

Nordic Gerontological Federation

GeroNord

News on research, developmental work and education within the ageing area in the Nordic Countries

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In this newsletter:

- Words from the President
- 28NKG in Jyväskylä, Finland, 2027
- Recent doctoral dissertations
- Other news from the Nordic countries
- The Executive committee and NGF representatives



Words from the President

Dear colleagues,

It has been an exciting year full of interesting publications within the gerontological and geriatric area.

In this newsletter, you'll find summaries of some of the doctorial theses completed this year. It's great to see the wide range of topics and the high quality of work. The theses featured here are likely just a few of the many completed this year. With this knowledge and the achievements of young scholars, I'm confident that the future of ageing research is secure. However, remember to send us information because it is a great way for young scholars to gain recognition and foster future collaborations.

As many of you have heard there is a problematic situation related to the International Association of Gerontology and Geriatrics – European Region (IAGG-ER). As NGF understands it, the World Organisation (IAGG) has decided to take over and handle all IAGG-ER administrative issues until further notice and all plans for a European congress in 2025 is cancelled. The NGF is following the developments with great interest.

Together with many Swedish researchers I am following an investigation on exemptions from the requirement for ethical approval for certain research in Sweden. Currently out for consultation, the investigation proposes exempting significant research where subjects have consented to data processing or where data is public and not confidential. Such research would be managed internally within the research principal's organization, aiming to ease the burden on researchers, especially in the humanities, social sciences, and law. If adopted, the law is expected to enter into force, 2026.

Several years ago, the NGF board decided to keep the newsletter as a key channel for sharing information about activities and upcoming events. As such, the newsletter remains a vital means of communication and the attempt is to publish the newsletter three to four times a year. Let's all contribute by sending the NGF secretary information on upcoming events and courses, reports on past events, new research (especially from junior researchers), and highlights of new research centers and major projects, as long as they fall within the gerontological or geriatric fields.

The deadlines for materials to be published in the GeroNord newsletters in 2025 are 15 February, 15 May, 15 September, and 15 November. The intention is to approximately publish the GeroNord newsletter on 1 March, 1 June, 1 October and 1 December 2025.

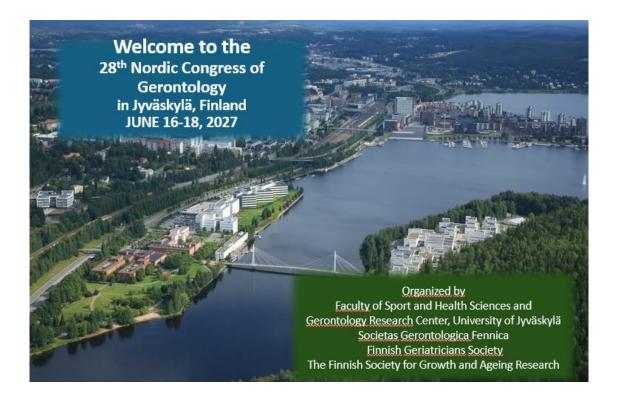
With this said I which you all a nice break during the holidays to come and a happy new year.

Best regards,



Carin Lennartsson

President of the Nordic Gerontological Federation



The 28th Nordic Congress of Gerontology in 2027

We look forward to welcoming you to the 28NKG in Finland!

The 28NKG will be at the University of Jyväskylä in Finland. The congress will be organised by the Faculty of Sport and Health Sciences and the Gerontology Research Center, University of Jyväskylä, Societas Gerontologica Fennica, Finnish Geriatricians Society, the Finnish Society for Growth and Ageing Research and the Nordic Gerontological Federation.



Call from NordForsk for Nordic and Baltic researchers

The call: "Sustainable health and social care systems for elderly" is out, and the deadline is February 20, 2025.

The overall aim of the call is to fund research which generates knowledge and evidence-based solutions in the area of sustainable health and social care systems for older adults. The research should contribute with knowledge that can be used to prepare and equip the health and social care systems of the Nordic and Baltic countries to meet the challenges of an aging population.

