomes associated with IC is incomplete

### **Delirium in acute stroke is associated with increased cognitive and psychiatric symptoms over time: The Nor-COAST study**

**CONCLUSIONS:** Patients with delirium in the acute phase of stroke may be particularly vulnerable to developing cognitive and psychiatric symptoms in the chronic phase.

### **Long-term trajectories of clinical staging in first-episode psychosis and their associated cognitive outcome: a 21-year follow-up study**

No abstract

### **Chitosan revokes controlled-cortical impact generated neurological aberrations in circadian disrupted mice via TLR4-NLRP3 axis**

The severity of inevitable neurological deficits and long-term psychiatric disorders in the aftermath of traumatic brain injury is influenced by pre-injury biological factors. Herein, we investigated the therapeutic effect of chitosan lactate on neurological and psychiatric

aberrations inflicted by circadian disruption (CD) and controlled-cortical impact (CCI) injury in mice

### Water extract of moschus alleviates erastin-induced ferroptosis by regulating the Keap1/Nrf2 pathway in HT22 cells

**CONCLUSIONS:** This study demonstrated that WEM could perform neuroprotective effects by alleviating ferroptosis, verified that WEM treatment of AD can be mediated by the Keap1/Nrf2 pathway, and provided theoretical support for the application of WEM in the treatment of AD.

### Autism Spectrum Disorder at Home and in School

The diagnosis of autism spectrum disorder (ASD) brings a lifetime of considerations for individuals and their families. The core symptoms of ASD vary in severity and influence behavior and function across all environments. Co-occurring medical, mental health, cognitive, language, learning, and behavioral differences add challenges to those associated with core symptoms

### The Autism Constellation and Neurodiversity: Long-Term and Adult Outcomes in Autism Spectrum Disorder

Research on autistic adults suggests significant heterogeneity in outcomes. A significant proportion of individuals struggle with intellectual disability and limited communication skills. Of the 67% who have age-appropriate cognitive skills, around half are expected to attain a college education, and 25% are likely to hold a full-time job

### Digital computerised cognitive training for preventing cognitive decline among hypertensive patients: a study protocol for a multicentre randomised controlled trial (DELIGHT trial)

**INTRODUCTION:** Mild cognitive impairment (MCI) is an important intervenable stage for the prevention of dementia. Hypertension is associated with impaired cognition, and when combined with MCI, it may lead to a poor prognosis. Digital computerised cognitive training (CCT) has recently become a potential instrument for improving cognition, but evidence for its efficacy remains limited

### Facing uncertainties: The longitudinal relationship between childhood maltreatment and exploratory behavior

**CONCLUSIONS:** Given the critical role of uncertainty stress, promoting more exploration among these maltreated adolescents requires corresponding cognitive and behavioral interventions to adjust their perception and cognition of uncertainty.

### Effect of gut microbiome modulation on muscle function and cognition: the PROMOTE randomised controlled trial

Studies suggest that inducing gut microbiota changes may alter both muscle physiology and cognitive behaviour. Gut microbiota may play a role in both anabolic resistance of older muscle, and cognition

### RNA as a component of scrapie fibrils

Recently, electron cryo-microscopy (cryo-EM) maps of fibrils from the brains of mice and hamsters with five infectious scrapie strains have been published and deposited in the electron microscopy data bank (EMDB). As noted by the primary authors, the fibrils contain a second component other than protein

**Glycan-4 serum levels are associated with cognitive dysfunction and vascular risk factors in Parkinson's disease**

Glycans are biomarkers for various pathologies, including cardiovascular disease, cancer and diabetes. Increasing evidence suggests that glycans also play a role in the context of neurodegenerative disorders

**Age and sex-based impacts of maternal iron deficiency on offspring's cognitive function and anemia: A systematic review**

Iron deficiency is a recognized global health concern, particularly impactful during pregnancy where the mother serves as the primary source of iron for the developing fetus. Adequate maternal iron levels are crucial for fetal growth and cognitive development

**Three-dimensional identification of microvascular pathology and neurovascular inflammation in severe white matter hyperintensity: a case report**

White matter hyperintensities (WMH) are the most prevalent markers of cerebral small vessel disease (SVD), which is the major vascular risk factor for dementia. Microvascular pathology and neuroinflammation are suggested to drive the transition from normal-appearing white matter (NAWM) to WMH, particularly in individuals with hypertension

**Proton Pump Inhibitors and Cognitive Health: Review on Unraveling the Dementia Connection and Co-morbid Risks**

Dementia, an international health issue distinguished by the impairment of daily functioning due to cognitive decline, currently affects more than 55 million people worldwide, with the majority residing in low-income and middle-income countries. Globally, dementia entails significant economic burdens in 2019, amounting to a cost of 1.3 trillion US dollars

**The Unveiling of Therapeutic Targets for Alzheimer's Disease: An Integrative Review**

Alzheimer's disease (AD) is characterized by a complex pathological landscape, necessitating a comprehensive treatment approach. This concise review paper delves into the idea of addressing multiple mechanisms in AD, summarizing the latest research findings on pathogenesis, risk factors, diagnostics, and therapeutic strategies

**Comorbidity and household income as mediators of gender inequalities in dementia risk: a real-world data population study**

**CONCLUSIONS:** Comorbidity and low HI act as mediators in the increased risk of dementia associated with female sex. Given the difference in the prevalence of comorbidities by HI, individual interventions to control comorbidities could not only prevent dementia but also reduce inequalities, as the risk is greater in the most disadvantaged population.

**Peripheral apolipoprotein is an independent factor for enlarged perivascular space in small vessel disease**

**CONCLUSION:** Our findings demonstrated peripheral apolipoproteins, including apoB, apoB/apoA-1, and apoE, were independent factor for EPVS in CSVD.

**Chronic inflammation is associated with worsening working memory performance: Preliminary evidence from a diverse, longitudinal cohort of adolescents and young adults**

Many depressed individuals experience cognitive difficulties that persist when depression is in remission. Inflammation is hypothesized to play a role in cognitive dysfunction in depression; however, many aspects of this relationship are not well characterized

## Cognitive, behavioral, and psychological phenotypes in small fiber neuropathy: A case-control study

**OBJECTIVE:** Small fiber neuropathy (SFN) is a well-defined chronic painful condition causing severe individual and societal burden. While mood disorders have been described, cognitive and behavioral profiles of SFN patients has not been investigated.

## Can motor decline be a modifiable marker of clinical progression in subjective cognitive decline? A national prospective cohort study

**CONCLUSIONS:** This study emphasizes the potential of gait speed, muscle strength, and endurance as non-cognitive indicators of clinical progression in subjective cognitive decline. Understanding their combined effectiveness may reveal primary physiological mechanisms contributing to the dual decline of motor and cognition.

## Enriched environment treatment promotes neural functional recovery together with microglia polarization and remyelination after cerebral ischemia in rats

**CONCLUSION:** EE improved long-term recovery of cognitive function after cerebral I/R injury, at least in part by promoting M2 microglia transformation through activation of the PI3K/AKT/GSK3 $\beta$  signaling pathway, inhibiting inflammation to provide a favorable microenvironment for oligodendrocyte maturation and remyelination

## The role of neuroglial cells communication in ischemic stroke

Ischemic stroke is one of the leading causes of death and disability globally, but its treatment options are limited due to therapeutic window and reperfusion injury constraints. Microglia, astrocytes, and oligodendrocytes are the major components of the neurovascular unit, and there is substantial evidence suggesting their contributions to maintaining homeostasis in the central nervous system

## The free plasma amyloid A $\beta$ 1-42/A $\beta$ 1-40 ratio predicts conversion to dementia for subjects with mild cognitive impairment with performance equivalent to that of the total plasma A $\beta$ 1-42/A $\beta$ 1-40 ratio. The BALTAZAR study

**CONCLUSION:** The free plasma A $\beta$ (1-42)/A $\beta$ (1-40) ratio is associated with a risk of conversion from MCI to dementia within three years, with performance comparable to that of the total plasma A $\beta$ (1-42)/A $\beta$ (1-40) ratio. Threshold levels of the free and total plasma A $\beta$ (1-42)/A $\beta$ (1-40) ratio could be determined, with a 60% lower risk of conversion for patients above the threshold than those below.

## Genetic variation in endocannabinoid signaling: Anxiety, depression, and threat- and reward-related brain functioning during the transition into adolescence

**CONCLUSIONS:** Our findings add to emerging evidence linking the FAAH C385A variant to lower risk of psychopathology, and extend these findings to a developmental sample. In particular, we found lower depressive symptoms in FAAH AA genotypes compared to AC and CC genotypes

## Development of progressive multifocal leukoencephalopathy after cord blood transplantation in a patient with refractory angioimmunoblastic T-cell lymphoma

A patient undergoing cord blood transplantation for refractory angioimmunoblastic T-cell lymphoma was subsequently managed with long-term immunosuppressants for chronic graft-versus-host disease (GVHD). On day 591 post-transplant, she exhibited disorientation and cognitive dysfunction

## **Neuroprotective effects of Shenghui decoction via inhibition of the JNK/p38 MAPK signaling pathway in an AICl(3)-induced zebrafish (*Danio rerio*) model of Alzheimer's disease**

**CONCLUSIONS:** Our findings revealed the therapeutic mechanism of SHD in mitigating AD progression and suggested that SHD is a potent neuroprotectant that contributes to the future development of TCM modernization and broader clinical applications.

## **Functional Stimulation and Imaging to Predict Neuromodulation of Chronic Low Back Pain**

Back pain is one of the most common aversive sensations in human experience. Pain is not limited to the sensory transduction of tissue damage; rather, it encompasses a range of nervous system activities including lateral modulation, long-distance transmission, encoding, and decoding

## **Therapeutic Potential for Metabotropic Glutamate Receptor 7 (mGlu(7)) Modulators in Cognitive Disorders**

Metabotropic glutamate receptor 7 (mGlu(7)) is the most highly conserved and abundantly expressed mGlu receptor in the human brain. The presynaptic localization of mGlu(7), coupled with its low affinity for its endogenous agonist, glutamate, are features that contribute to the receptor's role in modulating neuronal excitation and inhibition patterns, including long-term potentiation, in various

## **Proactive Versus Reactive Control Strategies Differentially Mediate Alcohol Drinking in Male Wistar and P rats**

Problematic alcohol consumption is associated with deficits in decision-making, and alterations in prefrontal cortex neural activity likely contributes. We hypothesized that differences in cognitive control would be evident between male Wistar rats and a model for genetic risk for alcohol use disorder (alcohol-preferring P rats)

## **Risk factors for violence in an emergency department: Nurses' perspectives**

**CONCLUSIONS:** We recommend that violence risk assessment include: history of violence, cognitive impairment, psychotic symptoms, drug and alcohol influence, shouting and demanding, verbal abuse/hostility, impulsivity, agitation, irritability and imposed restrictions and interventions. These violence risk factors fit within the four categories of historical, clinical, behavioural and situational.

## **Inactivity May Identify Older Intensive Care Unit Survivors at Risk for Post-Intensive Care Syndrome**

**CONCLUSIONS:** Post-ICU inactivity may identify older ICU survivors who may be at risk for PICS and may guide future research interventions to mitigate symptom burden.

## **APOE genotype-specific methylation patterns are linked to Alzheimer disease pathology and estrogen response**

The joint effects of APOE genotype and DNA methylation on Alzheimer disease (AD) risk is relatively unknown. We conducted genome-wide methylation analyses using 2,021 samples in blood (91 AD cases, 329 mild cognitive impairment, 1,391 controls) and 697 samples in brain (417 AD cases, 280 controls)

## **Visual processing speed and its association with future dementia development in a population-based prospective cohort: EPIC-Norfolk**

Visual processing deficits have frequently been reported when studied in individuals with dementia, which suggests their potential utility in supporting dementia screening. The study

uses EPIC-Norfolk Prospective Population Cohort Study data (n = 8623) to investigate the role of visual processing speed assessed by the Visual Sensitivity Test (VST) in identifying the risk of future dementia using

### Sleep disorders in Parkinson's disease, an early and multiple problem

In Parkinson's disease (PD), it remains unclear whether sleep disorders including insomnia, REM sleep behavior disorder (RBD), excessive daytime sleepiness (EDS), restless legs syndrome (RLS) and sleep-disordered breathing (SDB), are isolated or combined, interact with each other and are associated with clinical factors

### Perception of social inclusion/exclusion and response inhibition in adolescents with past suicide attempt: a multidomain task-based fMRI study

The occurrence of suicidal behaviors increases during adolescence. Hypersensitivity to negative social signals and deficits in cognitive control are putative mechanisms of suicidal behaviors, which necessitate confirmation in youths. Multidomain functional neuroimaging could enhance the identification of patients at suicidal risk beyond standard clinical measures

### Handwriting Markers for the Onset of Alzheimer's Disease

**CONCLUSION:** The handwriting marker of AD could be an effective supplement instrument for earlier screening. It is also useful when traditional biomarkers and neurological tests could not be applied. AD-HS can accompany therapy as an indication of its effect on a person.

### Is Alzheimer disease a disease?

Dementia, a prevalent condition among older individuals, has profound societal implications. Extensive research has resulted in no cure for what is perceived as the most common dementing illness: Alzheimer disease (AD). AD is defined by specific brain abnormalities - amyloid- $\beta$  plaques and tau protein neurofibrillary tangles - that are proposed to actively influence the neurodegenerative process

### Immune Activation in Alzheimer Disease

Alzheimer disease (AD) is the most common neurodegenerative disease, and with no efficient curative treatment available, its medical, social, and economic burdens are expected to dramatically increase

### Butyrylcholinesterase activity in patients with postoperative delirium after cardiothoracic surgery or percutaneous valve replacement- an observational interdisciplinary cohort study

**CONCLUSION:** BChE activity is not independently associated with the occurrence of postoperative delirium. Preoperative BChE values are related to patients' morbidity and vulnerability, while postoperative activities reflect the severity, length and complications of surgery.

### Risk factors associated with functional decline in older hospital survivors with acute lower respiratory tract infections: a prospective cohort study

**CONCLUSIONS:** About 20% older patients with LRTIs experienced functional decline at discharge. Compared to age, severity of diseases and length of stay, frailty and cognitive impairment performed better at predicting the function decline. The apply of geriatric assessment may contribute to enhance the quality of management and treatment for patients with the older with LRTIs.

**Impacts of metabolic disruption, body mass index and inflammation on cognitive function in post-COVID-19 condition: a randomized controlled trial on vortioxetine**

**CONCLUSION:** Overall, vortioxetine demonstrated significant improvements in cognitive deficits among individuals with baseline markers of metabolic dysfunction, elevated inflammation and higher BMI at endpoint as compared to placebo.

**Progression analysis versus traditional methods to quantify slowing of disease progression in Alzheimer's disease**

**CONCLUSION:** PMRM methods can be used to estimate treatment effects in terms of slowing of progression which translates to time metrics that can be readily interpreted and appreciated as meaningful outcomes for patients, care partners, and health care practitioners.

**From bedside to recovery: exercise therapy for prevention of post-intensive care syndrome**

**CONCLUSION:** PICS is a growing global healthcare concern. This review aims to guide clinicians, researchers, policymakers, and healthcare providers in utilising ET as a therapeutic and preventive measure for patients during and after an ICU admission to address this problem

**Polygenic effects on the risk of Alzheimer's disease in the Japanese population**

**CONCLUSIONS:** We showed that the AD PRS is useful in the Japanese population, whose genetic structure is different from that of the European population. These findings suggest that the polygenicity of AD is partially common across ethnic differences.

