

# Cognitive, Psychological and Social Drivers of Longevity

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## ABSTRACT

As people advance into their 80s, mental health becomes ever more important. Two nonsmoking octogenarians of identical age and gender, with the same body mass index, type of diet and physical exercise routine, may have markedly different prospects of living to 100. Cognitive and social functioning, and positive well-being, are key to living longer. Many activities that influence longevity are very cognitively demanding. For example, chronic illnesses require self-regulation to limit damage; better knowledge and reasoning help manage disease.

With physical disease, longitudinal studies undertaken over the past half century have provided the empirical data upon which numerical models have been developed for the prevalence of cancer and cardiovascular disease. To explore the longevity impact of cognitive and social functioning and well-being, longitudinal studies have been undertaken over the past decade in many countries. A notable recent Scottish study has highlighted the widowhood effect: Analysis of mortality statistics of 58,000 married couples found significantly enhanced hazard ratios for both men and women.

This paper evaluates the cognitive, psychological and social drivers of longevity by reviewing recent longitudinal studies, and analyzing the latest research on brain plasticity, positive psychology and elderly cohort survival, as well as new geriatric psychological theories on successful aging. A quantitative assessment is then made of the actuarial implications of these drivers for modeling the mortality of elderly annuitants, with new insights into what factors keep people progressing purposefully into advanced age, beyond avoiding disease.