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Abstract

Demographic aging is a phenomenon that concerns policymakers in most developed countries around the world. This challenge affects the economic sustainability of both the public health and pension systems. EU member states are concerned with the costs of supplying health and long-term care adequately, since older people use more social services, compared to the younger population. In order to improve the economic sustainability of the pension system, EU member states had either reformed the pension system in their respective countries or had augmented the early and statutory retirement age, prolonging the working lives of older workers. The reforms have concerned the researchers especially about the effects that prolonged working life has on wellbeing, and how these effects are moderated by the existence of social networks. This paper utilizes panel data from the Survey of Health, Ageing and Retirement in Europe (SHARE) by using instrumental variables (IV) strategy. Specifically, I use the institutional variation in ages for statutory retirement eligibility in European countries as a source of exogenous variation in retirement status. The results indicate that there is negative and significant correlation between retirement and health measures. The effects of the independent variables on the outcome are larger in the instrumental variables results. The results also suggest that there is a moderating effect of social networks to those health measures where the interaction between retirement and different types of social network ties is statistically significant.

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1. Introduction

Demographic aging is a phenomenon that concerns policymakers in most developed countries around the world. Reasons that cause this demographic transition[1] are the low mortality rates and the consequent rise in life expectancy, due to medical advances and the higher quality of life in the Western countries. Another reason is the declining fertility levels, due to intentional and unintentional factors that causally influence and hinder fertility (e.g., household income, women's labor force participation and earnings) (Grant et all, 2004; OECD, 2019). It is estimated that by 2070, 30 percent of all Europeans will be aged sixty-five and older, as compared to today's 20 percent (European Commission, 2020). We can examine the level of support that the working-age population can give to the older people by counting the old-age dependency ratio[2]. In the European Union, the old-age dependency ratio for the EU-27 in 2019 was 34.1 percent, as compared to 25.9 percent in 2001 (Eurostat, 2020). There are only three working persons for every older person. It is expected that by 2050 the dependency ratio will surge to 56.7 percent for EU-27. That means that there only will be fewer than two working persons for every older person.

This challenge affects and puts in jeopardy the economic sustainability of both the public health and pension systems. Thus, policymakers need to put in place policies and reforms that deal with the fiscal consequences of the phenomenon (Eurostat, 2020). Regarding this problem. member states of the EU are concerned with the costs of supplying health and long-term care that is adequate, since older people use more social services, compared to the younger population.

To maintain and enhance the economic sustainability of the pension system, EU member states have taken substantial reforms. Over the last decade, they had either reformed the pension system in their respective countries or had augmented the early and statutory retirement age, prolonging the working lives of older workers (The 2021 Aging report). This means that in almost all the EU countries the statutory retirement age has risen to 65 years (on average), whereas few countries have reached 67 years (Finnish Centre for Pensions, 2021). Moreover, some countries have chosen to

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[1] Demographic Transition Model (DTM) is a theory that explains the changes in the population of a country over time. Specifically, it shows how mortality levels and birth levels influence the total population a country (Kirk, 1996).

[2] The dependency ratio is the relative size of the older part of the population aged 65 years and over as compared to the working-age population (20 -64 years old). It measures the number of older individuals that each individual in labor force will have to support (OECD, 2017).

introduce a balancing system that adjusts the retirement age and the changes in life expectancy levels automatically, to make the pension systems more robust against the phenomenon of demographic aging, having a direct impact on the labor supply (Europa, EPC, 2020).

The United Nations have proclaimed the 2021-2030 the Decade of Healthy Ageing (WHO,2020). Healthy ageing is defined by the WHO as "the process of developing and maintaining the functional ability that enables wellbeing in older ages" (WHO, 2020). The concept of healthy ageing refers to the hierarchical relationship of low probability of disease and disability (and low probability of severe risk factors), functional physical and cognitive abilities, and actively engaging with life (Rowe and Kahn, 1997). It is regarded as a recurring process in which people enhance their opportunities to maintain and improve physical and mental health, independence, and quality of life during the life course by developing interpersonal relations and participating in activities that are valuable to them. Diving into the interpersonal relations and participation in productive activities, social networks offer significant effects on the general functioning of older people. Individuals who report increased social integration and social support have relatively better general health (Rowe and Kahn, 1997). And that is important especially for individuals experiencing changes in life, such as retirement or widowhood, which have major implications for the wellbeing. The changes to poor social relationships, fewer social activities, and less social engagement of people above the age of sixty-five have been shown to predict greater cognitive decline over 4 years after retirement (Rowe and Kahn, 1997).

Motivated by the above, I formulate the researcher question of this paper as to how do social relationships moderate the effect of retirement on health. I hypothesize that the existence of different types of social network ties moderate the effect of retirement on general health and mental health conditions, by improving the impact after examining the joint effect of the $\beta_2 + \beta_4$ relationship.

Changes in social life and social engagement after retirement have motivated researchers to explore the impact of pension reform on the health of the individual. Both policymakers and researchers need to evaluate the welfare and budgetary consequences of the new policies. Retirement affects physical and mental health in several ways and through multiple mechanisms. Under the Grossman model of demand of human capital, health is viewed as an investment good that influences the individual's labor market output (Grossman, 1999). If retirement does not enhance health but rather worsens it

and then the generated health utilization goes up, the need to implement policies that delay retirement and that do not put pressure on the welfare system increases. On the other hand, if retirement ameliorates the health of the retiree, the policies for delaying retirement exit so as to support the welfare state from failing, might induce economic costs that affect the individuals (Gorry et al, 2018). Gorry et al.(2018) finds that no matter what the impact of the retirement on health is, there is no direct impact of the policy interventions that delay or not retirement to the health costs of the individual.

There has been a substantial number of studies that examine the impact of retirement on the mental and physical health of the individual. Empirical studies find either negative, positive, or even no effects of retirement on health (Coe & Zamarro, 2011; Charles, 2004; Dave et all, 2006; Bertoni et all, 2017, Bound and Waidmann, 2007; Rohwedder & Willis, 2010, Neuman, 2007; Kolodziej and García-Gómez, 2019; Eibich, 2015). As it has been mentioned retirement influences health status with various ways. One of these is the interaction of retirement with social networks, which can be associated with physical and mental health of the retiree (Litwin and Stoeckel, 2012; Fletcher, 2014; Borsch- Supan and Schuth, 2014).

However, the literature on this topic on mechanisms that mitigate the effect of transition into retirement on health is limited. Ali et al (2018) in their study used longitudinal data from the Chicago Health and Aging Project to investigate the association between social network diversity and mortality, cognitive function and physical health among older black and white adults. Moreover, Litwin and Levinsky (2020), investigated the effect of retirement on health, and also, how social networks intervene in the association between transition to retirement and health, by exploiting longitudinal variation provided by the SHARE dataset

The study at hand contributes to the body of knowledge on the topic of interest in two ways. First, this is one of the few studies explores the counterbalanced effect of different types of social network ties on the effect of retirement of general and mental health by exploiting the wealth of information that SHARE provides. Second, the nature of the sample as well as its size allow to employ pooled OLS as the baseline model, fixed effects estimation, and IV model to counteract with the problem of endogeneity. of methods already applied in the literature (Coe and Zamarro, 2010) so as to extract the required results.

This paper deals with endogeneity with panel data from the Survey of Health, Ageing and Retirement in Europe (SHARE) by using instrumental variables (IV)

strategy. Specifically, I use the institutional variation in ages for statutory retirement eligibility in European countries as a source of exogenous variation in retirement status. The instrument should be relevant, which means that it should be related to the retirement decision, and exogenous, that is, it should influence personal health only through the incidence of retirement (Angrist and Pischke, 2014).

The results indicate that there is negative and significant correlation between retirement and health measures. The effects of the independent variables on the outcome are larger when the instrument, that is cross-country variation of eligibility retirement age, is applied to the regressions. The results also suggest that there is a moderating effect of social networks to those health measures where the interaction between retirement and different types of social network ties is statistically significant. When examining $\beta_2 + \beta_4$ relationship closer, it is indicated that retirement affects the outcome depended on the changes on social networks, thus moderating and reducing the larger effect that retirement has on health.

The paper is organized as follows. Section II reviews the relevant literature and the theoretical framework. Section III analyses the relevant sources of endogeneity. Section IV describes the data and the variable definitions employed in the study. Section V develops the empirical methodology of the paper. In section VI the main results for general health and mental health are analyzed. Finally, section VI concludes.

2. Literature review/ theoretical framework

2.1. Retirement and health

In the field of economic theory, health is perceived as an investment good and/or consumption good. In his model of the human capital of health demand, Grossman (1999) describes health as a form of human capital. Individuals demand health for reasons regarding consumption and investment. That is, health capital raises utility and decreases sick time subtracted from work time because of bad health and illness, hence increasing earnings. Consequently, once individuals have retired, motivation to be healthy is minimal, since the pressure to be healthy to be productive and raise earnings is not mandatory henceforth. Thus, it is expected that retirees will not invest in their health. Nevertheless, health stock is at the present a consumption good, retired individuals will invest more in their health in the post-retirement period. Therefore, health is expected to increase, but that also depends on the value that the person gives on either dimension.

Studies and research material that associate health with retirement have produced conflicting outcomes regarding the causal mechanism of retirement due to mainly the heterogeneity of populations and subpopulations as well as variables that confound the results. Moreover, most of the existing studies use various methods and strategies to deal with endogenous variation. The problem of endogeneity arises when individuals decide to retire earlier than the eligibility age for pension because of health problems that come of physically demanding job positions. However, there is a set of studies that uses the instrumental variables (IV) model or regression discontinuity (RD) model to determine the causal effect of retirement on health. The most common instrument used in the literature is normal or early eligibility age for retirement (Coe & Zamarro, 2011; Charles, 2004; Dave et all, 2006; Bertoni et all, 2017, Bound and Waidmann, 2007; Rohwedder & Willis, 2010, Neuman, 2007; Kolodziej and García-Gómez, 2019; Eibich, 2015).

Dave et all (2006) estimated in their study the impact of retirement on health status, using indices of physical and functional limitations, depression, and illness. They used in their empirical work seven longitudinal waves of the Health and Retirement Study from 1992 to 2005, using panel data. In their results, they found that retirement can bring about a 5-16 percent rise in difficulties related to mobility and

daily activities. Moreover, they found that illness conditions increase by 5-6 percent and a 6-9 percent reduction in mental health, after six years in retirement. These results are associated with changes in lifestyle through social interaction and physical activity. Health problems are eased in cases where the individual has a spouse, social support, and does not stop taking part in physical activities post-retirement. However, adverse health conditions may be larger because of involuntary retirement.

Coe and Zamarro (2011) study the effect of retirement on health and cognitive function. They use cross-country variation in retirement behavior from various countries and different retirement ages across countries as the instrument in their instrumental variables (IV) model. They utilize Wave 1 (release 2) of the SHARE longitudinal panel dataset to collect information on demographics and post-retirement behavior. The results indicate that there is a statistically significant modest positive effect of retirement on general health status, and there is no causal link between work status and depression or even cognitive function. It is estimated that changes in the statutory retirement age implemented by the government reduces by 35 percent the probability of reporting in fair, bad, or very bad health, while there is almost one standard deviation improvement in the health index. Further, Kolodziej and García-Gómez (2019) use also information form the SHARE longitudinal panel dataset. They had found that retirement positively affects mental health, but the benefits from retirement are not equally distributed, meaning that the protective effect on mental health is considerable for those that are just above or below the clinical threshold of being at risk of depression. The result is greater for women and for blue collar workers.

Following a similar approach as Coe and Zamarro (2011) and Rohwedder & Willis (2010), Eibich (2015) explores how retirement influences personal health, and the heterogeneity in the effect across demographic characteristics, using panel data from Germany. Eibich (2015) employs a fuzzy Regression Discontinuity Design to treat endogeneity with discontinuous increases in the retirement probability at ages 60 and 65 in the pension system. The results of the paper indicate that there is a positive and significant correlation between retirement and self- reported health and mental health. It is also indicated that retirement reduces outpatient care utilization. Moreover, by looking into the effect of heterogeneity, health behavior and time use data results indicate three possible means through which retirement influences health status: a rise in sleep duration, rise in physical activity, and mitigation of stress and tension due to work.

The research of Bertoni et all (2017) explores the effects of retirement on the physical health of the retiree. Specifically, they explore the causal effect of the timing of retirement on handgrip strength (GS) loss in older age. They exploit the longitudinal dimension of SHARE and the variation in minimum eligibility age on early retirement and old pension benefits in Europe over the last 40 years. The results show that there is a positive causal effect on muscle strength.

Bound and Waidmann (2007) focused on age-specific incentives of the pension system of the United Kingdom to examine the impact of the retirement of health. They utilized the institutional characteristics of the pension system since it is impossible to estimate the causal effect only by comparing the health of the individuals before and after the retirement age threshold. Objective physical measurements and self-reports of the respondents are included in the survey data. The analysis suggests that there is no evidence that retirement and health are negatively correlated, and some evidence is positive for men. They follow a similar strategy as Charles (2004) who assesses how retirement impacts subjective well-being. He finds that Subjective Well-Being (SWB) and retirement are negatively correlated, as well as change in SWB and change in retirement status. According to Charles, this negative correlation derives from the fact that individuals who experience low well-being and individuals who experience negative and transitory changes might be more likely to retire. Once he controls for endogenous variations of retirement on health status, the results indicate that retirement improves SWB.

Neuman (2007) examines if individual health stays the same after transitioning to retirement in the USA. He uses data from the Health and Retirement Study (HRS) and applies IV strategy to tackle the problem of endogeneity. The results show that individuals in retirement or with minimal labor force participation continue to have the same health status as before or improve their health. Nevertheless, the researcher cannot control for reporting bias, i.e., the respondents of the survey may report or perceive one's subjectively. They also use objective health measures to ease the issue of subjective measures.

Coe and Lindeboom (2008) explore the impact of retirement on later-life health. They collected data from the Health and Retirement Survey and used IV estimates of age retirement incentives of the US Social Security system as well as sudden alterations in retirement opportunities. The results indicate that there are no negative health effects of early retirement for men. On the contrary, there is a rise in self-reported and

improved health for highly educated individuals. Like Charles (2004), Neuman (2007) uses age-specific retirement incentives in the USA, with the only difference being that he uses both subjective and more objective measures to health. He observes that retirement preserves subjective health for both men and women, whilst for objective health, he finds no effect of retirement.

2.2. Retirement and social networks

For years researchers have associated social networks of older people with better health since it helps them preserve a "good old age" or improve their life, providing greater longevity. Greater social capital, interpersonal and emotional connectedness in older people's lives have positive effects as compared to those with insignificant network size. Van Tilburg (1992) had investigated how transition to retirement influences support network. Data from fifty men before and after retirement showed that a third of interpersonal relationships were not part of the network anymore (at T_2), while there was no change in the size of the network. Relationships were more pleasant, and the contact was more frequent.

Litwin and Stoeckel (2012) managed to derive a confidant typology among adults in Europe since they realized that social capital is an integral part of the physical and mental health of the elders. Their study investigates three hypotheses: confidant network types are different in every country, confidant network types with a substantial social capital are associated with greater well-being, and finally, elder individuals with no confidants have worse well-being than those with confidant networks. Data from the fourth wave of SHARE are used and the sample contained people aged fifty and older and their spouses. K-cluster analysis was utilized to obtain the typology, consisting of eight variables. CASP-12 scores[3] were employed in the regression on network types controlling for country and demographic characteristics. They identified six confidant network types of family-based configurations depending on proximity as well as friend-based and other-based types. Enhanced well-being was related to people with substantial social capital in their lives. However, those with no designated confidants had the lowest CASP-12 scores. Country differences exhibit that, in general, Southern

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[3] CASP-12 is a shorter 12-version of CASP-19, a measure of quality of life in older ages. It describes four dimensions of life: Control, Autonomy, Self-realization, and Pleasure. The 12 items take the form of either questions or statements to the survey and are assessed as four-point scale. http://www.share-project.org/fileadmin/pdf_documentation/SHARE_Scales_and_Multi-Item_Indicators.pdf

and Eastern countries were negatively associated with CASP-12 well-being as compared to Northern and Western countries.

Borsch- Supan and Schuth (2014) explore the relationship between early retirement, mental health (Subjective Well-Being and cognition), and social network size and composition among older individuals. Wave 4 of the SHARE dataset is employed. They find a noteworthy correlation among the triangle early retirement, mental health, and social networks, based on the sample that consists of all individuals that retired by the time of the survey. Furthermore, by adding socio-demographic controls and background variables, the previous results remain the same or it is even strengthened. When employing the IV model to deal with the problem of reverse causality, they find that (early) retirement decreases the size of social networks since there is a reduction in the size of colleagues and other non-family contacts. They also connect the reduction of social networks with different levels of mental health and cognitive abilities and deduce that diminishing cognitive function, increased depressive symptoms and worst subjective health can be explained by the changes in social networks.

