

International Summit on

AGING & GERONTOLOGY

May 27-28, 2019 | Rome, Italy

Theme: *Understanding Mechanisms & Compressing Morbidity in Aging Humans*

HOLIDAY INN ROME AURELIA
VIA AURELIA, KM 8.400, 00165, ROME, ITALY

 **Aging & Gerontology 2019**

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DAY 1

Keynote Speakers

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The Aging Process and Silicon Valley Quest for longevity

Steven A. Garan

University of California, USA

Biography

Steven A. Garan is the Director of Bioinformatics at the Center for Research & Education on Aging (CREA) at the University of California, Berkeley and Lawrence Berkeley National Laboratory and he also serves on CREA's Advisory Board, he is also a researcher at the Lawrence Berkeley National Laboratory. Garan was also the director of the Aging Research Center and is a leading scientist in the field of aging research. He is best known for the coining of word "Phenomics", which was defined in an abstract titled: "Phenomics: a new direction for the study of neuroendocrine aging", that was published in the journal Experimental Gerontology.

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Cryonics: Better Marketing for Modern Society

Paul A. Spiegel

LIBERTAS Biomedical, USA

Biography

Paul Spiegel is an attorney in private practice in San Francisco, California. His firm, Eclectic Law, provides general counsel services to startups and established companies in biotechnology, longevity medicine and other fields. Paul graduated from the University of California, Berkeley in 1979 and from Berkeley Law School (formerly Boalt Hall School of Law) in 1983, and attended Harvard Law School, the University of Paris, Sorbonne, and International Christian University in Tokyo. Trained in international business law, he worked on Wall Street, on Montgomery Street and in Tokyo before entering private practice in San Francisco. Long an advocate of progressive ideas and legal causes, he has focused on longevity, regenerative medicine and the biology of aging. He is a board member of the International Longevity Alliance, the American Longevity Alliance, the Life Extension Advocacy Foundation and Humanity +, and he is a legal advisor to the Transhumanist Party and the Brain Preservation Foundation. He is a member of Health Extension and carboncopies.org, and provides legal counsel for many longevity-related and transhumanist enterprises.

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Expansion of the Current Conceptual Model of Frailty

Michal Elboim-Gabyzon

University of Haifa, Israel

Frailty in the elderly is a common syndrome with a multi-factor etiology and is characterized by increased susceptibility to biological, physiological, and mental stressors. Frailty carries an increased risk of negative health events and outcomes including falls, incident disability, hospitalization, and mortality. The frailty syndrome is a dynamic progressive and chronic condition. Although it is reversible in the pre-frailty stage and in the early stages of frailty, it is irreversible in the advanced stage; however, its rate of progression can still be reduced to some extent, with the possibility of reducing and preventing complications while also improving quality of life. Accordingly, screening, prevention, and treatment strategies are required to identify high-risk subsets and prevent complications and deterioration among the ever-growing elderly population worldwide.

This presentation will provide an overview of the current conceptual model of frailty including assessment tools. In addition, it will point out the urgent requirement to update the model and expand it according to the changing characteristics and needs of older people living in the community. The current “real life” of the elderly is a technological environment. The surrounded technological devices and interfaces affect the individual performance of basic and instrumental activities of daily living and all aspects of society including communication avenues, healthcare facilities, and leisure activities.

The suggested expanded conceptual model of frailty aims to cover the complexity and multidimensionality of modern life by incorporating new aspects related to the usage of technology by the elderly.

Biography

Michal Elboim-Gabyzon is a full-time lecturer and staff member at the physical therapy department of the University of Haifa (UOH). She has a bachelor's degree (1999, TAU, with honors), master's degree (2005, TAU), and PhD (2011, UOH) in physical therapy. She completed post-doctoral studies at the Biorobotics and Biomechanics Lab at the Mechanical Engineering Faculty at the Technion, Israel (2012), and at the Neuromuscular Research Laboratory, Schulthess Clinic, Zurich, Switzerland (2014-2015). Her primary research areas include application of physical agent modalities and electrical stimulation in rehabilitation, balance and gait capabilities of elderly individuals, fragility of the elderly and acute orthopedic rehabilitation. She has published articles in refereed journals.

DAY 1

Oral Presentations

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Bladder Control and Aging: The Neurogenic Bladder and Associated Voiding Dysfunctions in Older Adults

Kareaion Eaton

University of South Alabama, USA

Description: Bladder control problems, including urinary incontinence, negatively affect quality of life and rehabilitation outcomes. Voiding dysfunction, which may be caused by neurogenic bladder, is associated with incontinence and infections. Physical and occupational therapists can provide interventions for patients with neurogenic voiding dysfunction (NVD) to improve symptoms and reduce associated consequences. This course will describe causes of neurogenic bladder and associated dysfunctions, and will explain evaluation and intervention strategies for improved bladder control.

Objectives: Participants will be able to: 1) Describe the etiology and symptoms of neurogenic bladder and NVD. 2) Identify the risk factors associated with NVD in the older adult population 3) Discuss neurologic disorders and associated symptoms of neurogenic bladder dysfunction. 3) Describe the evaluation and assessment of neurogenic voiding dysfunction. 4) Identify strategies and principles to improve bladder control in clients with symptoms of NVD.

Biography

Dr. Kareaion Eaton is an Assistant Professor and Director of Clinical Education with the University of South Alabama Department Of Physical Therapy located in Mobile, Alabama. She also practices at a hospital based outpatient clinic specializing in women's health and pelvic floor dysfunction. She earned a Master of Science in Physical Therapy from the University of Mobile in 1999, and a Doctorate of Physical Therapy from Alabama State University in 2010. She is an ABWM board certified wound specialist. She is a member of the APTA's Education Section and Section on Women's Health (SOWH). She currently serves on the SOWH's Membership committee as the Southeastern Regional Membership Representative.

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The Anesthesia Implications of the Use of Essential Oils in Alzheimer's Dementia

James L Geiger

Medical Advisory Panel, USA

The diagnosis and treatment of Alzheimer's dementia (AD) has gained much attention due to the current and predicted prevalence of the disease. The biomarkers of neural inflammation, oxidative stress, genetics and the multiple medical etiologies of AD coupled with the poly-pharmacy of comorbid conditions and diseases associated with AD are complex. The medical diagnosis and treatments of AD need more reliability and integrative health regimens, such as supplementation with generally regarded as safe (GRAS) essential oils that could be implemented clinically to lessen the global economic impact to societies, and disruptions to families.

Treatment has focused on the management of AD based on the cholinergic theory attempting to prevent cognitive decline while preserving short-term memory with prescription medications. Certain essential oils exhibiting acetylcholinesterase inhibition (ACHEI) activity derived from natural phyto-preparations might also be utilized in the setting of the decreasing memory of AD. Prescription psychotropic medications might be therapeutically interchanged to certain essential oils to manage behavioral and psychiatric issues associated with AD. Advancing age and anesthesia increase the risk of post-operative cognitive decline (POCD) associated with common procedures and surgeries that AD patients commonly undergo. Globally, plant material preparations such as extracts and essential oils are analyzed for anti-inflammatory, anti-infectious and anti-anxiety, anti-depressive, analgesic and ACHEI activity.

The potential for use of GRAS essential oils as supplements for seniors in the prevention and treatment of the cognitive decline and behavioral disruptions of aging should be studied to determine the safe and effective methods of inhalational, topical and ingestion aromatherapy techniques. The landmark literature reviewed here explores the mechanisms and synergy of the aromatic sciences that can provide the basis for designing and implementing protocols for the integration of GRAS essential oils into the wide variety of clinical situations encountered in the aging population, with and without AD.

Keywords: Alzheimer's Dementia Memory Anxiety Aromatherapy Acetylcholinesterase Anesthesia Essential oils Lavender Ginger

Key Subjects: Natural Products, Phytotherapy, Biochemistry, Acetylcholinesterase, Healthcare

Biography

James L. Geiger is a board certified anesthesiologist practicing acute care anesthesia and clinical aromatherapy in Arizona. He completed residency at USC and Internship at St. Marys Medical Center in San Francisco where he remained to perform cardiac anesthesia with his father, a cardiothoracic surgeon, for 16 years. He has served as a member of the medical advisory board for doTERRA International for 5 years. He is the author of two books and two articles on anesthesia and essential oils emphasizing prevention of post-operative complications.

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Implications of Active Aging on Aging Well: Mixed-Methods Quantitative–Qualitative Study

Hadeel Halaweh

Al-Quds University, Palestine

Introduction: Worldwide, the ratio of people age 60 and over is growing faster than any other age group. By 2025, there will be 1.2 billion people over the age of 60. With increasing number of older adults; aging well becomes a priority, and measures to help older people remain healthy and active are developing to be an important area of research. The concept of active aging intends to extend healthy life expectancy and quality of life for all people as they age, including those who are frail and in need of care. This study aims to explore the implications of active aging on aging well among older adults' ≥ 60 years.

Methods: Quantitative data were collected (176 participants, mean age: 68.15 ± 6.74), using a demographic clinical questionnaire, a physical activity socio-cultural adapted questionnaire, EuroQuol-5 Dimensions and Physical functioning tests (Hand Grip Strength, Timed Up and Go, and Short Physical Performance Battery). Statistical analyses were performed to determine differences between the groups according to gender, prevalence of comorbid conditions and physical activity level. For the qualitative data, a qualitative research design in the context of focus group discussions and in depth personal interviews were used; seven focus groups included 56 participants and 17 participants were personally interviewed (aged 63–84 years). Data were analyzed using a qualitative thematic approach described by Braun and Clarke and a narrative interpretative method.

Results: Physically active older adults recorded lower prevalence of chronic diseases including hypertension, diabetes and cardiovascular diseases ($P < 0.001$). Older adults who participated in moderate-intensity aerobic PA for 150 min/week have recorded higher values of physical functioning and health related quality of life (HRQoL) than older adults who were classified as low physically active ($p < 0.001$). Staying active was perceived as an important factor to maintain functioning and to preserve active roles with aging. Five themes were identified, “keep moving, stay healthy,” “social connectedness, a motive to stay active,” “staying independent”, “having a life purpose” and “enjoying good physical and mental health”.

Conclusion: Moderate to high level of physical activity may contribute to maintain physical functioning and better HRQoL among community dwelling older adults above 60 years old. Active aging contributes to aging well; that was manifested in this study through enhancing health related quality of life, good physical and mental health, physically active lifestyle, social participation, and being independent.

Biography

Dr. Hadeel Halaweh holds a doctoral degree in medical sciences from the University of Gothenburg /Sweden. She works as an assistant professor at Al-Quds University/Faculty of Health Professions. Dr. Hadeel's research interests focus on the areas of health care, physical activity, Neuro-rehabilitation, gerontology, and health-related quality of life; her recent publications have included both quantitative and qualitative studies in the field of gerontology.

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Effects of Cold Temperatures on Increasing the Incidence of Respiratory Infections Especially in Those ≥ 65 : Systematic Review

Roger E. Thomas
University of Calgary, Canada

THE PROBLEM

1. Those ≥ 65 have higher death rates in winter and from influenza.
2. Each prolonged drop of 1oC increases respiratory illness rates and mortality.

SOLUTIONS

1. There is evidence from cohort studies that vaccine is effective in those ≥ 65 .
2. A more effective vaccine for ≥ 65 is required. LAIV, inactivated nasal or double or triple dose inactivated vaccines are all candidates.
3. Vaccinating children may reduce influenza in those ≥ 65 both by reducing influenza in the general population and also when they contact senior family members.
4. Maintaining seniors' body and nasal and respiratory tract temperatures in winter may reduce respiratory infections.
5. The optimum temperature to minimise morbidity and mortality in multiple studies 15oC.
6. RCTs of handwashing and mask wearing need more thorough implementation
7. The combination of improving senior fitness, rigorous handwashing of all contacts and children and fitted mask needs testing in an RCT with meticulous attention to implementing the protocol.

Biography

Dr. Roger Thomas is Emeritus Professor of Family Medicine, University of Calgary. His undergraduate degree from the University of Cambridge was in economics, his Ph.D. from Yale in Sociology and MD in medicine from McMaster University. He is the author of 165 peer-reviewed articles, 2 book chapters, 8 reports to governments and 130 abstracts. He received a Lifetime Achievement Award for Research in Family Medicine from the College of Family Physicians of Canada in 2013 and the Outstanding Family Physician 2016 Award, Calgary Zone. He has received 18 teaching awards. He has been a chair of a family medicine department, director of a postgraduate residency programme, medical director of two hospitals and three nursing homes, and practiced medicine in the USA, Malaŵi and Canada

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The Role of Information and Communication Technology Use on Social Support and Life Satisfaction

Kyoung Hag Lee

Wichita State University, United States

Jung Sim Jun

Kansas State University, United States

This study recruited 150 community dwelling Korean immigrant elders age 60 and over in the U.S. to understand the role of information and communication technology use on social support and life satisfaction by utilizing face-to-face interviews and purposive sampling methods. Respondents' ages ranged from 60 to 87, with a mean of 67.5 years ($SD = 6.96$) and the median of 65 with a mode of 60 years. Over 55% of the respondents were female, while 44.7% were male. Approximately 87% of participants were married and around 13% were separated, divorced, or widowed. In terms of the final education degree, 95.4% of the respondents had a high school degree/GED or more, while only 4.6% did not have a high school diploma/GED. Hierarchical multiple regression results indicated that high level of smartphone use ($\beta = .05, p \leq .05$) was significantly related to high levels of social support from family among Korean immigrant elders. High levels of smartphone use ($\beta = .05, p \leq .05$) and social media use ($\beta = .06, p \leq .05$) were significantly related to high level of social support from friends. In addition, high levels of social media use ($\beta = .02, p \leq .05$) was significantly related to high levels of life satisfaction among Korean immigrant elders. The findings provide important insights for social work practitioners and Korean community agencies to develop educational programs for information and communication technology use to improve social support system and quality of life among Korean immigrant elders.