Read more

Recent PhD dissertations



Epidemiology of medication use among patients prior to and following hospital admission – A Retrospective, population-based cohort study

Freyja Jónsdóttir, Faculty of Pharmaceutical Sciences, University of Iceland, freyjaj@hi.is

Polypharmacy is a well-known term within the healthcare setting. It describes the usage of multiple medicines and is associated with adverse health consequences. Research has shown that such consequences can be decreased quality of life, decreased medication adherence, increased frailty, and increased likelihood of hospitalisation. Polypharmacy has been identified as the leading risk for potentially inappropriate medication use.

This thesis aimed to estimate the prevalence and incidence of polypharmacy among adult surgical and internal medicine patients and assess potential inappropriate medication use among older (≥65) patients. The thesis is based on four studies presented in four manuscripts. Manuscript I used the Icelandic perioperative database to estimate the prevalence, incidence, and changes of polypharmacy and associated patient factors and clinical outcomes of patients.

Manuscript II used the newly established Icelandic internal medicine database to estimate the prevalence, incidence, and changes of polypharmacy-associated risk factors and clinical outcomes of patients. In manuscript III the prevalence, incidence, and changes of the prevalence of potentially inappropriate medication use was assessed amongst internal medicine patients ≥65 years by applying Beers 2019 prescribing criteria. Finally, manuscript IV aimed to use the Icelandic perioperative database to estimate the prevalence and incidence and changes in the prevalence of potentially inappropriate medication use amongst surgical patients ≥65 years. Both research databases will be maintained for future research projects. Polypharmacy and potentially inappropriate medication use are common among patients admitted to hospitals both for surgical and internal medicine care. New medications postdischarge are frequent, as well as new, potentially inappropriate medication among older (>65) patients post-hospital admission. This thesis demonstrates that polypharmacy among surgical patients was associated with decreased survival, extended hospital stays, and readmissions. This thesis also demonstrated that potentially inappropriate medication use is prevalent among patients admitted by internal medicine specialty and due to surgical admission and associated risk factors among increased ages, female gender, use of higher number of medications, and use of multidose dispensing service.

The population is continuously ageing. This presents certain challenges, with multimorbidity and associated polypharmacy becoming an increasingly alarming factor concerning public health. There is no one-size-fits-all solution for addressing polypharmacy and inappropriate prescribing. Healthcare providers should aim to initiate medication treatment only when the benefit outweighs the harm. This balance becomes more delicate as the patient becomes more frail. Therefore, multiple measures are required, ranging from upscaling educational activities, empowering patients and their carers, and implementing multidisciplinary interventions that are both general and targeted at specific medication classes and patient groups, in addition to using computerised prescribing aids when possible. Healthcare providers, especially prescribers and patients, need further support with strategies to facilitate safe and effective use of medications. Tools need to be added to the toolbox of Icelandic healthcare professionals and patients. Increased collaboration between healthcare professionals, as well as an increased skill shift between them, would serve this purpose. Finally, healthcare professionals must apply cautious foresight when initiating new medication and planning appropriate revisions.

Published articles:

- Epidemiology and association with outcomes of polypharmacy in patients undergoing surgery: retrospective, population-based cohort study, BJS Open
- The association of degree of polypharmacy before and after among hospitalised internal medicine patients and clinical outcomes, BMJ Open
- <u>Potentially Inappropriate Medication Use and Polypharmacy Before and After</u>
 <u>Admission to Internal Medicine for Older Patients</u>, The American Journal of Medicine



Educational attainment, physical workload, and low back pain influence old-age functioning

Physiotherapist and Master of Health Sciences Saila Kyrönlahti defended her doctoral dissertation on 30 September 2024 at Tampere University, Finland.