Additionally, Ali et al (2018) in their study used longitudinal data from the Chicago Health and Aging Project to investigate the association between social network diversity and mortality, cognitive function and physical health among older black and white adults. They estimated the main effect of social network diversity in their model as well as the interaction term with time since baseline calculations for both cognitive and physical function. They concluded that sizeable network diversity indicates statistically significant association with decreased mortality risk and decreased cognitive and physical impairment in older adults. Furthermore, they suggest that the associations were independent of network size and the positive association between network size and the health outcomes was diminished once they included the social network diversity in the regression as part of the interaction term.

Likewise, Litwin and Levinsky (2020), examined the effect of retirement on health, and also, how social networks intervene in the association between transition to retirement and health, by exploiting longitudinal variation provided by the SHARE dataset. More specifically, they investigated the inter-relationship among social networks, retirement and health in later life. They reported that retirement is associated with poorer health (physical, cognitive and mental) among men. However, the negative

results were counterbalanced in the presence of network factors (network satisfaction) and they were accompanied by better health.

3. Sources of endogeneity

The existing literature provides mixed results for the main research question at hand. However, the researchers had acknowledged that there is one common element that threatens the validity of those results. They have been concerned so far with the problem of endogeneity (Charles, 2004; Dave et all, 2006; Bound and Waidmann, 2007; Neuman, 2007; Coe and Lindeboom, 2008; Coe and Zamarro, 2011; Eibich, 2015, Mazzonna and Peracchi, 2012, 2017; Rohwedder and Willis, 2010; Borsch- Supan and Schuth, 2014; Bertoni et all, 2017; Kolodziej and García-Gómez, 2019). Endogeneity is a key problem in causal process tracing. Endogeneity arises when the treatment variable correlates with the error term e, thus making the estimates inaccurate. Although there are various threats to internal validity of the estimations, this study is focusing on two sources of endogeneity (Bascle, 2008).

First, a major problem of causal relationships is reverse causality. Consider an explanatory variable X that causes the outcome variable Y. In a situation with reverse causality occurs when the dependent variable (Y) causes the explanatory variable (X) (Antonakis et all, 2010; Bascle, 2008). On the context that I examine, studies have shown that health affects retirement decisions as well. More specifically, the retirement decision might be a result of self-selection into retirement due to worse mental or physical health status. Or the decision to exit the workforce earlier might depend on the gains of this decision (Coe and Zamarro, 2011). For instance, those who are not satisfied or do not enjoy their job as much as they did in the past or those who have physically demanding occupations self-select to retire earlier to relieve themselves. Therefore, there is a strong preference for investment in health capital after retirement because of losses arising from adverse work conditions. This is in line with the Grossman model for the demand for health capital as discussed in the literature review chapter.

To tackle the problem of endogeneity, the paper follows the existing literature (Charles, 2004; Dave et all, 2006; Bound and Waidmann, 2007; Neuman, 2007; Coe and Lindeboom, 2008; Coe and Zamarro, 2011; Mazzonna and Peracchi, 2012, 2017; Rohwedder and Willis, 2010; Borsch- Supan and Schuth, 2014; Fletcher, 2014; Bertoni et all, 2017; Kolodziej and García-Gómez, 2019) and uses instrumental variable

strategy. I utilize the institutional variation in ages for statutory retirement eligibility in European countries as a source of exogenous variation in retirement status (Mutual Information System of Social Protection/ MISSOC. It is imperative that the instrument satisfies certain conditions (Angrist and Pischke, 2014). It is relevant, which means that is directly related to the retirement decision, it is exogenous, that is, it influences personal health only through the social networks (aka treatment variable).

Additionally, not only is the above relationship threatened by the problem of reverse causality but also it is important to consider reverse causality in the relationship of health and social networks. As it is suggested by the literature, substantial social capital is translated into a healthier life for the elders (Litwin and Stoeckel, 2012). Borsch- Supan and Schuth (2014) indicate that the number of former colleagues, friends is reduced with age, and especially for early retirees. Time elapsed since retirement is associated with smaller overall social networks, as well as smaller number of friends former colleagues and other family members. However, correlation is opposite for formal healthcare support. Additionally, social networks and mental health are significantly associated, and larger social networks have strong association with enhanced cognition, less depression, and better subjective health. However, there are unobserved characteristics that might negatively influence cognition, thus increasing the distance to friends and (ex-) colleagues as individuals become older.

On top of that, Ertel et al. (2009) acknowledged that retirement is a transition point where many changes take place. For instance, many social contacts occur in the workplace; individuals have less contacts once exiting the working environment. However, this void can be filled with contacts and relationships from participation in social activities. Moreover, they concluded that it is possible that relationships with friends might be threatened and destabilized in cases where older individuals are facing physical problems, and search for one-sided relationships for support and assistance (e.g., formal homecare support). Consequently, the substitution of mutual support, and psychologically beneficial relationships might lead to social isolation causing major mental problems. However, there is evidence that suggest that retirement may not have an influence on social networks, thus reducing reverse causality from health to social networks or the causal relationship from social networks to health. The literature tries to control of the reverse causality of the health-social networks causality relationship by exploiting the longitudinal variation of dataset keeping track of those who answered in the baseline wave questions about social networks and following them in subsequent

waves that include questions for social networks, holding fixed individual characteristics.

Further, potential source of endogeneity could be omitted variable bias that is caused due to heterogeneity in unobserved characteristics, namely failing to include control variables that are important for the validity of the estimations, and therefore for the credibility of results (Antonakis et all, 2010; Bascle, 2008). When estimating retirement decision and personal health, it is crucial not to omit control variables that simultaneously affect retirement, social networks, and personal health. Otherwise, omitted variable bias is generated. Those are analyzed in the definition of variables section.

4. Data and Variables

4.1. Data Source

I employ data from the Survey on Health, Ageing and Retirement in Europe aged 50+ (SHARE). SHARE is a multidisciplinary, cross-sectional, longitudinal panel dataset that consists of micro-level information on health, socioeconomic status, social networks, and work history of people 50 years old and older at the time of the first interview (Borsch- Supan et all, 2013). The survey is carried out every two years (from 2004 to 2022), and waves four until eight are used in the paper. I chose to include these specific waves since I am interested to examine people who were employed in the baseline year and eventually retired in the subsequent waves. Wave 3 SHARELIFE is not included because it does not provide information on current health and social networks but it is a retrospective analysis.

All SHARE waves include information of individual health status. In addition, Waves 4, 6 and 8 collects and analyzes information about the personal social networks of older people that relate to different behaviors and perceptions because it enables the researchers to understand their contribution to the quality of life. Moreover, Wave 7 contains data from the SHARELIFE questionnaires that include people's life history in various areas of their lives. This time the paper utilizes SHARELIFE Wave 7 since it includes data on current health status. Additionally, for Wave 8 the fieldwork commenced in October of 2019, however it was suddenly interrupted by the Covid- 19 pandemic, thus postponing the fieldwork in all participating countries. Then, the

SHARE created a questionnaire similar to the regular one but with shorter and more targeted questions regarding the living conditions of individuals aged 50+ during the pandemic. Three main variables of interest in the paper are retirement, health status, and social networks.

4.2. Sample Selection

The sample is derived from the countries participated in every wave: Austria, Germany, Sweden, the Netherlands, Spain, Italy, Denmark, Switzerland, Belgium, and Slovenia. I include individuals who are between 50 and 70 years old. The sample includes those that are observed in at least 3 waves in order to observe the effects of retirement on health . I select those who are employed in wave 4, the baseline, and I follow them in the proceeding waves if they have retired and look at the outcome variable 2 and 4 years after potential retirement or more, as long as they do not drop form the survey. Health changes can be compared to those who transited to retirement and those that continue working, between the baseline and the following waves. Furthermore, I observe individuals who entered as a refreshment sample in other waves but they provide information for social network variables. I drop individuals who are unemployed, disabled, or homemakers. I also exclude those who refuse to answer to questions or do not know. Moreover I drop those who participate only in one wave. The final sample consists of 30,212 individuals that either work or are retired.

4.3. Variable definitions

4.3.1. Retirement

For this study, I examine individual health after retirement, therefore it is important to give a definition of this exact variable. There are various definitions of retirement in the literature (Rohwedder & Willis, 2010; Coe and Zamarro, 2011; Gorry et al, 2018; Eibich, 2015; Mazzonna and Peracchi, 2012,2017, Insler, 2014). Retirement is the shift from working full or part-time to full or partial retirement. Otherwise, retirement is defined as the exit of an individual from the labor market. Therefore, I consider a person retired if she/he self-reports to be retired and supplies no work. In addition, a person who had never worked for payment or have not worked for payment since the age of 50, is regarded to be out of the labor force and thus is dropped from the sample. Finally, I drop observations with a labor force status that is missing, disabled, unemployed, homemakers, and those who switch from retirement to non-retirement.

Individuals who are partially retired are excluded when estimating the effects of complete retirement on health, and those who transition from work to disability or unemployment before retiring. The survey asks respondents about their labor market status, and the year of retirement should the individual has retired. I include a dummy variable for being employed in the baseline questionnaire at wave 4, and a dummy for being retired in the follow-up interviews when someone transits from work to retirement (waves 6 and 8). The same applies for the refreshment sample in wave 6 that retire in waves 7 and 8 (transiting from work to retirement).

4.3.2. Health measurement

The existing literature on the subject of health status displays numerous ways of measuring personal health. Those measures are either subjective or objective, and they concern physical or mental health status. The SHARE provides an extensive list of these measures through multiple questions which I include in the paper. For subjective, self-reported health, I use the response of the question of how an individual rates ones health on a five-point scale ("excellent," "very good," "good," "fair" and "poor") (Coe and Zamarro, 2011). Unlike Coe and Zamarro (2011) that create a "health stock" index, I create a dummy variable that takes value one if an individual has excellent or good health, and zero otherwise, similar to Suari- Andreu et al (2020).

The SHARE also includes a variety of mental health conditions. The EURO-D scale runs from 0 to 12, measuring the number of depressive symptoms in the previous month: depression, pessimism, suicidality, quilt, sleep, lack of interest, irritability, appetite, fatigue, concentration, enjoyment, and tearfulness. Each item in the scale accounts for the self-reported presence of the specific symptom.

4.3.3 Social Networks

Moderation occurs when the relationship between two variables is affected by a third variable, the moderating variable, which can alter the significance or the direction of the relationship between the two variables (Hair et al.,2021). The researcher proceeds to examine the interaction effect between the two variables. Two variables interact when one impacts the effect of the other. In other words, their main effect (i.e. the distinct effect of each of them on the dependent variable) should no longer be explored separately so as to interpret the impact of one while holding the other ceteris paribus (Frazier, Tix and Barron, 2004). I assume that social networks and the subgroups are the moderating variables. I could also assume that social networks work as a mediating variable as well. That is, it does not influence health independently but

rather it is first influenced by retirement. Nonetheless, I examine the moderation model in the paper.

Moving to the definition of the variable, the SHARE dataset (waves 4, 6 and 8) provides a variety of characteristics of the respondents' social networks (SN). The size of the respondents' social network is specified as the number of persons listed in the respondents' social network based on the question "Looking back over the last 12 months, who are the people with whom you most often discussed important things?". The interviewer clarifies that "these people might include family members, friends, neighbors or other acquaintances". The respondents could name up to seven contacts in their answers. Then the social networks are divided into different groups in the dataset, spouses, friends, children/grandchildren, colleagues, other family members, formal healthcare support, and other members in the social network. The variables dichotomize the count of variables into two categories: takes the value 1 if the relationship category exists in the social network, or 0 if the relationship is not present in the social network (Malter and Börsch-Supan, 2013).

4.3.4. Control Variables

The differences of the sample that is included in the SHARE can cause omitted variable bias as mentioned earlier. In order to control for this problem when estimating the effects of social networks on health are transiting to retirement, it is required to use a set of covariates that enhances the internal validity of the study thus limiting the influence of confounding or other variables. This step is important or otherwise there can be alternative explanations of the results. Namely, age and gender are correlated with both retirement and health measures since the studies mentioned in the literature review section have identified diverse levels of health for both genders. Moreover, age is crucial determinant for transition to retirement, either if they are close to early or normal retirement age.

Another, control variable of great interest that I need to control for is the occupation sector, so as to tackle the problems of reverse causality and omitted variable bias, as it is discussed above. As a result, to self-selection into retirement because of worst health conditions, people choose to retire earlier or later based on their respective occupation. The SHARE utilizes the International Standard Classification of Occupations (ISCO), and the Standard Classification of Economic Activities in the European Community (NACE) to measure both occupation and job sector. Educational

level is also controlled in the paper using the International Standard Classification of Education Scale (ISCED-97 and ISCED-11).

Additionally, I control for country specifications using a vector of country dummies in Europe, since there is different eligibility for statutory pension. Finally, marital status and having at least one child and grandchildren are key factors for measuring social networks. I use a dummy for being married/ having a live-in partner or otherwise[4]. I also include a dummy variable that takes the value 1 if one has children/grandchildren or otherwise. Bazzoli (1985) suggests that economic situation is a more important factor for early retirement than health, since future liquidity constraints have a larger impact on (early) retirement decision. She also suggests that the model of (early) retirement is comprised of personal health and pension benefits as well as other components that influence retirement decision. However, Dwyer and Mitchell (1999) found that there is a strong correlation of retirement and health instead of economic variables. Therefore, it is also important to control for economic variables (liquidity constraints). Table 1A in the Appendix includes a list of the variables.

4.4. Descriptive statistics

Table 1 provides the descriptive statistics of the sample. The average age of the sample is 60 years, while 34.5 percent of the individuals is retired and the average retirement age is 64 years. Seventy-three percent are married and have a living in partner, 4.5 percent are widowed and 6.8 percent have never been married. Fifty percent have children and 55 percent grandchildren. Concerning educational level, 21.6 percent have primary education, 44 percent secondary education and 32.6 percent of tertiary education

Regarding health measures, 82 percent report excellent to good health.For mental health (Euro-D index), 54 percent have depressive symptoms, 7.2 percent report feelings of pessimism, 3.1 percent report that they have thought of committing suicide. Additionally, 6 percent report feelings of guilt, 24.7 percent lack of sleep, 4.1 percent lack of interest, 21.5 percent report that being irritable, 23 report lack of appetite, while 9.2 percent report lack of concentration. Moreover, 6.5 percent report being joyous recently and finally 17 percent have cried recently. As for social networks, fifty-one percent report that they have at least one member in their social circle, of whom 38.4

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[4] It is a vector of being widowed, divorced, never married, and married living separately from spouse.

percent is the spouse/partner, 28 percent is children/grandchildren, 19 percent mention other family members, 20.7 percent is friends, 4.4 percent are former colleagues, 2.2 percent are people outside of family.

5. Empirical methodology

To start with, the first OLS measuring the impact retirement on personal health takes the following form:

1. $H_{ict} = \beta_1 + \beta_2 R_{ict} + \beta_3 SN_{itc} + \beta_4 X_{itc} + \beta_6 C_c + u_{itc}$

The first regression (1) estimates the effects of retirement on health. The depended variable is personal health H_{ict} of the individual i in country c, at time (wave) t. It is dummy variable of the health measurements as they are described in the previous chapter, and it takes the value one if a person has a problem and 0 otherwise. R_{ict} is a dummy variable that specifies if someone is retired (1) or otherwise (0). SN_{itc} is a dummy variable that takes the value 1 if the relationship category exists in the social network, or 0 if the relationship is not present in the social network. X_{it} consists of a set of individual characteristics, including gender, age, marital status, educational level, type of job and income, the presence of children and grandchildren, as discussed above. C is the country-level fixed effects, while u_{itc} is the error term. The main effect presumes that the effect of each variable on the outcome is independent of other variables in the regression model.

2. $H_{ict} = \beta_1 + \beta_2 R_{ict} + \beta_3 SN_{itc} + \beta_4 (R_{ict} * SN_{itc}) + \beta_5 X_{it} + \beta_6 C_c + u_{itc}$

The equation 2 includes the interaction affect. The moderating effect of social networks on health after retirement are measured by the interaction between $R_{ict} * SN_{ict}$ (sn=1), where the coefficient of interest is β_4. In cases that SN_{ict} is 0, then the coefficient of interest is β_2. And if SN is 1, then I am interested in examining the $\beta_2 + \beta_4$ relationship. When there is an interaction effect, the influence of one variable is contingent on the other variable.

