The effect of retirement on health & health behavior: an analysis of the German KORA-Platform

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***TOPIC**: Ageing, savings and retirement*

***PRESENTATION FORMAT:** PhD students/Young research fellows*

BACKGROUND: Recently, several studies aimed at analyzing the effects of retirement on health status, health behavior and health care utilization. In accordance with theories of health capital, retirement could both have a direct impact on health, via reduced stress and job strain, but also an indirect effect, via increased health care utilization and improved health behavior, due to a larger availability of time.

OBJECTIVE: The present study aims at estimating the effect of retirement on a large number of objective and subjective health parameters, health care utilization and health behavior indicators, differentiating the effect for different groups based on gender and chronic illness. The study pays specific attention to relevant objective risk factors for chronic cardiovascular and metabolic diseases, while also differentiating their meaning in the heterogeneity analysis of chronic illness patients, in order to offer relevant starting points for targeted prevention and intervention strategies.

METHODS: We utilized three longitudinal waves of the KORA cohort study (S3-F3/S4-F4-FF4), analyzing a panel of 2200 individuals. In order to take into account the severe endogeneity issues connected with our research questions, we adopted a fuzzy regression discontinuity design with individual specific fixed effects, exploiting the exogenous variation in the retirement behavior induced by retirement age thresholds. We considered a set of health behavior variables (i.e. physical activity, smoking, alcohol consumption, diet, sleep). Health status was measured through risk factors composing the metabolic syndrome (BMI, cholesterol/HDL-quotient, HbA1c, systolic/diastolic blood pressure) and by subjective indicators (SF12 mental and physical scales, self-rated health). Health

care utilization was measured using doctor visits and hospital stays. We carried out specific regressions to disentangle the effect of early and regular retirement, as well as a comprehensive heterogeneity analysis. There we were specifically interested in investigating the effect of retirement distinguishing individuals with/without a cardiovascular or metabolic chronic disease at baseline.

MAIN RESULTS: In the general population, retirement has a positive effect on self-rated health, but no effect on objective health or health care utilization. These effects differ however substantially depending on the time point of retirement, on sex and on the presence of a chronic illness. Among those who retired early, retirement reduced BMI, cholesterol/HDL-quotient, number of cigarettes smoked and sleep problems, but resulted also in a more frequent alcohol consumption. Among those who retired at the regular age threshold, retirement instead increased BMI, cholesterol/HDL-quotient, blood pressure, but also subjective physical health and physical activity. Among men, the effect was rather positive for subjective health and health behavior, while the effect for women was positive only for objective health, since health care utilization and health behavior worsened after retirement. Substantial differences exist also depending on the presence of a chronic illness.

CONCLUSIONS: In the sample considered, the effect of retirement depends strongly on retirement timing, gender, and chronic illness. Retirement seems to cause a partition in the further development of health depending on the time point of retirement. Early retirees experienced an improvement of objective health parameter, probably partly mediated by their increased positive health behavior and their need to counterbalance possible health-related issues, which drove the decision to retire in the first place. Regular retirees instead, show a rather passive and subjectively positive, but also rather deleterious adaptation to retirement. They showed an increased risk of metabolic syndrome, together with an improvement in subjective physical health and almost no changes in their health behavior. These results reveal how different societal groups react to retirement and that the main risk factors concerned by this transition are BMI, cholesterol/HDL-quotient, but also physical activity, alcohol consumption and sleep. They constitute relevant starting points for future targeted prevention and intervention and their interrelation should be further analyzed, for example by means of mediation analysis.

With this abstract, I would like to take part in the AIES Young Researchers Award.