The opponent in the defense was Professor Hugo Westerlund from Stockholm University, and the custos was Docent Subas Neupane from the Faculty of Social Sciences at Tampere University. In her dissertations Kyrönlahti explored how educational attainment, low back pain (LBP), and physical workload during late career stages influence functioning in old age. The findings underscored the long-term impact of these factors and the importance of timely preventive measures.

Good functioning in old age enables independence, quality of life, and participation in meaningful activities. Kyrönlahti's research showed that lower education was linked to faster declines in physical functioning, partly due to higher physical workload and body mass index, which were more common among less-educated individuals. Those in physically demanding jobs were more likely to report mobility difficulties decades later.

The study also highlighted the role of LBP in predicting old-age functioning. Frequent back pain during midlife often persisted into retirement and was associated with mobility challenges in old age, particularly among those in physically demanding occupations.

"The latter half of one's career is a critical period for shaping functional ability in old age. Reducing physical workload and managing back pain could improve long-term functioning and reduce health disparities between educational groups," Kyrönlahti emphasized.

Her research was based on longitudinal data from Finnish and U.S. cohorts and is part of an Academy of Finland-funded project on midlife health risks and aging. Kyrönlahti now works as a senior researcher at the Finnish Institute for Health and Welfare (THL), focusing on memory research.

Go here to find the dissertation



New research results from Karolinska Institutet, Stockholm, Sweden

A healthy lifestyle may counteract diabetes-associated brain ageing

Type 2 diabetes is a known risk factor for dementia, but it is unclear how diabetes and its early stages, known as prediabetes, affect brain ageing in people without dementia. Now, a comprehensive brain imaging study shows that both diabetes and prediabetes can be linked to accelerated brain ageing. The study included more than 31,000 people between 40 and 70 years of age from the UK Biobank who had undergone a brain MRI scan (magnetic resonance imaging).

"Having an older-appearing brain for one's chronological age can indicate deviation from the normal ageing process and may constitute an early warning sign for dementia. On the positive side, it seems that people with diabetes may be able to influence their brain health through healthy living," says the study's lead author Abigail Dove, a PhD student at the Aging Research Center at the Department of Neurobiology, Care Sciences and Society, Karolinska Institutet.

High fitness linked to lower risk of dementia

People with a genetic predisposition to dementia can reduce their risk by up to 35 percent by increasing their fitness, according to a study published in the British Journal of Sports Medicine. High levels of fitness are also linked to better cognitive ability, according to the study by researchers from Karolinska Institutet.

"Our study shows that higher fitness is linked to better cognitive function and reduced dementia risk. In addition, high fitness could attenuate the effect of genetic risk for all dementias by up to 35 percent. Our findings suggest that maintaining good fitness may be a strategy to prevent dementia, even among people with high genetic susceptibility," says Weili Xu, professor of Geriatric Epidemiology at the Aging Research Center at the Department of Neurobiology, Care Sciences and Society, Karolinska Institutet, and the study's last author.



Ageing and Social Change

Application applications are open for the Ageing and Social Change master's programme at Linköping University in Sweden for autumn 2025!

This interdisciplinary programme is a unique opportunity to explore the intersection of longevity and social change, with a focus on how society can respond to the challenges and opportunities posed by an ageing population. It covers key areas such as health, welfare, pensions, family policies, intergenerational relations, and the sustainability of health and care systems. Spread the word among potentially interested students at your institute!

The programme is available both on-campus (ideal for those who prefer a community experience) and online (with a few weeks per year at Linköping University). The programme can be completed in 1 year (60 credits) or 2 years (120 credits). All courses are taught in English, and students will be supported by expert faculty members who contribute to cutting-edge research in the field.

Application Deadline: 15 April, 2025.

Find more information here



Photo: Gerontology Research Center (GEREC)

New CAREFIT project aims to promote the physical activity and well-being of informal caregivers

The project will produce new scientific knowledge about challenges, incentives, and effects of physical activity on the health and well-being of older caregivers.