Biography

Jung Sim Jun, PhD, MSW is an assistant professor of Social Work, Kansas State University, United States of America. She received Ph.D. in Social Work from University of Missouri-Columbia. Dr. Jun has taught Macro Practice and Research Methods courses and is interested in developing Global Social Work and Community Organizational Development courses. Her research interests include health disparities and health literacy among minority older adults; cancer health literacy and technology supported prevention programs for older immigrants; technology use and psychological well-being. Dr. Jun serves as Gerontology Faculty in the Center on Aging and Community Advisory Committee in the Social Work Program.

Kyoung Hag Lee, PhD, MSW, MPA is an associate professor in the School of Social Work at Wichita State University, United States of America. He received Ph.D. in political science and MSW from West Virginia University, Morgantown. His research interests include vulnerable minority older adults (immigrants/Native Americans), mental health, and health disparity. Dr. Lee teaches courses in international social work, social work research, and social welfare policy for undergraduate and graduate students. Dr. Lee has published over 40 journal articles, book, and book chapters and presented over 50 papers at national level conferences.

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The Right to Voluntary Discontinuation of Aging: A Global Perspective

Luciana Dadalto

Centro Universitário Newton Paiva, Brazil

The aging of the world's population is a phenomenon that has impacted different areas of knowledge. There are ongoing discussions in medicine about how to improve the quality of aging and how to secure more and more years of life for humankind. Studies on immortality, cryogenics, memory transplantation, anti-aging pills have taken over the international research. In this scenario an important juridical discussion arises: the right to voluntary discontinuation of aging. That is, the elderly and healthy can simply get tired of living and having lawful access to assisted suicide? Cases such as the Australian's David Goodall, who at age 104, without terminal comorbidity, performed assisted suicide with the help of the Swiss organization LifeCircle and, more recently, the 74-year-old Frenchwoman Jacqueline Jencquel, put the debate on the world agenda. Jacqueline states that "old age is an incurable disease, which is fatal in any case," and so will perform its life-assisted suicide at LifeCircle in January 2020. Philip Nitschke, president of Exit International, goes on to say that suicide should be a Human Right. While assisted suicide is banned in countries such as Brazil, it is allowed in some US states, Belgium, the Netherlands and Luxembourg only for patients with incurable and terminal illnesses. The interpretation of Swiss legislation has allowed the realization in people that have no terminal illnesses and deepened the debate on autonomy, especially in old age.

Biography

Luciana Dadalto had completed his master's degree with 25 years at the Faculty of Law of the Pontifical Catholic University of Minas Gerais and his doctorate with 32 years at the Faculty of Medicine of the Federal University of Minas Gerais. She has published more than 20 articles in renowned journals and has published five books. She is a reference in Brazilian law in studies on the right to die.

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Ensuring social care services and supportive family care in aging Japan

Hiromi Watanabe

Toyo University, Japan

Population aging is a major social issue facing contemporary Japanese society, with an aging rate in 2018 of 28.1% - the highest in the world.

The Japanese government is now promoting the socialization of care for the frail elderly, implemented under the slogan, "From Care by Family to Care by Society".

Long-Term Care Insurance (LTCI) was established in Japan in 2000, and is managed by local governments as a public care service insurance system covering elderly people over 65 years of age (and, in some cases, those aged 40-64 years). LTCI in-home services include home-help services, and home nursing. The LTCI law was reformed in 2006, when night-home help was set up. A second reform in 2012 introduced 24-hour routine home visits. But the rollout of this service has been not widespread: according to a national survey, it is implemented in only 596 (37.7%) of the total 1,579 local governments in Japan (Monthly reports of LTCI Service, Ministry of Health Labor and Welfare, November 2017). While these steps have improved of LTCI care system, fundamental innovation is required. There are three kinds of service: home-help service, night-home help, and 24-hour routine home visits, all of which remain fragmented.

In Japan, family care is still the main pillar for providing personal care, accounting for 58.7%, including those living together and living separately. This includes care-giving from a spouse (25.7%), children (21.8%), daughters-in-law (9.7%), and family members living apart (12.2%). In contrast, paid professional care from care service agents makes up only 13.0%. (Ministry of Health Labor and Welfare, 2016). Relative few people are fortunate enough to be living in a limited area with 24-hour social care available in the community.

In this presentation, I will explore a number of case studies about family care assisted and supported by 24-hour routine home visits. I will also discuss how the transformation to social care can be achieved through a system that provides social care while protecting the role of the family in caring for elderly family members. Finally, I will consider the question of how the country can adapt to its aging society with a focus on the role of bottom-up social care services and of family support in the aging society in Japan.

Biography

Hiromi Watanabe is Professor of Faculty of Human Life Design at Toyo University in Japan. She has 25 years teaching experience, holds a Doctoral Degree of Social Welfare, and is a registered nurse and certified care worker. As professor, her specialized field is elderly care and she runs a four-year long care work diploma program which prepares students to become care workers certified by the Japanese government. Her main research interests involve exploring 24-hour home care. As visiting professor at VIA University of College in Denmark during six months in 2013, she carried out research into the Danish home care system. In 2016 and 2018 she also joined the International Summer School on Integrated Care in the UK, and was a local committee member at the Aging & Society 2018: Eighth Interdisciplinary Conference in Japan.

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Grape Seeds and Exercise for the Aging Brain: An Approach towards Cortical Neuronal Protection and Cognitive Performance in Rats

S. Asha Devi
Bangalore University, India

Reduced cognitive ability is one of the indicators of normal brain aging. Studies have hitherto focused on dietary polyphenols and exercise for understanding their implications towards a healthy cognitive aging. This study was aimed to assess the impact of a natural product, grape seed proanthocyanidin extract (GSPE), and swimming training on the medial prefrontal cortex (mPFC), an area for working memory consolidation and known for its declined function with age.

Methods: Male Wistar rats of 4-(adult) and 18-(middle-aged) mo-old were administered orally with GSPE at 400 mg/kg body weight for 14 weeks along with swimming training. Following this, behavioral, immunohistochemical, fluorescent and stereomorphological techniques were undertaken to assess the role of the interventions on cognitive aging.

Results: GSPE supplementation and swimming training either individually or combined improved the acquisition and working memory with lessened AChE activity with age. Further, immunohistochemical and qRT-PCR evaluation showed elevated m1AChR density and mRNA synthesis in the mPFC of the intervened groups. Our results also evidenced lowered lipofuscin content, a product of lipid peroxidation in the anterior cingulate cortex (ACC) and prelimbic cortex (PrL) of the intervened groups. These responses were accompanied with improvement in the neuronal number and planimetric volume of the ACC and PrL compared to their controls. Hence, age-related neuronal loss in the mPFC may disrupt the acquisition and working memory and therefore working memory in particular is not totally restricted to only hippocampal subfields.

Conclusions: These observations indicate that the prefrontal cortex is subjected to age-related reductions in volume and neuronal number in the mPFC brain with concomitant reduction in working memory. However, GSPE and swimming training are effective non-pharmacological tools in protecting against cognitive decline in the middle-aged and improved cognition in the adult.

Biography

Prof. S. Asha Devi completed her Ph.D. thesis in aging and disease in 1984 at Bangalore University and joined the faculty in 1985. She was a JSPS post-doctoral fellow at Hiroshima University (1988-89) and John Sealy Fellow at University of Texas Medical Branch (Galveston, USA, 1993-94) and Tulane University Medical Centre (1994-95), New Orleans, USA). Dr. Asha was a Staff Fellow at Aberdeen University (2007) and Visiting Scientist at University of Tokyo (2005, 2012) to collaborate on Biogerontology projects. Her research largely focuses on mechanisms of aging at cellular and organ levels. Currently, she is working on biochemical and molecular tools in disease management at Bangalore University.

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Why Do We Age?

Alvaro Macieira-Coelho

French National Institute of Health, France

A living organism has different hierarchical layers of organization through which information flows with new emerging properties at each higher level of structure. Through the human life span there is a permanent structural reorganization in the different layers with the flow of information changing accordingly. Aging is the result of the reorganization progressing at different rates among the hierarchical layers. To give a few examples: the follicles in the ovaries start reducing from birth on; the thymus regresses from the time of adolescence; the weight of the brain decreases after 20 years of age; sexual activity declines progressively the most notorious decline starts on average between 45 to 50 years. Some gerontologists mingle these progressive physiological modifications with pathological processes¹, which is wrong. Living means continuous adaptation away from equilibrium leading to a decline in the probability of perpetuating the organism. The second law states that all systems spontaneously change in such a way as to decrease their capacity for subsequent change. A system driven by the utilization of energy has to follow the second law with entropy increasing inexorably². Aging is the result of the increase in entropy.

Biography

Dr. Alvaro Macieira-Coelho is a Research Director at the French National Institute of Health. He received an MD from the University of Lisbon, Portugal, and a PhD from the University of Uppsala Sweden. He made an internship at the University Hospital in Lisbon and was a research associate at the Wistar Institute in Philadelphia (USA) and at the Department of Cell Biology of the University of Uppsala (Sweden). He became Head of the Department of Cell Pathology at the Cancer Institute in Villejuif (France) and was a visiting Professor at the University of Linkoping (Sweden). He published 150 papers in professional Journals and 9 books on cancers and aging. He received the following awards: Fritz Verzar Prize (University of Vienna, Austria), "Seeds of Science" Career Prize (Lisbon, Portugal), Dr. HonorisCausa (University of Linkoping, Sweden), Johananof International Visiting Professor (Institute Mario Negri, Milano, Italy).

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Intrinsic and Extrinsic Epigenetic Age Acceleration is Associated with Hypertensive Target Organ Damage in Older African Americans

Jennifer A. Smith

University of Michigan, United States

Introduction: Epigenetic age acceleration, a measure of biologic aging based on DNA methylation, is associated with cardiovascular disease and mortality. However, little is known about its relationship with hypertension and subsequent target organ damage to the heart, kidneys, brain, and peripheral arteries.

Methods: We evaluated the associations between intrinsic (IEAA) or extrinsic (EEAA) epigenetic age acceleration, blood pressure, and six types of organ damage in a primarily hypertensive cohort of 1,390 African Americans from the Genetic Epidemiology Network of Arteriopathy (GENOA) study. DNA methylation from peripheral blood leukocytes was collected at baseline (1996-2000), and measures of target organ damage were assessed in a follow-up visit (2000-2004). Linear regression with generalized estimating equations was used to test for associations between epigenetic age acceleration and target organ damage, as well as effect modification of epigenetic age associations by blood pressure or sex.

Results: After adjustment for sex, chronological age, and time between methylation and organ damage measures, higher IEAA was associated with higher urine albumin to creatinine ratio (UACR, $p=0.004$), relative wall thickness (RWT, $p=0.022$), and left ventricular mass index (LVMI, $p=0.007$), and with lower ankle-brachial index (ABI, $p=0.014$). EEAA was associated with higher LVMI ($p=0.005$). Target organ damage associations for all but IEAA with LVMI remained significant after further adjustment for blood pressure and antihypertensive use ($p<0.05$). Further adjustment for diabetes attenuated the IEAA associations with UACR and RWT, and adjustment for smoking attenuated the IEAA association with ABI. No effect modification by age or sex was observed.

Conclusions: Measures of epigenetic age acceleration may help to better characterize the functional mechanisms underlying organ damage from cellular aging and/or hypertension. These measures may also act as valuable subclinical biomarkers for damage to the kidney, heart, and peripheral vasculature.

Biography

Dr. Smith received her master's degree in Public Health, master's degree in Statistics, and doctoral degree in Epidemiology from the University of Michigan. Broadly, her research investigates the relationship between genetic, epigenetic, and transcriptomic variation and age-related chronic diseases, including cardiovascular disease and cognitive decline. She is affiliated with the Michigan Center on the Demography of Aging (MiCDA), the Center for Midlife Science, the Center for Social Epidemiology and Population Health (CSEPH), and the Population, Neurodevelopment and Genetics (PNG) Program.

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Mentorship through Leadership: The Heart that Strengthens Aging Care Management

Edwin Cabigao

Generations Healthcare, USA

Learning Objectives:

- Discuss how being a mentor is cultivated and developed in geriatric care environment
- Describe mutually rewarding benefits of mentorship to mentee and mentor
- Cite examples of “Best Practice” in Mentoring
- Discuss how mentorship can influence staff to apply, stay, and grow within the geriatric healthcare organization
- Describe how effective mentoring program can improve geriatric care management

Geriatric care is one of the most stressful specialties in care profession. The demands of taking care of frail and sick older adults can lead to frustration and burnout at very high rates. Compassion is an attribute that is innate in this culture of aging care. Despite efforts to increase healthcare workers in geriatric care environment through training and recruitment, challenges remain in bridging the gap between knowledge and quality care. While the lack of trained healthcare workers in geriatric care settings remains a significant concern, implementation of effective strategies to build their skills, knowledge, and the systems needed to ensure quality of care delivery remains a challenge. These opportunities provide a need to identify and invest in effective strategies to better train and support health workers to deliver quality resident-centered care, a core component of geriatric care management. Effective mentorship can be a valuable and critical tool in not only recruiting and retaining care providers as well as improving the care these outstanding individuals provide.

Mentoring is a multidimensional empowering relationship that invigorates personal and professional growth. This presentation will explore the concept of mentoring in geriatric care and will present how being a mentor is cultivated and developed in geriatric care environment, its benefits to “mentor” and “mentee”, and examples of best-practice mentorship model based on a caring philosophy. Additionally, we will present how mentorship enriches geriatric care in all levels with deeper holistic emphasis on nurturing the person as whole. Effective mentorship begins with the organizational culture and when guided by honesty, compassion, and kindness, mentoring as a caring platform builds unfathomable connections and energizes geriatric care environments. Caring mentorship inspires new perspective about self, new opportunities, and a vast vision of possibilities for geriatric care management.

