University of Victoria | Graduate Studies

Notice of the Final Oral Examination for the Degree of Doctor of Philosophy

of

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MSc (University of Victoria, 2013)
BA (York University, 2011)

"Investigating Interactions Between Executive Functions and Quality of Life in Older Adults"

Department of Psychology

Monday, February 20, 2017
9:00AM
David Turpin Building
Room A136

Supervisory Committee:
Dr. Mauricio Garcia-Barrera, Department of Psychology, University of Victoria (Supervisor)
Dr. Holly Tuokko, Department of Psychology, UVic (Member)
Dr. Debra Sheets, School of Nursing, UVic (Non-Unit Member)

External Examiner:
Dr. Julene Johnson, School of Nursing, University of California at San Francisco

Chair of Oral Examination:
Dr. John Borrows, School of Law, UVic

Dr. David Capson, Dean, Faculty of Graduate Studies

Abstract

The cognitive aging literature contains abundant evidence of the natural vulnerability of the frontal areas of the brain and the associated impact on higher-order cognition. Namely, Executive Functions (EFs) have been repeatedly shown to wane steadily after 60 (Schaie, 2013). These age-related changes are said to impact most aspects of everyday life including quality of life (QoL; Davis et al., 2010), a key variable with regards to health, social service interventions and evidence-based clinical practices. The nature of this relationship is unclear however, and research targeting "normal," healthy seniors is scarce. Deepening our understanding of potential moderators of cognitive aging is crucial to promoting well-being in the growing older adult population.

The primary aim of this study was to investigate the moderating role of QoL over age-related EFs differences. A seminal taxonomy of EFs (Miyake et. al, 2000, 2012) and the work of the World Health Organization (WHO) on QoL (Power et al., 2005) inspired this endeavor. Six tasks of EFs related to Shifting, Updating, and Inhibiting and self-reported QoL based on the WHOQOL-BREF and -OLD were utilized with 102 community-dwelling, healthy older adults (*M* = 73.11 years; age range: 60-94). A moderation analysis was used to assess if QoL (moderator) buffers the relationship between age (IV) and EFs indicators (DV). Regression and MANCOVA analyses were conducted to evaluate age-related differences in EFs and the following prominent theories: *the processing speed theory* (Salthouse, 1996), *inhibition deficit theory of cognitive aging* (Hasher & Zacks, 1988), and *dedifferentiation hypothesis* (Garrett, 1946).

Congruent with recent research and as hypothesized, the analyses generally could not support the EFs theories related to processing speed and dedifferentiation. Against our predictions, the findings also negated the inhibition theory. As expected, statistically significant moderation interactions were found for several executive indicators and QoL domains, illustrating the buffering role of QoL over particular age-related differences in EFs. Implications for these results, unexpected findings, and the role of covariates were discussed. An emphasis was placed throughout on the importance of investigating QoL variables and other moderating factors of cognitive aging, for the development of prevention and intervention endeavors with seniors.