Informal care covers a significant part of the growing care needs of the Finnish population. It is estimated that over a million Finnish people act as caregivers for their loved ones, with a large

proportion of these caregivers being at least 65 years old. Research has shown that caregivers are exposed to several harmful health effects due to caregiving, such as musculoskeletal problems, various pain conditions, and fatigue.

Physical activity has many well-known positive health effects and can support the health and functional capacity of older caregivers. However, due to the demands of caregiving, caregivers may neglect their own health, which is reflected for example in a decrease in leisure-time physical activity. The CAREFIT project investigates the functional capacity and physical activity behavior of older caregivers and how the caregiving situation affects caregivers' commitment to physical activity programs. CAREFIT is a joint project of the University of Tampere and the Finnish Institute for Health and Welfare, with close collaboration with the University of Eastern Finland, Carers Finland, and the Karolinska Institutet in Stockholm.

The CAREFIT project is based on the internationally recognized FINGER study

The CAREFIT project is based on the Finnish Institute for Health and Welfare's previous, internationally recognized FINGER intervention study. The randomized controlled FINGER study demonstrated that a multi-domain lifestyle intervention that includes physical activity can prevent cognitive and physical decline in older individuals at risk of dementia and improve quality of life.

The CAREFIT project is funded by the new Academy Programme for Sports Science and Physical Activity (ACTIVE) of the Research Council of Finland, which promotes research related to physical activity, exercise, and sports.

Read more



Best Practices Report. For the digital inclusion of older persons: a "digital rights" approach

New report from St@ndbyMe, a project that aims to support practitioners in the field of adult education and long-term care in building their capacity on how they can help older persons to meet their potential in digital participation, while protecting their rights to health, autonomy, independence, and privacy.

The report provides a thorough introduction on why a human-rights perspective is important when considering digital exclusion in older age. The authors also argue that increasing awareness on the driving forces of the "grey digital divide" is still a contemporary issue. The report provides introductory information for the diverse digital landscape in the countries of

reference, how older persons are positioned in terms of digital literacy and internet use in these countries, along with the best practices that the project team could identify at the national level. The main scope of examination was the digital inclusion of older persons and the respect of their human rights in digital environments.

The St@ndbyMe project is a collaboration between five non-government organizations (NGO's) and one university in Europe: those are the Frankfurter Verband in Germany, TREE in Estonia, CollectiveUp in Belgium, APSS in the Czech Republic, and the Hellenic Adult Education Association in Greece, and the Linköping University in Sweden.

The project has been accepted for funding by the European Commission through the Erasmus+ funding programme and it will run until December 2025.

Go here to find the report

Read more about the St@ndbyMe project

Recent PhD dissertations



Cardiometabolic disease and dementia risk: Identifying compensatory factors

Doctoral dissertation by Abigail Dove, from the Aging Research Center Department of Neurobiology, Care Sciences, and Society Karolinska Institutet, Stockholm, Sweden.

Specific cardiometabolic diseases (CMDs) – including type 2 diabetes, heart disease, and stroke – have been individually linked to increased risk of dementia. With population aging, a growing number of older adults are living with cardiometabolic multimorbidity – i.e., the presence of multiple, co-occurring CMDs. However, the role of cardiometabolic multimorbidity in the development of dementia is not well-understood. This thesis aimed to explore the complex interplay between cardiometabolic multimorbidity, cognitive decline, and dementia, and to identify possible compensatory factors that may attenuate the detrimental influence of CMDs on cognitive and brain health. This was carried out using data from three longitudinal studies: the Swedish National Study on Aging and Care in Kungsholmen (SNAC-K), the Screening Across the Lifespan Twin (SALT) study, and the UK Biobank (UKB).