**Exercise alleviates cisplatin-induced toxicity in the hippocampus of mice by inhibiting neuroinflammation and improving synaptic plasticity**

Chemotherapy-induced cognitive impairment is recognized as the most typical symptom in patients with cancer that occurs during and following the chemotherapy treatment. Recently many studies focused on pharmaceutical strategies to control the chemotherapy side effects, however it is far from satisfactory. There may be a need for more effective treatment options

**Predicting and Preventing Gun Violence: An Experimental Evaluation of READI Chicago**

Gun violence is the most pressing public safety problem in American cities. We report results from a randomized controlled trial (N=2,456) of a community-researcher partnership called the Rapid Employment and Development Initiative (READI) Chicago. The program offered an 18-month job alongside cognitive behavioral therapy and other social support

**Relationship between physical activity and cerebral white matter hyperintensity volumes in older adults with depressive symptoms and mild memory impairment: a cross-sectional study**

**INTRODUCTION:** Cerebral white matter hyperintensities (WMHs) are commonly found in the aging brain and have been implicated in the initiation and severity of many central nervous system diseases. Furthermore, an increased WMH volume indicates reduced brain health in older adults

**Large-scale screening of clinical assessments to distinguish between states in the Integrated HD Progression Model (IHDPM)**

**CONCLUSION:** By providing ranked quantitative scores indicating discriminatory ability of thousands of clinical measures between specific pairs of IHDPM states, our results will aid

clinical trial designers select the most effective outcome measures tailored to their study cohort

### **Emerging wearable technologies for multisystem monitoring and treatment of Parkinson's disease: a narrative review**

Parkinson's disease (PD) is a chronic movement disorder characterized by a variety of motor and nonmotor comorbidities, including cognitive impairment, gastrointestinal (GI) dysfunction, and autonomic/sleep disturbances. Symptoms typically fluctuate with different settings and environmental factors and thus need to be consistently monitored

### **REPRESENTATIVE FUNCTIONAL CONNECTIVITY LEARNING FOR MULTIPLE CLINICAL GROUPS IN ALZHEIMER'S DISEASE**

Mild cognitive impairment (MCI) is a high-risk dementia condition which progresses to probable Alzheimer's disease (AD) at approximately 10% to 15% per year. Characterization of group-level differences between two subtypes of MCI - stable MCI (sMCI) and progressive MCI (pMCI) is the key step to understand the mechanisms of MCI progression and enable possible delay of transition from MCI to AD

### **Differential Diagnosis and Interdisciplinary Workup of a Pediatric Patient With an Unknown Immune Condition: Chronic Respiratory Distress Secondary to Viral Illness and Developmental Consequences**

We present a case of a three-year-old African American male, born at term, who initially presented with bronchiolitis at six months and has since experienced recurrent episodes of respiratory distress and hospitalizations. The patient also has severe eczema, developmental delays, and recurrent viral illnesses

### **Prevalence and risk factors of cognitive impairment in Chinese patients with hypertension: a systematic review and meta-analysis**

**CONCLUSION:** Cognitive impairment is prevalent in Chinese patients with hypertension, and the increased prevalence was associated with several demographic characteristics, complicated disease, no regular physical activity, worse hypertension status (higher stages and SBP), and high levels of biomarkers

### **Cognitive dysfunction in early experimental metabolic dysfunction-associated steatotic liver disease is associated with systemic inflammation and neuroinflammation**

**CONCLUSIONS:** Experimental non-fibrotic MASLD, as a model to reflect the early stage of human disease, results in cognitive impairment and depression-like behaviour. This is associated with an inflammatory phenotype not only in the liver but also in the plasma and brain, which together with diminished synaptic density, provides a pathophysiological link between liver disease and cognitive

### **Clinical potential of sensory neurites in the heart and their role in decision-making**

The process of decision-making is quite complex involving different aspects of logic, emotion, and intuition. The process of decision-making can be summarized as choosing the best alternative among a given plethora of options in order to achieve the desired outcome

### **Racial and ethnic disparities in the co-occurrence of intellectual disability and autism: Impact of incorporating measures of adaptive functioning**

Intellectual disability (ID) commonly co-occurs in children with autism. Although diagnostic criteria for ID require impairments in both cognitive and adaptive functioning, most population-based estimates of the frequency of co-occurring ID in children with autism-

including studies of racial and ethnic disparities in co-occurring autism and ID-base the definition of ID solely on cognitive scores

### In vivo microstructural heterogeneity of white matter and cognitive correlates in aging using tissue compositional analysis of diffusion magnetic resonance imaging

**CONCLUSION:** The microstructural heterogeneity within normal-appearing white matter and WMSA is associated with increasing age and cognitive variation, in cognitively unimpaired individuals. Furthermore, the 3-tissue signal fractions are more specific to potential white matter alterations than conventional MRI measures such as WMSA volume

### Gingipains may be one of the key virulence factors of *Porphyromonas gingivalis* to impair cognition and enhance blood-brain barrier permeability: An animal study

**CONCLUSIONS:** Gingipains may be one of the key virulence factors of *P. gingivalis* to impair cognition and enhance BBB permeability by the Ddx3x/Mfsd2a/Cav-1 axis.

### Therapeutic potential of mesenchymal stem cells for cerebral small vessel disease

Cerebral small vessel disease (CSVD), as the most common, chronic and progressive vascular disease on the brain, is a serious neurological disease, whose pathogenesis remains unclear. The disease is a leading cause of stroke and vascular cognitive impairment and dementia, and contributes to about 20% of strokes, including 25% of ischemic strokes and 45% of dementias

### Risk factors and predictive markers of post-stroke cognitive decline-A mini review

Stroke is one of the top causes of death and disability worldwide. Cognitive impairments are found in more than 70% of individuals who have survived a stroke. Cognitive decline is a major contributor to disability, dependency, and morbidity. The prevalence and severity of dementia vary depending on different characteristics of the stroke and other clinical risk factors

### A case for seeking sex-specific treatments in Alzheimer's disease

There is no satisfactory explanation for the sex-related differences in the incidence of many diseases and this is also true of Alzheimer's disease (AD), where females have a higher lifetime risk of developing the disease and make up about two thirds of the AD patient population

### Meta-analysis of Montreal cognitive assessment diagnostic accuracy in amnestic mild cognitive impairment

**BACKGROUND:** The Montreal Cognitive Assessment (MoCA) is one of the most widely-used cognitive screening instruments and has been translated into several different languages and dialects. Although the original validation study suggested to use a cutoff of ≤26, subsequent studies have shown that lower cutoff values may yield fewer false-positive indications of cognitive impairment

### Place attachment mediates links between pro-environmental attitudes and behaviors among visitors to Mt. Bukhan National Park, South Korea

**INTRODUCTION:** Efforts to understand visitors' participation in pro-environmental behaviors (PEB) are important for protected area management. Previous research in nature-based recreation settings suggests environmental attitudes may affect PEB, and that these relationships might be mediated by different dimensions of place attachment (place identity and place dependence).

## A classification-based generative approach to selective targeting of global slow oscillations during sleep

**CONCLUSION:** Our research presents a novel approach to optimize cl-tACS during sleep, with a focus on targeting global SOs. This approach holds promise for improving cl-tACS not only for global SOs but also for other physiological events, benefiting both research and clinical applications in sleep and cognition.

## Sporadic cerebral small vessel disease and cognitive decline in healthy older adults: A systematic review and meta-analysis

We performed a systematic review and meta-analysis on prospective studies that provided risk estimates for the impact of 3 different MRI markers of small vessel disease (SVD), namely white matter hyperintensities (WMH), cerebral microbleeds (CMB) and lacunes, on cognitive decline in relatively healthy older adults without cognitive deficits at baseline

### Anxiety

In this article, we will address 10 questions about anxiety that are relevant to doctors who encounter this in their practice. This often occurs in the primary care setting, where individuals with anxiety frequently present with somatic complaints. A focused medical history, including questions about the use and withdrawal of psychoactive substances, can assist in the diagnostic process

### Association between experiencing low healthcare quality and developing dementia

**CONCLUSIONS:** As predicted, experiencing low healthcare quality was associated with greater dementia risk. To date, most measures to reduce dementia have focused on individual-level behaviors. Our findings suggest that implementing structural changes to improve healthcare quality delivery for older persons could reduce dementia prevalence.

### Associations of social and cognitive-behavioral variables with disinhibited eating and anxiety: An ecological momentary assessment study

**OBJECTIVE:** Among adolescents, disinhibited eating and anxiety commonly co-occur. Precision intervention approaches targeting unique mechanistic vulnerabilities that contribute to disinhibited eating and anxiety may therefore be helpful

### Role of Eating Behavior and Stress in Maintenance of Dietary Changes During the PREVIEW Intervention

**CONCLUSIONS AND IMPLICATIONS:** Higher cognitive restraint predicted lower energy intake (food quantity), but disinhibition and hunger were also associated with dietary quality.

### Features of the Physical and Social Neighborhood Environment and Neighborhood-Level Alzheimer's Disease and Related Dementia in South Carolina

**CONCLUSIONS:** Neighborhood environment features, such as higher air pollution levels, were associated with higher neighborhood ADRD incidence. The INLA-SPDE method could have broad applicability to data collected across disparate spatial scales.  
<https://doi.org/10.1289/EHP13183>.

### Delayed neuropsychiatric syndrome after carbon monoxide poisoning

**BACKGROUND:** Delayed neuropsychiatric syndrome (DNS) is a well-known complication following carbon monoxide (CO) poisoning and develops in up to 50 % of adult survivors. The syndrome is probably immunologically mediated. Common symptoms are slowness, Parkinsonism and cognitive impairment.

**What is the extent of reliability and validity evidence for screening tools for cognitive and behavioral change in people with ALS? A systematic review**

**Objective:** This systematic review provides an updated summary of the existing literature on the validity of screening tools for cognitive and behavioral impairment in people with Amyotrophic Lateral Sclerosis (pwALS), and also focuses on their reliability

### **Slow-wave sleep and subsequent risk of dementia**

No abstract

**The Bio-Hermes Study: Biomarker database developed to investigate blood-based and digital biomarkers in community-based, diverse populations clinically screened for Alzheimer's disease**

**INTRODUCTION:** Alzheimer's disease (AD) trial participants are often screened for eligibility by brain amyloid positron emission tomography/cerebrospinal fluid (PET/CSF), which is inefficient as many are not amyloid positive. Use of blood-based biomarkers may reduce screen failures.

**Late-onset neonatal sepsis was not associated with impaired neurodevelopmental outcome: Results from the EPICE/SHIPS-PT cohort**

**CONCLUSION:** LONS per se was not associated with the risk for poor long-term cognitive or motor outcomes in VPT children. Social-demographic and clinical characteristics assessed during the neonatal period and at the time of neurodevelopment assessment were similar between groups suggesting that social-related factors such as parents' educational level could have mitigated the LONS impact.

### **Reduction of Amyloid- $\beta$ Production without Inhibiting Secretase Activity by MS-275**

Brain amyloid- $\beta$  (A $\beta$ ) governs the pathogenic process of Alzheimer's disease. Clinical trials to assess the disease-modifying effects of inhibitors or modulators of  $\beta$ - and  $\gamma$ -secretases have not shown clinical benefit and can cause serious adverse events

### **Hypnotherapy as Treatment for Depression: A Scoping Review**

This scoping review aims to provide a comprehensive overview of studies that explore the use of hypnotherapy as a treatment for depression, adhering to the PRISMA-ScR guidelines. A total of 232 articles were identified through systematic search strategies in four databases

### **Anatomical correlates of apathy and impulsivity co-occurrence in early Parkinson's disease**

**CONCLUSIONS:** Apathy and ICDs are joint non-exclusive neuropsychiatric disorders also in the early stages of PD and their co-occurrence was associated with GM decrease in several cortical regions of the limbic circuit and cognitive control systems.

### **Prevention of dementia**

With increasing life expectancy, the prevalence of dementia is increasing worldwide. Dementia is among the greatest challenges for healthcare and social systems of the future. Approximately 40% of newly diagnosed cases of dementia are associated with risk factors that can potentially be influenced by preventive measures

### **Is adherence to the 24-h movement guidelines associated with greater academic-related outcomes in children and adolescents? A systematic review and meta-analysis**

The purpose of this systematic review was to synthesise the evidence for the association of adherence to the 24-h movement guidelines with academic-related outcomes in children and adolescents. This systematic review was based on the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) statement

### A Eu-MOF-Based Fluorescent Sensing Probe for the Detection of Tryptophan and Cu<sup>2+</sup> in Aqueous Solutions

Abnormal tryptophan (Trp) metabolism can be used as an important indicator of chronic hepatitis, paranoia, Parkinson's disease and other diseases. Deficiency or excessive accumulation of Cu<sup>2+</sup> can cause diseases such as Wilson's disease and Alzheimer's disease

### SAFE-ROCK: A Phase I Trial of an Oral Application of the ROCK Inhibitor Fasudil to Assess Bioavailability, Safety, and Tolerability in Healthy Participants

**CONCLUSIONS:** Oral fasudil was generally well tolerated in the studied population, and no safety concerns were identified. However, systemic bioavailability of oral hydroxyfasudil corresponded to 69%, and dose adjustments need to be considered. The results presented here lay grounds for future trials of fasudil in chronic diseases, which require an oral long-term application

### Cognitive Function and Variability in Antipsychotic Drug-Naive Patients With First-Episode Psychosis: A Systematic Review and Meta-Analysis

**CONCLUSIONS AND RELEVANCE:** Results of this systematic review and meta-analysis identified cognitive impairment in FEP before the initiation of antipsychotic treatment, with large effect sizes. The high variability within the FEP group suggests the need to identify those individuals with more severe cognitive problems who risk worse outcomes and could benefit the most from cognitive remediation.

### National Estimates of Short- and Longer-Term Hospital Readmissions After Major Surgery Among Community-Living Older Adults

**CONCLUSIONS AND RELEVANCE:** In this nationally representative cohort study of community-living older US residents, the likelihood of hospital readmissions within 180 days after major surgery was increased among older persons who were frail or had probable dementia, highlighting the potential value of these geriatric conditions in identifying those at increased risk.

### Nutritional Interventions for the Prevention of Cognitive Decline in Patients With Mild Cognitive Impairment and Alzheimer Disease: Protocol for a Network Meta-Analysis of Randomized Controlled Trials

**CONCLUSIONS:** Our study holds significant clinical relevance given the rising prevalence of AD and the potential influence of nutritional interventions on cognitive function in individuals with MCI and AD. By investigating this relationship, our research aims to inform evidence-based decision-making in the development of prevention strategies for MCI and AD

### Dynamic Reconfiguration of Brain Functional Network in Stroke

The brain continually reorganizes its functional network to adapt to post-stroke functional impairments. Previous studies using static modularity analysis have presented global-level behavior patterns of this network reorganization. However, it is far from understood how the brain reconfigures its functional network dynamically following a stroke

## Racial/ethnic/gender-Based Differences in Health Trajectories Among American Older Adults: 10-Year Longitudinal Evidence from the Health and Retirement Study

Health disparity by race/ethnicity or gender has been well-documented. However, few researchers have examined health outcomes based on the intersection of individuals' race, ethnicity, and gender or investigated various health dimensions

## Effects of the CO-OP Approach in Addressing the Occupational Performance of Adults With Stroke: A Systematic Review

**CONCLUSIONS AND RELEVANCE:** The CO-OP is a promising client-centered, occupation-based approach, but future adequately powered studies addressing the potential for generalization are needed. Plain-Language Summary: The Cognitive Orientation to daily Occupational Performance is a relatively new treatment method that uses cognitive techniques to guide patients into discovering ways to perform

## Alusti test as a premonitory variable of adverse health events in a nursing home. Two-years follow-up

**CONCLUSIONS:** A higher mild-moderate level of dependence on the AT correlates with a lower risk of falls, a lower rate of hospitalization, and a higher risk of mortality at six months.

## Secondhand smoke exposure and risk of dementia in non-smokers: A population-based cohort study

**Background** Large population-based prospective studies are necessary to provide clarification on the associations of panoramic secondhand smoking burden, including prenatal and postnatal secondhand smoke (SHS) exposure, with the risk of developing dementia

## Blood-based Biomarkers of Cerebral Small Vessel Disease

Age-associated cerebral small vessel disease (CSVD) represents a clinically heterogeneous condition, arising from diverse microvascular mechanisms. These lead to chronic cerebrovascular dysfunction and carry a substantial risk of subsequent stroke and vascular cognitive impairment in aging populations

## Mechanisms of pain in aging and age-related conditions: focus on caregivers

Pain is a complex, subjective experience that can significantly impact quality of life, particularly in aging individuals, by adversely affecting physical and emotional well-being. Whereas acute pain usually serves a protective function, chronic pain is a persistent pathological condition that contributes to functional deficits, cognitive decline, and emotional disturbances in the elderly

## Associations among birthweight, adrenarche, brain morphometry and cognitive function in preterm children aged 9-11 years

**CONCLUSIONS:** These findings highlight the impact of low birthweight on long-term brain structural and cognitive function development, and showed important associations with early onset of adrenarche during the puberty. This understanding may help with prevention and treatment.

