322 - Heterogeneity in dynamic change of cognitive function among Chinese elderly: A growth mixture model

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Objectives: Our aim is to use the growth mixture model (GMM) to distinguish different trajectories of cognitive change in Chinese geriatric population and identify risk factors for cognitive decline in each subpopulation.

Methods: We obtained data from the Chinese Longitudinal Health Longevity Survey, using the Chinese Mini-Mental State Examination (C-MMSE) as a proxy for cognitive function. We applied the GMM to identify heterogeneous subpopulations and potential risk factors.

Results: Our sample included 2850 older adults, 1387 (48.7%) male and 1463 (51.3%) female with age range of 62 to 108 (average of 72.3). Using GMM and best fit statistics, we identified two distinct subgroups in respect to their longitudinal cognitive function: cognitively stable (91.4%) group with 0.42 C-MMSE points decline per 3 years, and cognitively declining (8.6%) group with 4.76 C-MMSE points decline per 3 years. Of note, vision impairment and hearing impairment had the highest associations with cognitive decline, with stronger association found in the cognitively declining group than the cognitively stable group. Cognitive activities were protective in both groups. Diabetes was associated with cognitive decline in cognitive declining group. Physical activities, social activities and intake of fresh vegetables, fruits, and fish products were protective in cognitive stable group.

Conclusions: Using GMM, we identified heterogeneity in trajectories of cognitive change in Chinese elders. Moreover, we found risk factors specific to each subgroup, which should be considered in future studies.