Biography

Dr. Edwin P.Cabigao, PhD, RN, is currently the Regional Director of Clinical Services at Generations Healthcare, Northern Region. He manages fifteen(15) skilled nursing facilities caring for aging residents/older adults averaging total of 1700+ beds. He was the Chief Nursing Officer at the Jewish Home for nine years. He received his Bachelor of Science in Nursing magna cum laude and Master of Arts in Gerontology with an emphasis in Long-Term Care Administration from SFSU; and Ph.D. in Healthcare Administration from Touro University. He received San Francisco State University (SFSU) School of Nursing Alumni of the Year Award in recognition of his commitment to service, mentorship, professionalism, and lifelong education in Nursing last May, 2013. In addition, he currently serves as a Legal Nurse Consultant and Nurse Expert Witness for numerous law firms in Arizona and California. Also, he recently accepted a position as Program Director for Centerpointe Learning Institute, a Vocational Nursing school in Bay Area.

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Policies for an Aging and Ability Impaired Society: Policy and Program Planning for Older Adults and People with Disabilities, Realities and Visions

Elaine Jurkowski

Southern Illinois University Carbondale, USA

Legislation through public laws and policy development undergirds innovations in practice within the field of aging. It is difficult to understand or utilize interventions, programs and services at any level regardless of country, without policies and legislation to set the stage and mandate. This presentation will discuss a variety of policies and programs within the North American Context, identify building blocks which undergird policy development and strategies to impact policy development and program planning. In the United States disability and aging policies are now found under one umbrella, in response to the newly developed Administration on Aging and Disability. This presentation will discuss a variety of policies which impact this target group within the areas of health, social security, caregiving, community resources, mental health, substance misuse, housing and adult protection. It addresses policy changes impacting health and disability services resulting from the Affordable Care Act (ACA) and other new legislation, and offers a pioneering approach to transforming policy into practice applications. This presentation will also discuss the impact of social, economic, scientific and philosophical paradigms that impact policy development within the aging arena. The presentation will conclude with a variety of strategies which can be used to impact policy development and program implementation.

Biography

Dr. Jurkowski has worked within the area of aging and disability throughout her professional and academic career. She earned her MSW from the University of Manitoba, Canada and PhD in Public Health and Social Policy from the University of Illinois Chicago (USA). She has written eight textbooks and numerous articles within the areas of aging, disability, access to health care and rural health disparities for older adults and people with disabilities. She has also served in various academic roles that promote the education of the geriatric workforce, including the Co-ordinator of SIU's Certificate in Gerontology program.

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Telemedicine in the Management of Osteoporosis in Brazil

Helio Bernardi

University of the State of Rio de Janeiro, Brazil

Osteoporosis and fractures due to fragility are highlighted by high public health costs and negatively impact on the quality of life of the elderly. One of the great challenges to be considered in Brazil is the aging of its population which has a reported prevalence of osteoporosis among post-menopausal women ranging from 15% to 33%. This country has large territorial extension that includes states with isolated municipal regions, a multiethnic population and an unequal supply of specialized medical services that hamper epidemiological studies and aging care management.

This situation encourages greater use of telecare, apps and decision support tools in this area. The spread of information and communication technologies, with the global use of mobile devices and broadband expansion, has had major repercussions in the area of medicine. This technological configuration has enabled the development of web systems and specific applications for health professionals and patients. A progressive web application (osteoguide) was developed to assist health professionals in the assessment and prevention of osteoporosis with content based on risk assessment tools available in the literature.

Despite the many treatments available for the prevention and management of osteoporosis, with effective reduction of vertebral and non-vertebral lesions, the majority of the Brazilian population still does not have access to early diagnosis of appropriate therapy for the disease. This also happens in other countries that identify that even patients who have suffered fractures due to fragility are not properly diagnosed and treated with the necessary preventive measures.

Biography

Helio Bernardi graduated in Medicine and specialized in radiology at Federal University of Sao Paulo (2002). He completed his master's degree at the University of the State of Rio de Janeiro focused on telemedicine and osteoporosis (2017). He is currently responsible for a women's mobile health unit and research on the areas of artificial intelligence and deep learning in image-recognition tasks to improve aging care management.

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Recent Advances in the Understanding of Molecular Mechanisms of Osteoarthritis

Hamza Malik Okuyan

Hatay Mustafa Kemal University, Turkey

Osteoarthritis (OA) is the most common degenerative joint disease and the major cause of disability in the elderly population. It is predicted that 18% of females and 10% of males who are over 60 years old suffer from symptomatic OA. Although OA is a common disease with an enormous socioeconomic burden, the mechanisms underlying the pathogenesis of OA are not completely elucidated. OA is characterized by all articular pathologies such as cartilage degeneration, synovial inflammation, and subchondral alterations. There are still no effective treatment options due to complex molecular pathogenesis in the onset and development of the disease. There are various factors that play important roles in the pathogenesis, including cytokines, signal pathways, and proteases. Articular cartilage and subchondral bone are affected by OA development and there is a close pathophysiological association between them. Maintenance of joint homeostasis is intimately associated with the balance between anabolic and catabolic signaling pathways. The physiological role of signaling pathways in processes such as extracellular matrix synthesis and balancing of bone remodeling make them a very attractive target. Agents that specifically block these signaling pathways may potentially be used in the development of targeted therapies for OA. A comprehensive understanding of the molecular signaling pathways that regulate anabolic and catabolic processes may contribute to the development of future therapeutic strategies for OA. This study focuses on the important molecular mechanisms that have been involved in OA pathophysiology and provides new insights into potential targets for the treatment of OA.

Keywords: Osteoarthritis, Signaling Pathways, Cartilage, Subchondral Bone

Biography

Hamza Malik OKUYAN received his Ph.D. from the department of medical biology and genetics at Gaziantep University in 2017. Dr. Okuyan is currently a lecturer and a postdoctoral researcher in Hatay Mustafa Kemal University. His current works focus on the pathophysiology of osteoarthritis as well as the molecular mechanism of novel vitamin k dependent proteins in human diseases. He conducts research on in vitro and in vivo in the department of medical biology.

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In Pursuit of Wellbeing as we Age

Farzaneh Daghigh

Philadelphia College of Osteopathic Medicine, United States

INTRODUCTION: “Portion distortion” is a common occurrence that hinders individuals’ ability to identify the proper portioning of foods when offered with choices. Proper control of food portion in health maintenance and weight loss has been shown to alter individual perception as it pertains to the portion of food. Additionally, behavior modifications and coping strategies to promote mindfulness can allow individuals the opportunity to recognize appropriate food selections and healthy choices. This study focuses on portion control as the pillar for nutrition education counseling and subsequent wellness intervention. The aim of this study is to promote better attitudes and behaviors toward food via community discussions and group learning, accountability of behaviors to others, and fostering an environment that encourages mindfulness of food selection, exercise, nutritional awareness, and self-motivation.

METHODS: Three cohorts of participants’ ages from 22 to 61 were engaged in a program designed with 10 weekly sessions and 5 subsequent biweekly sessions. Nutritional topics presented were designed to enhance participant nutrition knowledge and adherence to portion control strategies, and adjunctively help participants self-monitor their intake, nutritional choices, and physical activity. At intake visit, the structure of meetings was explained; anthropometric and biochemical measurements were obtained. Thereafter, participants were weighed at predetermined intervals to document weight-loss or gain. In an effort to maintain accountability and provide continued support, weekly email communications were sent to participants in the third cohort to report on progress and discuss any issues. Brief phone sessions were introduced at the completion of weekly group visits (between sessions 10 – 15) to maintain interaction with participants.

RESULTS: The majority of participants enjoyed weekly nutrition lessons, readings on nutrition topics, listening to motivational Ted Talks, and increasing their weekly physical activity. Weight-loss success ($\geq 5\%$ loss at 5 months) was significantly associated with self-motivation outside of meetings. This played a large role in the success or failure of any participant involved in a nutrition education intervention. The weight-loss corresponded with a decrease in BMI, percentage body fat, waist circumference, and blood pressure measurements in participants.

CONCLUSIONS: Embracing the freedom to eat large portions of food has resulted in a growing trend of unhealthy eating behaviors and obesity related co-morbidities. Even though the participants’ major goal was to improve their well-being as they aged, they were driven by an initial motivation of weight loss. The interventions showed that a key component to adherence of nutrition concepts and strategies learned was self-regulation, outside of the group setting.

Biography

Dr. Farzaneh Daghigh received her Ph.D. in biochemistry from Temple University, School of Medicine. Later, she conducted postdoctoral research at the DuPont-Merck Pharmaceuticals. She then joined the faculty at the Philadelphia College of Osteopathic Medicine as an Assistant Professor in 1998. Currently, she is a full Professor of Biochemistry in the Department of Bio-Medical Sciences at PCOM. Her research in basic sciences involves the study of arginine metabolism and its involvement in airway remodeling of asthmatic patients. Dr. Daghigh is the biochemistry content expert in the pre-clinical curriculum. She is the co-course director of the Culinary Medicine elective in which medical sciences meet cooking. She has served as a member of several committees, which spearheaded the curricular changes at PCOM. Dr. Daghigh passion is helping students understand, appreciate and integrate the basic sciences to remain as inquisitive physicians during their lifelong medical practice.

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The Formation of a Protocol for Secondary Prevention of Hip Fractures in the Elderly, In the Rehabilitation Department

Hagay Amir

Loewenstein Hospital, Israel

In recent decades an increased incidence of osteoporotic fractures has been observed worldwide. The first fracture is prognostic of future fractures. Intervention with appropriate therapy has been proven effective in the prevention of secondary fragility fractures and in reduction of related morbidity and mortality. Economic benefit of such treatment has been demonstrated by international publications. Nonetheless current data suggest that less than 20% of the patients receive pharmacological intervention. Factors that account for this include failure to identify and document fragility fractures, underestimating the need for treatment, lack of coordinated management and unclear therapeutic guidelines.

We created and implemented a pharmacological treatment protocol:

A "Fracture Liaison(FL)" prepares the necessary documentation to obtain coverage from the insurer. When approval is obtained, the FL monitors treatment delivery and follows the patient after discharge to guarantee continued care.

-Patients were categorized as "Naïve" (no previous treatment for osteoporosis) or "Treatment Failure" (fracture occurring under treatment with bisphosphonate for at least 6 months in the past year).

-Completing an etiological investigation to rule out secondary osteoporosis and adding treatment with calcium and vitamin D when indicated.

-Treatment with Denosumab or Zoledronic Acid for "Naïve" and Teriparatide for "Treatment Failure" patients.

In 14 months, osteoporosis treatment has been initiated for 59 patients which represents 74% of all fragility fractures patients. The implementation of our protocol is an economical and effective tool in addressing the gap in osteoporotic care delivery, which is crucial in preventing the secondary fracture, and associated morbidity and mortality in such patients.

Biography

Dr. Hagay Amir completed his M.D. degree at Ben Gurion University in Beer Sheva, Israel. Double-boarded in Orthopedic Surgery, and in Physical Medicine and Rehabilitation in Sourasky Tel Aviv Medical Center, Tel Aviv University. Completed a Masters of Health Services Administration degree in the Recanati School of Management in Tel Aviv University. Did a postdoctoral fellowship in the Rehabilitation Institute of Chicago, and the Kellogg School of Management at Northwestern University, Chicago, Illinois. He is the director of the Orthopedic Rehabilitation Department in Loewenstein Hospital, Rehabilitation Center in Raanana, Israel.

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Effect of 4-Month Exercise Training and Omega-3 Supplementation on the Level of Depression Symptoms in Elderly Women

Dadová Klára

Charles University, Czech Republic

Introduction: Depression disorders in the elderly are relatively frequent and serious interdisciplinary problem. Previous research showed that regular physical activity (PA) has a positive effect on milder forms of depression and anxiety. However, effect of a combination of PA and omega-3 supplementation on depression symptoms has not been demonstrated yet. The aim of this study was to assess changes in the level of depression symptoms after 4-month exercise training only and in a combination with omega-3 supplementation.

Methods: 52 healthy sedentary women of age 65-80 (mean age 70.3 ± 3.9 years, BMI 27.2 ± 3.9 kg/m², VO₂max 19.4 ± 3.6 ml/kg/min) were enrolled to the study. They were assigned to an exercise plus supplementation group (Calanus, N=27) or to exercise only group (placebo, N=25). The exercise intervention program contained functional circuit training (twice a week, 45 min plus 15 min of stretching balance training) and Nordic walking (once a week, 60 min) for 16 weeks. Level of depression symptoms was assessed by the Czech version of 15-item Geriatric Depression Scale - GDS (Yesavage, 1986) both before and after the program. This study was a part of EXODYA (Effect of Exercise training and Omega-3 fatty acids on metabolic health and Dysfunction of Adipose tissue in elderly) research project (nr. AZV 16-29182A).

Results: Majority of women showed normal results (0-5 points). In the beginning of the study, 10 % of the sample showed higher level of depression symptoms (≥ 6 points). After the intervention, only 6 % of women showed higher level of depression symptoms. Results showed statistically significant decrease of GDS in the whole sample (2.17 ± 2.5 vs. 1.5 ± 1.9 points, $p < 0.01$, N=52). Both groups also decreased the GDS independently ($p < 0.05$), however no difference was found between the groups.

Discussion and conclusions: Older adults are more sensitive to feelings of loneliness and isolation, which may be the result of life events but also of lower performance connected with aging. Therefore, it is important to apply preventive strategies aimed to maintain functional ability and mental state. These strategies may also involve social support and a sense of belonging during group physical activity. The study confirmed positive effect of exercise on depression symptoms after 4-month intensive program. An additive effect of omega-3 supplementation has not been confirmed.

