

**Latent Growth Curve Paths to Longevity:
The Terman Study
AG008825**

Chandra A. Reynolds, PI
Howard S. Friedman, Co-PI

Project Description: Disparities in developmental biopsychosocial trajectories beginning in early childhood may distinguish those who reach advanced age exceptionally healthy from those who suffer an early death or chronic disease. Variations in longitudinal trajectories will be examined using a latent growth curve approach on 1,528 individuals from the Terman Life Cycle Study, a comprehensive 8-decade archive. Whilst individuals in the study were selected for childhood intelligence and promise, there was substantial variation in later success, longevity, and disease, including dementing illnesses. Life course trajectories have yet to be considered across the 8-decades of rich psychosocial, health and mortality information available. This project will use dynamical modeling approaches to examine patterns of stability and change for individual characteristics, including physical activity level, social support, and personality, and variations in growth curves as a function of cause-specific mortality (nosologist coded). Childhood data will be used as predictors of variations in growth trajectories, for example, birth weight, nursing, childhood illnesses, developmental milestones, gender, socioeconomic status, and parental age at participant's birth. Life events occurring in adulthood will also be examined as potential sources of turning points in health and psychosocial trajectories, for example, divorce or death of spouse. Sample and familial factors such as intelligence and parental longevity will be statistically accounted for in analyses. Consistent with the Request (RFA), the aim is to use new modeling techniques to expand use of and collaboration on an existing study to assess patterns of health and psychosocial trajectories as well as their dynamic interrelations across time in order to differentiate among those who reach old age and whether they reach it in good health.