## Prosthetic Fitting Concepts after Major Amputation in the Upper Limb - an Overview of Current Possibilities

**CONCLUSION:** TMR surgery represents a significant advancement in the bionic care of amputees. Employing selective nerve transfers for signal multiplication and amplification,

opens up possibilities for improving myoelectric prosthesis function and thus enhancing patient care

### **Analysis of radiological features in patients with post-stroke depression and cognitive impairment**

Post-stroke depression (PSD) and post-stroke cognitive impairment (PSCI) are common complications following a stroke, significantly impacting the quality of life and survival time of survivors. Currently, the comorbidity of PSCI and PSD is receiving increasing attention, as they share some common clinical characteristics, mechanisms, risk factors, radiological features, and treatment strategies

### **Upregulation Effect of Citrus Species on Brain-Derived Neurotrophic Factor**

Brain-derived neurotrophic factor (BDNF) is a neurotrophin that plays fundamental roles in neuronal survival and synaptic plasticity. Its upregulation in the brain can effectively prevent and treat central nervous system (CNS) diseases, including depression, Alzheimer's disease (AD), and Parkinson's disease (PD)

### **Epigenetic studies in children at risk of stunting and their parents in India, Indonesia and Senegal: a UKRI GCRF Action Against Stunting Hub protocol paper**

**INTRODUCTION:** In 2020, an estimated 150 million children under the age of 5 years were stunted. Stunting results from early-life adversity and it is associated with significant physical and cognitive deficit, lifelong socioeconomic disadvantage and reduced life expectancy

### **Investigating market-based opportunities for the provision of nutritious and safe diets to prevent childhood stunting: a UKRI-GCRF action against stunting hub protocol paper**

**BACKGROUND:** Inadequate access to affordable, safe, desirable and convenient nutrient-dense food is one of the underlying causes of child stunting. While targeted nutrition-sensitive interventions (eg, backyard 'nutri-gardens') may increase dietary diversity within farming households, such interventions have limited scalability across the wider food system where markets remain underdeveloped

### **Huntingtin CAG repeats in neuropathologically confirmed tauopathies: Novel insights**

Previous studies have suggested a relationship between the number of CAG triplet repeats in the HTT gene and neurodegenerative diseases not related to Huntington's disease (HD). This study seeks to investigate whether the number of CAG repeats of HTT is associated with the risk of developing certain tauopathies and its influence as a modulator of the clinical and neuropathological phenotype

### **The Effect of Galantamine on Lipopolysaccharide-induced Acute Lung Injury During Neutropenia Recovery in Mice**

**CONCLUSION:** Galantamine attenuated inflammation in LPS-induced ALI during neutropenia recovery.

### **Novel social stimulation ameliorates memory deficit in Alzheimer's disease model through activating alpha-secretase**

As the most common form of dementia in the world, Alzheimer's disease (AD) is a progressive neurological disorder marked by cognitive and behavioral impairment. According to previous researches, abundant social connections shield against dementia

### **The neural oscillations serving task switching are altered in cannabis users**

**CONCLUSIONS:** Cannabis users exhibited altered theta switch cost activity compared to nonusers in prefrontal cortical regions, which are critical for cognitive flexibility. This activity scaled with cannabis use involvement, indicating a link between cannabis use and aberrant oscillatory activity underlying cognitive flexibility.

#### **Instrumental activities of daily living in older patients with metastatic prostate cancer: results from the meet-URO network ADHERE prospective study**

Instrumental activities of daily living (IADL) are significant health indicators closely related to executive functions and able to detect mild cognitive impairment. A decline in IADL usually precedes ADL limitation, including taking medications, and may therefore predict a cognitive decline

#### **Brain structural and functional outcomes in the offspring of women experiencing psychological distress during pregnancy**

In-utero exposure to maternal psychological distress is increasingly linked with disrupted fetal and neonatal brain development and long-term neurobehavioral dysfunction in children and adults. Elevated maternal psychological distress is associated with changes in fetal brain structure and function, including reduced hippocampal and cerebellar volumes, increased cerebral cortical gyration and

#### **Assessing the perceived effect of non-pharmaceutical interventions on SARS-CoV-2 transmission risk: an experimental study in Europe**

We conduct a large ( $N = 6567$ ) online experiment to measure the features of non-pharmaceutical interventions (NPIs) that citizens of six European countries perceive to lower the risk of transmission of SARS-CoV-2 the most. We collected data in Bulgaria ( $n = 1069$ ), France ( $n = 1108$ ), Poland ( $n = 1104$ ), Italy ( $n = 1087$ ), Spain ( $n = 1102$ ) and Sweden ( $n = 1097$ )

#### **Vocabulary knowledge as a reliable proxy of cognitive reserve in multiple sclerosis: a validation study**

**CONCLUSION:** We demonstrated the validity of VOC as a reliable CR measure in pwMS. Thus, CR may also be estimated using fixed objective measures, independent of brain pathology and clinical features. Early CR estimation may help clinicians identify pwMS at a higher risk of cognitive decline and plan strict neuropsychological monitoring and cognitive interventions.

#### **Gamma oscillatory complexity conveys behavioral information in hippocampal networks**

The hippocampus and entorhinal cortex exhibit rich oscillatory patterns critical for cognitive functions. In the hippocampal region CA1, specific gamma-frequency oscillations, timed at different phases of the ongoing theta rhythm, are hypothesized to facilitate the integration of information from varied sources and contribute to distinct cognitive processes

#### **Hard flaccid syndrome symptoms, comorbidities, and self-reported efficacy and satisfaction of treatments: a cross-sectional survey**

Hard flaccid syndrome (HFS) is a poorly understood condition with no formal consensus on its definition. We aimed to advance the understanding of HFS by evaluating symptom prevalence, cause of symptom onset, comorbidities, and self-reported efficacy and satisfaction with current treatments

#### **Exercise therapy, education, and cognitive behavioral therapy alone, or in combination with total knee arthroplasty, in patients with knee osteoarthritis: a randomized feasibility study**

**CONCLUSIONS:** Except for recruitment and compliance to iCBT, feasibility was demonstrated. The initial recruitment process was challenging, and necessary changes were made to increase the recruitment rate. The findings informed how a definitive RCT should be undertaken to test the effectiveness of the complex intervention.

### **Large-scale in-silico analysis of CSF dynamics within the subarachnoid space of the optic nerve**

**CONCLUSIONS:** The present analysis suggests that a pressure drop of 0.1-0.2 mmHg over 4 cm is sufficient to steadily drive CSF through the entire subarachnoid space. Despite low hydraulic resistance, great heterogeneity in flow speeds puts certain areas of the ONSAS at risk of stagnation

### **Repetitive head injuries in German American football players do not change blood-based biomarker candidates for CTE during a single season**

**CONCLUSION:** Our data indicates, that changes of CTE marker candidates either occur slowly over several active seasons of American Football or are exclusively found in CSF. Nevertheless, our results underline the importance of a long-term assessment of these biomarker candidates, which might be possible through repeated blood biomarker monitoring in exposed athletes in the future.

### **The effect of single-component sleep restriction therapy on depressive symptoms: A systematic review and meta-analysis**

Sleep restriction therapy is a behavioural component within cognitive behavioural therapy for insomnia and is an effective standalone treatment for insomnia, but its effect on depressive symptoms remains unclear. This review aimed to synthesise and evaluate the impact of single-component sleep restriction therapy on depressive symptoms relative to a control intervention

### **Mechanism of KAT2A regulation of H3K36ac in manganese-induced oxidative damage to mitochondria in the nervous system and intervention by curcumin**

Excessive exposure to manganese in the environment or workplace is strongly linked to neurodegeneration and cognitive impairment, but the precise pathogenic mechanism and preventive measures are still not fully understood. The study aimed to investigate manganese -induced oxidative damage in the nervous system from an epigenetic perspective, focusing on the H3K36ac-dependent antioxidant pathway

### **Single-nucleus RNA sequencing demonstrates an autosomal dominant Alzheimer's disease profile and possible mechanisms of disease protection**

Highly penetrant autosomal dominant Alzheimer's disease (ADAD) comprises a distinct disease entity as compared to the far more prevalent form of AD in which common variants collectively contribute to risk. The downstream pathways that distinguish these AD forms in specific cell types have not been deeply explored

### **Differences in the expression of cortex-wide neural dynamics are related to behavioral phenotype**

Behavior differs across individuals, ranging from typical to atypical phenotypes.<sup>1</sup> Understanding how differences in behavior relate to differences in neural activity is critical for developing treatments of neuropsychiatric and neurodevelopmental disorders. One hypothesis is that differences in behavior reflect individual differences in the dynamics of how information flows through the brain

**How does the neurotoxin β-N-methylamino-L-alanine exist in biological matrices and cause toxicity?**

The neurotoxin β-N-methylamino-L-alanine (BMAA) has been deemed as a risk factor for some neurodegenerative diseases such as amyotrophic lateral sclerosis/parkinsonism dementia complex (ALS/PDC). This possible link has been proved in some primate models and cell cultures with the appearance that BMAA exposure can cause excitotoxicity, formation of protein aggregates, and/or oxidative stress

**Blood biomarkers for post-stroke cognitive impairment: a systematic review and meta-analysis**

**CONCLUSION:** Based on our findings, we recommend that paramedics focus on the blood biomarkers levels of Hcy, CRP, UA, IL-6, Cys-C, creatinine and TNF- $\alpha$  in conjunction with neuroimaging and neuropsychological assessment to assess the risk of PSCI, which may help with early detection and timely preventive measures

**Response to "letter to editor" from Nicolini et al. Regarding "Autonomic modulation and the risk of dementia in a middle-aged cohort: A 17-year follow-up study"**

No abstract

**Redox-associated changes in healthy individuals at risk of Alzheimer's disease. A ten-year follow-up study**

Carrying an allele 4 of the apolipoprotein E (ApoE) is the best-established genetic risk factor to develop Alzheimer's disease (AD). Fifty percent of ApoE4/4 individuals develop the disease at 70 years of age. ApoE3/4 carriers have a lower risk of developing the disease, still 50% of them suffer AD at around 80 years

**Individualized functional brain system topologies and major depression: Relations among patch sizes and clinical profiles and behavior**

**BACKGROUND:** Neuroimaging studies of major depression have been typically conducted using group-level approaches. However, given interindividual differences in brain systems, there is a need for individualized approaches to brain systems mapping and putative links toward diagnosis, symptoms, and behavior.

**Eggs for Improving Nutrition, cognitive development and reducing linear growth retardation among Infants and young Children (ENRICH): protocol of an egg supplementation trial among children aged 9-18 months in Hyderabad, India**

**INTRODUCTION:** Evidence on the impact of nutrient-rich animal source foods such as eggs for improving child growth and cognition is inconsistent. This study aims to examine the impact of an egg intervention in children, along with behaviour change communication (BCC) to the mother, on linear growth and cognition, and nutritional status in children aged 9-18 months.

**Evaluating the Effectiveness of Take it Personal!+ in People With Mild Intellectual Disability or Borderline Intellectual Functioning and Substance Use Disorder: A Multiple Baseline Single-Case Experimental Study**

Individuals with mild intellectual disabilities or borderline intellectual functioning are at increased risk to develop a substance use disorder-however, effective treatment programs adapted to this target group are scarce

**Neurocognitive disorders in chronic kidney disease**

Neurocognitive disorders (NCD) are common in patients with chronic kidney disease (CKD). It is essential to identify and characterize these disorders at an early stage, so as to be able to offer appropriate treatment

**Single dose creatine improves cognitive performance and induces changes in cerebral high energy phosphates during sleep deprivation**

The inverse effects of creatine supplementation and sleep deprivation on high energy phosphates, neural creatine, and cognitive performances suggest that creatine is a suitable candidate for reducing the negative effects of sleep deprivation

**Machine learning models identify predictive features of patient mortality across dementia types**

**CONCLUSIONS:** This study demonstrates the feasibility of flagging dementia patients at risk of mortality for personalized clinical management. Parsimonious machine-learning models can be used to predict dementia patient mortality with a limited set of clinical features, and dementia-type-specific models can be applied to heterogeneous dementia patient populations.

**The activation impact of lactobacillus-derived extracellular vesicles on lipopolysaccharide-induced microglial cell**

Perioperative neurocognitive dysfunction (PND) emerges as a common postoperative complication among elderly patients. Currently, the mechanism of PND remains unclear, but there exists a tendency to believe that inflammation plays a significant role in PND

**Prevention of post-operative delirium using an overnight infusion of dexmedetomidine in patients undergoing cardiac surgery: a pragmatic, randomized, double-blind, placebo-controlled trial**

**CONCLUSION:** In patients recovering from an elective cardiac surgery, an overnight infusion of dexmedetomidine did not decrease postoperative delirium. Trial registration This trial was registered on ClinicalTrials.gov (number: NCT03477344; date: 26th March 2018).

**Association of healthy eating index and anthropometric indices among primary school girls in southeast of Iran: a cross-sectional study**

**CONCLUSIONS:** The study found no significant association between HEI scores and the likelihood of being thin or obese. However, children with the highest HEI scores were more likely to be overweight. Therefore, it is recommended to implement health programs for primary school girls in Kerman to improve their eating habits and reduce the risk of overweight and obesity.

**Odor identification score as an alternative method for early identification of amyloidogenesis in Alzheimer's disease**

A simple screening test to identify the early stages of Alzheimer's disease (AD) is urgently needed. We investigated whether odor identification impairment can be used to differentiate between stages of the A/T/N classification (amyloid, tau, neurodegeneration) in individuals with amnestic mild cognitive impairment or AD and in healthy controls

**A tutorial on fitting joint models of M/EEG and behavior to understand cognition**

We present motivation and practical steps necessary to find parameter estimates of joint models of behavior and neural electrophysiological data. This tutorial is written for researchers wishing to build joint models of human behavior and scalp and intracranial

electroencephalographic (EEG) or magnetoencephalographic (MEG) data, and more specifically those researchers who seek to understand human

### **The Association of Allergy-Related and Non-Allergy-Related Olfactory Impairment with Cognitive Function in Older Adults: Two Cross-Sectional Studies**

**CONCLUSION:** OI, particularly non-allergy-related OI, was related to poorer cognitive function in older adults. Although the current cross-sectional study is subject to several limitations, such as reverse causality and residual confounding, the findings will provide insights into the OI-cognition association and enlighten future attention to non-allergy-related OI for the prevention of potential

### **Antipsychotics in Alzheimer's Disease: Current Status and Therapeutic Alternatives**

Psychosis and hyperactive behaviors, such as agitation and wandering, affect a significant proportion of patients with Alzheimer's disease (AD). These symptoms are often treated with antipsychotics, usually in an off-label approach. This mini-review provides an updated perspective on the pharmacological approach for the neuropsychiatric symptoms (NPS) in AD

### **Barriers and enablers of dementia training in healthcare workers in rural and remote Australia: A scoping review to inform future approaches to training**

**CONCLUSION:** Addressing the identified barriers and enablers may assist in developing training approaches appropriate for existing staff, and in meeting training needs for the future workforce.

### **Biomarkers of neurodegeneration in isolated and antidepressant-related rapid eye movement sleep behavior disorder**

**CONCLUSIONS:** Patients with antidepressant-related RBD have clinical and neuropathological features suggesting a lower risk of evolution than those with iRBD.

### **Transcriptomic analysis reveals prolonged neurodegeneration in the hippocampus of adult C57BL/6N mouse deafened by noise**

**INTRODUCTION:** Several studies have reported a significant correlation between noise-induced hearing loss and cognitive decline. However, comprehensive analyses of this relationship are rare. This study aimed to assess the influence of hearing impairment on cognitive functions by analyzing organ samples in the afferent auditory pathway of deafened mice using mRNA sequencing.

### **Executive Functions Assessment Based on Wireless EEG and 3D Gait Analysis During Dual-Task: A Feasibility Study**

Executive functions (EFs) are neurocognitive processes planning and regulating daily life actions. Performance of two simultaneous tasks, requiring the same cognitive resources, lead to a cognitive fatigue. Several studies investigated cognitive-motor task and the interference during walking, highlighting an increasing risk of falls especially in elderly and people with neurological diseases

### **Optical Imaging Demonstrates Tissue-Specific Metabolic Perturbations in Mblac1 Knockout Mice**

**OBJECTIVE:** Metabolic changes have been extensively documented in neurodegenerative brain disorders, including Parkinson's disease and Alzheimer's disease (AD). Mutations in the *C. elegans* *swip-10* gene result in dopamine (DA) dependent motor dysfunction accompanied by DA neuron degeneration

**Higher remnant cholesterol is associated with an increased risk of amnestic mild cognitive impairment: a community-based cross-sectional study**

**CONCLUSION:** Higher RC levels were identified as an independent indicator for aMCI, particularly in the naming cognitive domain among older individuals. Further longitudinal studies are necessary to validate the predictive efficacy of RC.

**Clinical significance and main parameters promoting the breast-feeding strategy (Review)**

Breastfeeding provides numerous nutritional and immunological benefits, promotes neurological and cognitive development, and protects against chronic and infectious diseases, rendering it beneficial to the survival and well-being of infants. According to international recommendations, infants should be exclusively breastfed for the first 6 months

**Prevalence of comorbidities with the potential to increase the risk of nonadherence to topical ocular hypotensive medication in patients with open-angle glaucoma**

**CONCLUSIONS:** The presence of comorbidities should be considered when determining whether eye drops are suitable treatment for glaucoma. Neurodegenerative disease affecting cognition and memory, motor disease, and low vision are common comorbidities that may impact adherence to eye drops, and affected patients may benefit from non-drop treatment modalities.

**Physical, cognitive, and social activities as mediators between personality and cognition: evidence from four prospective samples**

**CONCLUSION:** The present study provides replicable evidence that physical and cognitive activities partly mediate the prospective association between personality traits and cognitive functioning.

**Prevention of Vascular Contributions to Cognitive Impairment and Dementia: The Role of Physical Activity and Exercise**

Vascular contributions to cognitive impairment and dementia, specifically cerebral small vessel disease (CSVD), are the second most common cause of dementia. Currently, there are no specific pharmacological treatments for CSVD, and the use of conventional antidementia drugs is not recommended

[\[back to top\]](#)

## Living well with dementia

**Effect of home-based lifestyle interventions on cognition in older adults with mild cognitive impairment: a systematic review**

**CONCLUSIONS:** Home-based lifestyle interventions have the potential to improve cognition in elderly patients with MCI. However, future RCTs with larger sample sizes and longer intervention durations are needed to confirm these findings.

