STATS 506 Final Project Proposal

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I shall use the Health and Retirement Study (HRS) to study the following research question: What is the association between mid-life occupation and cognitive health in later life? Answering this question will help me write my dissertation prospectus on earlier life occupational mismatch and later life cognitive outcomes.

The HRS is a biennial, nationally representative, longitudinal US survey of older adults and their spouses. I plan to use the RAND HRS, a harmonized version of the dataset that contains imputed economic variables and allows for cross-wave comparisons. Wave 1 (1992) interviewed adults born in 1931 to 1941, with successive waves replenishing the sample with younger or older cohorts such as the AHEAD cohort (born before 1924), Children of the Depression Era (born 1924-1930), the War Babies (born 1942-1947), and Baby Boomers (1948-1965). All household heads are 50 years old or older, while some spouses may be under age 50 at the time of interview. Information is collected regarding demographics, income, assets, health, cognition, family structure and connections, health care utilization and costs, housing, job status and history, expectations, and insurance. Since the HRS over samples Hispanic people, Black people, and residents of Florida, it provides weighting variables to make it representative of the community-based US population. HRS also provides weights for individuals living in nursing homes.

I plan to use R and STATA to clean and analyze my data. Despite using the harmonized dataset, I will have to do additional data cleaning and preparation before conducting the analyses. While I have some experience using HRS data, I have not used these variables or methods before. I plan to use discrete time event history modeling to predict the hazard of becoming cognitively impaired at the end of the observation interval, given that a respondent does not have cognitive impairment at the beginning of the observation period. This method is used in public health and sociological papers that examine how cognitive outcomes are related to earlier life

exposures. My dependent variable is a binary variable – having moderate to severe cognitive impairment or not (derived from the total cognition summary score variable). My independent variable of interest is occupation code for the job with the longest reported tenure (2000 Census occupation codes). I will include time varying covariates (age, self-rated health, whether the respondent smokes, employment status) and time-invariant covariates (educational attainment, race, gender, parent's educational attainment) in my analysis. I will conduct the analyses to determine if less prestigious occupations, while controlling for education and other measures of socioeconomic status, are associated with cognitive impairment in later life. I pursue this research question given the importance of examining how social institutions such as work and education are associated with the unequal patterning of population health outcomes.