Because it is difficult to come across a valid instrument to tackle reverse causality of health and social networks, I exploit the available panel data and apply individual and time fixed effects as well as country fixed effects as mentioned above.

To illustrate the inclusion of fixed effects in the regression, the equation takes the following form. The term ω_{it} is unobserved heterogeneity:

3. $\Delta H_{it} = \Delta\beta_1 + \beta_2 \Delta R_{it} + \beta_3 \Delta SN_{it} + \Delta\omega_{it}$

4. $\Delta H_{ict} = \Delta\beta_1 + \beta_2 \Delta R_{it} + \beta_3 \Delta SN_{it} + \beta_4 (R_{ict} * SN_{itc}) + \Delta\omega_{it}$

However, retirement is likely to be endogenous with respect to health, therefore I instrument for retirement status by using variation is eligibility for normal retirement age. As it has already been used from the literature so far since people might self-select into retirement due to health issues and thus retire before reaching the pensionable eligibility age. Cross-country and over-time variation in eligibility age for retirement should prompt individuals to retire at a predefined age as compared to retiring at the individual's chosen retirement age if there were no pension policy. It is imperative that the instrument satisfies certain conditions (Angrist and Pischke, 2014). It is relevant, which means that is directly related to the retirement decision, it is exogenous, that is, it influences personal health only through the fact that someone is retired or not. The instrumental design should work under the hypothesis that retirement does not affect directly social networks. That allows for a pooled two-stage least squares (2SLS) approach. The first stage in the 2SLS estimation can be described as follows:

5. $R_{ict} = \beta_1 + \beta_2 NR_{ct} + \beta_3 X_{ict} + \beta_4 C_c + u_{ict}$

Concerning the relevance assumption, Table 2 demonstrates the results of the first stage of the IV analysis. Retirement age significantly affects retirement decision, however the effect is not strong, the incidence of retiring is associated with one year increase in retirement age. The F-statistics value is not significantly different than 0 and therefore I am not able to reject the null hypothesis.

Providing with the second 2SLS stage (equation 3):

6. $H_{ict} = \beta_1 + \beta_2 \hat{R}_{ict} + \beta_3 SN_{it} + \beta_4 (\hat{R}_{ict} * SN_{it}) + \beta_5 X_{ic} + \beta_6 C_c + u_{ic}$

The instrument is normal retirement age of the NR_{ict} of the person i in country c. Following, the excludability principle the instrument should not affect the outcome directly but only through the independent variable, that it R_{ict} in equation (5). That is illustrated by the $\hat{R}_{ict}$ value. The moderating effect of social networks on health after retirement are measured by the interaction between includes the fitted value in the equation (6) $\beta_4 (\hat{R}_{ict} * SN_{it})$. Finally, in case that the instrumental variable strategy

produces the desired results, then the variation of the retirement variable is exogenous, and therefore I do not include fixed effects in the .

6. Results

6.1. General health

Table 3 shows that general health is negatively affected by retirement. Retirees have 1.5 percent less probability of reporting excellent to good health in OLS (1). The presence of different types of relationships in the social networks has a positive effect on the general health only for those connect with marital status and former colleagues with whom the retirees maintain contacts. The inclusion of covariates in the OLS (2), the effect of retirement and the effect of different types of social networks become statistically insignificant. The findings for subjective health disconfirm the findings of Neuman (2007) and Eibich (2015), who identified that retirement results in a good health and, are in line with the findings of Charles (2004) who acknowledged that Subjective Well-Being (SWB) and retirement are negatively correlated.

When I employ the instrument in IV(1), retirees have 6 percent increased probability of reporting excellent to good health, at a statistically significant level. The effect of different types of relationships of the individuals is the same as the OLS (1), indicating that only for those connect with marital status and former colleagues there is a positive effect on general health. Nonetheless, the effect of retirement on general health is not significant once I add control variables in the IV (2), except for distant family members, formal healthcare support and other acquaintances.

Continuing to the OLS(3) and IV(3) columns that include the interaction term. In the OLS (3) the interaction term is statistically significant only for those that have a formal healthcare support kind of relationship. The presence of formal healthcare support decreases the probability of reporting good health after retirement by 13 percentage points. The effect of retirement on health should be measured by the $\beta_2 + \beta_4$ relationship and therefore the joint effect shows that the likelihood of reporting good health is decreased by 15 percentage points in the presence of formal healthcare support the after retirement on general health. In the OLS (4), that consists of covariates, the interaction term is not statistically significant but only for those that have a formal healthcare support kind of relationship. The presence of formal healthcare support

decreases the probability of reporting good health after retirement by 15 percentage points. The joint effect shows that the likelihood of reporting good health is decreased by 16 percentage points in the presence of formal healthcare support the after retirement on general health. Ertel et. al (2009) showed that people do look for one-sided relationships as they get older or have impaired health.

Continuing, the results of the interaction term in column IV(3) are statistically significant and therefore the impact of the independent variable and the moderator variable should no longer be examined separately but the effect of retirement on health should be measured by the $\beta_2 + \beta_4$ relationship. The presence of different types of relationship decreases the probability of reporting good health after retirement. The results vary per type of relationship. The largest effect is that of the interaction of retirement with formal healthcare support. The presence of formal healthcare support decreases the probability of reporting good health after retirement by 20 percentage points. The smallest effect is that that of the interaction of retirement with colleagues. The presence of colleagues decreases the probability of reporting good health after retirement by 7 percentage points. The largest joint effect occurs in the likelihood of reporting good health is decreased by 14 percentage points in the presence of formal healthcare support the after retirement on general health, while the joint effects of the other relationships is not different than 0.

Finally, in column IV (4) with the inclusion of control variables, the interaction term is not statistically significant except for distant family members and other acquaintances. Those social network types improve the relationship between retirement and depression by more than 24 percentage points. The largest effect of the interaction term is for distant family members at 28 percent.

6.2. Mental health

Table 4 reports the results of the effect of retirement on mental health conditions. In column OLS (1) retirement worsens depression by 10 -11 percent, at a statistically significant level in the simple effect. Different types of relationships of the individuals show to have a positive effect on depression, since they improve depression by 10 to 20 percentage points, at a statistically significant level. However, the results for the presence of formal healthcare support are not statistically significant. With the inclusion of covariates, the effect of retirement on depression has the opposite sign, indicating that retirement improves depression by 4 to 5 percent on average.

When I employ the instrument in IV(1), the absolute values are larger as compared to the OLS (1). Retirement worsens depression by 40 percent, at a statistically significant level in the simple effect. Different types of relationships of the individuals show to have a positive effect on depression, improving depression by 14 percentage points, at a statistically significant level. However, the effect of presence of colleagues in the social network improves depression by only 3 percentage points and the results for the presence of formal healthcare support are insignificant. Nonetheless, the effect is not significant once I add control variables (IV (2).

Continuing to the columns that include the interaction term, the results for both OLS(3) and IV(3) are statistically significant and therefore the impact of the independent variable (retirement) and the moderator variable (the types of relationships in the social network) should no longer be examined separately but the effect of retirement on health should be measured by the $\beta_2 + \beta_4$ relationship. In the OLS (3), the social network types improve the relationship between retirement and depression by 12 to 17 percentage points. When measuring the $\beta_2 + \beta_4$ relationship, the results show that in the presence of different types of relationships the effect of retirement on depression is counterbalanced, and it only worsens depression by 1 or 2 percentage points.

In the IV (3), the absolute values of the interaction term are larger. The IV (4) column shows that the social network types improve the relationship between retirement and depression by more than 45 percentage points. The largest effect of the interaction term is for close family members at 67 percent and 63 percent for marital relationships and children/grandchildren relationship, respectively.

Retirement decreases further the symptoms of lack of interest and lack of concentration by 1 and 3 percent, at a statistically significant level in the simple effect (OLS (1). Different types of relationships of the individuals show to have a positive effect on the lack of interest, since they improve depression by 1 to 5 percentage points, at a statistically significant level. With the inclusion of covariates in OLS (2), the effect of retirement on lack of interest and lack of concentration becomes statistically insignificant and not different than zero. The relationship with distant family members and formal healthcare support shows to improve lack of interest by 1.5 percentage points and 4.6 percentage points, respectively. Moreover, the presence of close and distant family members, friends, formal healthcare and other acquaintances improve lack of concentration at a statistically significant level. When I employ the instrument in IV(1), the effect of retirement in the condition is not statistically significant,

indicating that there is no causal mechanism. Different types of relationships of the individuals are similar to the results in the OLS (1). Nonetheless, the effect is not significant once I add covariates (IV (2). The effect on the lack of concentration the effect is statistically significant and the effect of different types of relationships of the individuals are similar to the results in the OLS (1). However, the inclusion of covariates renders the results statistically insignificant in the IV (2).

In addition, the results in the columns OLS(3) and IV(3) include the interaction term. In the OLS (3) the interaction term is statistically significant when the moderator variable includes close and distant family members, formal healthcare support and other acquaintances, but not for friends and former colleagues. Those types of relationships that are statistically significant, improve the relationship between retirement and lack of interest by 1 to 4 percentage points, but only the formal healthcare support type of relationship in the social network impacts negatively the effect of retirement on the condition (worsens the condition by 9 percentage points). When measuring the $\beta_2 + \beta_4$ relationship, the results show that in the presence of formal healthcare support type of relationship the effect of retirement on lack is negative indicating that it worsens the condition by 10 percentage points. Otherwise, the outcome for close and distant family members and other acquaintances is not different than zero. For the lack of concentration the interaction term in the OLS (3)In the IV (3), the results are statistically significant for marital relationship, formal healthcare support, distant family and other acquaintances. The IV (4) not statistically significant for any of the relationships.

The results for lack of interest and tearfulness are similar and show that retirement worsens the symptom by 5 percent, at a statistically significant level in the simple effect (OLS (1). Different types of relationships of the individuals show to have a positive effect on the lack of sleep and tearfulness, since they improve lack of sleep by more than 6 percentage points, at a statistically significant level. With the inclusion of covariates in OLS (2), the effect of retirement on lack of interest becomes statistically insignificant and not different than zero. The different types of relationships improve lack of sleep by more than 5 percentage points, at a statistically significant level.

When I employ the instrument in IV(1), the absolute values are larger as compared to the OLS (1). Retirement worsens depression by 20 percent, at a statistically significant level in the simple effect. Different types of relationships of the individuals show to have a positive effect on lack of sleep, improving condition by 9 percentage points, at a statistically significant level. However, the effect of presence of colleagues

in the social network improves the condition by only 3 percentage points. Nonetheless, the effect is not significant once I add control variables (IV (2).

Moreover, the results in the columns OLS(3) and IV(3) include the interaction term. In the OLS (3) the interaction term is statistically significant for all types of relationships, except for formal healthcare support. Those types of relationships that are statistically significant, improve the relationship between retirement and lack of sleep by more than 7 percentage points. When measuring the $\beta_2 + \beta_4$ relationship, friendship improves the relationship between retirement and lack of sleep by 14 percentage points, indicating the largest improvement between the other types of relationships.

In the IV (3), the results are statistically significant and the absolute values of the interaction effect is larger as compared to the OLS (3). The types of relationships that are statistically significant, improve the relationship between retirement and lack of sleep by more than 24 percentage points. The results of the IV (4) are not statistically significant for any of the relationships.

Being retired worsens the feeling of pessimism by 2 percent, at a statistically significant level in the simple effect. Different types of relationships of the individuals show to have a positive effect on pessimism, since they improve the feeling of pessimism by 2 percentage points, at a statistically significant level. However, the results for the presence of formal healthcare support are not statistically significant. With the inclusion of covariates, the effect of retirement on pessimism has the opposite sign, indicating that retirement improves retirement by 2 percent on average.

When I employ the instrument in IV(1), the absolute value of retirement is larger as compared to the OLS (1). Retirement worsens pessimism by 18 to 19 percent, at a statistically significant level in the simple effect. Different types of relationships of the individuals show to have a positive effect on feeling of pessimism, improving the condition by 2 to 3 percentage points, at a statistically significant level. However, the effect of presence of colleagues in the social network worsens pessimism by only 1.5 percentage points and the results for the presence of formal healthcare support are statistically significant. Additionally, the effect or retirement on pessimism is positive and statistically significant when I add covariates, but the different types of relationships in one's social network have the opposite sign, indicating that they worsen the feeling of pessimism, except when former colleagues are present in the social network.

Continuing to the columns OLS(3) and IV(3) contain the interaction term. In the OLS (3) the results are statistically significant for close and distant family members and not for those outside the family circle. The same holds for tearfulness. Close and distant family members improve the relationship between retirement and depression by 2 percentage points. For those types of relationships that are outside the family circle, the separate effect of retirement and social network type should be considered and not the joint effect. The interaction effect in IV (4) column is statistically significant indicating that the social network types improve the relationship between retirement and pessimism by more than 20 percentage points. The largest effect of the interaction term is for close and distant family members at 31 percent and 26 percent for marital relationships and children/grandchildren relationship, respectively. The results of the OLS (4) and IV (4) include control variables statistically significant for any of the relationships. The interaction term is statistically significant for spouse, children/grandchildren, friends, colleagues, and other acquaintances.

Furthermore, retirement worsens the feeling of guilt by 1 percent, at a statistically significant level in the simple effect. Different types of relationships of the individuals show to have a positive effect on guilt, since the positive effect varies from 1 to 6 percentage points, at a statistically significant level. With the inclusion of covariates in OLS (2), the effect of retirement on guilt becomes insignificant or slightly different than zero, while the effect of different types of social networks remains the same with OLS (1).

When I employ the instrument in IV(1) retirement worsens guilt by 6 percent, at a statistically significant level in the simple effect Different types of relationships of the individuals show to have a positive effect on guilt, since the positive effect varies from 2 to 6 percentage points, at a statistically significant level. However, the effect of presence of colleagues in the social network is not statistically significant. Additionally, the effect or retirement on guilt and the effect of the different types of social networks are not statistically significant once I include covariates in the IV (2).

Moreover, columns OLS(3) and IV(3) contain the interaction term. In the OLS (3) the results are statistically significant for distant family members formal healthcare support. Distant family members ameliorate the relationship between retirement and the sentiment of guilt by 1.6 percentage points, while formal healthcare support deteriorates the relationship between retirement and the sentiment of guilt by 12 percentage points. Looking closely at $\beta_2 + \beta_4$ relationship, the joint effect of *retirement*

x other family (distant family) is not different than zero, while the joint effect *retirement x healthcare* support is negative. The interaction effect in IV (4) column is statistically significant indicating that in the presence of the social network types in retirement the sentiment of guilt is improved by 5 to 8 percentage points. The results for the interaction term are not statistically significant for the formal healthcare support and the largest effect is observed for close family members. The results of the OLS (4) with the inclusion of control variables and are statistically significant only for formal healthcare support, confirming the results of the OLS (3). The interaction term in the IV (4) is not statistically significant.

The effect of retirement on suicidality is statistically significant and no different than zero. Different types of relationships of the individuals show to improve suicidality but marginally in OLS (1). With the inclusion of covariates in OLS (2), the effect of retirement on suicidality is positive and slightly different than zero, while the effect of different types of social networks remains the same with OLS (1).

When I employ the instrument in IV(1) retirement has a positive effect on suicidality. The coefficients for close and distant family members and friends describe a positive effect on suicidality, since it improves the need for committing or thinking about suicide by 1 percentage points, at a statistically significant level. However, the effect of presence of colleagues, formal healthcare support and other acquaintances in the social network is not statistically significant. Additionally, the effect or retirement on suicidality is statistically significant and has a positive effect, although the effect of the different types of social networks are not statistically significant once I include covariates in the IV (2). Moreover, columns OLS(3) and IV(3) contain the interaction term. In the OLS (3) the interaction term is statistically significant only for those with spouses. The effect of the interaction is only 1 percentage point. The same results hold with the inclusion of covariates in the OLS (4).

In Column IV(3), the interaction term is statistically significant except for formal healthcare support. Social network types improve the relationship between retirement and the suicidality by 5 to 8 percentage points. Looking closely at $\beta_2 + \beta_4$ relationship, the joint effects are not different than zero. The interaction effect in IV (4) column with the inclusion of covariates is statistically significant except for formal healthcare support, colleagues. The coefficients of the effect of retirement and the coefficient of the interaction term are larger and have the opposite sign as compared to the IV(3) indicating that in the presence of the social network types in retirement the

suicidality is worsened by 9 to 12 percentage points. The joint effects are positive, indicating a smaller improvement of suicidality once in retirement.