**Cognitive frailty and its association with disability among Chinese community-dwelling older adults: a cross-sectional study**

**CONCLUSION:** Cognitive frailty was associated with a higher prevalence of disability. Interventions for improving cognitive frailty should be developed to prevent IADL disability among community-dwelling older adults in China.

**Technology and physical activity for preventing cognitive and physical decline in older adults: Protocol of a pilot RCT**

**BACKGROUND:** Cognitive frailty, defined as having both physical frailty and cognitive impairment that does not satisfy the criteria for Major Neurocognitive Disorder, represents an elevated risk for morbidity. Hence, it is crucial to mitigate such risks. Physical activity interventions have been found effective in protecting against physical frailty and cognitive deterioration

**Activities of daily living and non-exercise physical activity in older adults: findings from the Chinese Longitudinal Healthy Longevity Survey**

**CONCLUSION:** Participating in more NEPA could reduce the risk of ADL disability, and participating in NEPA may reduce the risk of ADL disability through cognitive function to some extent.

**Health conditions in spousal caregivers of people with dementia and their relationships with stress, caregiving experiences, and social networks: longitudinal findings from the IDEAL programme**

Longitudinal evidence documenting health conditions in spousal caregivers of people with dementia and whether these influence caregivers' outcomes is scarce. This study explores type and number of health conditions over two years in caregivers of people with dementia and subgroups based on age, sex, education, hours of care, informant-rated functional ability, neuropsychiatric symptoms, cognition

**Interaction between visual impairment and subjective cognitive complaints on physical activity impairment in U.S. older adults: NHANES 2005-2008**

**CONCLUSION:** Both VI and SCC were significantly associated with PFI in elder adults. Besides, there was a significant synergistic interaction between SVI and SCC on PFI, which indicated the improvement of SVI and SCC may be beneficial for the prevention of PFI

**Prevalence of urinary incontinence and associated factors in nursing homes: a multicentre cross-sectional study**

**CONCLUSIONS:** The prevalence of UI was high in this sample of NH residents compared to the literature, yet less than half received prompted voiding as a strategy to prevent/reduce UI. UI was associated with cognitive impairment, anticholinergic activity, and risk of sarcopenia.

**Blessing or curse: the role of authoritarian filial piety and self-efficacy in caregiver gains among Chinese family caregivers caring for physically impaired older adults**

**CONCLUSIONS:** This study provides valuable insights into filial piety, elucidating AFP's comprehensive impact on cognitive appraisals of caregiving. Culturally sensitive psychoeducational therapy, addressing AFP expectations and boosting caregiver self-efficacy, is recommended to enhance positive caregiving outcomes.

**Effects of square dance exercise on cognitive function in elderly individuals with mild cognitive impairment: the mediating role of balance ability and executive function**

**CONCLUSIONS:** Square dance exercise represents a nonpharmacological intervention for the prevention and treatment of MCI. Importantly, it is best to combine this exercise with

other forms of physical exercise and comprehensive treatment programs such as cognitive training, social interaction, and psychological intervention to realize its maximum effect.

### **Comprehensive geriatric assessment predicts listing for kidney transplant in patients with end-stage renal disease: a retrospective cohort study**

**CONCLUSIONS:** The CGA is a useful, comprehensive tool to help select older adults for kidney transplantation. Further study is needed to better understand the predictive value of CGA in predicting post-operative outcomes.

### **Effects of Mind-Body Qigong Exercise on Overall Health, Fatigue/Sleep, and Cognition in Older Chinese Immigrants in the US: An Intervention Study with Control**

**CONCLUSION:** We revealed significant positive effects of Qigong in older Chinese immigrants across multiple health domains. Findings highlight the potential of a culturally relevant exercise in addressing health disparities.

### **Symptoms of depression and risk of emergency department visits among people aged 70 years and over**

**CONCLUSIONS:** This study is unique in demonstrating how depressive symptoms among healthy older persons are associated with subsequent increased use of emergency healthcare. Improved understanding and monitoring of mental health in primary care is essential to undertake effective healthcare planning including prevention of needing emergency care.

### **Protocol of a 12-week eHealth programme designed to reduce concerns about falling in community-living older people: Own Your Balance randomised controlled trial**

**INTRODUCTION:** Concerns about falling (CaF) are common in older people and have been associated with avoidance of activities of daily life. Exercise designed to prevent falls can reduce CaF, but the effects are usually short-lived. Cognitive behavioural therapy (CBT) can reduce CaF for longer but is not readily available in the community and unlikely to prevent falls

### **Maintaining independence in individuals with dementia at home after a fall: a protocol for the UK pilot cluster randomised controlled trial MAINTAIN**

**INTRODUCTION:** Individuals with dementia face an increased risk of falls. Falls can cause a decline in the individual's overall functionality. All types of falls, including those that do not result in injury, can lead to psychosocial consequences, such as diminished confidence and a fear of falling. Projections indicate a rising trend in dementia diagnoses, implying an increase in fall incidents

### **L-shaped association between dietary zinc intake and cognitive decline in Chinese older people**

**CONCLUSION:** Dietary Zn intake was negatively associated with cognitive decline in the older people. Maintaining appropriate dietary Zn levels may prevent cognitive decline.

### **Prevalence and factors associated with sarcopenia among older adults in a post-acute hospital in Singapore**

**CONCLUSIONS:** More than 1 in 2 older adults admitted to a post-acute hospital in Singapore are sarcopenic. There is an urgent need to address this important clinical syndrome burden and to identify patients at risk of sarcopenia in post-acute settings in Singapore for early intervention.

## **Factors affecting cognitive frailty improvement and progression in Taiwanese older adults**

**CONCLUSIONS:** The baseline CF state, an older age, poorer balance, slower gait, and a high number of comorbidities may contribute to CF progression, while the baseline CF state may account for associations of engaging in regular exercise and depression with CF development.

## **Effects of a multicomponent physical activity programme, Mobility-Fit, compared with a standard care lower limb strengthening programme, to promote safe mobility among older adults in care facilities: protocol for a cluster randomised controlled trial**

**INTRODUCTION:** Upper limb and core strength training is essential for older adults to safely perform daily activities. However, existing exercise programmes mainly focus on lower limb strength and are not designed or delivered to suit people with different functional capacities

## **Feasibility and preliminary efficacy of different intensities of functional training in elderly type 2 diabetes patients with cognitive impairment: a pilot randomised controlled trial**

**CONCLUSION:** HIFT vs. LIFT is a safe, feasible, and effective approach for improving some aspects of physical, biochemical, and cognitive function in elderly T2D patients with cognitive impairment. This pilot study provides initial proof-of-concept data for the design and implementation of an appropriately powered randomised controlled trial (RCT) of HIFT vs

## **Default Palliative Care Consultation for Seriously Ill Hospitalized Patients: A Pragmatic Cluster Randomized Trial**

**CONCLUSIONS AND RELEVANCE:** Default palliative care consult orders did not reduce length of stay for older, hospitalized patients with advanced chronic illnesses, but did improve the rate and timing of consultation and some end-of-life care processes.

## **The impact of diet quality on cognitive ability of Chinese older adults: evidence from the China Health and Nutrition Survey (CHNS)**

**CONCLUSION:** Our study suggests that improving diet quality and adhering to the Dietary Guidelines for Chinese may enhance cognitive performance in Chinese adults aged 55 years and older.

## **IMPAACT: IMProving the PArticipAtion of older people in policy decision-making on common health CondiTions - a study protocol**

**INTRODUCTION:** Rapid population ageing is a demographic trend being experienced and documented worldwide. While increased health screening and assessment may help mitigate the burden of illness in older people, issues such as misdiagnosis may affect access to interventions

## **Association between obesity, physical activity, and cognitive decline in Chinese middle and old-aged adults: a mediation analysis**

**CONCLUSION:** This study suggests that vigorous physical activity mediates less than 10% of the association between obesity and cognitive decline in middle and old-aged adults. Further studies are warranted to explore the potential factors related to the obesity paradox in the cognitive field.

[\[back to top\]](#)

## Mental health and ageing

### Word or pseudoword? The lexicality effect in naming and lexical decision tasks during advanced aging

Although there is evidence that recognizing pseudowords is more difficult than recognizing words during childhood, adulthood, and early old age (60-75 years), it is not yet clear what happens during advanced aging or the fourth age, a stage when the decline of fluid intelligence strongly affects processing speed, but a good performance of crystallized intelligence is described through an increase

### Cognition and emotional distress in middle-aged and older adults with spina bifida myelomeningocele

**CONCLUSION:** This study adds important information about cognitive functioning and emotional distress in an understudied population. The results indicated normal cognitive functioning in adults aged 55 to 68 years with SBM without hydrocephalus. Prevalence of emotional distress was comparable with previous studies of younger adults with SBM

### Defining the role of frailty in the transition from mild cognitive impairment to dementia and in dementia progression

**CONCLUSIONS:** Frailty plays a critical role in the transition from MCI to dementia and within dementia progression. Age, cognitive impairment, and frailty were identified as significant predictors of disease progression. The CFS is a clinically applicable tool for frailty assessment. Regular frailty assessments may be valuable in early detection and management of dementia.

### "Provided a window on the world and lessened my feeling of isolation": older adults' perceived COVID-19 impact and technology use in Australia during recurrent lockdowns

**CONCLUSIONS:** Findings suggest a critical need for interventions that address the social loss experienced by older adults during COVID-19 recurrent lockdowns, particularly to alleviate the associated negative impact on mental wellbeing. Recognising the positive aspect of increased time for relationships and leisure activities indicates potential areas for resilience-building strategies

### Assessment of air pollution and air quality perception mismatch using mobility-based real-time exposure

Air pollution poses a threat to human health. Public perceptions of air pollution are important for individual self-protection and policy-making. Given the uncertainty faced by residence-based exposure (RB) measurements, this study measures individuals' real-time mobility-based (MB) exposures and perceptions of air pollution by considering people's daily movement

### Impact of subjective well-being on physical frailty in middle-aged and elderly Japanese with high social isolation

Social isolation exacerbates physical frailty and is associated with subjective well-being. Even those with high levels of social isolation may have different health statuses depending on the type of isolation and their subjective well-being. However, the effect of subjective well-being on the relationship between social isolation and physical frailty remains unclear

## **Association between perceived stress and motoric cognitive risk syndrome in an elderly population: Rugao longevity and ageing study**

**Introduction** Previous studies have indicated a correlation between perceived stress and cognitive decline. However, it remains unknown whether high levels of perceived stress can result in motoric cognitive risk (MCR) syndrome. This study investigated the relationship between perceived stress and MCR in a community-based population

## **How might secondary dementia prevention programs work in practice: a pre-implementation study of the APPLE-Tree program**

**CONCLUSION:** This study highlights likely challenges in scale-up if we are to make personalized dementia prevention widely available. This will only be possible with increased funding of dementia prevention activities; integrated care systems, with their focus on prevention, may enable this

## **Effects of neighborhood built environment on cognitive function in older adults: a systematic review**

**CONCLUSION:** Preliminary evidence suggests an association between the neighborhood built environment and cognitive function in older adults. The causal relationship between the built environment and cognitive function can be further explored in the future using standardized and combined subjective and objective assessment methods, and longitudinal or quasi-experimental study designs

## **Assessing frailty amongst older people admitted to hospital in a low-income setting: a multicentre study in northern Tanzania**

**CONCLUSIONS:** This study indicates that the prevalence of frailty on medical wards in northern Tanzania is high according to the CFS. However, the challenges in operationalising the FP in this setting highlight the need for future work to adapt frailty screening tools for an African context

## **Exploration of subgroups and predictors of loneliness among older adults in rural China: A latent profile analysis**

**CONCLUSION:** This study identified a classification pattern for loneliness among older adults in rural areas of China, revealed the characteristics of different demographic variables in loneliness categories, and highlighted the heterogeneity of loneliness in this population

## **The role of frailty in the relationships between social relationships and health outcomes: a longitudinal study**

**CONCLUSIONS:** The findings suggest that changes in social support have a protective and compensatory role in decreasing depressive symptoms and enhancing cognitive health among older adults with increasing frailty. Public health policy and strategies should consider the impact of social support on multiple health outcomes among older adults with increasing frailty

## **A Scoping Review on the Opportunities for Social Engagement and Cognitive Frailty in Older Adults**

Cognitive frailty (CF) is defined as the clinical syndrome of the combination of physical frailty and cognitive impairment, without dementia. Numerous risk factors for CF have been previously identified but this scoping review focusses on the critical need for social engagement and the association with cognition

**Longitudinal reciprocal associations between volunteering, health and well-being: evidence for middle-aged and older adults in Europe**

**CONCLUSION:** Understanding the reciprocal nature of the relationship between volunteering and health and well-being can help identify strategies to encourage volunteering among middle-aged and older adults with specific health conditions and to target health promotion efforts towards volunteers.

**Predictors of unplanned emergency hospital admissions among patients aged 65+ with multimorbidity and depression in Northwest London during and after the Covid-19 lockdown in England**

**CONCLUSION:** The likelihood of unplanned hospitalisation was higher in men than women, and significantly increased with age, higher deprivation, and comorbidities. Despite modest increases in magnitude of risk between lockdown and post-lockdown periods, there is evidence to support proactive case-review by multi-disciplinary teams to avoid unplanned admissions, particularly men with multimorbidity

**The mediating role of children's intergenerational support in association between grandparenting and cognitive function among middle-aged and older Chinese: findings from the CHARLS cohort study**

**CONCLUSION:** The results emphasized the significance of policymakers considering the consequences of intergenerational care and family support when formulating and executing social service policies targeted at the middle-aged and older population in China.

**Loneliness among homeless-experienced older adults with cognitive or functional impairments: qualitative findings from the HOPE HOME study**

**CONCLUSIONS:** Loneliness is a complex and heterogeneous social phenomenon, with homeless-experienced older adults with cognitive or functional impairments exhibiting diverse loneliness experiences based on their individual life circumstances and needs

**Study protocol of the OrkA project: orofacial and communicative activation in old age- a cluster randomized prevention study in long-term care facilities in Lower Saxony, Germany**

**BACKGROUND:** The process of aging involves numerous changes in the body, influencing physical, mental, and emotional well-being. Age-related changes and degradation can impact various functions of the swallowing process and lead to delayed word retrieval. Individuals with limited linguistic stimulation may experience a more rapid decline in cognitive performance

**Economic vulnerabilities, mental health, and coping strategies among Tanzanian youth during COVID-19**

**CONCLUSIONS:** These findings underscore the potential opportunity to promote policies and programs which address risks youth face. Recommended measures include expansion and adaptation of social protection policies, strengthened food and nutrition surveillance and referral systems, and scaling up community-based mental health programming.

**Estimating the Sex Gap in Depression-Free Life Expectancy Among Widowed Americans Aged 50 and Older: An Application Using the Interpolated Markov Chain Approach**

**OBJECTIVES:** Using Interpolated Markov Chain software, we compare the length of life with and without depression among married individuals and widowers, and the related sex differences.

## **Biomarker Changes during 20 Years Preceding Alzheimer's Disease**

**CONCLUSIONS:** In this study involving Chinese participants during the 20 years preceding clinical diagnosis of sporadic Alzheimer's disease, we observed the time courses of CSF biomarkers, the times before diagnosis at which they diverged from the biomarkers from a matched group of participants who remained cognitively normal, and the temporal order in which the biomarkers became abnormal

## **Mood profile in men and women of all ages is improved by leisure-time physical activity rather than work-related physical activity**

**CONCLUSIONS:** This study provides theoretical implications of the physical activity paradox, justifying the benefits of moderate to vigorous physical activity practiced in different circumstances. According to the regression analysis, exercising men in all age groups moved the most (had a higher moderate to vigorous physical activity level) during leisure time, the highest work-related moderate to

## **Prevalence of occupational moral injury and post-traumatic embitterment disorder: a systematic review and meta-analysis**

**CONCLUSION:** Exposure to PMIEs, moral injury symptoms and PTED are prevalent at work and exposure to transgressions by others and betrayal are more likely in civilian occupations than the armed forces.

## **Characterizing Aging-Related Health in Older Women with a History of Incarceration: Multimorbidity, Polypharmacy, Mortality, Frailty, and Depression**

**OBJECTIVE:** To characterize aging-related health in women with past CLSI and compare with women with no-CLSI.

## **Trajectories of negative and positive experiences of caregiving for older adults with severe dementia: application of group-based multi-trajectory modelling**

**CONCLUSION:** The caregiving experiences for older adults with severe dementia vary between caregivers but remain stable over time. Modifiable risk factors identified for trajectories involving negative experiences of caregiving may be targeted in future interventions to improve the experience of caregiving and caregiver quality of life and distress after the death of the older adult.

