CLSA Approved Project

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Project Title
Multivariate analysis and prediction of inter-relationships between cognitive and non-cognitive measures in the CLSA comprehensive sample

Project Summary
There is a growing understanding that different facets of "healthy cognitive aging" are strongly influenced by a large number of non-cognitive variables such as diet and lifestyle, physical activity, nutrition, and other physical health indices. Moreover, evidence suggest that the influence of such variables form correlated components that, considered together as a cluster or latent factor, have greater explanatory and predictive power than any individual measure examined in isolation. However, to reliably identify these kinds of latent factors requires large studies that collect hundreds or even thousands of measurements on large groups of individuals. The Canadian Longitudinal Study in Aging (CLSA) offers exactly this kind of large-sample dataset that is needed to capture the complex multivariable relationships between cognition and other non-cognitive domains. Using statistical methods designed to capture commonalities across large sets of variables, we will capture the elements of lifestyle, physical health, and social participation that are most strongly related to cognitive performance in an aging population in Canada.

Keywords
Multivariate analysis, Multiple factor analysis, Cognition, Cognitive reserve