Keywords: older age, circuit training, Nordic walking, depression

Biography

Dr. Dadová is the Head of Department of Adapted Physical Education and Sports Medicine at Faculty of Physical Education and Sport, Charles University in Prague. Her academic interest has focused especially on physiotherapy and health-enhancing physical activity for people with special needs including elderly. She received her PhD in kinanthropology in 2007. She has participated on research projects aimed at exercise therapy for cardiac patients, benefits of exercise for elderly, exercise adherence and exercise-related metabolic changes. She has worked as an instructor of health-enhancing physical activity courses for elderly since 2001. She also leads courses for caregivers who are aimed at home exercise of elderly people.

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The Possible Role of Nutraceuticals in Delirium Prevention

Alessandra Coin
University of Padova, Italy

Introduction: Neuro-inflammation can be considered in the pathogenesis of delirium, which is characterized by an acute change in mental status along with diminished awareness, deficits in attention, memory, language and/or perception. Among the possible causes of delirium, authors identified minor brain reserve, dehydration, polypharmacy and malnutrition.

Methods: A PubMed, Scopus, and Web of Science search was performed to identify clinical trials and previous reviews that investigated the role of nutraceuticals in delirium prevention. Titles and abstracts were screened by two referees independently; then, potentially relevant studies were reviewed in full to determine their validity/quality. The references of the selected articles were considered for any additional paper that fits the search criteria.

Results: Nutrients are fundamental for cellular function and metabolism, so that their redundancy or deficiency can trigger a cascade of cellular events in the brain, culminating in possible cognitive impairments and in delirium. Despite an empirical rationale supporting nutraceuticals activity in neuro-protection and prevention of delirium, only a few intervention studies still exist. Nutraceuticals protect individuals from delirium through both a direct and indirect action. On the one hand, in fact, functional food can control neuro-inflammation (i.e. thanks to its antioxidant properties) and malnutrition; on the other hand, nutraceuticals could prevent and stabilize global cognitive functioning by reducing the risk of developing delirium.

Conclusions: The aim of this work is to shed a light on the controversial evidence that, respectively, corroborate and discourage the use of nutraceuticals in delirium syndrome.

Biography

Dr. Alessandra Coin completed her Degree in Medicine at the University of Padova - Italy, 16 October 1996, Post-degree in Geriatrics at the University of Padova, in 2000 and PhD in Experimental and Clinical Rheumatology and Geriatrics at the University of Padova, in 2004.

She is a Research Assistant and Clinical Fellow at the Geriatric Clinic, Department of Medical and Surgical Sciences (DIMED), University of Padova – Azienda Ospedaliera Padova, since 2003 and Author of 80 publications in national and international journals.

She had Previous experience as Co-investigator in pharmacologic multi-centers international randomised double-blind, placebo-controlled clinical trials in the field of ageing, dementia, obesity and osteoporosis.

DAY 1

Posters

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Age or Environment? What is Determinative in How Homeless People Spend Their Time after the Age of 55?

Jan Vane

University of West Bohemia, Czech Republic

As people grow older, their action radius as well as sense of belonging tend to shrink to smaller geographical areas and places. It also applies to the homeless people. But there are two more important factors to add: time dispositions and living in the street or at the shelter house.

Using unique data gathered in our own research of homeless people, we will explore whether it is either age or environment what is determinative in how homeless and roofless people (definition based on the European Typology on Homelessness and Housing Exclusion) spend their time ensuring livelihood and doing their free time activities. We focus primarily on the homeless and roofless people who are after the age of 55 and are excluded both by age and space.

We conducted data collection in the city of Pilsen in the Czech Republic on 8th February 2014. We visited 79 temporary shelters where homeless and roofless people slept overnight. The data collection included a census and was a single action in institutions providing shelters and in pre-selected locations in order to reach homeless and roofless people in places of their overnight dwell. When interviewing homeless people in the streets we cooperated with the city police. We chose the month of February on purpose as it is the coldest month in the Czech Republic and the number of interviewed people was the lowest possible number of all the homeless and roofless people in the city (we assumed that people having a possibility of living in any type of housing would not be in the streets due to the harsh weather). Thus we only interviewed those who sleep rough and fall into the most endangered category of homelessness and avoided interviewing every possible type of homeless people (e.g. in insecure or inadequate housing).

Biography

Jan Vane is an Assistant Professor at the Department of Sociology at the University of West Bohemia in Pilsen. His research interests focuses on sociology of religion and social theory

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Investigation of Relationship between Synovial Fluid Levels of Interleukin 6 and Severity of Knee Osteoarthritis

Hamza Malik Okuyan

Hatay Mustafa Kemal University, Turkey

Osteoarthritis (OA) is the degenerative joint disease and characterized by cartilage loss, osteophyte formation, subchondral sclerosis, and synovial inflammation. OA is a significant cause of disability, affecting millions of people worldwide. Although the molecular pathogenesis of OA is not fully understood, recent studies have emphasized that some factors such as inflammatory cytokines may have played an important role in OA development. Especially, Interleukin 6 (IL-6), as a pro-inflammatory cytokine, has been implicated in the degradation of cartilage. Emerging evidence suggests that plasma IL-6 levels in OA patients were positively correlated with radiographic severity of knee OA. Besides OA patients have higher levels of IL-6 in synovial fluid than the healthy control group. However, the exact role of IL-6 in OA remains unclear. In the current study, we aimed to investigate the relationship between levels of IL-6 in synovial fluid and severity of knee OA. Levels of IL-6 in synovial fluid of OA patients were measured with ELISA. We used the Kellgren-Lawrence (K-L) grading system for evaluating the severity of OA. Our results showed that there was no relationship between synovial fluid levels of IL-6 and KL score. In conclusion, synovial fluid IL-6 levels in OA cannot reliably represent the severity of knee OA. Also, further studies are needed to understand the role of IL-6 in the pathophysiology of OA.

Keywords: Osteoarthritis, IL-6, Cytokine, Synovial Fluid

Biography

Hamza Malik OKUYAN received his Ph.D. from the department of medical biology and genetics at Gaziantep University in 2017. Dr. Okuyan is currently a lecturer and a postdoctoral researcher in Hatay Mustafa Kemal University. His current works focus on the pathophysiology of osteoarthritis as well as the molecular mechanism of novel vitamin k dependent proteins in human diseases. He researches on in vitro and in vivo in the department of medical biology.

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Male Breast Cancer in the Elderly Belonging to Lower Income Group in Kolkata

Esha Chakravarty

Calcutta Metropolitan Institute of Gerontology, India

Male breast cancer is a rare type of cancer constituting around 1% of male malignancies. We studied cases of 21 elderly (aged>60) patients diagnosed with breast cancer with respect to age of onset, treatment choices, access to care, ability to perform activities of daily living (ADL) from CMIG, a centre on ageing in East India. All 21 patients belonged to lower income group in society and the study was conducted in a 5 year period of 2013-2018. Primary symptom leading to diagnosis was self detection of lump and the median time of diagnosis from onset of symptoms was 6 months. 20 of the 21 patients were diagnosed with Stage III or Stage IV breast cancer and only one patient was diagnosed with Stage I. The average age of diagnosis of the patients was found to be 69 years. The main method of treatment was surgery for patient diagnosed in Stage I and surgery followed by chemotherapy and radiation therapy for the rest. None of the patients underwent hormone therapy and information regarding presence of hormone receptors was not available in all cases. 5 of the 21 cases reported metastasis- four in bone and one in lung. Spouse or adult children were found to be caregivers and no access to trained caregivers or counsellors. All patients showed moderate decline in motor function and ADL after surgery and susceptibility to fall or injury. Free hand exercises showed slight improvement. Further studies can attract state funding, influence health policies for lower income groups.

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Quality Of Life and Associated Factors: A Population-Based Study with Elderly Persons in the Sertão of Ceará-Brazil

Deborah Santana Pereira
University of Ceará, Brazil

Introduction: The aging world population is increasingly evident by the increase in longevity. Healthy aging and quality of life have become the major desire of contemporary society. The purpose of this paper is to analyse the quality of life and associated factors, as perceived by elderly residents in the central hinterland region of the State of Ceará, Brazil. Method: This cross-sectional, household-based study with stratified sampling of 372 individuals. It was used a characterization questionnaire with socio-demographic, health-related quality of life questions; the WHOQOL-bref and the International Physical Activity Questionnaire – (IPAQ long version). The SPSS version 16.0 was used for descriptive and inferential statistics, adopting a significance level of 5% ($p < 0,05$). The procedures carried out comply with international standards for experimentation with humans (Declaration of Helsinki-1975).

Results: Most elderly individuals were female, aged 60-69 years old, sedentary, with a low education level and an income of up to minimum wage. Despite describing their quality of life as "good", most of the elderly persons questioned do not have good social and leisure habits, especially the women, who reported a high prevalence of hypertension, diabetes and osteoporosis. In terms of quality of life, the mean of the total score was 63,45(+2,04), and the psychological domain (69,62+2,18) had the highest, and the environmental domain (56,26+2,17) had the lowest mean score; the negative feelings (79,23+0,89) subjects had the highest, and the recreation and leisure (39,99+1,05) subjects had the lowest mean score of facets. For the majority, the environment that involves physical and social aspects, transit and security preclude the adoption of an active lifestyle.

Conclusions: Understanding the profile of this population will allow the creation of more appropriate actions for promotion the quality of life for elderly people from arid and remote regions.. The environmental domain, the subject's negative feelings and the absence of recreation and leisure negatively influenced their overall quality of life, indicating the importance of actions and of the creation of their healthy environments.

Biography

Graduation in Physical Education by the Federal Institute of Education, Science and Technology of Ceará. Post graduated in Exercise Physiology by the Faculdade Integrada de Patos - FIP. Master in Collective Health, University of Fortaleza - UNIFOR. Student of the Doctorate in Collective Health from the State University of Ceará - UECE. She is currently a Higher Education teacher at the IFCE, in the Physical Education Course. Has experience in the areas of Physical Education and Collective Health, working mainly on the following topics: Health Promotion and Quality of Life of the Elderly; Physical Activity, Exercise and Health.

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Effects of Resistance Training on Inflammatory Biomarkers in Sarcopenic Obesity Elderly Women: A Randomized Controlled Trial

Crisieli Maria Tomeleri
Londrina State University, Brazil

Introduction: Sarcopenia involves age-related decreases in muscle strength and muscle mass, leading to frailty and disability in elderly people. When combined with obesity, it is defined as sarcopenic obesity (SO) resulting in an increased risk for functional limitations and metabolic disorders. Objective: To investigate the effects of resistance training (RT) program on body composition and inflammatory biomarkers in SO elderly women.

Methods: A randomized, controlled trial with two parallel arms (NCT03370211) was carried with thirty-seven SO [which was defined by the simultaneous presence of sarcopenia (if appendicular lean soft tissue (ALST) <15.02 kg), and obesity (percentage of body fat \geq 35%)], elderly women that were randomly allocated into: training group (TG, n=18, who performed 12 weeks of supervised RT program) or non-exercising control group (CG, n=19, did not perform any type of physical exercise during this period). Body composition (ALST and total body fat), and blood sample measurements (after a 12 h fasting) for the determination of: factor necrosis tumoral alpha (TNF- α), interleukine-6 (IL-6) and interleukine-10 (IL-10), were performed pre- and post-training. Two-way analysis of covariance (ANCOVA) for repeated measures was applied for comparisons, and Bonferroni's post hoc test was employed to identify the mean differences ($P < 0.05$).

Results: Twenty-nine SO elderly women completed the experiment (TG n=14; CG n=15). The TG showed a significant ($P < 0.05$) decrease in the total body fat (absolute: TG= -5.1% vs. CG= +2.1%, and relative: TG= -8.6% vs. CG= +1.4%), TNF- α (TG= -14.3 % vs. CG= +9.7%), IL-6 (TG= -22.6% vs. CG= +21.2%). In contrast, ALST (TG= +3.3% vs. CG= -5.9%), and IL-10 (TG= +50.0% vs. CG= -45.6%) increased in TG compared to CG ($P < 0.05$).

Conclusions: Twelve-weeks of RT promote improvements on body composition and inflammatory biomarkers in SO elderly women.

Biography

PhD in Health Sciences, post-doctoral researcher in the area of aging and gerontology on project Active Aging Longitudinal Study. She is a member of the Metabolism, Nutrition, and Exercise Laboratory (GPEMENE / UEL/BRAZIL). Has experience in Collective Health, Health Sciences and Physical Education, working mainly in the following subjects: physical activity, sarcopenia, metabolic syndrome, inflammation markers, metabolomics, cardiovascular risk factors, woman's health, aging, obesity/ weight loss, resistance training, and physical exercise prescription for special populations

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Hip fracture and Psychotropic Drugs

Sonia Jiménez-Mola
University Hospital of León, Spain

Psychoactive drug (anxiolytics, antidepressants and neuroleptics) may increase the risk of falling because of sedation, impaired balance and reduced cognition. We aim to investigate the intake of these drugs in old patients admitted for hip fracture in our Hospital and its relationship with evolution.

METHOD: We enrolled 534 patients with hip fracture, aged 75 years or older in an Orthogeriatric Unit of the University Hospital from León (Spain), between December 2013 and November 2014. Variables: sex, age, type of fracture, place of residence, functional and cognitive baseline and discharge status, in-hospital mortality, presentation of delirium and taking of psychotropic drugs. The possible relationship between these variable was analyzed. SPSS®, v.22.0

RESULTS: Among the 534 participants, 75.4 % were women. The mean age was 86.1 ± 7.3 years (75-105 years). (93%) underwent surgery. 69% had Barthel > 60 and 64% walk independently. 26% live in nursing homes prior to fracture. Only 132 (25%) had a previous diagnosis of dementia. They take benzodiazepines 35%, antidepressants 32% and neuroleptics 9.7%. All were related ($p < .001$) with worse ambulation at admission and discharge ($p < .01$) No relation was found ($p > .05$) with in-hospital mortality or with the presentation of delirium.) Antidepressants were more frequent in women (35% vs. 23%) and Benzodiazepines were more frequent (49%) in the nonagenarian group ($p < .001$)

CONCLUSIONS: The intake of benzodiazepines is high in the group of nonagenarians. Patients with psychotropic drugs at admission have worse functional and cognitive status and also worse ambulation.. Geriatric assessment during hip fracture admission improves the prescription of these drugs.