Study I. The relationship between CMDs and cognitive phenotypes in the preclinical/prodromal phase of dementia was examined using 12y follow-up data from SNAC-K (n=2,577). Cardiometabolic multimorbidity was associated with accelerated cognitive decline (β -0.03 [-0.04, -0.02]) and a significantly increased risk of both cognitive impairment (HR 1.73 [1.23, 2.44]) and its progression to dementia (HR 1.86 [1.17, 2.97]).

Study II. The association between cardiometabolic multimorbidity and dementia was assessed using 18y follow-up data from 17,913 twin individuals from SALT. Cardiometabolic multimorbidity was associated with a significantly increased risk of all-cause dementia (HR 1.42 [1.31, 1.53), Alzheimer's disease (HR 1.26 [1.10, 1.45]) and vascular dementia (HR 1.64 [1.42, 1.88]). Comparison of monozygotic and dizygotic twin pairs further indicated that genetic factors may underlie the association between CMDs and dementia.

Study III. Cognitive reserve (characterized by higher educational and occupational attainment, social stimulation, and engagement in leisure activities) was explored as a potential compensatory factor that might attenuate the association between CMDs and dementia using 15y follow-up data from UKB (n=216,178). People with CMDs and moderate-to-high compared to low levels of cognitive reserve had 17% lower risk of dementia (HR 0.83 [0.77, 0.91]) and significantly larger volumes of gray matter and hippocampus on brain MRI.

Study IV. The compensatory role of anti-inflammatory diet in the CMD dementia association was examined using 15y follow-up data from UKB (n=84,342). People with CMDs and an anti-inflammatory compared to proinflammatory diet had 31% lower risk of dementia (HR 0.69 [0.55, 0.88]) as well as a significantly larger volume of gray matter and significantly smaller volume of white matter hyperintensities on brain MRI.

Conclusions. Together, the findings highlight cardiometabolic multimorbidity as an especially high-risk state for a continuum of cognitive phenotypes spanning from accelerated cognitive decline to cognitive impairment and dementia. This appears to involve both eurodegenerative and vascular processes in the brain. Further, genetic background may underpin the CMD-dementia association. However, modifiable factors including high levels of cognitive reserve and adherence to an anti-inflammatory diet appear to attenuate the association between CMDs, brain pathologies, and dementia.

Go here to learn more



Days Lived at Home, Use and Costs of Healthcare and Social Services, Functioning, and Health-related Quality of Life after Hip Fracture: Effects of a 12-month Home-based Exercise Intervention

Doctoral dissertation in Gerontology and Public Health by Paula Soukkio, University of Jyväskylä, Faculty of Sport and Health Sciences, Finland.

Hip fracture is a major trauma in an older adult's life and causes a substantial burden to society by reducing the person's functional capacity and health-related quality of life and increasing mortality and the use and costs of healthcare and social services. The aim of this thesis is to examine the effects of a 12-month physiotherapist-supervised, progressive home-based exercise program on the number of days lived at home, mortality, the use and costs of healthcare and social services, functioning, and health-related quality of life among patients who have undergone a hip fracture operation.

The participants (n=121) were recruited from South Karelia, Finland. Their mean age was 81 years, 75% were women, and 61% had a femoral neck fracture. They were randomized into a 12-month, home-based exercise group, who had 60-minutes of guided exercise twice a week (n=61), and a usual care group (n=60). The data on the primary outcome—days lived at home—and the secondary outcomes—mortality and use of healthcare and social services—were gathered from registers and assessed over a 24-month period. Other secondary outcomes —physical performance, functional independence, instrumental activities of daily living, and health-related quality of life were assessed at baseline and at 3, 6, and 12 months.

The exercise intervention consisted of strength, balance, flexibility, and functional exercises, and brief counseling on nutrition and physical activity. The 12-month supervised exercise program did not increase the number of days lived at home or decrease mortality over 24 months. The exercise intervention was cost neutral in terms of the use of all healthcare and social services over 24 months. The intervention improved functional independence, instrumental activities of daily life and physical performance, but not health-related quality of life, which remained below the reference population level in both groups over 12 months.