## **Sustaining the collaborative chronic care model in outpatient mental health: a matrixed multiple case study**

**CONCLUSIONS:** MMCS revealed that CCM sustainability in VA outpatient mental health clinics may be related most strongly to provider collaboration, knowledge retention during staff/leadership transitions, and availability of skilled internal facilitators

## **Core requirements of frailty screening in the emergency department: an international Delphi consensus study**

**CONCLUSIONS:** Although a clear consensus was reached on important requirements of frailty screening in ED, and variables to include in an ideal screen, more research is required to operationalise screening in clinical practice.

## **Effects of rhythm-control and rate-control strategies on cognitive function and dementia in atrial fibrillation: a systematic review and meta-analysis**

**CONCLUSIONS:** Rhythm-control strategies, especially ablation, are effective in protecting cognitive function, reducing dementia risk and thus improving quality of life in AF patients.

**Examining the impact of a health report card on follow through with fall risk recommendations: an observational study**

**CONCLUSIONS:** An occupational therapy fall risk screening and tailored recommendations were not sufficient to encourage follow through with fall risk recommendations. Older adults may benefit from additional support and encouragement to reduce their fall risk

**Exploring the usability of the virtual reality module LEAF CAFÉ: a qualitative think-aloud study**

**CONCLUSION:** Continued improvements in accessibility suggest that VR tools could help with diagnosing cognitive impairment in older adults. Using a simulated environment to assess cognitive status might fill the gap between current diagnostic methods, aiding treatment planning and early intervention

**Social anxiety and loneliness among older adults: a moderated mediation model**

**CONCLUSIONS:** The study found that social anxiety can contribute to loneliness by narrowing older adults' social network. High perceived social support can buffer this process, but do not overstate its protective effects. Thus, interventions to reduce social anxiety and improve social network and social support may help prevent and alleviate loneliness in older adults.

**Cognition and Wealth Changes in Mid-to-later Life: A Latent Class Trajectories Approach Using the Health and Retirement Study**

**Objectives** To assess how cognitive trajectories from mid-to-later life relate to wealth change, overall and by mid-life income. **Methods:** Data were from participants (51-64 years) in the 2000-2018 U.S. Health and Retirement Study who were cognitively healthy at baseline (year 2000; unweighted n = 3821)

**Self-care interventions to assist family physicians with mental health care of older patients during the COVID-19 pandemic: Feasibility, acceptability, and outcomes of a pilot randomized controlled trial**

**CONCLUSION:** Both interventions were feasible and acceptable to patients. Trained lay coaching increased patients' engagement with the tools. Self-care tools offer a low cost and acceptable remote activity that can be targeted to those with immediate needs

**Increased serum methylmalonic acid levels were associated with the presence of cognitive dysfunction in older chronic kidney disease patients with albuminuria**

**CONCLUSION:** Our study showed that higher serum MMA levels were independently associated with the presence of cognition dysfunction in CKD patients. The exact pathogenesis of MMA and cognition needs further research.

**Repeated hospital admission for intentional poisonings among older adults - a Swedish national register-based study**

**CONCLUSION:** Most re-hospitalizations within a year after intentional poisoning are also for intentional poisoning and occur most typically within days. Re-hospitalization is associated with several conditions that are characteristic of poor mental health and there are more similarities than differences between men and women in that respect.

**Differences in prescribed medicinal cannabis use by cannabinoid product composition: Findings from the cannabis as medicine survey 2020 (CAMS-20) Australia-wide study**

**CONCLUSIONS:** This Australia-wide study found clear differences in consumer-reported experiences of prescribed THC- and CBD-containing products. Current prescriptions of these products do not always align with relevant clinical guidance. Educating prescribers around cannabinoid products is essential to ensure optimal prescribing practices and to prevent avoidable drug side effects and interactions.

### **Feeling Alone Together: Loneliness in Older Adults with Cognitive Impairment and Their Family Caregivers with Low Mastery**

**INTRODUCTION:** Loneliness in older persons with cognitive impairment (PCI) may beget loneliness in their family caregivers, depending on buffering resources caregivers possess. This study examined the association between loneliness in older persons with cognitive impairment (PCI) and loneliness experienced by their family caregivers, and the moderating role of caregiver mastery in this association.

### **Association between geriatric nutritional risk index and depression prevalence in the elderly population in NHANES**

**CONCLUSION:** The GNRI demonstrates efficacy as a reliable indicator for forecasting depression in the elderly population. It exhibits a negative nonlinear correlation with the prevalence of depression among geriatric individuals.

### **Developing a PRogram to Educate and Sensitize Caregivers to Reduce the Inappropriate Prescription Burden in the Elderly with Alzheimer's Disease (D-PRESCRIBE-AD): Trial protocol and rationale of an open-label pragmatic, prospective randomized controlled trial**

**CONCLUSION:** This large pragmatic RCT will contribute to the evidence base on promoting deprescribing of potentially inappropriate medications among older adults with dementia. If successful, such light touch, inexpensive and highly scalable interventions have the potential to reduce the burden of potentially inappropriate prescribing for patients with dementia. ClinicalTrials

### **Common practices for sociodemographic data reporting in digital mental health intervention research: a scoping review**

**CONCLUSIONS:** This review describes the widespread underreporting of sociodemographic information in RCTs of app-based DMHIs published from 2007 to 2022. Reporting was often incomplete (eg, % female only), unclear (eg, the conflation of gender/sex) and limited (eg, only options representing majority groups were reported). Trends suggest reporting has somewhat improved in recent years

### **Correction: Associations between Social Isolation Index and changes in grip strength, gait speed, bone mineral density (BMD), and self-reported incident fractures among older adults: Results from the Canadian Longitudinal Study on Aging (CLSA)**

[This corrects the article DOI: 10.1371/journal.pone.0292788].

### **Disentangling the reasons why older adults do not readily participate in cancer trials: a socio-epidemiological mixed methods approach**

**CONCLUSION:** Our results suggest that efforts to increase fair inclusion and the participation of older adults in CTs should target the physician-patient relationship, the medical profession and hospital funding, rather than the patient alone.

### **Delirium is frequently underdiagnosed among older hospitalised patients despite available information in hospital medical records**

**CONCLUSION:** Underdiagnosis of in-hospital delirium was a major issue in our study, especially in less severe delirium cases. Our findings emphasise the need for integrating systematic delirium diagnostics and documentation into hospital admission and discharge routines.

#### **New horizons in the diagnosis and management of Alzheimer's Disease in older adults**

Alzheimer's Disease (ad) is the most common cause of dementia, and in addition to cognitive decline, it directly contributes to physical frailty, falls, incontinence, institutionalisation and polypharmacy in older adults

#### **Association between Internet use and depressive symptoms among older adults in two regions of Myanmar: a cross-sectional study**

**CONCLUSIONS:** Internet use and depressive symptoms were associated especially among the older adults. However, there were no significant interaction between Internet use and subjective economic status for GDS.

#### **Qualitative study investigating the professional and personal effects of patient suicide on general practitioners in Northern Ireland**

**CONCLUSIONS:** There is a need for a systemic culture shift within general practice which allows doctors to seek support when their physical or mental health require it. This may help prevent stress, burnout and early retirement.

#### **Impact of digital assistive technologies on the quality of life for people with dementia: a scoping review**

**CONCLUSIONS:** Various DATs offer extensive support, elevating the QOL of PWD. Digital therapeutics are predominantly used for ageing-in-place and independent living through assistance with daily tasks. Future research should focus on less-represented digital health technology categories, such as care support, health & wellness or software solutions

#### **Prevalence and correlates of depression and anxiety symptoms among older adults in Shenzhen, China: a cross-sectional population-based study**

**CONCLUSIONS:** We observed a high prevalence of depression and anxiety symptoms among older adults in this study. The existing welfare system and infrastructure should remain and targeted mental health programmes addressing the identified risk factors should be proposed.

#### **Prevalence of DSM-5 mild and major neurocognitive disorder in India: Results from the LASI-DAD**

**INTRODUCTION:** India, with its rapidly aging population, faces an alarming burden of dementia. We implemented DSM-5 criteria in large-scale, nationally representative survey data in India to characterize the prevalence of mild and major Neurocognitive disorder.

#### **Study protocol for a prediction model for mild cognitive impairment in older adults with diabetes mellitus and construction of a nurse-led screening system: a prospective observational study**

**INTRODUCTION:** With an increasing number of older adults in China, the number of people with cognitive impairment is also increasing. To decrease the risk of dementia, it is necessary to timely detect mild cognitive impairment (MCI), which is the preliminary stage of dementia

**Quantitative assessments of retinal macular structure among rural-dwelling older adults in China: a population-based, cross-sectional, optical coherence tomography study**

**CONCLUSIONS:** Macular thickness and volume assessed by Spectralis and Primus 200 OCT scanners differ. Older age and female sex are associated with lower macular thickness and volume. Macular parameters are associated with education, CVD and spherical equivalent.

**The relationship between childhood socioeconomic status and depression level in older adults: the mediating role of adult socioeconomic status and subjective well-being**

**CONCLUSIONS:** In terms of childhood socioeconomic status, older adults in urban regions were significantly higher than those in rural regions. As for depression level, female older adults were more depressed than males; married older people have the lowest depression levels, while unmarried and widowed older people have higher depression levels; older adults in rural regions had higher depression

**Perioperative point-of-care-testing of plasmacholinesterases identifies older patients at risk for postoperative delirium: an observational prospective cohort study**

**CONCLUSIONS:** Perioperative measurement of BuChE activity can be used as a tool to identify patients at risk of POD. As a point-of-care test, quick results may alter the patients' course prior to the development of POD.

**Trends in Psychological Distress and Outpatient Mental Health Care of Adults During the COVID-19 Era**

**CONCLUSION:** These trends and patterns underscore the persistent challenges of connecting older adults, unemployed persons, and seriously distressed adults to outpatient mental health care and the difficulties faced by older, less educated, lower-income, unemployed, and rural patients in accessing outpatient mental health care via video.

**Perinatal choline supplementation prevents learning and memory deficits and reduces brain amyloid A<sub>B</sub>42 deposition in AppNL-G-F Alzheimer's disease model mice**

Alzheimer's disease (AD) is characterized by cognitive and memory impairments and neuropathological abnormalities. AD has no cure, inadequate treatment options, and a limited understanding of possible prevention measures

**Suicide Attempts After a Diagnosis of Polycystic Ovary Syndrome : A Cohort Study**

**CONCLUSION:** This study underscores the heightened risk for suicide attempt that persons with PCOS face, even after adjustment for demographics, psychiatric comorbid conditions, physical conditions, and all-cause clinical visits. This suggests the importance of routine monitoring of mental health and suicide risk in persons diagnosed with PCOS.

**Patients risk for mortality at 90 days after proximal femur fracture - a retrospective study in a tertiary care hospital**

**CONCLUSION:** The proportion of patients who died until 90 days after surgery is still high. It is less extend influenced by surgical and anaesthesiologic factors than by patient-related factors like age or lower BMI. Physicians should be aware of the importance of avoiding adverse events and the importance of patients' mobilization to reduce mortality and improve patients' outcome.

**Case report: a unique presentation of memantine overdose causing echolalia and hypertension**

**CONCLUSIONS:** Hypertensive urgency and echolalia were the most striking symptoms of our patient's presentation. Though hypertension is a known sign of memantine overdose, it can easily be contributed to medication non-compliance in patients with dementia, being treated for hypertension

#### **Trends in the prevalence of social isolation among middle and older adults in China from 2011 to 2018: the China Health and Retirement Longitudinal Study**

**CONCLUSIONS:** We found a U-shaped prevalence of social isolation trends from 2011 to 2018 and revealed increasing trends from 2013 to 2018 among middle-aged and older adults in China. The findings of the study highlight the urgent need for interventions to reduce social isolation including improving sleep quality and internet skills

#### **Cohort profile: rationale and design of the Resource Center for Health Science (RECHS) project - a study of health hazards and medical cost burden among the Japanese population**

**PURPOSE:** The increased global burden of non-communicable diseases and mental disorders is an urgent health challenge for countries around the entire world, especially those experiencing super-ageing societies, where over 21% of the population is age 65 years or older. Japan is the world's most rapidly ageing society, and as a result, medical costs are also rising dramatically

#### **Food insecurity and health-related quality of life among a nationally representative sample of older adults: cross-sectional analysis**

**CONCLUSIONS:** Food insecurity was positively associated with multiple adverse health outcomes. Public health programs and policies targeted for older adults are needed to mitigate the extent of food insecurity to promote overall health and well-being.

#### **Older men and loneliness: a cross-sectional study of sex differences in the English Longitudinal Study of Ageing**

**CONCLUSIONS:** Cultural ideals of masculinity and older men's poorer quality friendships may explain their reluctance to directly state loneliness, greater dependency on partners/spouses, and use of alcohol. Severely isolated older men may under-report loneliness on the UCLA scale as well as a direct question.

#### **Blood pressure control in patients aged above and below 75 years**

It remains unclear what the blood pressure target is and at which point in life it is appropriate for antihypertensive treatment. This study aimed to determine age-specific systolic blood pressure (SBP) targets

#### **Exploring the lived experience: impact of dementia diagnosis on individuals with cognitive impairment - a qualitative study**

**CONCLUSION:** Our findings imply that being diagnosed with dementia is a relief because it explains observed cognitive and functional decreases and reduces confusion, shame and stigma. However, it also raises concerns about an unknown future. Most participants not diagnosed with dementia reported having little or no difficulty with everyday living and leading a fulfilling life

#### **Patterns of psychotropic drug prescriptions and general practice consultations among community-dwelling older people with dementia during the first two years of the COVID-19 pandemic**

**CONCLUSIONS:** This study demonstrates a decrease in psychotropic drug prescriptions, but an increase in general practice consultations among community-dwelling older people with dementia during the first two years of the pandemic

### Co-designing action-oriented mental health conversations between care providers and ageing Canadians in the community: a participatory mixed-methods study protocol

**INTRODUCTION:** The mental health of ageing Canadians is a growing concern, particularly post-pandemic. Older adults face systemic ageism and mental health stigma as pervasive barriers to seeking needed mental health support, care and treatment within health and social care systems

### Investigating the prevalence of cognitive impairment and dementia in the Northern Ireland Cohort for the Longitudinal Study of Ageing (NICOLA): the Harmonised Cognitive Assessment Protocol (HCAP) cross-sectional substudy

**INTRODUCTION:** The Northern Ireland Cohort for the Longitudinal Study of Ageing (NICOLA) study is the largest study of ageing in Northern Ireland (NI). The Harmonised Cognitive Assessment Protocol (HCAP) is a substudy of NICOLA designed to assess cognitive impairment and dementia in individuals aged 65 and over

### Solid fuel use, socioeconomic status and depression: a cross-study of older adults in China

**CONCLUSIONS:** Solid fuel use and SES are associated with depression, and solid fuel use may act as a potential mediator connecting socioeconomic indicators and depression.

### Interaction between plant-based dietary pattern and frailty on cognitive decline: a longitudinal analysis of the Chinese Longitudinal Healthy Longevity Survey cohort

**CONCLUSION:** Adherence to plant-based dietary patterns attenuates the association between frailty and cognitive decline. If the observed association is causal, promoting plant-based dietary patterns may be a strategy to reduce the effects of frailty on neurological health.

### Clinical characteristics and healthcare utilisation associated with undiagnosed cognitive impairment in elderly patients with diabetes in a primary care setting: a population-based cohort study

**CONCLUSIONS:** This study highlights the high prevalence of undiagnosed severe cognitive impairment in elderly patients with T2DM and its association with poor outpatient care. Appropriate interventions are needed to improve outcomes and prevent hospitalisation in this high-risk population.

### Cultural capital, the digital divide, and the health of older adults: a moderated mediation effect test

**CONCLUSIONS:** The results of the study show that cultural capital can have a positive impact on the health of older adults, but there is urban-rural heterogeneity and gender heterogeneity, in which the digital divide plays a mediating role, and the enhancement of the cognitive ability of older adults will be conducive to the improvement of their health, so the health of older adults should be

### Herpes zoster diagnosis and treatment in relation to incident dementia: A population-based retrospective matched cohort study

**CONCLUSIONS:** We found little evidence for an association between HZ diagnosis and dementia overall. Antiherpetic medication prescribed around the time of HZ diagnosis was

statistically associated with lower risk of subsequent dementia in some but not all analyses and subgroups.

[back to top]

## Physical activity and ageing

### Uncertainty in serious illness: A national interdisciplinary consensus exercise to identify clinical research priorities

**CONCLUSIONS:** These co-produced, clinically-focused research priorities map out key evidence gaps concerning uncertainty in serious illness. Managing uncertainty is the most pressing issue, and researchers should prioritise how to optimally manage uncertainty in order to reduce distress, unlock decision paralysis and improve illness and care experience.