Retirement worsens lack of appetite by 8 percent, at a statistically significant level in the simple effect. Different types of relationships of the individuals show to have a positive effect on lack of appetite, since the positive effect varies from 5 to 8 percentage points, at a statistically significant level. With the inclusion of covariates in OLS (2), the effect of retirement on the condition becomes insignificant, while the effect of different types of social networks remains the same with OLS (1).

When I employ the instrument in IV(1) the effect of retirement on the condition becomes larger maintaining the negative effect at a statistically significant level and worsens lack of appetite by 24 percent and irritability by 26 to 27 percent, at a statistically significant level in the simple effect. Different types of relationships of the individuals show to have a positive effect on the conditions, since the positive effect varies from 8 to 9 percentage points for lack of appetite, at a statistically significant level . However, the effect of presence of colleagues and formal healthcare support in the social network is not statistically significant. Different types of relationships of the individuals show to have a positive effect on the conditions from 8 to 16 percentage points for irritability, at a statistically significant level. Additionally, the effect or retirement on lack of appetite and the effect of the different types of social networks are not statistically significant once I include covariates in the IV (2).

Moreover, columns OLS(3) and IV(3) contain the interaction term. In the OLS (3) the interaction term for lack of appetite is statistically significant for all types of relationships, except for colleagues. The interaction term for irritability is statistically significant close family members. The different types of social networks ameliorate the relationship between retirement and the lack of appetite by 3 to 9 percentage points. Looking closely at $\beta_2 + \beta_4$ relationship, the joint effects decrease the negative effect by almost 6 percentage points. The results of the OLS (4) with the inclusion of control variables are statistically significant and comparable with the results of the OLS (3).

The interaction effect in IV (4) column is statistically significant indicating that in the presence of the social network types in retirement the lack of appetite is improved by more than 15 percentage points. The largest effect exists in the interaction between retirement and formal healthcare support, since it improves the lack of appetite by 40 percentage points. The results of the joint effects either turn positive or remain negative but decreased. For irritability, the largest effect exists in the interaction between

retirement and close family members. The interaction effect for irritability is statistically significant indicating that in the presence of the social network types in retirement the condition is improved by more than 20 percentage points. The results of the joint effects either turn positive or remain negative but decreased. The interaction term in the IV (4) with the inclusion of covariates is not statistically significant except for distant family members for lack of appetite. In the case of irritability the interaction term in the IV (4) is not statistically significant for close family members.

Finally, table 4 shows that for fatigue the interaction term is not statistically significant, meaning that the effect of retirement on the condition it is not moderated by the existence of social network relationships. Retirement has a negative effect for fatigue and distant family members have a positive effect on the outcome. The statistically significant interaction term for enjoyment is limited to close family members, friends, and other acquaintances. Those different types of social networks ameliorate the relationship between retirement and the enjoyment by 20 percentage points. The results prove the results of Dave et all (2006) and are not in line with Kolodziej and García-Gómez (2019). Additionally, Borsch- Supan and Schuth (2014) highlight that social networks, and mental health are significantly associated, and larger social networks have strong association less depression, the results are in line with these conclusions. Moreover, the results are similar to Litwin and Levinsky (2020), who found that retirement is related to deteriorated health, and that the negative results are counterbalanced when a network factor is included.

7. Conclusion

As discussed in the introduction part of the paper the ageing of the population influences the composition of the population overall and raises concerns for the policymakers in developed countries around the world. These concerns affect the decisions regarding the public health, the pension systems, and the economic decisions. To tackle the problem of aging population, member states of the EU are concerned with the costs of supplying health and long-term care that is adequate, since older people use more social services, compared to the younger population. Over the last decade, they had either reformed the pension system in their respective countries or had augmented the early and statutory retirement age, prolonging the working lives of older workers

(The 2021 Aging report). Thusly affecting the labor supply and the health of the individuals as they get older.

The effects of the of the decisions made by the policymakers have an impact on healthy aging by improving mental and physical health. Focusing on the interpersonal relations and participation in productive activities, social networks offer significant effects on the general functioning of older people. Individuals who report increased social integration and social support have relatively better general health.

The paper assesses the moderating effects of social networks on the effect of retirement on personal health. The literature suggests that there is an association between social networks of older people with better health since it helps them preserve a "good old age" or improve their life, providing greater longevity. Greater social capital, interpersonal and emotional connectedness in older people's lives have positive effects personal health as compared to those with insignificant network size (Borsch-Supan and Schuth, 2014; Litwin and Levinsky, 2020; Ertel et al., 2009; Litwin and Stoeckel, 2012). I hypothesized that the existence of different types of social network ties mitigate the effect of retirement on general health and mental health conditions.

In general, there is negative and significant correlation between retirement and health measures. The effects of the independent variables on the outcome are larger when the instrument, that is cross-country variation of eligibility retirement age, is applied to the regressions. The results also suggest that there is a moderating effect of social networks to those health measures where the interaction between retirement and different types of social network ties is statistically significant. When examining $\beta_2 + \beta_4$ relationship closer, it is indicated that retirement affects the outcome depended on the changes on social networks, thus moderating and reducing the larger effect that retirement has on health.

For general health, the results for general health are not with the findings of Neuman (2007) and Eibich (2015), who identified that retirement results in a good health and, are in line with the findings of Charles (2004) who acknowledged that Subjective Well-Being (SWB) and retirement are negatively correlated. And for mental health disprove Kolodziej and García-Gómez (2019), who report that found that retirement positively affects mental health and confirm the results of Dave et all (2006). Moreover, Borsch- Supan and Schuth (2014) highlight that social networks, and mental health are significantly associated, and larger social networks have strong association less depression, the results are in line with these conclusions. Moreover, the results are

similar to Litwin and Levinsky (2020), who found that retirement is related to deteriorated health, and that the negative results are counterbalanced when a network factor is included.

As stated in the introduction, demand of human capital under the Grossman model of, health is viewed as an investment good that influences the individual's labor market output (Grossman, 1999). If retirement does not enhance health but rather worsens it and then healthcare utilization and healthcare spending go up, the need to implement policies that delay retirement and that do not put pressure on the welfare system increases. On the other hand, if retirement ameliorates the health of the retiree, the policies for delaying retirement exit so as to support the welfare state from failing, might induce economic costs that affect the individuals (Gorry et al, 2018). The moderating role of the social networks in the effect of retirement on health showed that the investment building in meaningful social contacts has a positive effect in later-life. As Litwin and Levinsky (2020) suggested, the pre-retirement preparation training programs should be available in order to raise awareness and prepare those who are on the verge of retiring to invest in their social environment by expanding and developing their social circle, so as to contribute to their healthy aging.

Finally, further researcher is needed to examine the moderating effect of social network factors on more subjective health measures and objective ones. The SHARE dataset provides a variety of information regarding physical health, cognitive function, medicine intake and doctors' diagnoses as well as information on other social network factors than those used in this paper. It would be insightful to explore whether social network distance and network connectedness harness the effect of retirement on health.

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9. Tables

Table 1. Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Retired	30,212	.345	-	0	1
Gender	30,212	.493	-	0	1
Average retirement age	30,212	64.001	2.239	56	67
Age	30,212	60.738	4.654	50	70
Children	30,212	.505	-	0	1

Grandchildren	17,170	.549	-	0	1
Marital Status					
Married with living in	30,212	.73	-	0	1
Registered partnership	30,212	.022	-	0	1
Married no living in	30,212	.013	-	0	1
Never married	30,212	.068	-	0	1
Divorced	30,212	.122	-	0	1
Widowed	30,212	.045	-	0	1
Activities	30,212	.036	-	0	1
Education					
Primary educ	30,212	.216	-	0	1
Secondary educ	30,212	.442	-	0	1
Tertiary educ	30,212	.326	-	0	1
Total Household Income	30,212	40,770.353	48,733.657	0	1,274,627.8
Health Measures					
General health	30,212	.819	-	0	1
Mental health					
Depression	30,212	.819	-	0	1
Pessimism	30,212	.036	-	0	1
Suicidality	30,212	.049	-	0	1
Guilt	30,212	.544	-	0	1
Sleep	30,212	.072	-	0	1
Interest	30,212	.031	-	0	1
Irritability	30,212	.215	-	0	1
Appetite	30,212	.23	-	0	1
Concentration	30,212	0	-	0	1
Enjoyment	30,212	.092	-	0	1
Tearfulness	30,212	.065	-	0	1
Social Networks					
Spouse	30212	.384	-	0	1
Child grandchild	30212	.28	-	0	1
Friends	30212	.207	-	0	1
(Ex-) colleagues	30212	.044	-	0	1
Other	30212	.022	-	0	1
Other family	30212	.189	-	0	1
Healthcare	30212	.003	-	0	1
No-confidants	30212	.009	-	0	1

Table 2: First Stage IV Analysis.

Instrument	Model 1
Retirement age	0.012***
	(0.003)
Constant	-4.346***
	(0.111)
Observations	30,212
F-statistics	1474.84

Notes: Standard errors in parentheses. the F-value refers to the null hypothesis that the coefficient for retirement age is zero. *** significant at p<0.01, ** significant at p<0.05, * significant at p<0.1.

Table 3. The effect of retirement on general health.

General health	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
retired = 1	-0.015***	0.061***	-0.007	0.026	-0.013**	0.132***	-0.010	0.047
	(0.006)	(0.018)	(0.008)	(0.187)	(0.006)	(0.033)	(0.006)	(0.188)
spouse = 1	0.018***	0.001	0.015*	0.003	0.021***	0.051***	0.014**	0.013
	(0.006)	(0.004)	(0.008)	(0.014)	(0.007)	(0.012)	(0.007)	(0.021)
1.retired#1.spouse					-0.008	-0.141***	-0.007	-0.032
					(0.009)	(0.031)	(0.009)	(0.091)
Constant	0.834***	0.798***	0.747***	0.807*	0.832***	0.774***	0.795***	0.823**
	(0.012)	(0.006)	(0.070)	(0.475)	(0.012)	(0.011)	(0.054)	(0.371)
Observations	30,231	30,231	17,182	17,182	30,231	30,231	30,231	17,182
retired = 1	-0.015***	0.061***	-0.006	0.041	-0.018***	0.098***	-0.015**	0.070
	(0.006)	(0.018)	(0.008)	(0.182)	(0.006)	(0.027)	(0.006)	(0.204)
child_grandch = 1	0.009*	-0.002	0.014**	0.004	0.004	0.038***	0.005	0.012
	(0.006)	(0.005)	(0.007)	(0.010)	(0.006)	(0.010)	(0.006)	(0.028)
1.retired#1.child_grandch					0.016*	-0.101***	0.016*	-0.024
					(0.010)	(0.026)	(0.010)	(0.097)
Constant	0.842***	0.799***	0.761***	0.846*	0.845***	0.787***	0.803***	0.897**
	(0.012)	(0.006)	(0.070)	(0.463)	(0.012)	(0.009)	(0.054)	(0.436)
Observations	30,231	30,231	17,182	17,182	30,231	30,231	30,231	17,182
retired = 1	-0.015***	0.061***	-0.006	0.068	-0.015**	0.077***	-0.013**	0.199
	(0.006)	(0.018)	(0.008)	(0.179)	(0.006)	(0.021)	(0.006)	(0.238)
friends = 1	0.005	-0.000	0.007	0.002	0.004	0.034***	0.001	0.029
	(0.006)	(0.005)	(0.007)	(0.011)	(0.007)	(0.009)	(0.007)	(0.024)
retired==1 & friends==1					0.002	-0.093***	0.005	-0.089
					(0.010)	(0.022)	(0.010)	(0.097)
Constant	0.845***	0.799***	0.756***	0.912**	0.845***	0.793***	0.804***	1.177**

	(0.011)	(0.006)	(0.070)	(0.459)	(0.012)	(0.007)	(0.054)	(0.536)
Observations	30,231	30,231	17,182	17,182	30,231	30,231	30,231	17,182
retired = 1	-0.014**	0.063***	-0.006	0.061	-0.015***	0.065***	-0.012**	0.067
	(0.006)	(0.018)	(0.008)	(0.179)	(0.006)	(0.018)	(0.006)	(0.185)
colleagues = 1	0.022**	0.034***	0.020	0.021*	0.019*	0.047***	0.014	0.023
	(0.010)	(0.011)	(0.012)	(0.012)	(0.011)	(0.013)	(0.011)	(0.020)
retired==1 & colleagues==1					0.016	-0.074**	0.030	-0.009
					(0.024)	(0.031)	(0.024)	(0.071)
Constant	0.845***	0.796***	0.755***	0.893*	0.845***	0.796***	0.803***	0.906*
	(0.011)	(0.007)	(0.070)	(0.459)	(0.011)	(0.007)	(0.054)	(0.468)
Observations	30,231	30,231	17,182	17,182	30,231	30,231	30,231	17,182
retired = 1	-0.015***	0.061***	-0.006	-0.560***	-0.015***	0.073***	-0.013**	-0.766***
	(0.006)	(0.018)	(0.008)	(0.172)	(0.006)	(0.021)	(0.006)	(0.249)
otherfamily = 1	0.001	-0.003	0.003	0.025**	-0.001	0.025***	-0.000	-0.068***
	(0.006)	(0.006)	(0.007)	(0.012)	(0.007)	(0.009)	(0.007)	(0.022)
retired==1 & otherfamily==1					0.005	-0.076***	0.006	0.288***
					(0.011)	(0.022)	(0.011)	(0.088)
Constant	0.846***	0.799***	0.754***	-2.531**	0.847***	0.795***	0.804***	-3.252**
	(0.011)	(0.006)	(0.070)	-1.093	(0.011)	(0.007)	(0.054)	-1.402
Observations	30,231	30,231	17,182	17,182	30,231	30,231	30,231	17,182
retired = 1	-0.015***	0.061***	-0.006	-0.570***	-0.014**	0.061***	-0.012*	-0.570***
	(0.006)	(0.018)	(0.008)	(0.176)	(0.006)	(0.018)	(0.006)	(0.177)
healthcare = 1	-0.045	0.036	-0.043	0.022	-0.002	0.100**	0.006	0.018
	(0.034)	(0.037)	(0.038)	(0.053)	(0.041)	(0.045)	(0.041)	(0.064)
retired==1 & healthcare==1					-0.136*	-0.199**	-0.153**	0.014
					(0.072)	(0.080)	(0.072)	(0.113)
Constant	0.847***	0.798***	0.755***	-2.605**	0.847***	0.798***	0.803***	-2.606**

	(0.011)	(0.006)	(0.070)	-1.124	(0.011)	(0.006)	(0.054)	-1.126
Observations	30,231	30,231	17,182	17,182	30,231	30,231	30,231	17,182
retired = 1	-0.015***	0.060***	-0.000	-0.562***	-0.020***	0.061***	-0.001	-0.577***
	(0.006)	(0.018)	(0.006)	(0.174)	(0.005)	(0.018)	(0.006)	(0.179)
other = 1	0.013	0.021	0.028*	0.058**	0.015	0.045**	0.014	-0.045
	(0.014)	(0.015)	(0.014)	(0.023)	(0.019)	(0.020)	(0.019)	(0.031)
retired==1 & other==1					0.030	-0.052	0.031	0.232***
					(0.028)	(0.033)	(0.028)	(0.072)
Constant	0.846***	0.798***	1.018***	-2.537**	0.826***	0.798***	1.021***	-2.580**
	(0.011)	(0.006)	(0.075)	-1.104	(0.002)	(0.006)	(0.075)	-1.121
Observations	30,212	30,212	30,212	17,1700	30,212	30,212	30,212	17,1700

Note: Standard errors in parentheses Statistical significance *** p<0.01, ** p<0.05, * p<0.1. Columns OLS (2) and IV (2) include control variables. Columns OLS (3) and IV (3) include interaction effect retired x social network types). Columns OLS (4) and IV (4) include control variables and the include interaction effect (retired x social network types). The OLS columns include fixed effects.

Table 4. The effect of retirement on mental health- Social network components.