Participation in the exercise intervention was good and no severe adverse effects were detected.

Go here to find the dissertation



New report on the climate impact of distance spanning solutions

Distance spanning solutions in healthcare and social care are rapidly increasing in all the Nordic countries.

Healthcare and care are offered in people's homes based on their own needs. Digitalisation and remote service solutions are important prerequisites for maintaining the quality of the Nordic welfare model. But what are the sustainability impacts of these services? The purpose of the new report is to enhance understanding of the implications of digitalised health care and care on the different dimensions of the Sustainable Development Goals (SDGs). The first part of the report uses examples from home care services in the region Päijät-Häme in Finland.

Read more



36th REVES Conference, 14-16 May 2025, Tampere University, Finland

The abstract submission is open and will close on 31 January 2025.

Conference themes include life and health expectancy, chronic diseases, functional limitations, cognitive impairment, health inequalities, social and environmental determinants of health and ageing, and public policies.

The abstract submission will close on the 31st of January 2025. There will be no extensions to this deadline. Go here to find more information about the call for papers.

Read more about the REVES conference including important deadlines, venue, travelling etc.









TRANSFORMING CARE CONFERENCE 2025

25-27 June 2025, University of Helsinki, Finland



7th Transforming Care Conference, 25-27 June, University of Helsinki, Finland

The call for papers is open with a deadline 30 January 2025.

The theme of the 7th Transforming Care Conference is 'Social and Human Rights in Care'. In recent decades, there has been increasing discussion about the importance of the human rights approach and the role of social rights in the contexts of disability, long-term care and childcare.

Social and human rights have become a key perspective in the global debate on the future of care. Research is now needed to analyse the opportunities and potential problems of this development, which is why the 7th Transforming Care Conference hopes to bring social and human rights discussions into our research debates and strengthen their role in our future research work.

Read more

Calendar 2025

- **14 January 13.00–14.15 CET,** online via Teams, <u>Should people with long careers in demanding work be allowed to retire earlier?</u>, Finnish Centre for Pensions (ETK)
- 20 January, 12-14 CET, online, <u>Aldersvennlige lokalsamfunn om vinteren-erfaringsdeling mellom nordiske land,</u> Senteret for et Aldersvennlig Norge, Nordens Velfærdscenter, Fabric+
- 20-22 March, Helsinki, Finland, Older Persons and Crises: Rights and Challenges, Erik
 Castrén Institute (Faculty of Law) together with the Leo Mechelin Foundation and
 HelpAge International
- 13-15 May, Gothenburg, Sweden, <u>14th Nordic Public Health Conference</u>, Public Health Agency of Sweden
- **25-27 June, Helsinki, Finland,** 7th Transforming Care Conference, Social and Human Rights in Care, University of Helsinki
- **24-26 September, Reykjavik, Iceland,** <u>EuGMS 21st New landscapes in geriatric medicine, </u>European Geriatric Medicine Society

2026

• 5-9 July, Amsterdam, The Netherlands, <u>23rd IAGG world congress of gerontology</u> and <u>geriatrics</u>. Ageing well in a globalized world.

Would you like to announce an upcoming event in the GeroNord calendar?

Please send an email to contact@ngf-geronord.se

The Executive committee and NGF representatives

Executive committee

President: Carin Lennartsson, Aging Research Center, Karolinska Institutet, Sweden

- 1. Vice president: Mikaela von Bonsdorff, Societas Gerontologica Fennica, Finland
- 2. Vice president: Jette Thuesen, Danish Gerontological Society, Denmark

Secretary General of the 27NKG: Amaia Calderón Larrañaga, Aging Research Center, Karolinska Institutet, Sweden

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Danish Gerontological Society (Dansk Gerontologisk Selskab): Jette Thuesen Danish Society for Geriatrics (Dansk Selskab for Geriatri): Pia Nimann Kannegaard

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