### Best practice models of aged-care implemented for First Nations people: a systematic review aligned with the Good Spirit Good Life quality of life principles

**CONCLUSIONS:** Best-practice First Nations aged care requires a decolonizing approach. Programs with strong adherence to the 12 GSGL factors are likely to improve Elders' quality of life.

### Low physical activity is a risk factor for sarcopenia: a cross-sectional analysis of two exercise trials on community-dwelling older adults

**CONCLUSIONS:** Probable sarcopenia is common among community-dwelling older adults not meeting the PA guidelines and very common among individuals recovering from HF who are able to be involved in exercise interventions

### Functional disability and its associated factors among community- dweller older adults living in Gondar Town, Ethiopia: a community-based cross-sectional study

**CONCLUSION AND RECOMMENDATIONS:** Our study finding revealed that functional disability affects a large number of older adult residents. The age group of 80 years and older, low-income status, a low level of physical activity, multimorbidity, and depression were associated with basic and instrumental activities of daily living

### A study protocol to investigate if acipimox improves muscle function and sarcopenia: an open-label, uncontrolled, before-and-after experimental medicine feasibility study in community-dwelling older adults

**INTRODUCTION:** Sarcopenia is the age-associated loss of muscle mass and strength. Nicotinamide adenine dinucleotide (NAD) plays a central role in both mitochondrial function and cellular ageing processes implicated in sarcopenia. NAD concentrations are low in older people with sarcopenia, and increasing skeletal muscle NAD concentrations may offer a novel therapy for this condition

### Radiographers' perspectives on interactional processes during older persons diagnostic medical imaging encounters: a qualitative study

**CONCLUSION:** The results highlight the many considerations for radiographers during a short clinical interaction. There is optimism in adding value to the elderly persons experience through a complex interactional process. It is anticipated that the identified skills

will inform on best practice principles to achieve an elderly person-centred care medical imaging outcome.

### **Monoclonal antibodies for treating early Alzheimer disease-a commentary on recent 'positive' trials**

Recent phase 3 randomised controlled trials of amyloid-targeting monoclonal antibodies in people with pre-clinical or early Alzheimer disease have reported positive results, raising hope of finally having disease-modifying drugs

### **The Management of Posttraumatic Stress Disorder and Acute Stress Disorder: Synopsis of the 2023 U.S. Department of Veterans Affairs and U.S. Department of Defense Clinical Practice Guideline**

**DESCRIPTION:** The U.S. Department of Veterans Affairs (VA) and Department of Defense (DoD) worked together to revise the 2017 VA/DoD Clinical Practice Guideline for the Management of Posttraumatic Stress Disorder and Acute Stress Disorder

**Sedentary behaviour (especially accumulation pattern) has an independent negative impact on skeletal muscle size and architecture in community-dwelling older adults**

Prolonged sedentary behaviour (SB) i.e. longer bouts, is suggested to have a range of negative health effects, independent of habitual light and medium-to-vigorous physical activity (LIPA or MVPA). Any effect on musculoskeletal size, architecture or morphology has seldom been reported in older adults

### **Budget impact analysis of a Lifestyle-integrated Functional Exercise (LiFE) program for older people in Germany: a Markov model based on data from the LiFE-is-LiFE trial**

**CONCLUSIONS:** The results revealed that cost savings for LiFE and gLiFE compared with standard care could only be achieved for individuals at high risk of falling, with gLiFE being superior to LiFE. Future research should consider benefits and aspects of fall prevention beyond falls (e.g., physical activity, social aspects, and personal preferences of participants).

### **Physical symptoms and anxiety and depression in older patients with advanced cancer in China: a network analysis**

**CONCLUSION:** The symptom burden remains high in older patients with advanced cancer in China. Psychosomatic symptoms are highly interactive and often present as comorbidities. This network can be used to provide targeted interventions to optimize symptom management in older patients with advanced cancer in China.

### **Relationships between physical fitness characteristics, technical skill attributes, and sports injury in female Australian football players**

**CONCLUSIONS:** Physical fitness may be a significant factor contributing to development of Australian football technical skills in female players. However, its role is unclear in protecting against injury risk in this athlete population

### **Association between sarcopenia grade and fall history among older adults in West China: A retrospective study**

**CONCLUSIONS:** Severe sarcopenia, as defined per the AWGS2014 criteria, was associated with a significantly higher risk of falls in this multiethnic cohort of older adults from Western China, while the AWGS2019 diagnostic criteria did not

**Results of the Cologne Corona Surveillance (CoCoS) project- a cross-sectional study: survey data on risk factors of SARS-CoV-2 infection, and moderate-to-severe course in primarily immunized adults**

**CONCLUSION:** The results provide a first indication of which factors may be associated with SARS-CoV-2 breakthrough infection and moderate-to-severe course of infection despite vaccination. However, the retrospective nature of the study and risk of bias in the reporting of breakthrough infection severity limit the strength of the results.

**Prevalence of falls and comparison of health-related physical fitness factors between different faller categories among institutionalized older adults in Kandy District of Sri Lanka**

Falls can be identified as one of the main issues in elderly population which can lead to serious consequences. Elderly population can be subdivided as community dwelling older adults and institutionalized older adults. The components of health-related physical fitness factors play an important role in the perspective of healthy ageing

**Cardiorespiratory fitness and metabolic risk in Chinese population: evidence from a prospective cohort study**

**CONCLUSION:** Higher baseline CRF and improved CRF were associated with favorable changes in metabolic indicators.

**Physical activity and odds of coronary heart disease among Lebanese women**

**CONCLUSION:** The current study highlights the importance of combating sedentary behaviors and engaging in regular, easily accessible PA to reduce the odds of coronary disease among aging women. Therefore, better information regarding the benefits of physical activities such as transportation-related activities or gardening would be helpful in enhancing the prevention of CHD in aging women.

**Isokinetic training of lower extremity during the early stage promote functional restoration in elder patients with disability after Total knee replacement (TKR) - a randomized control trial**

**CONCLUSION:** Isokinetic training for 4 weeks following TKR effectively improved all the outcome parameters in this study, including the TUG test, lower limb strength, and functional scores. However, both isokinetic and isotonic training modes could be recommended after TKR because of no significant difference in the degree of improvement between these two groups.

**Correction to: Normative values for grip strength, gait speed, timed up and go, single leg balance, and chair rise derived from the Canadian longitudinal study on ageing**

No abstract

**Causal associations between leisure sedentary behaviors and sleep status with frailty: insight from Mendelian randomization study**

**CONCLUSIONS:** Genetic predispositions to time spent watching television and daytime napping were positively associated with the FI, while sleep duration was negatively associated with the FI. Our findings offer key insights into factors influencing biological aging and suggest areas for interventions to promote healthy aging and slow down the aging process.

**Is rest-activity rhythm prospectively associated with all-cause mortality in older people regardless of sleep and physical activity level? The 'Como Vai?' Cohort study**

**CONCLUSION:** Rest-activity rhythm pattern was not associated with mortality when physical activity was considered, possibly because this pattern could be driven by regular exercise. Promoting physical activity remains a relevant strategy to improve population health.

**Association between animal protein intake, oral frailty and calf circumference in middle-aged and older adults: a cross-sectional analysis from the Shika study**

**CONCLUSIONS:** The present results revealed a significantly lower animal protein intake in the OF group than in the non-OF group in the low-CC/kg group, but no such difference was observed in the high-CC/kg group. Further longitudinal studies are needed to elucidate this relationship.

**Stimulated cervical afferent input increases postural instability in older people with chronic neck pain: a cross-sectional study**

**CONCLUSION:** The neck torsion maneuver, stimulating the receptors resulted in increased postural sway in older people, with a more pronounced effect in those with neck pain. The study provides evidence supporting the use of neck torsion for assessing impaired balance related to abnormal cervical input in older people with chronic non-specific neck pain.

**Cultural adaptation and validation of the Sinhala version of the Frail Non-disabled tool (FiND)**

**CONCLUSION:** The S-FiND is a reliable, valid and well-received tool that can be used in detecting the frailty of non-disabled Sinhala-speaking older adults.

**Potential efficacy of caffeine ingestion on balance and mobility in patients with multiple sclerosis: Preliminary evidence from a single-arm pilot clinical trial**

**CONCLUSIONS:** Caffeine may enhance balance, functional mobility, and QoL in PwMS. Being male was associated with a sharper increase in self-reported ambulatory disability over time. The effects of aging on balance get more pronounced over time.

**Brain activation during standing balance control in dual-task paradigm and its correlation among older adults with mild cognitive impairment: a fNIRS study**

**CONCLUSION:** The MCI demonstrated worse balance control ability as compared to healthy older adults. The greater activation of PFC under dual tasks in MCI may be considered a compensatory strategy for maintaining the standing balance. The brain activation was negatively correlated with balance ability under single task, and positively under dual task.

**Identification of abdominal aortic aneurysm subtypes based on mechanosensitive genes**

**CONCLUSION:** We identified 38 DEMGs that may be involved in AAA. This gene cluster is involved in regulating the maximum vessel diameter, degree of immunoinflammatory infiltration, and strength of the local vessel wall in AAA. The prognostic model we developed can accurately identify the AAA subtypes that tend to rupture.

**Positive and negative emotions during the COVID-19 pandemic: A longitudinal survey study of the UK population**

The COVID-19 pandemic has had a profound impact on society; it changed the way we work, learn, socialise, and move throughout the world. In the United Kingdom, policies such as business closures, travel restrictions, and social distance mandates were implemented to slow the spread of COVID-19 and implemented and relaxed intermittently throughout the response period

## **Comparing online versus laboratory measures of speech perception in older children and adolescents**

Given the increasing prevalence of online data collection, it is important to know how behavioral data obtained online compare to samples collected in the laboratory. This study compares online and in-person measurement of speech perception in older children and adolescents

## **Effects of high-intensity training on fatty infiltration in paraspinal muscles in elderly males with osteosarcopenia - the randomized controlled FrOST study**

**CONCLUSIONS:** The previously reported positive effects on lumbar spine bone mineral density (BMD) suggest that mechanotransduction induces tropic effects on bone, but that fat infiltration of the erector spinae and psoas major muscles are either irreversible or, for some unknown reason, resistant to exercise

## **Barriers and facilitators to smartwatch-based prehabilitation participation among frail surgery patients: a qualitative study**

**CONCLUSIONS:** This study reports the perceived facilitators and barriers to a smartwatch-based prehab program for pre-frail and frail thoracic surgery patients. The future BeFitMe implementation protocol must ensure surgical providers emphasize the beneficial impact of participating in prehab before surgery and provide a written prehab prescription; must include a thorough guide on smartwatch use

## **Defining and reporting exercise intensity in interventions for older adults: a modified Delphi process**

**BACKGROUND:** Many exercise studies, including older adults, do not report all relevant exercise characteristics. Especially the description of exercise intensity is missing and mostly not controlled. This leads to difficulties in interpreting study results and summarizing the evidence in systematic reviews or meta-analyses

## **Beyond traditional training: Integrating data from semi-immersive VR dual-task intervention in Parkinsonian Syndromes. A study protocol**

Completing cognitive and motor tasks simultaneously requires a high level of cognitive control in terms of executive processes and attentional abilities. Most of the daily activities require a dual-task performance

## **Identifying sensors-based parameters associated with fall risk in community-dwelling older adults: an investigation and interpretation of discriminatory parameters**

**CONCLUSIONS:** Utilizing different types of sensors can offer more comprehensive information. Interpreting parameters to physiology provides deeper insights into the identification of high-fall-risk individuals. High-fall-risk individuals typically exhibited a cautious gait, such as larger step width and shorter step length during walking

## **Summary of best evidence for prevention and management of frailty**

**CONCLUSIONS:** This study summarised the best evidence for the prevention and management of frailty from eight aspects, which can provide guidance for clinical or community medical staff to develop and apply frailty intervention and practice programmes for older people and improved the clinical outcome and quality of life of older people.

## **Timing and duration of dog walking and dog owner's chronotype in relation to incident depression risk among middle to older-aged female nurses**

**CONCLUSIONS:** Overall, dog ownership was not associated with depression risk though it was increased among evening chronotypes. Walking their dog in the morning might help evening chronotypes to lower their odds of depression, though more data are needed to confirm this finding.

### **Perceived neighborhood social cohesion and functional disability among older adults: The moderating roles of sex, physical activity, and multi-morbidity**

Though the Ghanaian social structure is largely communal in several of its social life and social spaces, the extent to which cohesive neighbourhood affects functional ability of older persons and the moderating factors of the relationship, are unknown in Ghana

### **We are complex beings: comparison of statistical methods to capture and account for intersectionality**

**CONCLUSION:** These quantitative approaches help us to understand compounding intersectional experiences within healthcare, to plan interventions and policies that address multiple needs simultaneously.

### **Exploring the experience of appetite loss in older age: insights from a qualitative study**

**CONCLUSIONS:** A broad range of influences (including biological, psychological and social factors) and experiences of appetite loss in older age were described. Future research should consider person-centred approaches, that take account of individual narratives of appetite loss, in the design of effective strategies to support older adults.

### **The relationship between self-perceived fatigue, muscle endurance, and circulating markers of inflammation in participants of the Copenhagen aging and Midlife Biobank (CAMB)**

**CONCLUSIONS:** Middle-aged participants with higher fatigue in combination with low muscle endurance show higher levels of inflammation, independently from physical activity, body fat and inflammatory pathology

### **The effects of negative social media connotations on subjective wellbeing of an ageing population: A stressor-strain-outcome perspective**

In recent years, users' privacy concerns and reluctance to use have posed a challenge for the social media and wellbeing of its users. There is a paucity of research on elderly users' negative connotations of social media and the way these connotations contribute to developing passive behaviour towards social media use, which, in turn, affects subjective wellbeing

### **Age-related changes in the hematopoietic stem cell pool revealed via quantifying the balance of symmetric and asymmetric divisions**

Hematopoietic stem cells (HSCs) are somatic stem cells that continuously generate lifelong supply of blood cells through a balance of symmetric and asymmetric divisions. It is well established that the HSC pool increases with age. However, not much is known about the underlying cause for these observed changes

### **Systematic review protocol for complications following surgical decompression of degenerative cervical myelopathy**

**BACKGROUND:** Degenerative Cervical Myelopathy (DCM) is one of the most common degenerative disorders of cervical spine and sources of cord dysfunction in adults. It usually manifests with neurologic presentations such as loss of dexterity and gait issues. Treatment for moderate and severe cases of DCM is surgical decompression of the region

**Prevalence of physical inactivity and associated factors among older adults in Gondar town, Northwest Ethiopia: a community-based cross-sectional study**

**CONCLUSION:** Physical inactivity was relatively high among older adults in Gondar town. Being female, older age, having low levels of education, being unemployed, and having depression symptoms were associated with physical inactivity

**Sarcopenia in Thai community-dwelling older adults: a national, cross-sectional, epidemiological study of prevalence and risk factors**

**CONCLUSIONS:** This is the first large-scale national study to represent the prevalence and risk factors for sarcopenia in Thai community-dwelling individuals of advanced age using the AWGS 2019 criteria. Interventions such as lifestyle modifications and appropriate nutrition should be promoted throughout adulthood to maintain muscle strength and delay the onset of sarcopenia, particularly in males.

**In quest of China sports lottery development path to common prosperity in 2035**

**CONCLUSIONS:** Beyond offering original insights into the sales trajectory until 2035, specifically concerning new urbanization, negative population growth, and the FIFA effect, this macro forecasting framework can assist in addressing the policy priority of balancing growth with risk mitigation

**Prevalence, associated factors, and gene polymorphisms of obesity in Tibetan adults in Qinghai, China**

**CONCLUSION:** The prevalence of obesity and overweight in Tibetan adults was high. Both environmental and genetic factors contributed to the obesity prevalent.

**Complement component C3 is associated with body composition parameters and sarcopenia in community-dwelling older adults: a cross-sectional study in Japan**

**CONCLUSION:** C3 levels are suggested to be related to body composition and pathophysiological functions of sarcopenia. C3 is expected to become a useful biomarker for sarcopenia, for predicting the onset of the disease and for predicting the effectiveness of interventions.

**Predicting the incidence of mild cognitive impairment with a computer-based cognitive assessment tool in community-dwelling older adults: The Otassha study**

This study examined the ability of a computer-based cognitive assessment tool (CompBased-CAT) to predict mild cognitive impairment (MCI) in community-dwelling older adults. A two-year longitudinal study was conducted using data from 2016 to 2018 from the Otassha study cohort of community-dwelling older adults. MCI was defined as a Mini-Mental Status Examination (MMSE) score of <27

**Trunk postural control during unstable sitting among individuals with and without low back pain: A systematic review with an individual participant data meta-analysis**

**CONCLUSION:** Trunk postural control appears to be inferior among individuals with LBP, which was indicated by increased seat movements and some evidence of trunk stiffening. These findings are likely explained by delayed or less accurate corrective responses.