Depression	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
retired = 1	-0.109***	-0.386***	0.034***	-0.330	-0.179***	-0.725***	-0.029***	-0.340
	(0.007)	(0.027)	(0.009)	(0.221)	(0.008)	(0.051)	(0.010)	(0.228)
spouse = 1	0.212***	0.216***	0.172***	0.018	0.152***	-0.023	0.096***	-0.035
	(0.006)	(0.006)	(0.006)	(0.017)	(0.008)	(0.018)	(0.007)	(0.024)
retired==1 & spouse==1					0.169***	0.673***	0.216***	0.150
					(0.012)	(0.049)	(0.012)	(0.102)

Constant	0.500***	0.595***	1.779***	-1.811	0.524***	0.710***	2.171***	-1.381
	(0.004)	(0.010)	(0.108)	-1.385	(0.004)	(0.018)	(0.109)	-1.098
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.119***	-0.432***	0.042***	-0.324	-0.174***	-0.666***	-0.006	-0.381
	(0.007)	(0.027)	(0.009)	(0.216)	(0.008)	(0.043)	(0.010)	(0.253)
child_grandch = 1	0.191***	0.214***	0.168***	0.022*	0.124***	-0.035**	0.089***	-0.042
	(0.007)	(0.007)	(0.007)	(0.013)	(0.009)	(0.016)	(0.008)	(0.034)
1.retired#1.child_grandch					0.168***	0.632***	0.203***	0.175
					(0.013)	(0.042)	(0.013)	(0.112)
Constant	0.532***	0.633***	2.001***	-1.769	0.550***	0.711***	2.277***	-1.648
	(0.004)	(0.009)	(0.108)	-1.364	(0.004)	(0.014)	(0.109)	-1.295
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.108***	-0.430***	0.044***	-0.320	-0.139***	-0.517***	0.018*	-0.493

	(0.007)	(0.028)	(0.009)	(0.223)	(0.008)	(0.033)	(0.010)	(0.332)
friends = 1	0.127***	0.136***	0.090***	-0.006	0.078***	-0.043***	0.026***	-0.072**
	(0.008)	(0.008)	(0.008)	(0.015)	(0.010)	(0.014)	(0.009)	(0.030)
retired==1 & friends==1					0.137***	0.496***	0.178***	0.208*
					(0.015)	(0.035)	(0.015)	(0.125)
Constant	0.555***	0.664***	1.899***	-1.781	0.566***	0.694***	2.120***	-2.373
	(0.004)	(0.010)	(0.110)	-1.413	(0.004)	(0.012)	(0.111)	-1.805
Observations	30,212	30,212	30,212	17,1700	30,212	30,212	30,212	17,1700
retired = 1	-0.102***	-0.446***	0.050***	-0.325	-0.106***	-0.458***	0.047***	-0.339
	(0.007)	(0.028)	(0.009)	(0.216)	(0.007)	(0.029)	(0.009)	(0.225)
colleagues = 1	0.094***	0.030*	0.052***	-0.022	0.070***	-0.055***	0.024	-0.050*
	(0.016)	(0.017)	(0.015)	(0.020)	(0.017)	(0.021)	(0.017)	(0.028)
1.retired#1.colleagues					0.132***	0.481***	0.153***	0.140
					(0.039)	(0.050)	(0.037)	(0.092)
Constant	0.575***	0.697***	1.940***	-1.801	0.577***	0.701***	1.964***	-1.845

	(0.004)	(0.010)	(0.110)	-1.376	(0.004)	(0.011)	(0.110)	-1.404
Observations	30,212	30,212	30,212	17,1700	30,212	30,212	30,212	17,1700
retired = 1	-0.106***	-0.446***	0.049***	-0.323	-0.108***	-0.455***	0.047***	-0.330
	(0.007)	(0.028)	(0.009)	(0.216)	(0.007)	(0.029)	(0.009)	(0.221)
other = 1	0.136***	0.167***	0.117***	0.038	0.103***	-0.023	0.072**	-0.010
	(0.022)	(0.023)	(0.021)	(0.029)	(0.029)	(0.032)	(0.028)	(0.038)
retired==1 & other==1					0.075*	0.422***	0.100**	0.108
					(0.042)	(0.052)	(0.041)	(0.089)
Constant	0.578***	0.694***	1.959***	-1.790	0.579***	0.698***	1.968***	-1.810
	(0.004)	(0.010)	(0.110)	-1.372	(0.004)	(0.010)	(0.110)	-1.387
Observations	30,212	30,212	30,212	17,1700	30,212	30,212	30,212	17,1700
retired = 1	-0.108***	-0.436***	0.043***	-0.329	-0.132***	-0.511***	0.022**	-0.443
	(0.007)	(0.028)	(0.009)	(0.212)	(0.007)	(0.033)	(0.010)	(0.287)

otherfamily = 1	0.135***	0.144***	0.100***	-0.015	0.092***	-0.027*	0.042***	-0.067***
	(0.008)	(0.009)	(0.008)	(0.015)	(0.010)	(0.014)	(0.010)	(0.025)
retired==1 & otherfamily==1					0.122***	0.479***	0.160***	0.161
					(0.016)	(0.034)	(0.016)	(0.102)
Constant	0.556***	0.667***	1.888***	-1.843	0.564***	0.693***	2.059***	-2.239
	(0.004)	(0.010)	(0.110)	-1.349	(0.004)	(0.012)	(0.111)	-1.618
Observations	30,212	30,212	30,212	17,1700	30,212	30,212	30,212	17,1700
retired = 1	-0.105***	-0.448***	0.050***	-0.323	-0.105***	-0.448***	0.050***	-0.323
	(0.007)	(0.028)	(0.009)	(0.216)	(0.007)	(0.028)	(0.009)	(0.217)
healthcare = 1	0.062	0.042	0.010	-0.020	0.039	-0.095	-0.009	-0.035
	(0.056)	(0.059)	(0.054)	(0.065)	(0.067)	(0.072)	(0.065)	(0.079)
1.retired#1.healthcare					0.070	0.427***	0.059	0.044
					(0.116)	(0.127)	(0.112)	(0.140)
Constant	0.580***	0.698***	1.960***	-1.796	0.580***	0.699***	1.961***	-1.798
	(0.004)	(0.010)	(0.110)	-1.378	(0.004)	(0.010)	(0.110)	-1.380

	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
Observations	30,212	30,212	30,212	17,1700	30,212	30,212	30,212	17,1700
Lack of Interest	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
retired = 1	-0.010***	-0.014	-0.001	-0.105	-0.021***	-0.033	-0.010**	-0.109
	(0.003)	(0.011)	(0.004)	(0.110)	(0.004)	(0.020)	(0.004)	(0.113)
spouse = 1	0.011***	0.011***	0.008***	0.004	0.001	-0.002	-0.003	-0.017
	(0.003)	(0.003)	(0.003)	(0.008)	(0.003)	(0.007)	(0.003)	(0.012)
retired==1 & spouse==1					0.026***	0.036*	0.030***	0.059
					(0.005)	(0.019)	(0.005)	(0.051)
Constant	0.040***	0.042***	0.110**	-0.533	0.044***	0.048***	0.165***	-0.363
	(0.002)	(0.004)	(0.047)	(0.690)	(0.002)	(0.007)	(0.048)	(0.548)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.010***	-0.017	-0.000	-0.104	-0.015***	-0.025	-0.003	-0.121
	(0.003)	(0.011)	(0.004)	(0.108)	(0.003)	(0.016)	(0.004)	(0.126)

child_grandch = 1	0.006*	0.006**	0.004	-0.004	0.001	-0.003	-0.002	-0.024
	(0.003)	(0.003)	(0.003)	(0.006)	(0.004)	(0.006)	(0.004)	(0.017)
1.retired#1.child_grandch					0.012**	0.022	0.014**	0.055
					(0.006)	(0.016)	(0.006)	(0.056)
Constant	0.043***	0.045***	0.119**	-0.536	0.044***	0.048***	0.139***	-0.499
	(0.002)	(0.004)	(0.047)	(0.680)	(0.002)	(0.006)	(0.047)	(0.644)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.010***	-0.016	-0.000	-0.106	-0.012***	-0.018	-0.002	-0.154
	(0.003)	(0.011)	(0.004)	(0.111)	(0.003)	(0.013)	(0.004)	(0.163)
friends = 1	0.012***	0.012***	0.009***	0.003	0.010**	0.008	0.006	-0.015
	(0.003)	(0.003)	(0.003)	(0.008)	(0.004)	(0.006)	(0.004)	(0.014)
retired==1 & friends==1					0.006	0.012	0.008	0.058
					(0.006)	(0.014)	(0.006)	(0.061)
Constant	0.042***	0.044***	0.113**	-0.541	0.042***	0.044***	0.123***	-0.706
	(0.002)	(0.004)	(0.047)	(0.706)	(0.002)	(0.005)	(0.048)	(0.883)

Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.010***	-0.017	0.000	-0.104	-0.010***	-0.018	-0.000	-0.109
	(0.003)	(0.011)	(0.004)	(0.108)	(0.003)	(0.011)	(0.004)	(0.112)
colleagues = 1	0.005	0.003	0.001	-0.012	0.002	-0.001	-0.002	-0.020
	(0.006)	(0.007)	(0.006)	(0.010)	(0.007)	(0.008)	(0.007)	(0.014)
1.retired#1.colleagues					0.015	0.022	0.015	0.041
					(0.016)	(0.019)	(0.016)	(0.046)
Constant	0.044***	0.047***	0.118**	-0.531	0.044***	0.047***	0.120**	-0.544
	(0.001)	(0.004)	(0.047)	(0.686)	(0.001)	(0.004)	(0.047)	(0.699)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.010***	-0.017	0.000	-0.104	-0.011***	-0.018	-0.001	-0.109
	(0.003)	(0.011)	(0.004)	(0.108)	(0.003)	(0.011)	(0.004)	(0.110)
other = 1	0.010	0.011	0.008	0.003	-0.004	-0.007	-0.007	-0.029

	(0.009)	(0.009)	(0.009)	(0.014)	(0.012)	(0.013)	(0.012)	(0.019)
retired==1 & other==1					0.033*	0.040*	0.034**	0.073
					(0.017)	(0.020)	(0.017)	(0.044)
Constant	0.044***	0.046***	0.119**	-0.530	0.044***	0.047***	0.121***	-0.544
	(0.001)	(0.004)	(0.047)	(0.684)	(0.001)	(0.004)	(0.047)	(0.691)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.010***	-0.016	-0.001	-0.098	-0.013***	-0.019	-0.003	-0.142
	(0.003)	(0.011)	(0.004)	(0.106)	(0.003)	(0.013)	(0.004)	(0.141)
otherfamily = 1	0.017***	0.018***	0.015***	0.018**	0.013***	0.011**	0.010**	-0.003
	(0.003)	(0.003)	(0.003)	(0.007)	(0.004)	(0.006)	(0.004)	(0.012)
retired==1 & otherfamily==1					0.012*	0.017	0.014**	0.063
					(0.007)	(0.013)	(0.007)	(0.050)
Constant	0.041***	0.043***	0.108**	-0.483	0.042***	0.044***	0.123***	-0.638
	(0.002)	(0.004)	(0.047)	(0.671)	(0.002)	(0.005)	(0.047)	(0.796)

Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.010***	-0.017	0.000	-0.104	-0.010***	-0.017	0.000	-0.105
	(0.003)	(0.011)	(0.004)	(0.108)	(0.003)	(0.011)	(0.004)	(0.108)
healthcare = 1	0.050**	0.050**	0.046**	0.013	0.079***	0.076***	0.074***	0.007
	(0.023)	(0.023)	(0.023)	(0.032)	(0.028)	(0.028)	(0.028)	(0.040)
1.retired#1.healthcare					-0.089*	-0.082*	-0.088*	0.018
					(0.048)	(0.049)	(0.048)	(0.070)
Constant	0.044***	0.047***	0.118**	-0.535	0.044***	0.046***	0.116**	-0.535
	(0.001)	(0.004)	(0.047)	(0.687)	(0.001)	(0.004)	(0.047)	(0.688)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
Lack of sleep	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
retired = 1	-0.049***	-0.188***	0.001	-0.203	-0.094***	-0.370***	-0.035***	-0.210
	(0.005)	(0.022)	(0.008)	(0.193)	(0.007)	(0.040)	(0.008)	(0.199)
spouse = 1	0.090***	0.092***	0.074***	0.017	0.053***	-0.036**	0.030***	-0.019
	(0.005)	(0.005)	(0.005)	(0.015)	(0.006)	(0.014)	(0.006)	(0.021)

retired==1 & spouse==1					0.105***	0.361***	0.124***	0.104
					(0.010)	(0.038)	(0.010)	(0.089)
Constant	0.229***	0.276***	0.632***	-1.065	0.244***	0.338***	0.858***	-0.768
	(0.003)	(0.008)	(0.091)	-1.210	(0.004)	(0.014)	(0.092)	(0.960)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.054***	-0.208***	0.005	-0.196	-0.087***	-0.330***	-0.022***	-0.234
	(0.005)	(0.022)	(0.008)	(0.189)	(0.007)	(0.033)	(0.008)	(0.220)
child_grandch = 1	0.083***	0.095***	0.072***	0.002	0.042***	-0.036***	0.028***	-0.041
	(0.006)	(0.006)	(0.006)	(0.011)	(0.007)	(0.013)	(0.007)	(0.030)
1.retired#1.child_grandch					0.102***	0.331***	0.113***	0.116
					(0.011)	(0.033)	(0.011)	(0.098)
Constant	0.242***	0.292***	0.727***	-1.053	0.253***	0.332***	0.882***	-0.972
	(0.003)	(0.007)	(0.091)	-1.192	(0.003)	(0.011)	(0.092)	-1.128
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170

retired = 1	-0.050***	-0.202***	0.003	-0.209	-0.067***	-0.245***	-0.010	-0.301
	(0.005)	(0.022)	(0.008)	(0.195)	(0.006)	(0.026)	(0.008)	(0.285)
friends = 1	0.091***	0.095***	0.074***	0.021	0.064***	0.007	0.042***	-0.014
	(0.006)	(0.007)	(0.006)	(0.013)	(0.008)	(0.011)	(0.008)	(0.025)
retired==1 & friends==1					0.076***	0.245***	0.090***	0.110
					(0.012)	(0.027)	(0.013)	(0.107)
Constant	0.245***	0.297***	0.660***	-1.125	0.251***	0.311***	0.772***	-1.438
	(0.003)	(0.008)	(0.091)	-1.237	(0.003)	(0.009)	(0.092)	-1.549
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.046***	-0.213***	0.008	-0.196	-0.048***	-0.218***	0.006	-0.205
	(0.005)	(0.022)	(0.008)	(0.189)	(0.006)	(0.023)	(0.008)	(0.196)
colleagues = 1	0.061***	0.030**	0.043***	0.003	0.049***	-0.012	0.029**	-0.012
	(0.013)	(0.014)	(0.013)	(0.017)	(0.014)	(0.016)	(0.014)	(0.024)
1.retired#1.colleagues					0.071**	0.240***	0.074**	0.080

					(0.031)	(0.039)	(0.031)	(0.080)
Constant	0.260***	0.319***	0.694***	-1.055	0.261***	0.321***	0.705***	-1.080
	(0.003)	(0.008)	(0.091)	-1.202	(0.003)	(0.008)	(0.091)	-1.225
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.048***	-0.214***	0.007	-0.196	-0.052***	-0.220***	0.005	-0.205
	(0.005)	(0.022)	(0.008)	(0.189)	(0.005)	(0.022)	(0.008)	(0.193)
other = 1	0.061***	0.076***	0.051***	-0.007	0.002	-0.059**	-0.012	-0.064*
	(0.018)	(0.018)	(0.017)	(0.025)	(0.023)	(0.025)	(0.023)	(0.033)
retired==1 & other==1					0.131***	0.299***	0.139***	0.129*
					(0.034)	(0.041)	(0.034)	(0.078)
Constant	0.262***	0.319***	0.710***	-1.058	0.263***	0.321***	0.722***	-1.081
	(0.003)	(0.008)	(0.091)	-1.199	(0.003)	(0.008)	(0.091)	-1.211
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170

retired = 1	-0.050***	-0.206***	0.002	-0.188	-0.062***	-0.243***	-0.007	-0.237
	(0.005)	(0.022)	(0.008)	(0.185)	(0.006)	(0.025)	(0.008)	(0.246)
otherfamily = 1	0.094***	0.098***	0.078***	0.023*	0.073***	0.016	0.053***	0.001
	(0.007)	(0.007)	(0.007)	(0.013)	(0.008)	(0.011)	(0.008)	(0.021)
retired==1 & otherfamily==1					0.060***	0.231***	0.072***	0.068
					(0.013)	(0.027)	(0.013)	(0.087)
Constant	0.246***	0.299***	0.654***	-0.992	0.250***	0.312***	0.730***	-1.160
	(0.003)	(0.008)	(0.091)	-1.176	(0.003)	(0.009)	(0.092)	-1.389
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.048***	-0.214***	0.008	-0.197	-0.047***	-0.214***	0.008	-0.195
	(0.005)	(0.022)	(0.008)	(0.189)	(0.005)	(0.022)	(0.008)	(0.189)
healthcare = 1	0.126***	0.116**	0.100**	0.014	0.161***	0.096*	0.135**	0.071
	(0.045)	(0.046)	(0.044)	(0.057)	(0.054)	(0.056)	(0.054)	(0.069)
1.retired#1.healthcare					-0.111	0.063	-0.112	-0.165
					(0.094)	(0.099)	(0.093)	(0.122)
Constant	0.263***	0.320***	0.708***	-1.059	0.263***	0.320***	0.705***	-1.053