Biography

Dr. SONIA JIMÉNEZ-MOLA is from the Hospital Universitario de León, Spain. she have a skills in Geriatric Assessment, Hip fracture, Osteoporosis, Cognitive impairment.

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Intraoperative Hemofiltration for Removal of Circulating Advanced Glycation End-Products - Potential Influence on Inflammation and Aging

Veronika Piskovatska
University hospital Halle, Germany

Introduction: Advanced glycation end products (AGEs) play important role in aging and age-related conditions, causing impairment of protein structure and function, their aggregation and accumulation. These molecules can interact with receptors to AGEs (RAGE) and activate numerous pro-inflammatory and pro-fibrogenic signaling pathways.

Methods: The aim of the work is to evaluate removal of AGE-modified proteins from human plasma, using hemofiltration (HF) polymer-based device, and to identify cellular responses towards the retained proteins. Plasma samples and polymer material from HF devices were obtained in a subset of patients with infective endocarditis, undergoing heart valve surgery with concomitant HF procedure. AGE-modified proteins were isolated and characterized by immunological methods and LC-MS/MS.

Results: Adsorbent system allows elimination of the wide range of protein modifications - carboxymethyllysine, argpyrimidine, methylglyoxal-derived hydroimidazolone-1, pentosidine, and carbonyls. According to the results of LC-MS/MS, apart from extracellular proteins, significant amounts of modified intracellular proteins were adsorbed during the HF procedure. Isolated modified proteins tested in cultured endothelial cells led to an increase in expression of RAGE and increased production of pro-inflammatory cytokines.

Conclusions: Adsorbed AGE-modified proteins induce increased pro-inflammatory signaling, implicated in aging and pathogenesis of age-related disorders. Broader identification of the AGE-modified proteins, isolated via HF improves understanding of their role in pathogenesis of inflammatory diseases and age-related disorders.

Biography

Veronika Piskovatska has graduated from Odessa national medical university (Odessa, Ukraine) in 2012. In 2014 she has defended her master thesis, addressing the role of blood pressure variability in the onset of hypertension in young healthy young males. Since 2017 she is working on PhD project, based in the department of heart surgery in the university clinic of Halle, Germany. The aim of the project is removal of glycated proteins from circulation with perspective to translate this research into clinical application.

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Caregivers Attitudes and Adherence towards a Connected Health Platform for Dementia Home Care

Estefania Guisado-Fernandez
University College Dublin, Ireland

Background: When designing Connected Health (CH) solutions for home care it is vital to focus on usability and user experience to ensure that technologies are easy to use and meet users' expectations and needs. Generally, the usability and user experience tests are conducted during a short-term exposure, which does not allow a true understanding to how the technology can help with the home caring tasks.

Research Aim: We aim to investigate informal caregivers' feedback on the utility and usability of a CH monitoring platform for People with Dementia (PwD) during a period of extended use in the natural living context, and to understand how this was related to adherence patterns.

Methods: Informal caregiver's feedback about the CH platform, usability, and the impact of short-term versus long-term exposure were investigated through semi-structured individual interviews at the beginning and end of a 6-month deployment in the home care setting. Informal caregivers' adherence to the CH platform was analyzed from their daily platform utilization during the deployment time.

Results: 11 informal caregivers agreed to participate. There was a change in the caregiver's opinions about the CH platform between the short-term and the long-term exposure feedback. The caregiver's initial impressions about what the CH platform could offer them for the PwD home care did not correspond with what they found that the CH platform could provide them following the long-term exposure. Adherence to the CH platform was quite low and similar between all participants.

Conclusions: More qualitative and quantitative long-term exposure research involving PwD and their informal caregivers testing CH care technologies at home has to be conducted for a truly understanding how CH technologies can help and be used in the daily home care for this population.

Keywords: Dementia, informal caregiver, connected health, usability, user experience.

Biography

Estefanía Guisado-Fernández is a Medical Doctor specialised in Physical Medicine and Rehabilitation, currently working as a researcher at the University College of Dublin (Ireland). The project she carries out is called "CHES: Connected Health in Sustaining Home Stay in Dementia", under the supervision of Professor Brian Caulfield. The result of her work in this project will be used for the writing of her doctoral thesis dissertation, focused on the use of telemedicine in chronic home patients and their informal caregivers.

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Building Interprofessional Collaboration for Older Adults Living with Alzheimer's disease or Dementias and Multiple Chronic Conditions through a Problem Based Learning Approach

Elaine Jurkowski

Southern Illinois University Carbondale, USA

The objective of this quantitative study was to determine the effectiveness of a prescribed protocol, based on the tenets of an enhanced model of care, on family satisfaction in the acute care setting. The needs of families have been well documented in the literature. Data were collected from two critical care units of a large academic medical center, where inconsistencies in visitation and exclusion of family members from participation in patient care existed. The Patient and Family Access Model of Care (Brown, 2009) served as the foundation for engaging families through open visitation, collaboration with members of the healthcare team, information sharing, and structured family activities. Satisfaction was measured using the Critical Care Family Satisfaction Survey (CCFSS) (Wasser et al., 2001). Significant differences were found for family encouragement, perceived quality of care, availability of the nurse, spiritual support, and adequate visiting hours between the two groups. Family members with previous experience in the critical care setting had an additional finding of privacy needs being met for the treatment group. Results are easily generalized to other patient populations and settings, as family resilience to stress and illness are dependent on family functioning and past healthcare encounters. Further research is recommended to determine family satisfaction and engagement in care and improved patient outcomes.

Biography

Dr. Jurkowski completed her Master's in Social Work Degree at the University of Manitoba in 1987, and her doctorate in Public Health from the University of Illinois at Chicago in 1997. She joined the faculty at Southern Illinois University Carbondale in 1998 and has served as the academic partner to several community based research pilot initiatives, including the Mental Health and Aging (MHASI) initiative to provide geropsychiatric services to older adults and their families in a rural Midwest state. Dr. Jurkowski is currently a professor in the School of Social Work at Southern Illinois University Carbondale, located in the United States. She has written several textbooks, for health professionals including public health, social work and community medicine.

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A Pilot Evaluation of Mindfulness-Based Cognitive Therapy for Pre-Manifest Individuals with the Huntington's disease Gene– Findings at One Year

Jane Simpson

Lancaster University, United Kingdom

Introduction: Psychological difficulties such as low mood, anxiety and irritability are common in people with the Huntington's disease (HD) gene. Mindfulness based cognitive therapy (MBCT) may offer an alternative or additional approach for reducing distress. The aim of this study was to see if MBCT was an acceptable and useful way of alleviating psychological distress for pre-manifest people with the HD gene and to investigate these outcomes up to one year post the intervention.

Methods: An 8 week course of MBCT was completed by 12 pre-manifest participants in two groups. Participants were then invited to attend 3 reunion meetings over the year in which the principles of the course were revisited. Quantitative measures of anxiety, depression, stress and mindfulness were administered pre-course, post-course, 3 months post-course, and at one year post-course. Qualitative data about participants' experiences were collected immediately after the course and at one year.

Results: Significant changes in some aspects of mindfulness (particularly non-judging and non-reacting) were seen at all points in follow up, although little change was seen in measures of distress. Interviews at immediate follow up suggested that participants found the course acceptable and useful. Most participants attended the reunion meetings and found these helpful both for supporting their mindfulness practice and for maintaining connection with other pre-manifest individuals. Participants were still using some aspects of mindfulness in their daily lives at one year and for some it had resulted in marked changes in their well-being.

Conclusions: Learning mindfulness is possible and can be beneficial for pre-manifest individuals, with some learning and benefits retained after a year. Larger samples are needed including those with higher baseline depression, to show if it can significantly reduce psychological distress. Some recruitment difficulties were encountered and different ways of delivering the courses may need to be considered.

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Nifedipine Treatment Improves Muscle Function in Aged Mice Restoring Normal ATP Release

Andrea del Campo Sfeir

Bernardo O'Higgins University, Chile

Among the physiological changes associated with aging, the ones affecting skeletal muscle are a frequent cause of disability in the population. It has been shown that extracellular ATP acts as an autocrine stimulus in this tissue; however, the effects of ATP during the aging process have not been investigated. Our results show that there is an increase in the basal levels of extracellular ATP in muscle fiber cultures of aged mice. In this model group, Nifedipine was injected at a dose of 1 mg / kg for 10 days and tests were performed both to evaluate muscle function and extracellular ATP levels through a luciferin/luciferase kit. We detected that mice older than 18 months injected with Nifedipine, have a recovery of muscle function and a normalization of basal levels of extracellular ATP. Since this pharmacological treatment has also become an effective factor in models of muscular dystrophy, our results open new targets for the therapy of neuromuscular disorders.

Biography

Andrea del Campo entered the career of Chemistry and Pharmacy at the University of Chile in 2002, she obtained the professional title of Pharmaceutical Chemist in 2008. She Obtained her PhD. in Pharmaceutical Sciences. In 2013 she obtained the degree of Doctor in Cs. Pharmaceuticals granted by the University of Chile. She completed her post-doc research at the Faculty of Medicine of the University of Chile focusing on the relationship between the signaling of mitochondrial morphology and aging. Currently she is the Director of the School of Chemistry and Pharmacy at the Bernardo O'Higgins University where she continues her research, having awarded projects of national renown.

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Keynote Speakers

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Nanotechnology and Aging Research

Nuno Ricardo Martins

University of California Berkeley, USA

Biography

Dr. Martins is a polymath, a researcher, and an entrepreneur. As a polymath, Dr. Martins usually likes to make use of different subject areas, drawing ideas and concepts from different bodies of knowledge to solve specific problems. As an illustrative example, Dr. Martins' previously published papers involve several fields of research, such as: quantitative neuroscience, nanotechnology, nanomedicine, robotics, among others. As a researcher, Dr. Martins is interested in any scientific and engineering development with potential applications for aging research and human healthy life extension.

Dr. Martins is an affiliated senior scientist at the Lawrence Berkeley National Laboratory and a senior researcher at the Center for Research and Education on Aging, an interdisciplinary research center at the University of California Berkeley.

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Falls in the Elderly: Causes, Injuries & What to Do

Canan Birimoglu Okuyan

Hatay Mustafa Kemal University, Turkey

Falls are an important public health problem in geriatric population and affecting millions of people every year. Falls are often associated with poor quality of life and cause various injuries, from a minor scrape to more severe problems. The cost of falls-related injuries to the health care system is quite high. Falls in older adults are increased due to reasons such as weakness, balance problems, and environmental factors. Known effective fall prevention strategies for older individuals are comprehensive and multifaceted interventions are necessary to prevent falls. Walking, muscle and balance strengthening exercises and vitamin D and Ca supplementation is critical in preventing falls in the elderly. Furthermore, health care professionals play an essential role in preventing falls. They contribute to the prevention of falls by screening elderly individuals in terms of the risk of falling, managing medications related to falls, and suggesting preventive strategies such as exercise.

Keywords: Nursing homes, older adults, Falls, Injuries.

Biography

Canan Birimoglu Okuyan received her PhD in the Department of Public Health Nursing, Gazi University. During PhD, she has studied in the Turku University of Applied Science in Turku/Finland. She worked as a visiting researcher at the Manchester Metropolitan University in Manchester/UK. She is currently an Assistant Professor in the Department of Public Health Nursing at Hatay Mustafa Kemal University. Her research interests include public health, public health nursing, geriatric and gerontology.

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Development of Canis Familiaris as a Model of Human Aging

Kimberly Ann Greer

Prairie View A&M University, United States

For many years, scientists relied upon a very limited number of aging laboratory model. It has been recognized, however, that the laboratory mouse does not adequately reflect the natural aging occurrence. Important consideration was given to developing *Canis familiaris* as a model because we depend upon models to yield valuable information relevant to our ultimate interest, human aging. The genetic structure of modern dog breeds offers unique opportunities for finding genetic variants contributing to aging differences within and among breeds. Extreme bottlenecks in breeds and targeted selective breeding have created structures with extended linkage disequilibrium (Sutter et al., 2004) that have been successfully utilized for disease gene identification (Peterson et al., 2010). While some breeds are highly inbred, others include levels of outbreeding similar to human populations. Lastly are the important characteristics of the canine model system: they share the human environment and their medical and genetic records are annotated for many generations, thereby facilitating extensive history for each animal. With naturally occurring medical conditions often identical to those in the human, we have established the baseline parameters for utilizing the dog as the human aging model. Our longevity characterization of over 77 independent breeds first established the correlation between size and lifespan (Greer et al., 2007). The analysis of IGF-1 levels have been shown to be associated with longevity parameters (Masternak et al., 2010) yet offer additional insight into age effects with hormone presence and/or absence. Collectively, our work laid the foundation for the currently expansive studies into utilizing the dog as a test model for potential longevity extension substrates.

Biography

Dr. Greer received her Ph.D. from Texas A&M University. Following a postdoctoral study period under NIH F32 funding sponsorship award from NIA, Dr. Greer served in faculty positions at Texas A&M University, Indiana University East, North Dakota State University, and currently Prairie View A&M University. Having worked for many years on genetic analysis of inherited neurologic disorders, she now focuses her efforts on canine aging. Dr. Greer published the first demonstration that larger dog breeds have significantly shorter lives than the smallest dog breeds. While the aging characterizations continue in Dr. Greer's laboratory, she most enjoys training dogs for athletics and service (outside of the lab).