**The prevalence and impact of sarcopenia in older cardiac patients undergoing inpatient cardiac rehabilitation - results from a prospective, observational cohort pre-study**

**CONCLUSIONS:** The prevalence of sarcopenia in older patients at iCR after cardiac procedure is high (35%) and remains high at follow-up (23%). Sarcopenia screening is

important since the diagnosis of sarcopenia in these patients correlates significantly with poor functional capacity

### **Health-promoting behaviors in older adulthood and intrinsic capacity 10 years later: the HUNT study**

**CONCLUSION:** Health-promoting behaviors in old age are associated with better intrinsic capacity ten years later. In clinical settings assessment of health-promoting behaviors could potentially be done using short questionnaires.

### **Does digital technology make people healthier: the impact of digital use on the lifestyle of Chinese older adults**

**CONCLUSIONS:** Digital use can improve the health of Chinese older adults by promoting a healthy lifestyle through various means. The findings of this study have a substantial positive impact on bridging the digital divide that Chinese older adults face, as well as fostering the integration of digital use into their healthy lifestyles.

### **Smoking, alcohol consumption, drug abuse, and osteoporosis among older adults: a cross-sectional study on PERSIAN cohort study in Fasa**

**CONCLUSION:** The study underscores the significance of addressing osteoporosis risk factors in older adults. Healthcare policymakers and administrators can use these findings to identify and mitigate influential factors contributing to osteoporosis in this demographic.

### **Prevalence and association of compliance with the Canadian 24-hour movement guidelines with sociodemographic aspects in Brazilian adults: a cross-sectional epidemiological study**

**CONCLUSION:** Younger aged and male adults were more likely to meet the Canadian 24-hour guidelines in a small Brazilian city. However, further studies with larger and representative samples of sociodemographic stratum are still needed.

### **The sex difference in self-rated health among older Turkish and Moroccan migrants in the Netherlands: an exploratory study of contributing determinants**

**CONCLUSIONS:** Older Turkish-Dutch and Moroccan-Dutch women have a significant lower self-rated health compared to men. Women having a higher exposure to both socio-demographic and health-related determinants of self-rated health, which contributed to the sex difference

### **Cancer Diagnoses After Recent Weight Loss**

**CONCLUSIONS AND RELEVANCE:** Health professionals with weight loss within the prior 2 years had a significantly higher risk of cancer during the subsequent 12 months compared with those without recent weight loss. Cancer of the upper gastrointestinal tract was particularly common among participants with recent weight loss compared with those without recent weight loss.

### **"You can because you do and you do, because you can": Using interpretative description to examine what it means to be a physically literate adult living with multiple chronic conditions**

**CONCLUSIONS:** To improve function and mobility outcomes for adults living with chronic conditions, programs should be guided by a physical literacy framework that addresses the needs unique to aging adults, such as understanding the changes that occur with aging, self-monitoring mobility changes and participating in rehabilitation strategies.

### **Daily activity patterns in older adults receiving initial support: the association between daily steps and sitting in bouts of at least 60 min**

**CONCLUSION:** The model of predictors brings new understanding regarding daily steps among community-dwelling older adults. The association between sitting in bouts of > 60 min and daily steps is interesting as 35% of participants had a number of sitting bouts that on average, showed 30% less steps taken

[back to top]

## Employment, volunteering and ageing

### **Is Early-Life Enrichment Associated With Better Cognitive Function Among Older Adults? Examining Home and School Environments**

**Objectives:** We examine whether early-life enrichment, involving varied and stimulating activities to enhance cognitive function during childhood and adolescence, is associated with cognitive function in later life and whether the benefits persist over time

### **Association between physical frailty, circadian syndrome and cardiovascular disease among middle-aged and older adults: a longitudinal study**

**CONCLUSION:** PF and CircS together are associated with higher CVD risk, which provided new evidence for a strong relation that warrants attention to assessing PF and CircS and in community to promote healthy aging.

### **Socioeconomic variation in the prevalence of pain by anatomical sites among middle-aged and older adults in India: a cross-sectional study**

**CONCLUSION:** This research highlights the high burden of pain in major anatomical sites among middle-aged and older adults in India and emphasises the need for increased awareness and effective pain management strategies.

### **Trajectories network analysis of chronic diseases among middle-aged and older adults: evidence from the China Health and Retirement Longitudinal Study (CHARLS)**

**CONCLUSIONS:** With the chronic disease trajectory network analysis, we found that arthritis was prone to the occurrence and development of various other diseases. In addition, patients of heart diseases/hypertension/digestive disease/dyslipidemia were under higher risk of developing other chronic conditions

### **Age-disparate and intergenerational sex partnerships and HIV: the role of gender norms among adolescent girls and young women in Malawi**

**CONCLUSIONS:** In this Malawi general population survey, age-mixing partnerships were associated with increased odds of HIV among AGYW. These findings highlight inequitable gender norms as a potential focus for HIV prevention and could inform interventions targeting structural, cultural, and social constraints of this key group.

### **The associations of physical incapacity and wealth with remaining in paid employment after age 60 in five middle-income and high-income countries**

Previous studies on health and socioeconomic determinants of later-life labour force participation have mainly come from high-income European countries and the United States of America (USA). Findings vary between studies due to different measures of socioeconomic status and labour force outcomes

**The severity of andropause symptoms and its relationship with social well-being among retired male nurses: a preliminary cross-sectional study**

**CONCLUSION:** The results showed a moderate to severe prevalence of andropause among retired male nurses and a significant association between andropause and social well-being. The study suggests further research to examine sexual orientation and other factors that may affect andropause in retired male nurses.

**Recent innovations in long-term care coverage and financing: a rapid scoping review**

**CONCLUSIONS:** Initiatives where LTC insurance is mandatory and accompanied by commensurate funding are situated to facilitate ageing in place. Efforts to expand population coverage are common across the initiatives, with the potential for wider economic benefits

**Prevalence, risk factors and psychological consequences of workplace violence among health workers in the Greater Accra region, Ghana: a cross-sectional study**

**CONCLUSION:** There was high occurrence of WV, and verbal abuse was the most experienced form of WV. Age, work experience, on-call duties, and security within workplace were associated with exposure to WV. Facility-based interventions are urgently needed to curb the incidence of WV, especially verbal abuse.

**Preventing fear return in humans: Music-based intervention during reactivation-extinction paradigm**

In several research studies, the reactivation extinction paradigm did not effectively prevent the return of fear if administered without any intervention technique. Therefore, in this study, the authors hypothesized that playing music (high valence, low arousal) during the reconsolidation window may be a viable intervention technique for eliminating fear-related responses

**Risks and protection: a qualitative study on the factors for internet addiction among elderly residents in Southwest China communities**

**CONCLUSIONS:** Older adults' Internet addictive behaviors are shaped by multiple and complex internal and external factors. A higher level of online health risk perception is a key protective factor to effectively avoid the occurrence and deterioration of IA among the aged, a distinct finding from this study

**Susceptibility to eye diseases in relation to age and kidney failure among Taiwanese adults**

**CONCLUSIONS:** Our study suggests that age and kidney failure may jointly contribute to eye diseases, particularly cataract. The association between cataract and kidney failure could be bidirectional, especially in individuals below 50 years

**Risk of fall in patients with chronic kidney disease: results from the China health and retirement longitudinal study (CHARLS)**

**CONCLUSIONS:** The population in China afflicted with CKD has a significantly heightened risk of experiencing falls, underscoring the crucial importance of intensifying efforts in assessing and preventing fall risks.

**Challenges of proper disposal of old long-lasting insecticidal nets and its alternative uses in rural south-eastern Tanzania**

**CONCLUSION:** Strengthening awareness and education on proper LLIN disposal practices among community members and key stakeholders is essential for enhancing malaria control efforts and preventing environmental pollution.

## **Incorporating frailty to address the key challenges to geriatric economic evaluation**

**CONCLUSION:** The frailty-based conceptual structure and parameterisation methods significantly improved upon the methods previously employed by falls prevention models to address the key challenges for geriatric economic evaluation

## **Risk factors and prognosis of perioperative acute heart failure in elderly patients with hip fracture: case-control studies and cohort study**

**CONCLUSION:** Enhancing hip fracture prevention for AHF is particularly important. It is crucial to make informed decisions to avoid poor prognoses. Patients whose age over 75 years old, concomitant coronary heart disease, hemoglobin < 100 g/L and albumin < 40 g/L on admission are more likely to develop perioperative AHF

## **Cointegrations in house price dynamics and ageing population risks**

How does the riskiness of an ageing population change with house price dynamics of rural areas? Why do rural house prices increase faster than cities despite their ageing populations? Life cycle theory predicts working age households have higher demand for housing than retirement households

## **Knowledge about age-related eye diseases in the general population in Germany**

**CONCLUSIONS:** Knowledge gaps regarding eye health are considerable in the German general population and should therefore be addressed in educational interventions targeting the public. Special attention when designing such campaigns needs to be paid to infrequent users of the healthcare system. Knowledge of AMD seems to be poorer compared to other eye conditions.

## **Longitudinal relationship between social participation, depressive symptoms, and activity impairment among older patients with arthritis: a moderated mediation analysis**

**CONCLUSION:** Social participation was the key protective factor associated with depressive symptoms and activity impairment among arthritis patients. Encouraging arthritis patients to social participation and improving the depressive symptoms might avoid activity impairment, especially for female patients.

## **Being used for the greater good while fighting on the frontline: care staff's experiences of working with older people during the COVID-19 pandemic in Sweden**

**CONCLUSIONS:** The pandemic had a major effect on assistant nurses and care aides in terms of their working environment and their private lives. To be better prepared for future pandemics or disasters, organisations with responsibility for the care of older people will need to ensure that their staff have the necessary competencies and that there is adequate staffing in place

## **Association between sarcopenia and new-onset chronic kidney disease among middle-aged and elder adults: findings from the China Health and Retirement Longitudinal Study**

**CONCLUSION:** Middle-aged and elder adults diagnosed with sarcopenia have a higher risk of developing new-onset chronic kidney disease.

## **Oral health community engagement programs for rural communities: A scoping review**

This scoping review aims to identify the available literature on oral health community engagement programs that have been developed to guide oral health care in rural communities and to summarize their outcomes. This review was conducted using the 5-stage scoping review framework outlined by Arksey and O'Malley

## **What might make nurses stay? A protocol for discrete choice experiments to understand NHS nurses' preferences at early-career and late-career stages**

**INTRODUCTION:** Like many countries, England has a national shortage of registered nurses. Employers strive to retain existing staff, to ease supply pressures. Disproportionate numbers of nurses leave the National Health Services (NHS) both early in their careers, and later, as they near retirement age

### **Predictors of Retirement Voluntariness Using Canadian Longitudinal Study on Aging Data**

**Objectives:** Involuntary exit from the labor force can lead to poor health and well-being outcomes. Therefore, the purpose of this research is to better understand the factors that contribute to perceived retirement voluntariness

### **Factors influencing the work of researchers in Scientific Initiation: A systematic review protocol**

**INTRODUCTION:** Scientific Initiation (SI) is an educational activity that allows students to begin their scientific training and research under the guidance of an experienced researcher. While several studies have examined students' perceptions of SI, research on the perspective of researchers working in this field is currently lacking

### **A contemporary class structure: Capital disparities in The Netherlands**

The academic and public debate on social inequality has recently been fuelled by large disparities in income and wealth, profound changes in the labour market, and other emerging cleavages in post-industrial societies

### **Measuring functional ability in Healthy Ageing: testing its validity using Japanese nationwide longitudinal data**

**CONCLUSIONS:** Empirical data from Japan supports the functional ability concept among older individuals. Validating this concept with data from other nations is warranted.

### **Care pathways in older patients seen in a multidisciplinary same day emergency care (SDEC) unit**

**BACKGROUND:** Same day emergency care (SDEC) services are being advocated in the UK for frail, older patients in whom hospitalisation may be associated with harm but there are few data on the 'ambulatory pathway'. We therefore determined the patient pathways pre- and post-first assessment in a SDEC unit focussed on older people.

### **Changes in frailty and depressive symptoms among middle-aged and older Chinese people: a nationwide cohort study**

**CONCLUSIONS:** This study recommends advancing the age of concern for frailty and depressive symptoms to middle-aged adults. Both men and women need early screening and intervention for frailty and depressive symptoms to promote healthy aging.

### **Cardiovascular disease and the risk of incident falls and mortality among adults aged $\geq 65$ years presenting to the emergency department: a cohort study from national registry data in Denmark**

**CONCLUSION:** In this large study of adults aged  $\geq 65$  years attending the ED utilising data from national administrative registers in Denmark, we confirm that older adults attending the ED with a fall, including those with hip fracture, were at greatest risk for future falls. While CVD did not predict incident falls, it increased the risk of mortality in the three-year follow up with advancing age

## **Latent transition analysis of instrumental activities of daily living in Chinese elderly: based on the 2014-2018 wave of the Chinese Longitudinal Healthy Longevity Survey**

**CONCLUSIONS:** This study employed the LTA to examine the transition probability of IADL among the Chinese elderly. By recognizing the different profiles of IADL and understanding the factors associated with transitions among the elderly, interventions can be tailored to improve their functional independence and successful reintegration into families and society.

## **Effects of retirement on inpatient healthcare utilisation: an observational study in China**

**CONCLUSION:** The empirical findings suggested that retirement may lead to a reduction in inpatient healthcare utilisation, which underlined the importance for policy-makers to consider the externalities of retirement policies on inpatient healthcare utilisation.

## **Satisfaction of people at post-working age with pharmacists' health promotion in Poland**

**CONCLUSIONS:** People in post-working age assessed that health promotion conducted by pharmacists in community pharmacies is important, however they were not satisfied with the reliability, accessibility, communicativeness, and effectiveness of health promotion conducted by pharmacists.

## **Association of chronic conditions and physical multimorbidity with new-onset incontinence in a nationwide prospective cohort study of older adults $\geq 50$ years in China**

**CONCLUSION:** This longitudinal study found that physical multimorbidity and specific chronic conditions may increase the risk of new-onset incontinence among Chinese adults aged  $\geq 50$  years. Self-reported health, medications and mobility limitations seemed to be important intermediate conditions between multimorbidity and incident incontinence.

## **Return to flight duty (RTFD) after posterior lumbar spine surgery for symptomatic lumbar disc herniation (LDH) and lumbar isthmic spondylolisthesis (LIS) in Chinese military pilots**

**CONCLUSION:** Most military pilots diagnosed with symptomatic LDH and LIS can continue their careers and regain active-duty flight status following lumbar spine surgery, as reflected by the high RTFD rate. Lumbar spine surgery can successfully alleviate the physical constraints associated with spinal conditions, facilitating the return of military pilots to their demanding profession.

## **Understanding intersectional inequality in access to primary care providers using multilevel analysis of individual heterogeneity and discriminatory accuracy**

**CONCLUSIONS:** Despite a "universal" healthcare system, our analysis demonstrated a substantial amount of inequity in primary care across intersections of gender, age, immigration status, race, and income.

## **Gait smoothness during high-demand motor walking tasks in older adults with mild cognitive impairment**

Early signs of Mild Cognitive Impairment (MCI)-related gait deficits may be detected through the performance of complex walking tasks that require high gait control. Gait smoothness is a robust metric of overall body stability during walking. This study aimed to explore gait smoothness during complex walking tasks in older adults with and without MCI

## **Is there 'trustworthy' evidence for using manual therapy to treat patients with shoulder dysfunction?: A systematic review**

The primary objective of this review was to create a 'trustworthy,' living systematic review and meta-analysis for the application of manual therapy interventions in treating patients with shoulder dysfunction

**The association between sarcopenia and incident of depressive symptoms: a prospective cohort study**

**CONCLUSIONS:** Sarcopenia is an independent risk factor for depressive symptoms, Precautions to early detect and targeted intervene for sarcopenia should continue to be employed in adult with sarcopenia to achieve early prevention for depression and reduce the incidence of adverse clinical outcomes.

**Are retired persons fitter in their psychological capacities than unemployed? A cross-sectional representative study in Germany**

**CONCLUSIONS:** Keeping older persons with high psychological capacity levels in working life could be an alternative to forced reintegration of people with chronic participation problems into the competitive labour market. Unemployed persons with chronic health and participation problems might benefit from other social inclusion means.

**Willingness and influencing factors of old-age care mode selection among middle-aged and older adults in Henan Province, China**

**CONCLUSIONS:** The evaluation of MOA on choosing a non-home OCM was generally, and the number of children and external support received were shown to have a relatively substantial impact on the choice of OCM among MOA, however, their power was affected by MOA' POA

[\[back to top\]](#)

## Musculoskeletal health, falls prevention and ageing

**New horizons in frailty identification via electronic frailty indices: early implementation lessons from experiences in England and the United States**

Frailty represents an integrative prognostic marker of risk that associates with a myriad of age-related adverse outcomes in older adults. As a concept, frailty can help to target scarce resources and identify subgroups of vulnerable older adults that may benefit from interventions or changes in medical management, such as pursuing less aggressive glycaemic targets for frail older adults with

**Association between BMI and osteoporotic fractures at different sites in Chinese women: a case-control retrospective study in Changsha**

**CONCLUSIONS:** Underweight has a protective effect on total and lumbar spine fractures in Chinese women, while obesity poses a risk factor for total, lumbar, and femoral neck fractures. The effect of BMI on fractures may be mainly mediated by BMD.

