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VRIJE UNIVERSITEIT BRUSSEL

UNIVERSITEIT GENT

Joint PhD VUB & UGent
2021-2022

INVITATION to the Public defence of

Roberta VELLA AZZOPARDI

To obtain the academic degree of

'DOCTOR OF GERONTOLOGY' (VUB)
'DOCTOR OF HEALTH SCIENCES' (UGENT)

Cognitive frailty : Operationalisation of the concept and the study of co-morbidities as possible risk factors

The public defence will take place on

Tuesday, **6 September 2022 at 5:30 p.m.**

In Auditorium **Piet Brouwer**
Faculty of Medicine and Pharmacy, Laarbeeklaan 103, 1090 Brussel

and can be followed online, accessible through the following link:

https://gf.vub.ac.be/redirects/PhD_defense_Roberta_Vella_Azzopardi.php

Summary of the dissertation

In the context of population ageing, age prevalent conditions, such as, major neurocognitive disorder (dementia) are an important public health concern. This is especially so, because as yet, there is no cure for dementia. Therefore, knowledge and insights about relatively new concepts such as cognitive frailty (CF) – a heterogeneous clinical manifestation characterized by the simultaneous presence of both physical frailty and cognitive impairment among older adults without dementia - which predispose older adults to negative health outcomes including incident dementia are urgently needed. Being potentially reversible, CF offers an ideal target for prevention intervention strategies to promote healthy ageing. Therefore, this doctoral thesis aimed to analyse the state of play of frailty operationalisation, in particular its cognitive domain, as well as study age-related hearing loss (ARHL) and vascular variables as possible risk factors associated with cognitive frailty in the oldest old. Via two systematic literature reviews, this doctoral thesis has shown that frailty is diversely operationalised and mostly focuses on assessing the physical domain of frailty. Although there has been an increase in inclusion of cognitive assessment in frailty operationalisation, various methods are available and most of them deviate from the original concept of CF. Two explorative studies based on the baseline data from the BUTTERFLY study (Brussels study on the early predictors of frailty) investigated the association of age-prevalent and potentially modifiable co-morbidities with CF. In this thesis, hearing impairment has been associated with cognitive impairment (global cognition, processing speed, selective and alternating attention) in male octogenarians who do not use a hearing aid. Furthermore, an association has been identified between the metabolic syndrome as well as altered mood states and CF. Based on these results, it can be concluded that hearing impairment assessment and management might delay cognitive decline and eventually disability. The preliminary innovative results associating the metabolic syndrome with CF may serve to alert clinicians caring for older adults to the possible benefits derived from identifying and managing the metabolic syndrome that extend beyond the notion of decreasing cardiovascular related mortality to include preservation of cognitive health.

Curriculum Vitae

Roberta Vella Azzopardi was born in Pieta, Malta on the 2nd of January 1981. She obtained the degree of Doctor of Medicine and Surgery from the University of Malta in 2004. She furthered her studies in internal medicine and in 2010 she became a member of the Royal College of Physicians of the United Kingdom. In 2012, she moved to Belgium. Later on in 2013, she enrolled as a joint PhD student at the Gerontology department at the Vrije Universiteit Brussel and the faculty of Medicine and Health Sciences at Ghent University. In parallel, she obtained the degree of Master of Specialist Medicine (Geriatric Medicine) from the Vrije Universiteit Brussel in April 2020.
Roberta Vella Azzopardi authored 5 peer-reviewed publications – 4 published (one shared first authorship) and one revised and being reviewed.
Currently, she resides in Madrid with her spouse Daniel Azzopardi and their 4 young daughters Philippa Camille, Carla Ruby, Margot Mae and Luna Rose.