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Constipation/Silent Constipation: An Under/Never Addressed, But Potentially Lethal Entity

Naznin Esphani

University of Maryland School of Medicine, United States

Introduction: “Constipation is often NOT considered a serious complaint. Patients with constipation/silent constipation may present in myriad ways: 1.Gastrointestinal (G.I.), and/or 2.Extra-G.I. manifestations/complications due to excessive colonic fecal retention. Clinicians may not identify or comprehend the potentially catastrophic complication(s) of untreated or under- treated excessive colonic fecal retention. Addressing and management of constipation appropriately is by itself distinctive practice.

Methods: A retrospective study at a community hospital, on 100 consecutive patients who had presented with gastrointestinal symptoms, and who had colonic fecal stool score of > 7/12, on plain abdominal x-rays as per initial blinded, independent review of the imaging study by author were included in the study. Patients who had been cognitively impaired were excluded from the study. Patients were delineated into 9 treated categories/subcategories based on if they were treated with opiates, or no opiates.

Results: The study revealed that only 46% patients had complained of constipation; 56% of radiologists had reported excessive colonic fecal retention. The p value was < 0.001 for comparing the plain abdominal x-rays positivity for excessive colonic fecal retention by the author versus the radiologists report. Although, overall 64 patients (64%) appeared to be acutely treated with laxative and/ or stool softener (at least a single dose); but when the treated patients were dissected into different treated categories, it became evident that only, 24 patients were probably adequately treated, and of these, majority of the patients (20 patients) were those, who were not receiving opiates.

Conclusion: The study results reflect s that majority of cognitively intact patients may not complain of constipation, although they maybe silently developing excessive colonic fecal retention. Imagine the cognitively impaired aging population, in whom an unrecognized/unaddressed epidemic of silent constipation maybe brewing! Addressing constipation/silent constipation appropriately may require a well- trained interdisciplinary approach in order to prevent potential catastrophic complications, and /or death.

Biography

Dr. Naznin Esphani, MD, is an Internal Medicine specialist in Easton, Maryland. She graduated from Kilpauk Medical College, Tamil Nadu Dr. Mgr Medical University in 1989. She is affiliated with many hospitals including University of Maryland Medical Center, University Of Md Medical Center Midtown Campus.

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Advancing holistic learning and wellbeing for older worker's

Domini Bingham

UCL Institute of Education, UCL, United Kingdom

Working at the intersectionality of diversity, equality and lifelong learning my research and case studies considers the future of workplaces with ageing populations and dips into praxis of action of educational gerontology.

Retirement is a strong paradigm but people across many countries are starting to re-think how they approach their later years. Instead of viewing retirement as a total stop or withdrawal, middle aged and older people are reflecting on how they might invest in themselves, and how might their workplace do similarly to extend working lives through holistic approaches to learning, recognizing that older workers might approach the workplace in a different way to younger workers and have different generational needs for wellbeing than younger generations.

Many OECD countries need to increase the scale and content of their adult learning systems to support people to adapt better to the future world of work (OECD 2019).

In an era of extended working lives and rapid demographic and digital shift, where only two in five adults, that is 41% across OECD countries participate in learning and training in any given year (OECD Survey of Adult Skills 2016) is a reality that needs confronting to recognize that older workers are assets, should invest in themselves and be invested in and are not a grouping that requires managing, as often occurs. This presentation, focused on research into older worker's learning, presents the possibility of re-imagining learning opportunities in a time of intense demographic shift and digital change.

Biography

Dr. Domini Bingham is Lecturer in Educational Leadership at UCL Institute of Education and published author. She holds a Doctorate in Education and MA in Lifelong Learning. She is passionate about adults achieving their potential and addressing obstacles through her research, which embraces workplace learning and wellbeing and older workplaces and later life learning. In her teaching she co-leads on a number of leadership masters modules. She has worked on UK national media as a Literary Editor. She is a Fellow of the Chartered Institute of Marketing and Committee member on their Levitt Group, a special interest group for senior marketers

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Dimensions of Violence against the Elderly and Health Conditions: A Population-Based Study in Southern Brazil

Carolina Carvalho Bolsoni
Federal University of Santa Catarina, Brazil

Violence against the elderly is understood as an act of assault or omission, which may be intentional or involuntary, of a physical or psychological nature, and may involve financial or material ill-treatment. Elderly abuse occurs in multiple ways, the effects of which often overlap and are confused with signs and symptoms related to several conditions prevalent at this age. Considering the magnitude of this problem, my study object to estimate the prevalence of violence and its association with the health conditions of the elderly in the city of Florianópolis, Santa Catarina. Methods: a cross-sectional study with 1140 elderly individuals aged 60 and older of both sexes interviewed in years 2013 and 2014 in Florianópolis. The prevalence and dimensions of violence were measured using the Hawlek-Sengstock Elder Abuse Screening Test. To test the association of violence with health conditions, a bivariate and multivariate logistic regression model was applied; the analyzes were stratified by sex and adjusted for age, race, schooling, and income. The results of the present study evidenced the high prevalence of violence that elderly people in Florianópolis are subjected to. Men and women suffer violence in the same proportion; however, men are more affected by issues linked to financial violence, while women are plagued by issues that expose them to vulnerabilities. We highlight depressive symptoms as a health condition strongly associated with violence against the elderly. We hope that the evidence presented may support effective actions to prevent violence against the elderly.

Biography

Nursing from the Federal University of Santa Catarina (2009). Master (2012) and PhD in Collective Health (2017). Specialization in Aging and Health of the Elderly by the Federal University of São Carlos. She is currently developing activities with the Multiprofessional Specialization in Primary Care - UNASUS / UFSC, Member of the Editorial Production Team and tutorial coordinator of the Course of Integral Attention to Women's Health and Integral Attention to Human Health. Substitute Professor of the Nursing Department at the Federal University of Santa Catarina. Research Area - Violence and Health; Health of the Elderly.

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Dkk3 Dependent Transcriptional Activation of Age Related Skeletal Muscle Atrophy

Ping Hu

Shanghai Institute of Biochemistry and Cell Biology, China

Age-related muscle atrophy (sarcopenia) is the leading cause for disability in aged population, but the underlying molecular mechanisms are poorly understood. We identified that the expression level of a secreted glycoprotein Dickkopf 3 (Dkk3) in sarcopenia. Forced expression of Dkk3 in muscles in young mice leads to muscle atrophy. Conversely, reducing its expression in old muscles restores both muscle size and function. Dkk3 induces nuclear import of β -catenin and enhances its interaction with FoxO3, which in turn activates the transcription of E3 ubiquitin ligase Fbxo32 and Trim63, driving muscle atrophy. These findings suggest that Dkk3 may be used as diagnostic marker and as therapeutic target for age-related muscle atrophy, and reveal a distinct transcriptional control of Fbxo32 and Trim63. Dkk3 secreted by the old muscles can further decrease the insulin sensitivity of skeletal muscles and reduce the glucose metabolism abilities of skeletal muscles.

Biography

Dr. Ping Hu graduated from Peking University and obtained her Ph. D. from the joint graduate program of Cold Spring Harbor Laboratory and State University of New York Stony Brook. She performed her postdoc research in University of California, Berkeley/Howard Hughes Medical Institute. Dr. Hu joined Shanghai Institute of Biochemistry and Cell Biology, Chinese Academy of Sciences as a Principal Investigator. She is also the professor of University of Chinese Academy of Sciences. Her research is focused on the homeostasis maintenance of muscular skeletal system and muscle regeneration. Her group established an in vitro long term expansion system to expand functional muscle stem cells. This work paves the road toward cell therapy of muscle degenerative diseases. Her group also performed a series of work on sarcopenia, revealed new circulating marker for sarcopenia and interplays between sarcopenia and type II diabetes.

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Carotid Body as a Model for Aging Studies: The Hypoxia-Hyperoxia Aging Interaction

Di Giulio Camillo

University of Chieti Pescara, Italy

Carotid Body (CB), as a sensory neurepithelial organ, regulates the ventilation responding to the variation of blood gases O₂-CO₂ and pH, and influencing the gateway for the respiratory neurons in the brainstem. The aging process is characterized by a decline in several physiological functions resulting in a reduced capability to maintain homeostasis. This lowered homeostatic capacity seems to involve the (CB), whose role is to modulate ventilation and tissue oxygen supply thus playing a prime role in all aging processes. Aging causes marked changes in CB morphology. Indeed, it is enlarged and shows a concomitant decrease in the percentage of chemoreceptor tissue, as well as a proliferation of Type II cells. The carotid glomitis is present with aggregates of lymphocytes and fibrosis of the lobules. Type I cells are dehydrated, with a profound vacuolization, a shrinking nucleus, and lipofuscin accumulation. With increased age man CB shows a reduction in the number and volume of mitochondria, fewer synaptic junctions between glomi, along with a reduction in CB content of neurotransmitters, leading to a sort of 'physiological denervation'. Instead, in rats the hyperplastic response of CB cells during chronic hypoxia is less evident in aged CB samples as compared to young ones. The increase in HIF-1 - VEGF - ET and NOS-1 expression during chronic hypoxia is less evident in CBs of old rats as compared to the young ones. This favors changes in the set-point sensitivity for the chemosensory peripheral drive. Aging could be interpreted as a cumulative result of oxidative damage to cells, which derives from aerobic metabolism. Moreover, metabolism rate is tightly correlated with life span, thus a loss in mitochondrial function is one of the prime factors affecting CB aging processes. The age-related reduction in synaptic junctions might be a self-protective mechanism through which cells buffer themselves against accumulation of reactive oxygen species during aging. The correlation between hypoxia and life-span of CB cells remains open until the question of how and why cells sense oxygen is solved. In other words, in order to better understand aging, knowledge of which O₂ species are being sensed by cells is needed.

Key Words: Chemoreceptor, Aging, Hypoxia.

Biography

Dr. Camillo Di Giulio graduated in Medicine with 110/110 cum laude from the "G. d'Annunzio" University of Chieti. In 1983 he won the competition for a post of University Researcher, grouping of "Human Physiology", announced by the University "G. d'Annunzio" of Chieti. In 1986 he specialized in Gerontology and Geriatrics at the University of Chieti and in 1990 in Neurology at the University of Pavia. In 2006 he received the Reynolds Award (S. Francisco) of the American Physiological Society. He has worked for many years with the Departments of Physiology of the University of Pennsylvania Philadelphia, (USA), Kansas City (USA), with the Division of Pulmonary Medicine of the University of Michigan, Ann Arbor USA. Member of the Italian Society of Physiology (since 1989). Member of the American Physiological Society (since 1989). Member of the Executive Council of the "Italian Society of Gerontology and Geriatrics" in 1999. Member of the Board of Directors of the "Italian Society of Mountain Medicine" in 2001, Member of the Board of the "Italian Society of Methods and Teaching of Sports Activities".

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Precision Medicine Approaches for Alzheimer's disease: Early Detection and Progression Control

Hsuan-Yu Chen

Academia Sinica and National Taiwan University, Taiwan

The aims of the precision medicine are right treatments to the right patients at the right time. It depends on genome background and personal characteristic of each individual. Alzheimer's disease (AD) is the most common form of dementia and with high heterogeneity. It is difficult to prevent AD and control disease progression. Next generation sequencing (NGS) is a powerful method to provide genomic information rapidly. In precision medicine, personal genomic information is an important issue. Up to date, many AD associated SNPs were reported from GWAS studies. However, the impacts of these SNPs between different populations (e.g. In Asia or European populations) are still in the investigation. In our study, reported AD-risk SNPs were collected and frequencies were compared to the different populations including Asia, European, America, and Africa. Results showed that each population had specific AD-risk SNPs. In addition, a gene REST plays an important role of AD progression. An allele rs3796529 on REST was genotyped in Taiwanese patients (n=584) and compared the distribution with Taiwanese (n=993) and East Asia (n=504). Frequencies of rs3796529-T were higher in healthy persons (East Asia= 64.17% and Taiwanese= 64.95%) than AD (59.08%). In addition, patients without rs3796529-T had higher progression rate (adjusted hazard ratio= 0.593, p= 0.009). It indicated that rs3796529-T is an independent prognostic factor. Genomic information plays an important role in precision medicine. Findings of our studies demonstrated that genomic background of different populations had to be considered and patients with specific genetic variants may need to receive more aggressive treatments.

Biography

Dr. Hsuan-Yu Chen is an associate professor of Academia Sinica and National Taiwan University. He works on high throughput omics data analysis for many years. His research fields are bioinformatics in oncology and neurodegeneration diseases. He published more than 70 peer-reviewed papers on journals including New England Journal of Medicine etc. He is also a member of editorial board of the Scientific Reports and Secretary General of Taiwan Society of Genomic and Genetics.

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The Death of Death

Jose Cordeiro

Director of Millennium Project,
Member of the World Academy of Art and Science, Spain

Biography

Dr. Cordeiro got his B.Sc. and M.Sc. degrees in Mechanical Engineering at the Massachusetts Institute of Technology (MIT) in Cambridge, USA, with a minor in Economics and Languages. He is President Emeritus of the Future World Society (Venezuela), and since its foundation about two decades ago, Jose managed to become an influential futurist. He is a founding faculty at the Singularity University, created by NASA in Silicon Valley. The goal of the research centre is to tackle global problems such as health, nutrition, poverty, and education, using the medium of technology. He is also on the board of directors for the Lifeboat Foundation.

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The Effect of One Year of Exercise Training On Cardiometabolic Risk Factors in Older Adults

Dorthe Stenvold

Norwegian University of Science and Technology, Norway

Background: The world's population is ageing rapidly, and many of the diseases that previously led to premature death, now belongs to the category chronic diseases. Cardiovascular diseases are highly prevalent in older adults, and strategies on how to prevent and treat cardiovascular diseases are warranted. The literature lack large randomized studies on the long-term effect of exercise on fitness and cardiometabolic health in older adults.

