



*Editorial*

**Special Issue: Activity and Lifestyle Factors in the Elderly: Their Relationship with Degenerative Diseases and Depression**

**Carol Dillon**<sup>1,2\*</sup>, and **Fernando E. Taragano**<sup>1,2</sup>

<sup>1</sup> SIREN, Neurology Section, Department of Medicine, CEMIC University Hospital, Galván 4089 (1431), Buenos Aires, Argentina;

<sup>2</sup> National Scientific and Technical Research Council (CONICET), Buenos Aires, Argentina.

\* **Correspondence:** E-mail: [cdillon@cemic.edu.ar](mailto:cdillon@cemic.edu.ar); [drcaroldillon@gmail.com](mailto:drcaroldillon@gmail.com); Tel: (54)-11-5299-0100

---

Much has been written over the ages about the benefits of exercise and physical activity. Marcus Tullius Cicero stated, in 65 BC, that “It is exercise alone that supports the spirits, and keeps the mind in vigor”. Over the past decade, there has been increasing focus on the influence of a number of lifestyle factors; including: intellectual engagement, social interaction, nutrition, and physical activity; on the cognitive vitality of older adults. Some studies have examined changes in cognition within the normal range, whereas others have asked whether lifestyle factors reduce the risk or delay the onset of age-associated diseases such as Alzheimer’s, Cerebrovascular Disease, or Depression. Physical activity in midlife seems to protect from dementia in old age. Leisure-time physical activity (LTPA) is particularly important due to its broader effects in general and cardiovascular health.

This special issue is focused on different aspects of activity: relating physical activity to fragility syndrome, describing the impact of physical activity in the quality of life of elderly patients with cognitive impairment, depression and dementia. Moreover, physical and intellectual activity are protective factors in elderly patients with neuropsychiatric diseases. Cognitive stimulation and cognitive reserve are described in this issue. Also, caregivers’ burden is an important issue in these diseases, as they not only affect the patients; but also affect the environment (family, work, social activities). Therefore, impact of physical activity in caregivers is developed in this special issue.

Finally, it is essential to determine the key health risk factors among populations to specifically plan future services and explore interventions that modify risk factors for communities. This aims to reduce risks and delay the onset of chronic conditions, which frequently results in dementia. This topic is also exposed in this special issue.

In the research paper titled “*Consistency in Physical Activity and Increase in Mental Health in Elderly over a Decade: Are We Achieving Better Population Health?*”, Smith TC and Smith B, from the Department of Community Health, School of Health and Human Services, National University, San Diego (USA), investigated mental health and physical activity trends that may be leading indicators for healthier living and increased life expectancy. Authors concluded that physical activity is stable though mental health challenges are on the rise in this older population. Public health campaigns may face greater barriers in an elderly population due to lifelong habits, dissemination and educational approaches, or decreasing gains.

As we previously said, exercise may reduce depressive symptoms both in healthy aged populations and in old patients diagnosed with Major Depressive Disorder. Marks R, from the Department of Health and Behavior Studies, Teachers College, Columbia University, New York (USA), in his review paper “*Narrative Review of Dance-based Exercise and Its Specific Impact on Depressive Symptoms in Older Adults*” concluded that, although more research is needed, older individuals with or without chronic depression or depressive symptoms can benefit emotionally from dance based exercise participation. Geriatric clinicians can expect this form of exercise will also heighten the life quality of the older individual with depression or subclinical depression.

Another factor that contributes to reduce depressive symptoms is engaging in social activities and cognitive stimulation. Filipin F, Feldman M. et al, from SIREN, Neurology Section, Department of Medicine, CEMIC University Hospital, Buenos Aires (Argentina), in their research paper “*The Efficacy of Cognitive Stimulation on Depression and Cognition in Elderly Patients with Cognitive Impairment: A Retrospective Cohort Study*”, aimed to evaluate the efficacy of cognitive stimulation in patients with mild cognitive impairment (CDR = 0.5) and dementia (CDR = 1). The conclusion of this research study was that patients remained stable, both in cognitive and behavioral domains, for more than 18 months. However, no significant cognitive or behavioral improvement can be reported in these patients after the stimulation program (duration time: 12.53 months SD 5.5).

Human beings possess a considerable reserve capacity that allows them to benefit from exposure to highly enriched environments. Environmental complexity states that those individuals involved in activities that require greater cognitive demands keep their cognitive abilities undamaged despite the passing of time. Cognitive reserve is the ability to optimize performance through differential recruitment of brain networks, which may reflect the use of alternative cognitive strategies. Work is one of the most important sources of cognitive stimulation during adulthood. Felderg C. et al, from Department of Cognitive Neurology, Neuropsychology and Neuropsychiatry, Institute for Neurological Research (FLENI), Buenos Aires (Argentina), in the review paper “*Cognitive Reserve in Patients with Mild Cognitive Impairment: The Importance of Occupational*

*Complexity as a Buffer of Declining Cognition in Older Adults*”, showed that complex environments can enhance cognition in old age. It adds evidence that help to understand which psychological, social and labor factors intervene in the cognitive reserve of an elder adult in cognitive risk.

Moreover, Depression in people over 60 is associated with lower physical activity. The low level of physical activity is part of Frailty Syndrome. This syndrome is understood as a state of reduced physiological reserve and reduced ability to respond to stressors; in this syndrome depressive symptoms are frequent. Smietniansky M. et al, from the Department of Internal Medicine and Geriatrics, Hospital Italiano de Buenos Aires (HIBA), Buenos Aires (Argentina), in the paper *“Impact of Physical Activity on Frailty Status and How to Start a Semiological Approach to Muscular System”* made a narrative review on the relationship between physical activity, sarcopenia and frailty syndrome. And concluded that, low activity is a mechanism and at the same time part of the frailty syndrome. The determination of biologic reserve is important because it allows the prognostic stratification of the patient and constitutes an opportunity for intervention. The clinician should be aware of the clinical tools that evaluate muscular system and level of physical activity, because they place us closer to the knowledge of health status.

Impact of physical activity in caregivers of patients with this diseases was also described by Farran C.J. et al, from Rush University Medical Center, College of Nursing, Chicago, IL, (USA), in the research paper *“Impact of an Individualized Physical Activity Intervention on Improving Mental Health Outcomes in Family Caregivers of Persons with Dementia: A Randomized Controlled Trial”*. This study examined secondary benefits of an individualized physical activity intervention on improving dementia family caregivers’ subjective burden, depressive symptoms and positive affect. Caregiver involvement in an individualized physical activity intervention was associated with increased overall and total moderate physical activity and improved positive affect from baseline to 12 months. Improved positive affect may help caregivers to feel better about themselves and their situation, and better enable them to continue providing care for their family member for a longer time at lower risk to their own mental health.

Finally, a *“Descriptive Study of Health, Lifestyle and Sociodemographic Characteristics and their Relationship to Known Dementia Risk Factors in Rural Victorian Communities”* authored by Ervin K et al, from the Department of Rural Health, University of Melbourne, Vic. (Australia), is exposed in this special issue. The aim of the study was to determine existing rates of chronic disease, and current lifestyle and sociodemographic factors which may predispose the population to higher risk of dementia. This study suggests that community interventions could modify lifestyle risk factors in these rural communities. These lifestyle factors, age of residents and the current chronic conditions are also important for rural service planning to increase preventive actions, and warn of the likely increase in the number of people developing chronic conditions with predisposition to dementia.



AIMS Press

© 2016 Carol Dillon et al., licensee AIMS Press. This is an open access article distributed under the terms of the Creative Commons Attribution License

(<http://creativecommons.org/licenses/by/4.0>)