**Model of multidisciplinary teamwork in hip fracture care: a qualitative interview study**

**CONCLUSIONS:** Shared responsibility across the multidisciplinary team is fundamental to delivery of hip fracture care. Findings will inform development of clinical practice recommendations and training to build teamworking competencies.

## **Association between the frailty index and readmission risk in hospitalised elderly Chinese patients: a retrospective cohort study**

**CONCLUSIONS:** The frailty index predicted a longer length of stay and higher all-cause and cardiocerebrovascular disease readmission risk in hospitalised elderly patients.

## **Prevalence of postprandial hypotension in older adults: a systematic review and meta-analysis**

**CONCLUSIONS:** PPH is a prevalent condition in older adults. Further research is needed to confirm this result, and priority should be given to establishing international consensus on PPH diagnostic criteria and designing its diagnostic procedure.

## **Improving safety and preventing falls using an evidence-based, front-line staff huddling practice: protocol for a pragmatic trial to increase quality of care in State Veterans Homes**

**INTRODUCTION:** Falls in nursing homes are a major cause for decreases in residents' quality of life and overall health. This study aims to reduce resident falls by implementing the LOCK Falls Programme, an evidence-based quality improvement intervention

## **Risk factors for falls in older adults with diabetes mellitus: systematic review and meta-analysis**

**CONCLUSION:** Older adults with T2DM present a higher risk of falls compared to non-diabetics. Among the included older adults with T2DM, the most important factor associated with a higher risk of falls was insulin use.

## **Interaction between hypertension and frailty and their impact on death risk in older adults: a follow-up study**

**CONCLUSION:** Frailty is prevalent among older adults with hypertension; however, older adults with both hypertension and frailty have a relatively higher mortality risk. Therefore, screening and assessment of frailty in the older population with hypertension are crucial for its early identification, thereby enabling timely and appropriate interventions to prevent or delay the adverse effects of

## **Sex differences in the frailty phenotype and mortality in the I-Lan longitudinal aging study cohort**

**CONCLUSION:** Frailty reflected poorer health in men than in women in the present cohort. This study revealed sex disparities in the impact of frailty on mortality among relatively healthy community-dwelling older adults.

## **The experience of feeling old after a fragility fracture**

**CONCLUSIONS:** Our findings challenge the notion that fractures "happen to old people" and suggest that fractures can make people feel old. Careful consideration of how bone health messages are communicated to patients post-fracture by health care providers is warranted. (Word Count: 248).

## **Legacy lessons from the COVID-19 era to improve trial participation and retention: Views from trial participants, PPIE contributors and trial staff across the NIHR portfolio**

**CONCLUSIONS:** Our findings highlight a number of ways to future proof trial delivery against future pandemics or disruptions such as offering online options to participate in research, ensuring consistent communication between participants and the research team, making sure participants feel fully informed and the continued reassurance of safety in the clinical setting.

## Percutaneous vertebroplasty versus percutaneous kyphoplasty for osteoporotic vertebral compression fractures: an umbrella review protocol of systematic reviews and meta-analyses

**INTRODUCTION:** Several systematic reviews and meta-analyses have confirmed that percutaneous vertebroplasty and percutaneous kyphoplasty showed safety and beneficial efficacy in patients with osteoporotic vertebral compression fractures. Whereas, there is wide variation among results, which are not conducive to the evaluation and use of clinicians

**Using a participatory design to develop an implementation framework for integrating falls prevention for older people within the Chinese primary health care system**

**CONCLUSIONS:** The current integration of falls prevention in the NEPHSP is weak. Five opportunities for integrating falls prevention in the NEPHSP and a five-themed implementation framework with strategies are co-identified and developed, using a participatory design approach

**Reasons for hospitalisation and cumulative mortality in people, 75 years or older, at high risk of hospital admission: a prospective study**

**CONCLUSIONS:** Individuals 75 years or older, with high risk of hospital admission, were demonstrated to have considerable higher cumulative mortality as well as incidence of hospitalisation. The results support the use of the prediction model to direct resources towards individuals with highest risk scores, and thus, likely the greatest care needs

**Inflammatory markers and frailty in home-dwelling elderly, a cross-sectional study**

**CONCLUSIONS:** We found an association between FI score and inflammatory markers, and between FI score and monocyte-specific gene expression among elderly subjects above 70 years of age. Whether inflammation is a cause or consequence of frailty and whether the progression of frailty can be attenuated by reducing inflammation remains to be clarified.

**Evaluation of a pharmacist-led intervention to reduce drug-related problems in patients included in a home healthcare program: study protocol for a pragmatic randomized clinical trial**

**BACKGROUND:** ATDOM is the Catalan home healthcare program at primary care level. Patients in the home care program are usually frail, elderly people with multiple comorbidities. They are often polymedicated, leading to a high risk of drug-related problems (DRPs)

**Topic evolution before fall incidents in new fallers through natural language processing of general practitioners' clinical notes**

**CONCLUSIONS:** Early recognition of health conditions demanding care is crucial for applying proactive and comprehensive multifactorial assessments that address underlying causes, ultimately reducing falls and fall-related injuries.

**Extended use of point-of-care technology versus usual care for in-home assessment by acute community nurses in older adults with signs of potential acute respiratory disease: an open-label randomised controlled trial protocol**

**BACKGROUND:** Due to ageing-related physiological changes, diagnosing older adults is challenging. Delayed disease recognition may lead to adverse health outcomes and

increased hospitalisation, necessitating the development of new initiatives for timely diagnosis and treatment of older adults

### **The association of painful and non-painful morbidities with frailty: a cross sectional analysis of a cohort of community dwelling older people in England**

**CONCLUSIONS:** Pain is associated with frailty, over and above any effect of painful and non-painful morbidities. This forms the justification for future research which focuses on pain management in the identification, prevention, and treatment of frailty.

### **Which elements of hospital-based clinical decision support tools for the assessment and management of children with head injury can be adapted for use by paramedics in prehospital care? A systematic mapping review and narrative synthesis**

**CONCLUSION:** Factors that should be considered for use in a clinical decision tool designed to support paramedics in the assessment and management of children with head injury are: signs of skull fracture; a large, boggy or non-frontal scalp haematoma neurological deficit; Glasgow Coma Score less than 15; prolonged or worsening headache; prolonged loss of consciousness; post-traumatic seizure;

### **AI assisted reader evaluation in acute CT head interpretation (AI-REACT): protocol for a multireader multicase study**

**INTRODUCTION:** A non-contrast CT head scan (NCCTH) is the most common cross-sectional imaging investigation requested in the emergency department. Advances in computer vision have led to development of several artificial intelligence (AI) tools to detect abnormalities on NCCTH. These tools are intended to provide clinical decision support for clinicians, rather than stand-alone diagnostic devices

### **Primary and secondary care service use and costs associated with frailty in an ageing population: longitudinal analysis of an English primary care cohort of adults aged 50 and over, 2006-2017**

**CONCLUSIONS:** Increasing levels of frailty are associated with an additional burden of individual service use. However, individuals with mild and moderate frailty contribute to higher overall costs. Earlier intervention may have the most potential to reduce service use and costs at population level.

### **Early supported discharge for older adults admitted to hospital after orthopaedic surgery: a systematic review and meta-analysis**

**CONCLUSION:** In the older adult population with orthopaedic complaints, ESD can have a statistically significant impact in reducing hospital length of stay. This review identifies an insufficient existing evidence base to establish the key benefits of ESD for this population group

### **Syncope in older adults: challenges, approach and treatment**

Syncope can have devastating consequences, resulting in injuries, accidents or even death. In our ageing society, the subsequent healthcare usage, such as emergency room presentations, surgeries and hospital admissions, forms a significant and growing socioeconomic burden

### **Effect of tempo on the age-related changes in temporal expectation driven by rhythms**

Temporal expectation refers to the capacity to allocate resources at a particular point in time, enabling us to enhance our behavior performance. Empirical evidence indicates that,

among younger adults, temporal expectation can be driven by rhythm (i.e., regular sequences of stimuli)

### **Frailty in older people worsened under austerity, study finds**

No abstract

### **Frailty before and during austerity: A time series analysis of the English Longitudinal Study of Ageing 2002-2018**

**CONCLUSION:** The period of austerity politics was associated with steeper increases in frailty with age compared to the pre-austerity period, consistent with previously observed increases in mortality.

### **A novel scale for triage assessment of frailty in the emergency department (ED-FraS): a prospective videotaped study**

**CONCLUSIONS:** The ED-Fras tool is a simple and valid screening tool for identifying frail older adults in the ED. It also can complement and enhance ED triage systems. Further research is needed to test its real-time use at ED triage internationally.

### **Progression of vertebral deformity of prevalent vertebral fractures in the elderly: a population-based study**

**CONCLUSION:** This study clarified the natural history of the progression pattern of vertebral deformities in radiographic prevalent vertebral fractures in elderly individuals. Multiple vertebral fractures in the elderly present a risk for the progression of vertebral deformities.

### **Listen to the voices of nurses: the role of community chief nurses and registered nurses in the provision of care for older people in Sweden during the COVID-19 pandemic - a cross-sectional study**

**CONCLUSION:** The study highlights crucial facets that care organizations must address to enhance their readiness for future pandemics or disasters, ensuring the security and well-being of the older people.

### **Are frailty measurements derived using electronic health records fit for clinical use?**

No abstract

### **Sodium-glucose cotransporter-2 inhibitors (SGLT2) in frail or older people with type 2 diabetes and heart failure: a systematic review and meta-analysis**

**CONCLUSIONS:** In older or frail patients with T2D and HF, SGLT2Is are consistently linked with a decrease in total mortality and the overall burden of cardiovascular (CV) events, including HHF events and cardiac death, but not protective for macrovascular death or renal events

### **Effects of an integrated ambulatory care program on healthcare utilization and costs in older patients with multimorbidity: a propensity score-matched cohort study**

**CONCLUSIONS:** Expanding IACPs may help patients with multimorbidity reduce their use of outpatient clinics at the 6-month follow-up, reduce care fragmentation, and promote sustainability of the healthcare system.

### **Prevalence of iron deficiency in patients admitted to a geriatric unit: a multicenter cross-sectional study**

**CONCLUSION:** More than half of older patients had ID, including non-anemic patients. ID was associated with the presence of inflammation and a low SPPB score.

**The relationship between dysphagia and frailty among Chinese hospitalized older patients: a serial mediation model through self-perceived oral health and self-reported nutritional status**

**CONCLUSIONS:** This study indicated that dysphagia was significantly associated with frailty. Self-perceived oral health and self-reported nutritional status were serial mediators of this relationship. Improving the oral health and nutritional status of hospitalized older patients may prevent or delay the frailty caused by dysphagia.

**Preventing hospital falls: feasibility of care workforce redesign to optimise patient falls education**

**CONCLUSIONS:** It is feasible and of benefit to supplement usual care with patient education delivered by allied health assistants.

**Tailored implementation of national recommendations on fall prevention among older adults in municipalities in Norway (FALLPREVENT trial): a study protocol for a cluster-randomised trial**

**BACKGROUND:** Despite substantial research evidence indicating the effectiveness of a range of interventions to prevent falls, uptake into routine clinical practice has been limited by several implementation challenges

**Do urinary and double incontinence predict changes in living arrangements and mobility in older women after hip fracture? - a 1-year prospective cohort study**

**CONCLUSIONS:** Both pre-fracture UI and DI in older women are risk factors for declining mobility level, but only DI for more supported living arrangements 1-year post-hip fracture. UI likely develops earlier in life and might not necessarily be strongly associated with the onset or increasing disability in later years

**Constructing a quality frailty index: you get out what you put in**

No abstract

**Multicentre, open-label, randomised, controlled trial to compare early intervention with calcimimetics and conventional therapy in preventing coronary artery calcification in patients with secondary hyperparathyroidism (UPCOMING): a study protocol**

**INTRODUCTION:** Coronary artery and heart valve calcification is a risk factor for cardiovascular death in haemodialysis patients, so calcification prevention should be started as early as possible. Treatment with concomitant calcimimetics and low-dose vitamin D receptor activators (VDRAs) is available, but not enough evidence has been obtained on the efficacy of this regimen, particularly in

**Association of changes in frailty status with the risk of all-cause mortality and cardiovascular death in older people: results from the Chinese Longitudinal Healthy Longevity Survey (CLHLS)**

**CONCLUSIONS:** Frailty is a dynamic process, and improved frailty and remaining robust are significantly associated with lower risk of all-cause mortality and cardiovascular death in older people.

**A stepped-wedge randomised controlled trial to assess efficacy and cost-effectiveness of a care-bundle to prevent falls in older hospitalised patients**

**CONCLUSIONS:** Care-bundle had a protective effect on patients, with a statistically significant reduction of the fall risk. This type of intervention appears cost-effective compared to routine practices.

[[back to top](#)]

## Ageism and discrimination

**What can patient-reported experience measures tell us about the variation in patients' experience of prostate cancer care? A cross-sectional study using survey data from the National Prostate Cancer Audit in England**

**CONCLUSIONS:** The observed discrepancies highlight the need for more focus on initiatives to improve the experience of ethnic minority patients and those older than 60 years. The findings also argue for further validation of discriminatory instruments to help cancer care providers fully understand the variation in the experience of their patients.

**Internet use and difficulties in acquiring health resources among older adults with disabilities during the COVID-19 pandemic: a population-based cross-sectional study**

**CONCLUSIONS:** Considering that older adults with disabilities experience triple the burden amid COVID-19 due to old age, disabilities, and the digital divide, policymakers, healthcare professionals, and engineers should aim to narrow the gaps between Internet users and Internet non-users among this population

**Changes in surgical mortality during COVID-19 pandemic by patients' race, ethnicity and socioeconomic status among US older adults: a quasi-experimental event study model**

**CONCLUSIONS:** 30-day surgical mortality during the COVID-19 pandemic peaked in April 2020 and remained elevated until the end of the year. The influence of the pandemic on surgical mortality did not vary by patient race and ethnicity or socioeconomic status, indicating that once patients were able to access care and undergo surgery, surgical mortality was similar across groups.

**Living in poverty and accelerated biological aging: evidence from population-representative sample of U.S. adults**

**CONCLUSION:** In a nationally representative US adult population, we found that higher poverty was positively associated with the acceleration of biological age, particularly among middle-aged persons.

**Prescription drug coverage and effective coverage of three chronic conditions of high prevalence in Chile: Hypertension, diabetes and dyslipidemia**

**CONCLUSION:** A significant proportion of Chileans with hypertension, diabetes or dyslipidemia still do not use the required medications and do not control their conditions.

**Gender-based stigma and the prevention and treatment of HIV/AIDS among older women: A scoping review protocol**

**INTRODUCTION:** The population of women aged 50 years and older living with HIV is increasing. Older women face unique challenges in the prevention and management of HIV; however, they are often under engaged in HIV/AIDS research

**Attitudes toward active aging and their association with social determinants and views on older adults in Japan: a cross-sectional study**

**CONCLUSIONS:** This study identified that females have more positive ATAA than males. Better views on older adults are a possible contributing factor that promotes ATAA among Japanese people. Our findings provide useful evidence that an approach towards those who are male, single, and economically satisfied is needed so that they have a positive attitude toward aging in Japan

**Food security and its association with socioeconomic status and dietary diversity in free living older people in Tehran, Iran**

**CONCLUSIONS:** Overall, socio-economic status and demographic characteristics were the predictors of FI among older people. The findings can have implication in design and targeting of interventions directed at older people.

**Twenty-first-century demographic and social inequalities of heat-related deaths in Brazilian urban areas**

Population exposure to heat waves (HWs) is increasing worldwide due to climate change, significantly affecting society, including public health. Despite its significant vulnerabilities and limited adaptation resources to rising temperatures, South America, particularly Brazil, lacks research on the health impacts of temperature extremes, especially on the role played by socioeconomic factors in

**Patient-reported outcome and experience measures (POEM) of a community-based glaucoma clinic in Cambridge, UK: an observational study**

**CONCLUSIONS:** A large majority of patients expressed a positive experience, felt safe under the care of their clinical team and their care was well organised. Relatively younger patients (<60 years) and those with no confirmed diagnosis would likely benefit from more consultation time and educational materials to improve their understanding of glaucoma.

**A scoping review on the barriers to and facilitators of health services utilisation related to refugee settlement in regional or rural areas of the host country**

**CONCLUSIONS:** Refugees face significant barriers to accessing and engaging with healthcare services. This impacts their integration into rural communities and increases the prevalence of psychosocial issues like feelings of loneliness, low self-esteem, a lack of autonomy, and a lack of empowerment over informed decision-making, especially for women, jobless men, and the elderly

[\[back to top\]](#)

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