The aim of this study was to examine long-term effect of high intensity interval training and moderate continuous training on fitness and cardiometabolic risk factors in older adults.

Methods: A total of 1567 individuals (790 women) were included and randomized to either five-years of two weekly sessions of high intensity training (HIIT) (10 minutes warm-up followed by 4x4 minute intervals at ~90% of peak heart rate) or, moderate intensity training (MOD) (50 minutes of continuous work at ~70% of peak heart rate), or to a control group that followed the national recommendations for physical activity. Clinical examinations and physical tests were administered to all participants at baseline, and after one year. Result: HIIT induces a larger change in maximal oxygen uptake (10% increase), and more favorable cardio metabolic risk factor profile compared to MOD and control.

Conclusion: High intensity training for one year is superior to moderate intensity training in increasing fitness and improving cardio metabolic health in older adults.

Biography

Dorthe Stenvold has a PhD in clinical medicine and work as an associate professor and researcher at the Cardiac Exercise Research Group (CERG), The Norwegian University of Science and Technology, Trondheim. Stenvold is the principal investigator for Generation 100, and her research focus is active aging. Stenvold received the funding Young Talented Researchers from the Norwegian Research Council in 2015.

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The Effect of a Stability and Coordination Training Program on Risk of Falls in Older Adults With Cardiovascular Disease

Ayelet Dunsky

The Academic College at Wingate, Israel

Introduction: Cardiovascular diseases (CVD) are considered a main reason for mortality and morbidity. In the older adult population with CVD have higher risk of falls as compared to a matched age healthy population. The aim of the study was to investigate the effect of stability and coordination training within a cardiac rehabilitation (CR) program on fall risk in elderly with CVD enrolled in cardiac rehabilitation.

Methods: Twenty-six people with CVD participated in the study and were randomly assigned to an intervention or control group. The intervention group received 20 minutes of stability and coordination exercises within the 75 minutes of the CR program study group, while the control group performed the traditional CR program (which was mainly based on aerobic and resistance exercises). The study lasted 12 weeks. Balance measures were used to assess fall risk and included the Time Up and Go Test (TUG), the Functional Reach Test (FR) and the Balance Error Scale System (BESS). The Five Time Sit to Stand Test (FTSST) was used to assess functional lower extremity muscle strength.

Results: The intervention group had 70% adherence to the program, with significant improvement post-intervention in the following parameters: TUG ($p < 0.01$), BESS ($p < 0.02$) and FTSST ($p < 0.01$) in comparison to the control group. In addition, a significant group X time interaction was found for the TUG and the BESS ($F_{2,48} = 13.5$, $p < 0.01$, $d = 0.54$; $F_{2,48} = 4.29$, $p < 0.05$, $d = 0.84$, respectively) implying a significant advantage to the study group following the intervention. No significant group X time interaction was found on the FR ($p = 0.2$) or the FTSST ($p = 0.12$).

Conclusion: The results of the current study confirm that stability and coordination training alongside a traditional CR program improve static and dynamic balance, and muscle strength, skills that are considered major components in postural control. Improved postural control may reduce the risk of falls among people with CVD who are subject to a higher risk of falls (El-Khoury et al., 2013; Noohu et al., 2014; Schopfer & Forman, 2016). Based on the results of the study we suggest that trainers who work in cardiac rehabilitation centers should consider including stability and coordination training alongside the routine cardiac rehabilitation program.

Biography

Dr. Dunsky is the Head of Department of Physical Activity for the Elderly Population, and a Biomechanics, Kinesiology and Biomechanics of Elderly Senior Lecturer in the Life Sciences Department at The Academic College at Wingate, Wingate Institute, Israel. Her academic interest has mainly focused on improving the quality of life among the elderly. She has been conducting researches which examine the relationship between physical activity and cognitive functioning, mental health, sleep quality and daily functioning in older age. Additionally, in the last few years, she has focused on the biomechanical aspects of balance, among different populations. In this study area she combines the theoretical knowledge of biomechanics, with the practical background of working with individuals with balance problems.

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Effectiveness of Animal Assisted Interventions on Depression, Anxiety and Illness Perception in Institutionalized Elderly: A Randomized Controlled Study

Caterina A. Zaiontz

IES c/o Catholic University of the Sacred Heart, Italy

Aim: The purpose of this study was to identify the effectiveness of Animal Assisted Therapy on Depression Anxiety and Illness Perception in institutionalized elderly.

Patients' illness perception was investigated in order to identify core beliefs regarding mood, personal control and illness coherence. Individual perception of pain, social interaction and setting bound observable variables were also examined.

Method: A randomized sample of 17 institutionalized elderly over 65 years was selected to participate in the treatment group. The control group consisted of 14 subjects. Testing Assessment comprised the Mini Mental State Exam, 15-Item Geriatric Depression Scale, Positive and Negative Affect Schedule, Generalized Anxiety Disorder 7, Illness Perception Questionnaire, Numeric Pain Rating Scale. Intra and Inter group data analysis was performed before and after each session. Treatment lasted 10 weeks and patients participated to 30 minute individual sessions.

Results: A large effect size and statistically significant decrease in the 15-item Geriatric Depression Scale scores were identified in the treatment group. No significant differences were detected in the Generalized Anxiety Disorder 7, Positive and Negative Affect Schedule and Numeric Pain Rating Scale. However the Positive and Negative Affect Schedule and the Numeric Pain Rating Scale showed a moderate decrease. The Illness Perception Questionnaire's Timeline (acute/chronic) and Treatment Control Subscales showed a clinically relevant, large effect size.

Conclusions: Animal-Assisted Therapy has shown to be effective in reducing symptoms of Depression in institutionalized elderly. The increase in verbal interactions with the Animal Handlers throughout the study suggests the Animal is a facilitator of social interaction, eliciting positive emotional responses.

Animal Assisted Therapy shows promising results in the perception of Illness Timeline and Treatment Control suggesting a greater sense of treatment-related empowerment in the patients. However further study is required.

Biography

Dr. Caterina Ambrosi PhD is a Senior Lecturer of Psychopathology specializing in the instruction of the Bio-Psycho-Social Model and also of Transcultural Psychology at IES c/o Università Cattolica del Sacro Cuore, Milan Italy. She is also a Professor of Transcultural Psychotherapy at the post-graduate school of specialization Gruppo per le Relazioni Transculturali in Milan Italy, recognized by the Italian Ministry of University and Research.

She was formerly a Lecturer in Applied Linguistics at University College London (UK) and is fully licensed with the Italian and British Psychological Societies and a Member of the Lecturer and Researchers Division of BPS.

Her areas of interest and research include; Adjustment Disorder and Stress-related Disorders and their sequelae in multicultural patient populations and non-pharmacological rehabilitative interventions in the aging population.

She has been researching and implementing the effectiveness of Animal Assisted Therapy as a rehabilitative approach in the geriatric sector with special emphasis on Depression, Illness Perception and Cognitive Deterioration in institutionalized elderly.

She is currently researching the impact of Animal Assisted Interventions in the adult and aging populations with congenital cerebral diseases and Disorders of the Autistic Spectrum as well as in the Units for Near-Threshold of Consciousness and Persistent Vegetative States at NHS, accredited long-term geriatric care facilities in Lombardy Italy.

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MAY 27-28, 2019 | ROME, ITALY

Ketogenic diet therapies in Parkinson's and Alzheimer's disease

Matthew CL Phillips

Waikato Hospital, New Zealand

Defective mitochondrial bioenergetic function is a prominent hallmark of aging as well as a central feature of both Parkinson's disease (PD) and Alzheimer's disease (AD). Calorie restriction is one of the most effective methods known to slow the aging process, the mechanism of which is at least partly mediated by enhanced mitochondrial bioenergetic function; in theory, such an approach may also positively impact the bioenergetic failure observed in PD and AD. Given that calorie restriction is difficult to maintain indefinitely, a more viable long-term therapeutic approach may be to "mimic" the metabolic benefits of calorie restriction using a high-fat, low-carbohydrate ketogenic diet in people with PD and AD. In 2017, we developed a protocol to support 47 patients with PD randomized to either a low-fat or ketogenic diet. Primary outcomes were changes in motor and nonmotor scores over 8 weeks. By the end of the study, the ketogenic group demonstrated significantly greater improvements in nonmotor scores (41% improvement from baseline) compared to the low-fat group (11% improvement), with the largest between-group improvements observed for urinary problems, pain, fatigue, daytime sleepiness, and cognitive impairment. Adverse effects were generally mild. In 2019, we plan to run a similar randomized controlled study in patients with mild AD. Primary outcomes will be changes in cognition, function, and quality of life scores over 12 weeks.

Biography

Matthew Phillips is a full-time neurologist based in Waikato Hospital, Hamilton, New Zealand. His main interest is to explore the role of dietary modification, particularly ketogenic diets, as potential therapies in a variety of neurological disorders. In 2017, his team completed the world's first randomized controlled study to involve a ketogenic diet in people with Parkinson's disease, recently published in the journal *Movement Disorders*. In 2019, his team will conduct a similar randomized controlled study in people with Alzheimer's disease.

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Evaluation of the Health Profile of the Elderly People: A Nursing Home Study

Canan Birimoglu Okuyan

Hatay Mustafa Kemal University, Turkey

Population ageing is one of the main problems of the world. Therefore, further studies are needed to understand the problems related to social, psychological, and medical needs of older adults in order to plan their optimal care. This study was carried out to determine the general health profile of the elderly people in a nursing home. The study was carried out on 78 elderly people who volunteer to participate in research (both man and women) in a nursing home in Hatay. The data in this study were collected through face-to-face interviews with the elderly people using the information form. The mean age of the older people was 77 ± 8.4 (60-92) and 55.2% were male. 33.8% of the elderly people are taking 6 or more drugs, 55.9% of them have visited the doctor at least once in the last 6 months (39.3%) for a health check (39.3%). The majority of them evaluate their physical health (62.7%) and their mental health (74.2%) well. However, 78.5% of the elderly have at least one chronic disease. Hypertension (31.3%) and Diabetes mellitus (32%) are the most common among these diseases. This is followed by muscle, skeletal and joint problems (22.4%) and heart disease (14.9%). It was determined that more than half of the elderly people living in the nursing home had health problems. It is important to determine the health problems of the elderly in the early period, to make the health checks regularly and to advise the elderly individuals about their diseases.

Keywords: Nursing homes, Elderly people, Health.

Biography

Canan Birimoglu Okuyan received her PhD in the Department of Public Health Nursing, Gazi University. During PhD, she has studied in the Turku University of Applied Science in Turku/Finland. She worked as a visiting researcher at the Manchester Metropolitan University in Manchester/UK. She is currently an Assistant Professor in the Department of Public Health Nursing at Hatay Mustafa Kemal University. Her research interests include public health, public health nursing, geriatric and gerontology.

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MAY 27-28, 2019 | ROME, ITALY

The Hidden Roles of Fructose in Metabolism and Aging

Natalia Edel

VerbaMayr Academy, Russia

- Fructose – definition, features. FODMAPs.
- The relevance of the problem - dietary intake of fructose nowadays.
- Fructose management in humans:
 - Absorption
 - Metabolism (insulin-independent, resulting in replenishment of liver glycogen and triglyceride synthesis)
- Problems:
 - High intake
 - Hereditary fructose intolerance (the rare autosomal recessive disorder)
 - Fructose malabsorption (the disorder caused by alterations in the functional capability of Glut 5)
- Health effects:
 - Obesity, increased visceral adiposity
 - Fatty liver disease
 - Dyslipidemia
 - Insulin resistance
 - Cardiovascular disease
 - Sleep disorders, depression
 - Functional gut disorders
- Diagnostics of fructose malabsorption
 - Breath hydrogen testing – methodology
 - Breath hydrogen testing – clinical experience
- The results of clinical study. 251 breath hydrogen tests.
- Conclusion.

It is necessary to bear in mind that in some cases the leading cause in variety of patient's complaints is fructose intolerance. Fructose malabsorption should be considered in patients with symptoms of depression, functional gut disorders and metabolic syndrome. A reliable method of treatment in those cases is correction of a diet with the exception of fructose and mitochondrial regeneration. Also treatment of intestinal inflammatory and infectious diseases is needed.

Biography

Natalia Edel was born in 1983 in Petrozavodsk (Republic of Karelia). In 2006 graduated from the Faculty of Medicine of Petrozavodsk State University with a degree in General Medicine. In 2007 graduated from the internship in the specialty "Therapy". Upon graduation, was sent to work at the Kostomuksha city hospital (Republic of Karelia), where until 2009 worked as a general practitioner from 2009 to 2014, worked as a general practitioner and a doctor of functional medicine at Kivach Clinic, and from 2014 to 2016 worked as the chief doctor of Kivach Clinic in branch office in St. Petersburg. In 2016 obtained specialty "Public Health and Health Care.". In 2016, moved to Moscow, where worked as head of the medical care department at JSC RZD-HEALTH, for several months served as medical director at JSC RZD-HEALTH. Since 2017, the chief physician is the Deputy General Director of Verbamed LLC (Austrian Health Center VerbaMayr). Combining organizational and administrative work with the practice of a general practitioner, mayr- therapist. Since 2018, became the vice-president of the VerbaMayr Academy, on the basis of which conduct scientific, methodological and educational activities.

