

On Retirement and Cognitive Aging from a Life-Span Perspective

Linn Elena Zulka

Psykologiska institutionen, Göteborgs universitet, 2021

Avhandlingen för avläggande av filosofie doktorsexamen i psykologi, som med vederbörligt tillstånd av samhällsvetenskapliga fakultetsstyrelsen vid Göteborgs universitet kommer att offentligen försvaras fredagen den 17 december 2021, klockan 10:00 i sal F1, Psykologiska institutionen, Haraldsgatan 1, Göteborg.

Fakultetsopponent: Professor Nancy Pedersen, Karolinska Institutet, Sweden

Föreliggande avhandling baseras på följande artiklar:

- I Zulka, L. E., Hansson, I., & Hassing, L. B. (2019). Impact of retirement on cognitive function: A literature review. *GeroPsych: The Journal of Gerontopsychology and Geriatric Psychiatry*, 32(4), 187-203.
- II Zulka, L. E., Thorvaldsson, V., Hansson, I., & Hassing, L. B. (2021). Effects of work demand and changes in leisure activity on post-retirement memory. *GeroPsych: The Journal of Gerontopsychology and Geriatric Psychiatry*. Advance online publication.
- III Zulka, L. E., Hansson, I., Hassing, L. B., & Thorvaldsson, V. (2021). Personality and reasoning ability during retirement age: Report from a Swedish population-based longitudinal study. *Journal of Research in Personality*. Advance online publication.
- IV Zulka, L.E., Thorvaldsson, V., Hansson, I., & Hassing, L.B. (2021). *The role of young adulthood intelligence and contact with friends in life satisfaction during the retirement transition*. Manuscript submitted for publication.



GÖTEBORGS UNIVERSITET

Abstract

Zulka, L. E. (2021). *On Retirement and Cognitive Aging from a Life-Span Perspective*. Department of Psychology, University of Gothenburg, PO Box 500, SE-405 30 Gothenburg, Sweden.

Retirement is a major life event potentially affecting domains such as cognitive functioning and well-being. The main aim of this thesis was to assess whether retirement influences cognitive functioning and how inter- and intra-individual differences in psychological and lifestyle factors moderate the association. A secondary purpose was to evaluate whether general intelligence, as measured at age 18, and social contacts later in life may function as resources for successful adaptation to retirement from work. In **Study I**, we systematically reviewed current literature to evaluate patterns of findings regarding the impact of retirement on cognition. Peer-reviewed studies ($n = 20$) with longitudinal designs were reviewed. The studies reported negative, positive, and no effect of retirement on cognitive function. These conflicting results were explained neither by variations in study characteristics nor by the use of different measures of cognitive abilities. We found a positive trend for cognitive functioning for retirement from physically demanding jobs. For retirement from cognitively demanding jobs, the evidence was conflicting. **Studies II, III** and **IV** were based on data from the HEalth, Aging and Retirement in Sweden (HEARTS) study ($n = 5913$). In **Study II** ($n = 631$), we examined whether retirement influenced cognitive functioning, and modeled the interaction between job demands before retirement, changes in leisure activities over the retirement transition, and their relationship to post-retirement cognitive functioning. Results indicated that retirement did not generally lead to poorer cognitive development. Furthermore, increased cognitive stimulation, through cognitively demanding leisure activities, had beneficial effects on post-retirement memory development among individuals who reported low previous cognitive work demands. In **Study III** ($n = 3851$), we investigated the relationship between the Big Five personality traits and the level of and change in reasoning ability in the years around retirement. Higher levels of extraversion, conscientiousness, and neuroticism were related to lower levels of reasoning ability, whereas higher levels of openness were associated with higher levels of reasoning ability. We found no association between any of the Big Five personality traits and the rate of change in reasoning ability in the years around retirement. In **Study IV**, we merged HEARTS data with IQ measures derived from military conscription ($n = 924$). We found that IQ in young adulthood was unrelated to levels of life satisfaction before retirement. However, increases in contact with friends were associated with increases in life satisfaction and this increase was strongest for individuals with lower IQ scores. To conclude, our findings provide evidence that retirement does not generally negatively affect cognitive functioning, at least from a short-term perspective. Cognitive functioning in the years around retirement relates to different possibly modifiable psychological and lifestyle factors that potentially stimulate positive cognitive developments.

Keywords: cognitive aging, retirement transition, leisure activity engagement, work demands, personality, life satisfaction, initial IQ, social contacts