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The Indicators of Creativity in Older Adults as a Possibility to Reduce the Loss of Memory and Active Social Insertion

Carmen Gloria Burgos Videla
University of Atacama, Chile

Creativity is a construct that can be identified through its indicators, therefore it is affirmed that it can be measured, being this way it is verified that from different disciplines they have disaggregated the phenomenon; From this, what we hold in this presentation is that a creative subject, also has the attribute of being original, thinks imaginatively, is flexible, articulates significant experiences in a divergent manner and is fluent in ideas. What we would like to share is a pilot study, a case developed in a nursing home in Copiapó, Chile where 5 work sessions were held, workshops on basic theatrical expression, with two groups of 35 adults over 65 years old, these showed imagination, flexibility, expression, fluency in ideas, this was enriched with the results of the Torrance creativity test. Interesting question because the answers and the sample of those indicators are close in students with age range between 20 and 30 years, which shows that creativity from their indicators and expressions are present in older adults and are trainable. However, it is important to consider the cognitive level of adults, in this understanding a second stage will be developed, with significant intentional sample of women over 65, to contrast the first results of piloting with the CogniFit results. That has the computed evaluation battery to evaluate the cognitive level or Cognitive Assessment Battery (CAB). In the pilot in situ research, the indicators of creativity were observed in their latent and evident state. The results were positive, the elderly through the training of the skills that develop creativity as the theater workshop show indicators that can be related to a healthy memory and possible to train. It is necessary to consider the first part as an input to improve and contrast with the start-up of the research. Indicators of creativity related to the cognitive levels of healthy adults in order to identify which of these indicators has the greatest association and significance for an agile, imaginative, reflective and original mind.

Biography

Director of the Seedbed of Investigation of the Faculty of Humanities and Education of the University of Atacama. Researcher at the Research Institute of Social Sciences and Education of the University of Atacama. Belongs to different research centers in Chile and abroad. PhD in Educational Sciences from the University of the Frontier of Chile. Their interests go through the curricular line- pedagogical theory and creativity.

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Nursing Home Residents (In) Dependence: The Role of Falls, Intrinsic And Extrinsic Factors

Gorete Reis Pereira

University of Évora, Portugal

Ageing Safety in Alentejo– Understand for Action (ESACA) Ref^a: ALT20-03-0145-FEDER-000007 arises in response to the international recommendations advocating an active and successful ageing for worldwide population. It is important to develop and implement strategies for successful ageing for community residents and also for institutionalized ones. Present study objective was to determine the main factors explaining (in) dependence on basic daily life activities (BDLA) of nursing home residents.

This cross-sectional study enrolled 132 Portuguese nursing home residents (≥ 65 years old, 84.2 ± 6.9 years, 70.5% women). Measurements comprised BDLA (Barthel Index), falls occurrence (y/n), fear of falling (FES-I), sleeping quality (Epworth scale), cognitive impairment (MMSE), physical fitness: balance (Tinetti Balance Assessment Tool); strength, flexibility, agility and double task (Senior Fitness Test + TUG in DT), body composition: BMI, body lean and fat mass (stadiometre and bioimpedance scale); Environment hazards (questionnaire).

Univariate linear regression showed that the variables explaining BADL were balance, agility, DT, strength and fear of falling (R^2 range: 7.4- 22%) in which a poor result was associated to a higher dependence level, $p < 0.05$. However, multivariate linear regression selected upper limb strength and fear of falling as the main factors explaining (in) dependence (R^2 44,0% $p < 0.05$). These results suggest that older adults' intrinsic factors (physical fitness rather than cognitive impairment), and fear of falling explains more their (in) dependence than environmental factors or falls occurrence. Interventions designed for the maintenance of nursing home residents independence should consider these results, and include in clinical assessment at least upper limbs strength and fear of falling.

Keywords: Nursing Home, dependence, aged, accidental falls, Field Dependence-Independence

Biography

Gorete Reis completed her PhD in Nursing (UP- ICBAS, Portugal). She is professor in Évora University, Portugal. Her expertise area is aging and rehabilitation. She has developed research focused on older adults' active ageing, independence and safety. Particularly, she researched the problem of active aging in this population. She wrote book chapters and has publications in reputed international scientific journals. She participates in the coordination of the project Ageing safety in Alentejo. Understand for action, funded by Horizon 2020, which combines scientific traditional methodologies (designs and programs) with new theologies exploring multimedia devices potentialities.

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Using the new stepping-forward affordance perception test (SF-APT) to identify community-dwelling older adults at high risk of falling and of recurrent falling.

Catarina Pereira
University of Évora, Portugal

Previous, in the Ageing Safety in Alentejo—Understand for Action study (ESACA: Ref#: ALT20-03-0145-FEDER-000007), we developed and examined the validity and the reliability of the Stepping-Forward Affordance Perception Test (SF-APT). SF-APT showed to be a valid instrument for community-dwelling older adults falls risk assessment. Moreover, this instrument assesses the action capability perception, which previous research models evaluating falls risk do not address.

Present study aimed to identify and test the SF-APT key outcomes usable for falls risk assessment in community-dwelling older adults.

This cross-sectional study enrolled 347 participants aged \geq 65 years (non-fallers: 57.9%; fallers: 42.1%; recurrent-fallers: 17.9%). Falls occurrence and SF-APT outcomes were assessed.

Multivariate binary logistic regression analysis, receiver operating characteristic and respective area under the curve selected the estimated stepping-forward and Absolute-error in interaction with Error-tendency as the SF-APT key outcomes for falls risk assessment. Such as the larger the Estimated stepping-forward was, the lower the likelihood of falling recurrently and of falling; and, in cases of Error-tendency underestimation bias, the larger the Absolute-error was, the lower the likelihood of falling recurrently and of falling ($p < 0.05$). Moreover, above statistical analysis established cut-offs for these events occurrence probability (\geq) discriminating fallers (≥ 0.412) and recurrent fallers (≥ 0.261) as result of the equations generated by the build regression models.

In conclusion, SF-APT is a quick and inexpensive valuable tool for falls risk assessment in community-dwelling older adults. Falls prevention programs should include SF-APT on clinical evaluation and consider the mentioned key outcomes.

Key-Words: Action boundary; Falls; Stepping; Judgment bias; Geriatric assessment

Biography

Catarina Pereira completed her PhD in Human kinetics (FMH, Portugal). She is professor in the Universidade de Évora, Portugal. Her expertise area is aging. She has developed research focused on older adults' maintenance of functional function, independence, and safety. Particularly, she researched the problem of falls in this population. She wrote 4 books, several book chapters and has more than 30 publications in reputed international scientific journals. She coordinates the project Ageing safety in Alentejo. Understand for action, funded by Horizon 2020, which combines scientific traditional methodologies (designs and programs) with new theologies exploring multimedia devises potentialities.

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MAY 27-28, 2019 | ROME, ITALY

Caring For Quality Ageing

Nídia Maria Dias Azinheira Rebelo Braz
University of Algarve, Portugal

Educating for healthy ageing should then be the task of all education, continuing education programs, third-age universities and also of leisure-time occupation programs. It is about giving individuals the responsibility to build their healthy ageing, leading them to consider that they want and can live a long life, with more active and quality years, relegating disability and disease to ever increasing ages.

This talk focus on the determinants of quality of life and health: - firstly, the affections and social relations, then the proper feeding, regular physical exercise, adapted to each one's capacities and finally, financial security.

Our proposal is that one may reconcile each moment with their real capacities and competences, so that one can live each age at its best, building health and quality of life, everyday!

Universities begin to include in their formative offer courses of gerontology, physicians and nurses can already devote themselves to the specialty of geriatrics, but still very much needs to be done: it will be necessary for architects to know how to draw elderly-friendly buildings, that the food industry understands the needs of those who live alone and produce suitable foods, packaged in small quantities, that the caterers prepare ready-to-eat meals designed to meet the expectations of the elders, which are quite distinct from those of the teenagers and young adults, that sports equipment offer adapted sport solutions, that the communication technology industry includes the older in its target audience, that training centres provide learning packages designed for the elderly, because yes, we can always learn, and new technologies cannot exclude the older ones.

Biography

NÍDIA BRAZ is a biologist (Faculty of Sciences, University of Lisbon, 1981) and lecturer in Food Science at the University of Algarve since 1984. Her research has been focused on fish quality since her MPhil thesis at Loughborough University of Technology in 1986 (UK) and throughout her PhD research in Agro-Industrial Engineering in 2001 at ISA-UTL (Portugal). Recent research: Mediterranean Diet as a healthy food pattern (since 2014, a member of the University of Algarve team on Mediterranean Diet) and clinical research on active and healthy ageing, namely on its food and nutrition aspects. Presently involved in lecturing healthy food subjects such as food toxicology, food technology, applied culinary in dietetics and senior healthy food. Researcher at the Centre for Research and Development in Health (CESUAlg), coordinator of "Healthy aging research", Team member "Projeto IDOSO - Universidade Federal de Goiás", Brasil. Researcher at the Project International Centre on Aging, funded by Interreg Spain - Portugal Program 2014-2020 (POCTEP 0348_CIE_6_E) and EIP-AHA A3 NUTRITION SUB-GROUP Member.

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A Gerontological Study in the Indian Socio-Economic Panorama: Towards a Graceful Ageing

Indrani Chakravarty

Calcutta Metropolitan Institute of Gerontology, India

Ipsito Chakravarty

Calcutta Metropolitan Institute of Gerontology, India

Ageing evokes an uncanny fascination for all of us. This inevitable process which seals the fate of every organic life at birth brings with it certain changes, vulnerabilities and a commensurate need for increased adaptation for survival. This paradigm shift in the dynamics of life has attracted researchers all over the world to become interested in the study of ageing process. Demography-wise, the elderly (60+) constitute the fastest growing segment of population in India. Population ageing on one hand and several accompanying socio-cultural factors on the other has rendered the elderly a vulnerable group in our society. Calcutta Metropolitan Institute of Gerontology (CMIG) during the last three decades has been on a mission to harness continued creativity and productivity from old age, and to design a holistic platform which will help seniors of all socio-economic strata to achieve a graceful and fulfilling life in their advanced years. For the socio-economically disadvantaged group, an Income Generation Program (IGP) through skill development has been applied. Here the neglected and downtrodden work as a group and give their best to integrate with the mainstream. Their group dynamics has been interpreted as a kind of 'geriatric isomorphism' and this abstract mathematical analogy has been based on Lewin's field theory (1940). Applying Maslow's Theory, a platform has been built to improve the quality of life of the elders through positive engagement and self-actualization. Here we are utilizing the concept of lifelong learning, wherein the elders engage in creativity and productivity, with improved social capital and ongoing contribution towards society. The institute also produces geriatric animators, who help the frail and homebound elderly not only with daily chores, but also by encouraging spiritual activities which give them a feeling of 'transcendentalism' and a profound sense of meaning and satisfaction. Thus we suggest a general convergence of all these roadways, to meet at the crossroad of 'graceful ageing' in the Indian backdrop.

Keywords: Socio-economic strata, Income generation program, lifelong learning, graceful ageing

Biography

Dr. Indrani Chakravarty is Director of Calcutta Metropolitan Institute of Gerontology (CMIG), Centre of Excellence on Ageing, India. She was research fellow in Indian Statistical Institute, Tokyo Metropolitan Institute of Gerontology. She did her post-doctoral Netaji Institute of Asian studies and is Fellow of the Session 400 at Salzburg Seminar, Austria. She established CMIG, a unique institute for research and elderly care. Professionally trained in building comprehensive and sustainable reforms and is involved in policy making for elderly. She is has several publications, editor of journals and a research supervisor. Recipient of national award for her work.

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Rejuvenation Biotechnology: Why age may soon cease to mean aging

Aubrey de Grey

SENS Research Foundation, USA

Biography

Dr. Aubrey de Grey is a biomedical gerontologist based in Mountain View, California, USA, and is the Chief Science Officer of SENS Research Foundation, a California-based biomedical research charity that performs and funds laboratory research dedicated to combating the aging process. He is also VP of New Technology Discovery at AgeX Therapeutics, a biotechnology startup developing new therapies in the field of biomedical gerontology. In addition, he is Editor-in-Chief of Rejuvenation Research, the world's highest-impact peer-reviewed journal focused on intervention in aging. He received his BA in computer science and Ph.D. in biology from the University of Cambridge. His research interests encompass the characterization of all the types of self-inflicted cellular and molecular damage that constitute mammalian aging and the design of interventions to repair and/or obviate that damage. Dr. de Grey is a Fellow of both the Gerontological Society of America and the American Aging Association, and sits on the editorial and scientific advisory boards of numerous journals and organizations.

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UPCOMING CONFERENCES 2019

Global Conference on Nursing Care & Education

during 02-03, September 2019 Rome, Italy

<https://www.nursingcareconferences.com/>

Global Conference on Breast Cancer Research

during 02-03, September 2019 Rome, Italy

<https://www.breastcancerconferences.org/>

Euro Congress on Dementia and Alzheimer's Diseases

during 02-03, September 2019 Rome, Italy

<https://www.dementiameet.com/>

UPCOMING CONFERENCES 2020

2nd Dentistry and Oral Health Summit

during 13-14, April, 2020 Las Vegas, USA

<https://www.dentalcareconference.com/>

2nd International Conference on Aging & Cognitive Impairment

during 13-14, April, 2020 Las Vegas, USA

<http://usa.agingcongress.com/>

Global Conference on Sexual Medicine

during 30-31 March, 2020 Dubai, UAE

<http://www.sexualmedicineconference.com/>

Behavioral and Social Science Research Summit

during 30-31 March, 2020 Dubai, UAE

<http://www.behavioralconference.com>

Human Nutrition and Food Science Conference

during 30-31 March, 2020 Dubai, UAE

<http://www.hnfsconference.com/>

3rd International Summit on Aging & Gerontology

during 3-4 August, 2020 London, UK

<https://www.agingcongress.com/>

Catalysis and Chemical Engineering Conference

during 3-4 August, 2020 London, UK

<http://catalysisummit.com>

Global Summit on Climate Change

during 3-4 August, 2020 London, UK

<http://climatechangecongress.com>