	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
	(0.003)	(0.008)	(0.091)	-1.204	(0.003)	(0.008)	(0.091)	-1.206
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
Pessimism	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
retired = 1	-0.019***	-0.182***	0.011**	0.612***	-0.028***	-0.336***	0.000	0.630***
	(0.004)	(0.015)	(0.005)	(0.165)	(0.005)	(0.028)	(0.005)	(0.167)
spouse = 1	0.026***	0.029***	0.023***	-0.035***	0.018***	-0.080***	0.010**	0.060***
	(0.003)	(0.003)	(0.003)	(0.013)	(0.004)	(0.010)	(0.004)	(0.018)
retired==1 & spouse==1					0.023***	0.307***	0.037***	-0.269***
					(0.007)	(0.027)	(0.007)	(0.075)
Constant	0.069***	0.124***	0.399***	4.082***	0.072***	0.177***	0.465***	3.311***
	(0.002)	(0.005)	(0.060)	-1.031	(0.002)	(0.010)	(0.061)	(0.808)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.020***	-0.187***	0.012**	0.600***	-0.026***	-0.284***	0.006	0.701***

	(0.004)	(0.015)	(0.005)	(0.160)	(0.004)	(0.023)	(0.005)	(0.192)
child_grandch = 1	0.021***	0.034***	0.020***	-0.018*	0.014***	-0.070***	0.009*	0.097***
	(0.004)	(0.004)	(0.004)	(0.009)	(0.005)	(0.009)	(0.005)	(0.026)
1.retired#1.child_grandch					0.019***	0.262***	0.028***	-0.315***
					(0.007)	(0.022)	(0.007)	(0.085)
Constant	0.073***	0.127***	0.427***	4.036***	0.075***	0.160***	0.465***	3.818***
	(0.002)	(0.005)	(0.060)	-1.010	(0.002)	(0.008)	(0.061)	(0.982)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.019***	-0.187***	0.012**	0.613***	-0.020***	-0.221***	0.010*	0.899***
	(0.004)	(0.015)	(0.005)	(0.166)	(0.004)	(0.018)	(0.005)	(0.277)
friends = 1	0.021***	0.025***	0.016***	-0.023**	0.019***	-0.046***	0.011**	0.085***
	(0.004)	(0.004)	(0.004)	(0.011)	(0.005)	(0.008)	(0.005)	(0.025)
retired==1 & friends==1					0.005	0.196***	0.015*	-0.344***
					(0.008)	(0.018)	(0.008)	(0.104)
Constant	0.075***	4.142***	0.411***	4.142***	0.075***	0.143***	0.430***	5.120***

	(0.002)	-1.055	(0.060)	-1.055	(0.002)	(0.006)	(0.061)	-1.506
Observations	30,212	17,170	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.018***	-0.191***	0.013***	0.599***	-0.019***	-0.196***	0.012**	0.622***
	(0.004)	(0.015)	(0.005)	(0.160)	(0.004)	(0.015)	(0.005)	(0.168)
colleagues = 1	0.017**	-0.015*	0.010	0.003	0.012	-0.052***	0.004	0.047**
	(0.008)	(0.009)	(0.008)	(0.015)	(0.009)	(0.011)	(0.009)	(0.021)
1.retired#1.colleagues					0.030	0.206***	0.036*	-0.221***
					(0.020)	(0.026)	(0.020)	(0.069)
Constant	0.078***	0.139***	0.418***	4.064***	0.078***	0.140***	0.424***	4.132***
	(0.002)	(0.005)	(0.060)	-1.020	(0.002)	(0.006)	(0.060)	-1.049
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.019***	-0.190***	0.013***	0.599***	-0.019***	-0.194***	0.013**	0.611***
	(0.004)	(0.015)	(0.005)	(0.160)	(0.004)	(0.015)	(0.005)	(0.164)

other = 1	0.007	0.023*	0.005	-0.061***	-0.003	-0.067***	-0.008	0.021
	(0.012)	(0.012)	(0.011)	(0.021)	(0.015)	(0.017)	(0.015)	(0.028)
retired==1 & other==1					0.024	0.199***	0.029	-0.183***
					(0.022)	(0.028)	(0.022)	(0.066)
Constant	0.079***	0.137***	0.422***	4.045***	0.079***	0.139***	0.425***	4.079***
	(0.002)	(0.005)	(0.060)	-1.015	(0.002)	(0.005)	(0.060)	-1.031
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.019***	-0.188***	0.012**	0.590***	-0.025***	-0.221***	0.007	0.763***
	(0.004)	(0.015)	(0.005)	(0.156)	(0.004)	(0.017)	(0.005)	(0.226)
otherfamily = 1	0.023***	0.028***	0.018***	-0.024**	0.013**	-0.049***	0.005	0.054***
	(0.004)	(0.005)	(0.004)	(0.011)	(0.005)	(0.008)	(0.005)	(0.020)
retired==1 & otherfamily==1					0.028***	0.213***	0.038***	-0.243***
					(0.008)	(0.018)	(0.009)	(0.080)
Constant	0.074***	0.132***	0.409***	3.997***	0.076***	0.143***	0.450***	4.596***
	(0.002)	(0.005)	(0.060)	(0.993)	(0.002)	(0.006)	(0.061)	-1.272

	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.018***	-0.190***	0.013***	0.599***	-0.019***	-0.190***	0.013**	0.601***
	(0.004)	(0.015)	(0.005)	(0.160)	(0.004)	(0.015)	(0.005)	(0.161)
healthcare = 1	0.033	0.023	0.026	-0.010	0.020	-0.047	0.013	0.039
	(0.029)	(0.031)	(0.029)	(0.048)	(0.035)	(0.038)	(0.035)	(0.059)
1.retired#1.healthcare					0.039	0.218***	0.042	-0.141
					(0.061)	(0.066)	(0.061)	(0.104)
Constant	0.079***	0.138***	0.422***	4.066***	0.079***	0.138***	0.423***	4.072***
	(0.002)	(0.005)	(0.060)	-1.021	(0.002)	(0.005)	(0.060)	-1.023
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
Guilt	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
retired = 1	-0.011***	-0.053***	0.007	0.061	-0.015***	-0.095***	0.004	0.064
	(0.003)	(0.012)	(0.005)	(0.122)	(0.004)	(0.023)	(0.005)	(0.126)
spouse = 1	0.024***	0.025***	0.019***	0.004	0.021***	-0.004	0.014***	0.016

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	(0.003)	(0.003)	(0.003)	(0.009)	(0.004)	(0.008)	(0.004)	(0.013)
retired==1 & spouse==1					0.008	0.082***	0.013**	-0.034
					(0.006)	(0.022)	(0.006)	(0.056)
Constant	0.055***	0.070***	0.228***	0.417	0.057***	0.084***	0.252***	0.321
	(0.002)	(0.005)	(0.053)	(0.766)	(0.002)	(0.008)	(0.055)	(0.609)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.012***	-0.058***	0.008*	0.063	-0.016***	-0.087***	0.005	0.072
	(0.003)	(0.012)	(0.005)	(0.120)	(0.004)	(0.019)	(0.005)	(0.139)
child_grandch = 1	0.025***	0.029***	0.022***	0.008	0.021***	-0.002	0.017***	0.018
	(0.003)	(0.003)	(0.003)	(0.007)	(0.004)	(0.007)	(0.004)	(0.019)
1.retired#1.child_grandch					0.010	0.077***	0.013**	-0.028
					(0.006)	(0.019)	(0.007)	(0.062)
Constant	0.058***	0.073***	0.253***	0.430	0.059***	0.082***	0.271***	0.411
	(0.002)	(0.004)	(0.053)	(0.755)	(0.002)	(0.006)	(0.054)	(0.714)

Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.011***	-0.057***	0.008*	0.063	-0.012***	-0.067***	0.007	0.095
	(0.003)	(0.012)	(0.005)	(0.123)	(0.004)	(0.015)	(0.005)	(0.179)
friends = 1	0.026***	0.027***	0.020***	0.000	0.024***	0.007	0.017***	0.013
	(0.004)	(0.004)	(0.004)	(0.008)	(0.005)	(0.007)	(0.005)	(0.016)
retired==1 & friends==1					0.004	0.056***	0.008	-0.039
					(0.007)	(0.016)	(0.007)	(0.067)
Constant	0.060***	0.075***	0.234***	0.418	0.060***	0.078***	0.244***	0.528
	(0.002)	(0.004)	(0.053)	(0.783)	(0.002)	(0.005)	(0.054)	(0.973)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.010***	-0.060***	0.009**	0.064	-0.010***	-0.061***	0.009**	0.070
	(0.003)	(0.013)	(0.005)	(0.120)	(0.003)	(0.013)	(0.005)	(0.124)
colleagues = 1	0.019**	0.010	0.013*	0.016	0.021***	0.003	0.015*	0.029*
	(0.007)	(0.008)	(0.007)	(0.011)	(0.008)	(0.009)	(0.008)	(0.015)

1.retired#1.colleagues					-0.012	0.039*	-0.011	-0.065
					(0.018)	(0.022)	(0.018)	(0.051)
Constant	0.064***	0.081***	0.243***	0.419	0.063***	0.081***	0.241***	0.439
	(0.002)	(0.005)	(0.053)	(0.762)	(0.002)	(0.005)	(0.053)	(0.776)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.011***	-0.060***	0.009**	0.063	-0.011***	-0.061***	0.009*	0.064
	(0.003)	(0.013)	(0.005)	(0.119)	(0.003)	(0.013)	(0.005)	(0.122)
other = 1	0.017*	0.022**	0.014	-0.007	0.015	-0.004	0.010	0.002
	(0.010)	(0.010)	(0.010)	(0.016)	(0.014)	(0.014)	(0.014)	(0.021)
retired==1 & other==1					0.006	0.056**	0.009	-0.021
					(0.020)	(0.023)	(0.020)	(0.049)
Constant	0.064***	0.081***	0.247***	0.417	0.064***	0.082***	0.248***	0.421
	(0.002)	(0.004)	(0.053)	(0.760)	(0.002)	(0.005)	(0.053)	(0.767)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170

retired = 1	-0.011***	-0.058***	0.008*	0.064	-0.015***	-0.069***	0.005	0.067
	(0.003)	(0.012)	(0.005)	(0.117)	(0.004)	(0.015)	(0.005)	(0.156)
otherfamily = 1	0.027***	0.028***	0.022***	0.002	0.021***	0.004	0.015***	0.003
	(0.004)	(0.004)	(0.004)	(0.008)	(0.005)	(0.006)	(0.005)	(0.014)
retired==1 & otherfamily==1					0.016**	0.067***	0.021***	-0.004
					(0.008)	(0.015)	(0.008)	(0.055)
Constant	0.060***	0.076***	0.232***	0.424	0.061***	0.079***	0.254***	0.434
	(0.002)	(0.004)	(0.053)	(0.746)	(0.002)	(0.005)	(0.054)	(0.877)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.011***	-0.060***	0.009**	0.064	-0.010***	-0.060***	0.009**	0.065
	(0.003)	(0.013)	(0.005)	(0.120)	(0.003)	(0.013)	(0.005)	(0.120)
healthcare = 1	0.059**	0.056**	0.052**	-0.020	0.098***	0.079**	0.091***	0.010
	(0.026)	(0.026)	(0.026)	(0.036)	(0.031)	(0.032)	(0.031)	(0.044)
1.retired#1.healthcare					-0.121**	-0.070	-0.124**	-0.087
					(0.055)	(0.056)	(0.055)	(0.077)

	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
Constant	0.064***	0.082***	0.246***	0.425	0.064***	0.081***	0.244***	0.428
	(0.002)	(0.004)	(0.053)	(0.763)	(0.002)	(0.005)	(0.053)	(0.764)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
Suicidality	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
retired = 1	-0.007***	-0.049***	0.010***	0.228**	-0.011***	-0.091***	0.005	0.235**
	(0.002)	(0.009)	(0.003)	(0.096)	(0.003)	(0.016)	(0.003)	(0.098)
spouse = 1	0.004**	0.005**	0.001	-0.018**	0.001	-0.025***	-0.005*	0.016
	(0.002)	(0.002)	(0.002)	(0.007)	(0.003)	(0.006)	(0.003)	(0.010)
retired==1 & spouse==1					0.010**	0.084***	0.016***	-0.095**
					(0.004)	(0.016)	(0.004)	(0.044)
Constant	0.032***	0.046***	0.223***	1.652***	0.033***	0.061***	0.252***	1.380***
	(0.001)	(0.003)	(0.038)	(0.600)	(0.002)	(0.006)	(0.039)	(0.474)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.007***	-0.050***	0.010***	0.222**	-0.008***	-0.073***	0.008**	0.263**

	(0.002)	(0.009)	(0.003)	(0.093)	(0.003)	(0.014)	(0.003)	(0.110)
child_grandch = 1	0.009***	0.012***	0.007***	-0.005	0.008**	-0.014***	0.005	0.041***
	(0.002)	(0.002)	(0.002)	(0.005)	(0.003)	(0.005)	(0.003)	(0.015)
1.retired#1.child_grandch					0.002	0.064***	0.006	-0.125***
					(0.005)	(0.013)	(0.005)	(0.049)
Constant	0.031***	0.045***	0.226***	1.635***	0.031***	0.053***	0.234***	1.549***
	(0.001)	(0.003)	(0.038)	(0.589)	(0.001)	(0.005)	(0.039)	(0.563)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.007***	-0.048***	0.009***	0.228**	-0.007***	-0.057***	0.009***	0.332**
	(0.002)	(0.009)	(0.003)	(0.097)	(0.003)	(0.011)	(0.003)	(0.148)
friends = 1	0.014***	0.016***	0.011***	-0.010	0.014***	-0.002	0.009***	0.030**
	(0.003)	(0.003)	(0.003)	(0.007)	(0.003)	(0.005)	(0.003)	(0.013)
retired==1 & friends==1					0.001	0.048***	0.005	-0.125**
					(0.005)	(0.011)	(0.005)	(0.056)
Constant	0.030***	0.044***	0.216***	1.675***	0.030***	0.047***	0.223***	2.030**

	(0.001)	(0.003)	(0.038)	(0.613)	(0.001)	(0.004)	(0.039)	(0.806)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.006***	-0.050***	0.010***	0.222**	-0.006***	-0.051***	0.010***	0.229**
	(0.002)	(0.009)	(0.003)	(0.093)	(0.002)	(0.009)	(0.003)	(0.097)
colleagues = 1	0.015***	0.006	0.011**	0.007	0.013**	-0.003	0.009	0.020
	(0.005)	(0.006)	(0.005)	(0.008)	(0.006)	(0.007)	(0.006)	(0.012)
1.retired#1.colleagues					0.010	0.055***	0.012	-0.065
					(0.013)	(0.016)	(0.013)	(0.040)
Constant	0.032***	0.048***	0.220***	1.642***	0.032***	0.048***	0.222***	1.662***
	(0.001)	(0.003)	(0.038)	(0.595)	(0.001)	(0.003)	(0.038)	(0.607)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.006***	-0.050***	0.010***	0.222**	-0.006***	-0.051***	0.010***	0.228**
	(0.002)	(0.009)	(0.003)	(0.093)	(0.002)	(0.009)	(0.003)	(0.096)

other = 1	-0.009	-0.005	-0.010	-0.046***	-0.009	-0.025**	-0.012	-0.006
	(0.007)	(0.007)	(0.007)	(0.012)	(0.010)	(0.010)	(0.010)	(0.016)
retired==1 & other==1					0.000	0.045***	0.003	-0.091**
					(0.014)	(0.017)	(0.014)	(0.038)
Constant	0.033***	0.048***	0.224***	1.628***	0.033***	0.049***	0.224***	1.645***
	(0.001)	(0.003)	(0.038)	(0.592)	(0.001)	(0.003)	(0.038)	(0.599)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.007***	-0.049***	0.009***	0.220**	-0.008***	-0.057***	0.008**	0.292**
	(0.002)	(0.009)	(0.003)	(0.092)	(0.002)	(0.010)	(0.003)	(0.126)
otherfamily = 1	0.014***	0.015***	0.011***	-0.005	0.013***	-0.003	0.008**	0.028**
	(0.003)	(0.003)	(0.003)	(0.006)	(0.003)	(0.005)	(0.003)	(0.011)
retired==1 & otherfamily==1					0.005	0.051***	0.009	-0.102**
					(0.005)	(0.011)	(0.005)	(0.045)
Constant	0.031***	0.045***	0.216***	1.628***	0.031***	0.048***	0.225***	1.878***
	(0.001)	(0.003)	(0.038)	(0.581)	(0.001)	(0.004)	(0.038)	(0.712)

Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.006***	-0.050***	0.010***	0.224**	-0.006***	-0.050***	0.010***	0.225**
	(0.002)	(0.009)	(0.003)	(0.094)	(0.002)	(0.009)	(0.003)	(0.094)
healthcare = 1	0.019	0.016	0.015	-0.054*	0.033	0.016	0.029	-0.029
		(0.019)	(0.019)	(0.028)	(0.022)	(0.023)	(0.022)	(0.034)
1.retired#1.healthcare					-0.046	-0.000	-0.046	-0.073
					(0.039)	(0.040)	(0.039)	(0.060)
Constant	0.033***	0.048***	0.224***	1.657***	0.033***	0.048***	0.223***	1.660***
	(0.001)	(0.003)	(0.038)	(0.596)	(0.001)	(0.003)	(0.038)	(0.597)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
Lack of appetite	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
retired = 1	-0.082***	-0.233***	-0.012	0.092	-0.102***	-0.393***	-0.034***	0.097
	(0.006)	(0.022)	(0.008)	(0.206)	(0.007)	(0.041)	(0.009)	(0.212)
spouse = 1	0.075***	0.077***	0.059***	-0.007	0.058***	-0.035**	0.033***	0.021

	(0.005)	(0.005)	(0.005)	(0.016)	(0.006)	(0.015)	(0.006)	(0.022)
retired==1 & spouse==1					0.048***	0.317***	0.073***	-0.077
					(0.011)	(0.039)	(0.011)	(0.095)
Constant	0.229***	0.281***	0.838***	1.079	0.236***	0.335***	0.971***	0.859
	(0.003)	(0.008)	(0.093)	-1.292	(0.004)	(0.014)	(0.095)	-1.026
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.086***	-0.249***	-0.010	0.089	-0.100***	-0.353***	-0.023***	0.118
	(0.006)	(0.022)	(0.008)	(0.202)	(0.007)	(0.034)	(0.008)	(0.235)
child_grandch = 1	0.075***	0.087***	0.065***	-0.002	0.058***	-0.024*	0.042***	0.030
	(0.006)	(0.006)	(0.006)	(0.012)	(0.007)	(0.013)	(0.007)	(0.032)
1.retired#1.child_grandch					0.042***	0.280***	0.057***	-0.087
					(0.011)	(0.034)	(0.011)	(0.104)
Constant	0.239***	0.291***	0.915***	1.073	0.243***	0.326***	0.993***	1.012
	(0.003)	(0.008)	(0.093)	-1.273	(0.003)	(0.011)	(0.094)	-1.204

Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.082***	-0.244***	-0.011	0.088	-0.090***	-0.282***	-0.019**	0.151
	(0.006)	(0.022)	(0.008)	(0.208)	(0.006)	(0.027)	(0.008)	(0.302)
friends = 1	0.081***	0.085***	0.064***	0.003	0.069***	0.008	0.045***	0.027
	(0.007)	(0.007)	(0.007)	(0.014)	(0.008)	(0.012)	(0.008)	(0.027)
retired==1 & friends==1					0.033***	0.215***	0.052***	-0.076
					(0.013)	(0.028)	(0.013)	(0.114)
Constant	0.241***	0.296***	0.856***	1.066	0.244***	0.309***	0.920***	1.283
	(0.003)	(0.008)	(0.093)	-1.320	(0.003)	(0.009)	(0.095)	-1.642
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.079***	-0.254***	-0.007	0.089	-0.078***	-0.258***	-0.006	0.101
	(0.006)	(0.023)	(0.008)	(0.202)	(0.006)	(0.023)	(0.008)	(0.209)
colleagues = 1	0.053***	0.020	0.032**	-0.013	0.057***	-0.008	0.035**	0.010
	(0.013)	(0.014)	(0.013)	(0.018)	(0.014)	(0.017)	(0.014)	(0.026)

1.retired#1.colleagues					-0.022	0.156***	-0.016	-0.118
					(0.032)	(0.040)	(0.032)	(0.086)
Constant	0.255***	0.317***	0.887***	1.076	0.255***	0.318***	0.885***	1.112
	(0.003)	(0.008)	(0.093)	-1.284	(0.003)	(0.009)	(0.094)	-1.308
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.082***	-0.254***	-0.007	0.089	-0.084***	-0.260***	-0.009	0.088
	(0.006)	(0.022)	(0.008)	(0.201)	(0.006)	(0.023)	(0.008)	(0.206)
other = 1	0.074***	0.090***	0.064***	-0.009	0.035	-0.029	0.020	-0.016
	(0.018)	(0.019)	(0.018)	(0.027)	(0.024)	(0.026)	(0.024)	(0.035)
retired==1 & other==1					0.086**	0.262***	0.098***	0.014
					(0.035)	(0.042)	(0.034)	(0.083)
Constant	0.256***	0.316***	0.899***	1.073	0.257***	0.318***	0.907***	1.070
	(0.003)	(0.008)	(0.093)	-1.281	(0.003)	(0.008)	(0.093)	-1.293
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170

retired = 1	-0.083***	-0.248***	-0.012	0.095	-0.087***	-0.280***	-0.016**	0.147
	(0.006)	(0.022)	(0.008)	(0.198)	(0.006)	(0.026)	(0.008)	(0.263)
otherfamily = 1	0.087***	0.091***	0.070***	0.014	0.080***	0.019*	0.057***	0.039*
	(0.007)	(0.007)	(0.007)	(0.014)	(0.008)	(0.012)	(0.008)	(0.023)
retired==1 & otherfamily==1					0.020	0.202***	0.037***	-0.075
					(0.013)	(0.028)	(0.013)	(0.093)
Constant	0.242***	0.298***	0.848***	1.115	0.243***	0.309***	0.888***	1.299
	(0.003)	(0.008)	(0.093)	-1.258	(0.003)	(0.009)	(0.094)	-1.485
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.081***	-0.255***	-0.007	0.090	-0.082***	-0.256***	-0.007	0.088
	(0.006)	(0.023)	(0.008)	(0.202)	(0.006)	(0.023)	(0.008)	(0.202)
healthcare = 1	0.058	0.048	0.033	-0.024	-0.016	-0.084	-0.043	-0.089
	(0.046)	(0.047)	(0.046)	(0.061)	(0.055)	(0.057)	(0.055)	(0.074)
1.retired#1.healthcare					0.231**	0.413***	0.236**	0.188
					(0.097)	(0.101)	(0.095)	(0.130)

Constant	0.258***	0.318***	0.898***	1.082	0.258***	0.318***	0.903***	1.075
	(0.003)	(0.008)	(0.093)	-1.286	(0.003)	(0.008)	(0.093)	-1.288
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
Lack of concentration	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
retired = 1	-0.032***	-0.070***	-0.007	-0.158	-0.041***	-0.114***	-0.016***	-0.162
	(0.004)	(0.015)	(0.005)	(0.145)	(0.005)	(0.027)	(0.006)	(0.150)
spouse = 1	0.028***	0.029***	0.022***	0.010	0.021***	-0.002	0.011**	-0.010
	(0.004)	(0.004)	(0.004)	(0.011)	(0.004)	(0.010)	(0.004)	(0.016)
retired==1 & spouse==1					0.021***	0.089***	0.030***	0.058
					(0.007)	(0.026)	(0.007)	(0.067)
Constant	0.092***	0.105***	0.329***	-0.929	0.095***	0.120***	0.384***	-0.763
	(0.002)	(0.005)	(0.064)	(0.911)	(0.003)	(0.010)	(0.065)	(0.723)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170

retired = 1	-0.034***	-0.076***	-0.006	-0.155	-0.044***	-0.112***	-0.015***	-0.182
	(0.004)	(0.015)	(0.005)	(0.142)	(0.005)	(0.023)	(0.006)	(0.166)
child_grandch = 1	0.022***	0.025***	0.018***	-0.003	0.009*	-0.013	0.003	-0.034
	(0.004)	(0.004)	(0.004)	(0.008)	(0.005)	(0.009)	(0.005)	(0.022)
1.retired#1.child_grandch					0.033***	0.096***	0.038***	0.086
					(0.008)	(0.022)	(0.008)	(0.073)
Constant	0.097***	0.111***	0.356***	-0.927	0.101***	0.123***	0.408***	-0.868
	(0.002)	(0.005)	(0.064)	(0.897)	(0.002)	(0.008)	(0.065)	(0.849)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.033***	-0.074***	-0.007	-0.160	-0.038***	-0.086***	-0.011**	-0.246
	(0.004)	(0.015)	(0.005)	(0.147)	(0.004)	(0.018)	(0.006)	(0.215)
friends = 1	0.030***	0.031***	0.023***	0.009	0.021***	0.005	0.012**	-0.023
	(0.004)	(0.005)	(0.005)	(0.010)	(0.005)	(0.008)	(0.006)	(0.019)
retired==1 & friends==1					0.025***	0.070***	0.030***	0.103
					(0.009)	(0.019)	(0.009)	(0.081)

Constant	0.097***	0.111***	0.336***	-0.953	0.099***	0.115***	0.373***	-1.246
	(0.002)	(0.005)	(0.064)	(0.931)	(0.002)	(0.006)	(0.065)	-1.170
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.032***	-0.078***	-0.005	-0.156	-0.033***	-0.080***	-0.006	-0.164
	(0.004)	(0.015)	(0.005)	(0.142)	(0.004)	(0.016)	(0.005)	(0.148)
colleagues = 1	0.006	-0.003	-0.002	-0.030**	-0.000	-0.017	-0.008	-0.046**
	(0.009)	(0.009)	(0.009)	(0.013)	(0.010)	(0.011)	(0.010)	(0.018)
1.retired#1.colleagues					0.034	0.080***	0.034	0.082
					(0.022)	(0.027)	(0.022)	(0.060)
Constant	0.103***	0.119***	0.352***	-0.922	0.103***	0.120***	0.358***	-0.948
	(0.002)	(0.006)	(0.064)	(0.905)	(0.002)	(0.006)	(0.064)	(0.922)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.032***	-0.077***	-0.005	-0.155	-0.032***	-0.078***	-0.005	-0.158

	(0.004)	(0.015)	(0.005)	(0.142)	(0.004)	(0.015)	(0.005)	(0.145)
other = 1	0.031**	0.035***	0.027**	0.008	0.035**	0.018	0.029*	-0.014
	(0.012)	(0.012)	(0.012)	(0.019)	(0.016)	(0.017)	(0.016)	(0.025)
retired==1 & other==1					-0.009	0.038	-0.004	0.049
					(0.024)	(0.028)	(0.024)	(0.058)
Constant	0.102***	0.118***	0.352***	-0.921	0.102***	0.118***	0.351***	-0.930
	(0.002)	(0.005)	(0.064)	(0.902)	(0.002)	(0.005)	(0.064)	(0.912)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.032***	-0.076***	-0.007	-0.154	-0.033***	-0.084***	-0.008	-0.190
	(0.004)	(0.015)	(0.005)	(0.140)	(0.004)	(0.018)	(0.006)	(0.186)
otherfamily = 1	0.026***	0.027***	0.019***	0.001	0.025***	0.009	0.016***	-0.016
	(0.005)	(0.005)	(0.005)	(0.010)	(0.006)	(0.008)	(0.006)	(0.016)
retired==1 & otherfamily==1					0.003	0.050***	0.008	0.051
					(0.009)	(0.018)	(0.009)	(0.066)
Constant	0.098***	0.113***	0.338***	-0.922	0.098***	0.116***	0.347***	-1.046

	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
	(0.002)	(0.005)	(0.064)	(0.886)	(0.002)	(0.006)	(0.065)	-1.048
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.032***	-0.078***	-0.005	-0.158	-0.032***	-0.078***	-0.005	-0.159
	(0.004)	(0.015)	(0.005)	(0.142)	(0.004)	(0.015)	(0.005)	(0.143)
healthcare = 1	0.135***	0.132***	0.126***	0.091**	0.132***	0.114***	0.123***	0.074
	(0.031)	(0.031)	(0.031)	(0.043)	(0.038)	(0.038)	(0.038)	(0.052)
1.retired#1.healthcare					0.010	0.058	0.009	0.051
					(0.066)	(0.068)	(0.065)	(0.092)
Constant	0.102***	0.118***	0.349***	-0.947	0.102***	0.118***	0.349***	-0.949
	(0.002)	(0.005)	(0.064)	(0.907)	(0.002)	(0.005)	(0.064)	(0.908)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
Irritability	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
retired = 1	-0.089***	-0.253***	-0.002	0.091	-0.109***	-0.423***	-0.024***	0.095
	(0.005)	(0.022)	(0.008)	(0.195)	(0.007)	(0.041)	(0.008)	(0.201)

spouse = 1	0.071***	0.074***	0.051***	-0.017	0.055***	-0.046***	0.025***	0.005
	(0.005)	(0.005)	(0.005)	(0.015)	(0.006)	(0.014)	(0.006)	(0.021)
retired==1 & spouse==1					0.047***	0.337***	0.074***	-0.060
					(0.010)	(0.038)	(0.010)	(0.090)
Constant	0.219***	0.274***	1.041***	1.219	0.225***	0.332***	1.176***	1.048
	(0.003)	(0.008)	(0.090)	-1.219	(0.004)	(0.014)	(0.092)	(0.969)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.093***	-0.268***	-0.000	0.085	-0.107***	-0.379***	-0.015*	0.107
	(0.005)	(0.022)	(0.008)	(0.190)	(0.006)	(0.033)	(0.008)	(0.222)
child_grandch = 1	0.069***	0.082***	0.059***	-0.001	0.052***	-0.036***	0.034***	0.024
	(0.006)	(0.006)	(0.006)	(0.011)	(0.007)	(0.013)	(0.007)	(0.030)
1.retired#1.child_grandch					0.043***	0.300***	0.064***	-0.068
					(0.011)	(0.033)	(0.011)	(0.098)
Constant	0.228***	0.285***	1.108***	1.209	0.233***	0.321***	1.196***	1.161
	(0.003)	(0.007)	(0.090)	-1.202	(0.003)	(0.011)	(0.091)	-1.136

Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.090***	-0.263***	-0.002	0.077	-0.090***	-0.298***	-0.006	0.149
	(0.005)	(0.022)	(0.008)	(0.196)	(0.006)	(0.026)	(0.008)	(0.285)
friends = 1	0.084***	0.088***	0.065***	0.013	0.082***	0.016	0.055***	0.040
	(0.006)	(0.007)	(0.006)	(0.013)	(0.008)	(0.011)	(0.008)	(0.025)
retired==1 & friends==1					0.003	0.200***	0.029**	-0.086
					(0.012)	(0.027)	(0.012)	(0.107)
Constant	0.229***	0.287***	1.050***	1.167	0.229***	0.300***	1.087***	1.411
	(0.003)	(0.008)	(0.090)	-1.245	(0.003)	(0.009)	(0.091)	-1.549
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.086***	-0.273***	0.003	0.086	-0.086***	-0.277***	0.003	0.099
	(0.005)	(0.022)	(0.008)	(0.190)	(0.005)	(0.023)	(0.008)	(0.198)
colleagues = 1	0.060***	0.025*	0.037***	0.024	0.063***	-0.006	0.037***	0.049**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	(0.013)	(0.014)	(0.012)	(0.017)	(0.014)	(0.016)	(0.014)	(0.024)
1.retired#1.colleagues					-0.015	0.175***	-0.003	-0.127
					(0.031)	(0.039)	(0.031)	(0.081)
Constant	0.242***	0.308***	1.080***	1.209	0.242***	0.310***	1.080***	1.249
	(0.003)	(0.008)	(0.090)	-1.213	(0.003)	(0.008)	(0.090)	-1.235
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.089***	-0.273***	0.002	0.085	-0.088***	-0.277***	0.002	0.092
	(0.005)	(0.022)	(0.008)	(0.190)	(0.005)	(0.022)	(0.008)	(0.195)
other = 1	0.064***	0.081***	0.055***	0.016	0.073***	0.005	0.056**	0.059*
	(0.018)	(0.018)	(0.017)	(0.025)	(0.023)	(0.025)	(0.023)	(0.033)
retired==1 & other==1					-0.019	0.170***	-0.001	-0.098
					(0.034)	(0.041)	(0.033)	(0.078)
Constant	0.244***	0.308***	1.094***	1.215	0.244***	0.309***	1.094***	1.233
	(0.003)	(0.008)	(0.090)	-1.209	(0.003)	(0.008)	(0.090)	-1.221

Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.089***	-0.268***	-0.001	0.088	-0.091***	-0.300***	-0.005	0.140
	(0.005)	(0.022)	(0.008)	(0.187)	(0.006)	(0.025)	(0.008)	(0.249)
otherfamily = 1	0.073***	0.078***	0.055***	0.008	0.070***	0.005	0.044***	0.031
	(0.007)	(0.007)	(0.007)	(0.013)	(0.008)	(0.011)	(0.008)	(0.022)
retired==1 & otherfamily==1					0.008	0.205***	0.032**	-0.073
					(0.013)	(0.027)	(0.013)	(0.088)
Constant	0.232***	0.293***	1.055***	1.231	0.233***	0.304***	1.089***	1.411
	(0.003)	(0.008)	(0.090)	-1.187	(0.003)	(0.009)	(0.091)	-1.401
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.088***	-0.274***	0.002	0.080	0.002	-0.275***	0.002	0.082
	(0.005)	(0.022)	(0.008)	(0.190)	(0.008)	(0.022)	(0.008)	(0.191)
healthcare = 1	0.168***	0.158***	0.140***	0.121**	0.139***	0.098*	0.139***	0.171**
	(0.045)	(0.046)	(0.044)	(0.057)	(0.053)	(0.056)	(0.053)	(0.070)
1.retired#1.healthcare					-0.009	0.185*	0.003	-0.146

	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
					(0.093)	(0.099)	(0.092)	(0.123)
Constant	0.245***	0.309***	1.091***	1.178	0.245***	0.309***	1.091***	1.184
	(0.003)	(0.008)	(0.090)	-1.214	(0.003)	(0.008)	(0.090)	-1.215
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
Tearfulness	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
retired = 1	-0.047***	-0.140***	0.007	-0.150	-0.072***	-0.253***	-0.017**	-0.156
	(0.005)	(0.019)	(0.007)	(0.182)	(0.006)	(0.035)	(0.007)	(0.187)
spouse = 1	0.054***	0.055***	0.044***	0.020	0.033***	-0.025**	0.015***	-0.014
	(0.005)	(0.005)	(0.005)	(0.014)	(0.006)	(0.012)	(0.006)	(0.020)
retired==1 & spouse==1					0.058***	0.226***	0.082***	0.094
					(0.009)	(0.033)	(0.009)	(0.084)
Constant	0.165***	0.196***	0.704***	-0.229	0.173***	0.235***	0.853***	0.041
	(0.003)	(0.007)	(0.081)	-1.141	(0.003)	(0.012)	(0.083)	(0.905)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170

retired = 1	-0.051***	-0.150***	0.009	-0.143	-0.063***	-0.218***	-0.003	-0.165
	(0.005)	(0.019)	(0.007)	(0.178)	(0.006)	(0.029)	(0.007)	(0.208)
child_grandch = 1	0.063***	0.071***	0.057***	0.012	0.049***	-0.002	0.037***	-0.013
	(0.005)	(0.005)	(0.005)	(0.010)	(0.006)	(0.011)	(0.006)	(0.028)
1.retired#1.child_grandch					0.037***	0.183***	0.051***	0.066
					(0.010)	(0.029)	(0.010)	(0.092)
Constant	0.169***	0.201***	0.764***	-0.201	0.173***	0.223***	0.833***	-0.155
	(0.003)	(0.007)	(0.081)	-1.124	(0.003)	(0.010)	(0.082)	-1.063
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.048***	-0.146***	0.008	-0.149	-0.057***	-0.172***	-0.001	-0.226
	(0.005)	(0.019)	(0.007)	(0.184)	(0.005)	(0.023)	(0.007)	(0.268)
friends = 1	0.069***	0.071***	0.056***	0.010	0.055***	0.018*	0.036***	-0.020
	(0.006)	(0.006)	(0.006)	(0.013)	(0.007)	(0.010)	(0.007)	(0.024)
retired==1 & friends==1					0.039***	0.148***	0.057***	0.093

					(0.011)	(0.024)	(0.011)	(0.101)
Constant	0.171***	0.204***	0.712***	-0.250	0.174***	0.213***	0.782***	-0.515
	(0.003)	(0.007)	(0.081)	-1.166	(0.003)	(0.008)	(0.082)	-1.456
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.045***	-0.154***	0.011*	-0.143	-0.046***	-0.157***	0.010	-0.148
	(0.005)	(0.019)	(0.007)	(0.178)	(0.005)	(0.020)	(0.007)	(0.185)
colleagues = 1	0.048***	0.028**	0.032***	0.004	0.042***	0.002	0.024**	-0.006
	(0.011)	(0.012)	(0.011)	(0.016)	(0.012)	(0.014)	(0.012)	(0.023)
1.retired#1.colleagues					0.035	0.146***	0.044	0.052
					(0.028)	(0.034)	(0.028)	(0.076)
Constant	0.182***	0.221***	0.738***	-0.218	0.183***	0.222***	0.744***	-0.234
	(0.003)	(0.007)	(0.081)	-1.134	(0.003)	(0.007)	(0.081)	-1.154
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170

retired = 1	-0.047***	-0.155***	0.011	-0.142	-0.048***	-0.158***	0.010	-0.147
	(0.005)	(0.019)	(0.007)	(0.178)	(0.005)	(0.020)	(0.007)	(0.182)
other = 1	0.059***	0.069***	0.052***	0.034	0.039*	-0.001	0.028	0.007
	(0.016)	(0.016)	(0.016)	(0.024)	(0.021)	(0.022)	(0.021)	(0.031)
retired==1 & other==1					0.045	0.155***	0.052*	0.061
					(0.030)	(0.036)	(0.030)	(0.073)
Constant	0.184***	0.221***	0.750***	-0.208	0.184***	0.222***	0.754***	-0.219
	(0.003)	(0.007)	(0.081)	-1.130	(0.003)	(0.007)	(0.081)	-1.142
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.048***	-0.149***	0.007	-0.131	-0.051***	-0.168***	0.003	-0.159
	(0.005)	(0.019)	(0.007)	(0.174)	(0.005)	(0.022)	(0.007)	(0.232)
otherfamily = 1	0.078***	0.081***	0.067***	0.032***	0.074***	0.037***	0.057***	0.019
	(0.006)	(0.006)	(0.006)	(0.012)	(0.007)	(0.010)	(0.007)	(0.020)
retired==1 & otherfamily==1					0.013	0.124***	0.028**	0.039
					(0.012)	(0.024)	(0.012)	(0.082)

	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
Constant	0.171***	0.205***	0.702***	-0.131	0.172***	0.212***	0.732***	-0.228
	(0.003)	(0.007)	(0.081)	-1.108	(0.003)	(0.008)	(0.082)	-1.306
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.046***	-0.155***	0.011	-0.145	-0.046***	-0.155***	0.012*	-0.142
	(0.005)	(0.019)	(0.007)	(0.178)	(0.005)	(0.019)	(0.007)	(0.179)
healthcare = 1	0.138***	0.132***	0.119***	0.043	0.196***	0.153***	0.175***	0.100
	(0.040)	(0.040)	(0.040)	(0.054)	(0.048)	(0.049)	(0.048)	(0.065)
1.retired#1.healthcare					-0.181**	-0.067	-0.175**	-0.165
					(0.084)	(0.087)	(0.083)	(0.115)
Constant	0.184***	0.222***	0.747***	-0.230	0.184***	0.222***	0.743***	-0.223
	(0.003)	(0.007)	(0.081)	-1.136	(0.003)	(0.007)	(0.081)	-1.137
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
Fatigue	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
retired = 1	-0.040***	-0.041*	-0.034***	0.136	-0.034***	-0.031	-0.030***	0.142

	(0.006)	(0.024)	(0.009)	(0.202)	(0.009)	(0.065)	(0.011)	(0.208)
spouse = 1	-0.004	-0.004	-0.002	-0.013	-0.000	0.001	0.000	0.020
	(0.006)	(0.006)	(0.006)	(0.015)	(0.007)	(0.018)	(0.007)	(0.022)
retired==1 & spouse==1					-0.013	-0.016	-0.008	-0.095
					(0.012)	(0.064)	(0.012)	(0.093)
Constant	0.270***	0.270***	0.245**	1.279	0.268***	0.267***	0.235**	1.004
	(0.004)	(0.007)	(0.104)	-1.267	(0.004)	(0.018)	(0.105)	-1.004
Observations	25,125	25,125	25,125	17,157	25,125	25,125	25,125	17,157
retired = 1	-0.041***	-0.041	-0.034***	0.131	-0.032***	-0.029	-0.027***	0.165
	(0.006)	(0.025)	(0.009)	(0.198)	(0.008)	(0.049)	(0.010)	(0.230)
child_grandch = 1	-0.002	-0.002	-0.001	-0.003	0.006	0.006	0.006	0.036
	(0.006)	(0.008)	(0.006)	(0.012)	(0.008)	(0.015)	(0.008)	(0.031)
1.retired#1.child_grandch					-0.021*	-0.024	-0.021	-0.108
					(0.012)	(0.049)	(0.013)	(0.102)
Constant	0.269***	0.269***	0.244**	1.265	0.266***	0.266***	0.224**	1.186

	(0.004)	(0.007)	(0.104)	-1.247	(0.004)	(0.013)	(0.105)	-1.177
Observations	25,125	25,125	25,125	17,157	25,125	25,125	25,125	17,157
retired = 1	-0.041***	-0.042*	-0.034***	0.132	-0.037***	-0.039	-0.031***	0.220
	(0.006)	(0.024)	(0.009)	(0.204)	(0.007)	(0.031)	(0.010)	(0.297)
friends = 1	0.007	0.007	0.007	-0.002	0.013	0.012	0.012	0.031
	(0.007)	(0.007)	(0.007)	(0.014)	(0.009)	(0.012)	(0.009)	(0.026)
retired==1 & friends==1					-0.014	-0.016	-0.106	-0.015
					(0.033)	(0.014)	(0.112)	(0.014)
Constant	0.267***	0.267***	1.278	0.245**	0.266***	0.265***	1.578	0.230**
	(0.008)	(0.003)	-1.293	(0.104)	(0.010)	(0.004)	-1.614	(0.104)
Observations	25,125	25,125	17,157	25,125	25,125	25,125	17,157	25,125
retired = 1	-0.041***	-0.042*	-0.034***	0.130	-0.039***	-0.040	-0.032***	0.143
	(0.006)	(0.024)	(0.009)	(0.197)	(0.006)	(0.025)	(0.010)	(0.205)

colleagues = 1	0.006	0.006	0.004	-0.012	0.016	0.016	0.015	0.012
	(0.013)	(0.014)	(0.013)	(0.018)	(0.015)	(0.017)	(0.015)	(0.025)
1.retired#1.colleagues					-0.055*	-0.054	-0.060*	-0.119
					(0.033)	(0.042)	(0.033)	(0.084)
Constant	0.268***	0.268***	0.244**	1.270	0.267***	0.268***	0.238**	1.308
	(0.003)	(0.008)	(0.104)	-1.258	(0.003)	(0.009)	(0.104)	-1.282
Observations	25,125	25,125	25,125	17,157	25,125	25,125	25,125	17,157
retired = 1	-0.041***	-0.042*	-0.034***	0.131	-0.042***	-0.042*	-0.035***	0.132
	(0.006)	(0.024)	(0.009)	(0.197)	(0.006)	(0.025)	(0.010)	(0.202)
other = 1	0.018	0.018	0.018	0.003	0.010	0.010	0.009	0.010
	(0.019)	(0.019)	(0.019)	(0.026)	(0.025)	(0.026)	(0.025)	(0.035)
retired==1 & other==1					0.017	0.018	0.020	-0.017
					(0.036)	(0.044)	(0.036)	(0.081)
Constant	0.268***	0.268***	0.246**	1.271	0.268***	0.268***	0.247**	1.274
	(0.003)	(0.008)	(0.104)	-1.254	(0.003)	(0.008)	(0.104)	-1.266

Observations	25,125	25,125	25,125	17,157	25,125	25,125	25,125	17,157
retired = 1	-0.042***	-0.043*	-0.035***	0.134	-0.036***	-0.039	-0.030***	0.209
	(0.006)	(0.024)	(0.009)	(0.194)	(0.007)	(0.030)	(0.010)	(0.259)
otherfamily = 1	0.016**	0.016**	0.015**	0.011	0.024***	0.023**	0.023***	0.045**
	(0.007)	(0.008)	(0.007)	(0.014)	(0.009)	(0.012)	(0.009)	(0.022)
retired==1 & otherfamily==1					-0.021	-0.024*	-0.107	-0.023
					(0.033)	(0.014)	(0.092)	(0.014)
Constant	0.265***	0.265***	1.298	0.243**	0.264***	0.263***	1.558	0.224**
	(0.008)	(0.003)	-1.233	(0.104)	(0.010)	(0.004)	-1.459	(0.104)
Observations	25,125	25,125	17,157	25,125	25,125	25,125	17,157	25,125
retired = 1	-0.041***	-0.042*	-0.034***	0.132	-0.042***	-0.043*	-0.034***	0.131
	(0.006)	(0.024)	(0.009)	(0.198)	(0.006)	(0.024)	(0.009)	(0.198)
healthcare = 1	-0.045	-0.045	-0.051	-0.021	-0.092	-0.092	-0.103*	-0.047
	(0.048)	(0.048)	(0.048)	(0.059)	(0.057)	(0.058)	(0.057)	(0.072)

1.retired#1.healthcare					0.147	0.145	0.074	0.159
					(0.102)	(0.099)	(0.127)	(0.099)
Constant	0.269***	0.268***	1.276	0.246**	0.269***	0.269***	1.273	0.249**
	(0.008)	(0.003)	-1.260	(0.104)	(0.008)	(0.003)	-1.262	(0.104)
Observations	25,125	25,125	17,157	25,125	25,125	25,125	17,157	25,125
Enjoyment	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
retired = 1	-0.017***	-0.037***	0.003	-0.036	-0.025***	0.398	-0.005	-0.037
	(0.003)	(0.014)	(0.005)	(0.136)	(0.004)	(0.313)	(0.005)	(0.140)
spouse = 1	0.026***	0.027***	0.022***	0.006	0.019***	0.151	0.012***	-0.001
	(0.003)	(0.003)	(0.003)	(0.010)	(0.004)	(0.103)	(0.004)	(0.015)
retired==1 & spouse==1					0.020***	-0.391	0.028***	0.019
					(0.007)	(0.307)	(0.007)	(0.063)
Constant	0.060***	0.067***	0.266***	-0.056	0.063***	-0.076	0.316***	-0.002
	(0.002)	(0.005)	(0.059)	(0.850)	(0.002)	(0.105)	(0.060)	(0.676)

Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.018***	-0.043***	0.004	-0.034	-0.025***	0.123	-0.002	-0.043
	(0.003)	(0.014)	(0.005)	(0.133)	(0.004)	(0.091)	(0.005)	(0.155)
child_grandch = 1	0.022***	0.024***	0.019***	0.002	0.014***	0.057*	0.009*	-0.008
	(0.004)	(0.004)	(0.004)	(0.008)	(0.005)	(0.029)	(0.005)	(0.021)
1.retired#1.child_grandch					0.022***	-0.123	0.027***	0.028
					(0.007)	(0.089)	(0.007)	(0.069)
Constant	0.065***	0.073***	0.293***	-0.049	0.067***	0.021	0.329***	-0.030
	(0.002)	(0.005)	(0.059)	(0.838)	(0.002)	(0.029)	(0.060)	(0.792)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.017***	-0.042***	0.004	-0.038	-0.024***	0.073	-0.001	-0.077
	(0.003)	(0.014)	(0.005)	(0.137)	(0.004)	(0.066)	(0.005)	(0.198)
friends = 1	0.021***	0.022***	0.017***	0.007	0.010**	0.031	0.003	-0.008
	(0.004)	(0.004)	(0.004)	(0.009)	(0.005)	(0.022)	(0.005)	(0.018)

retired==1 & friends==1					0.031***	-0.066	0.037***	0.047
					(0.008)	(0.065)	(0.008)	(0.075)
Constant	0.066***	0.074***	0.277***	-0.075	0.068***	0.038*	0.322***	-0.209
	(0.002)	(0.005)	(0.059)	(0.869)	(0.002)	(0.022)	(0.060)	-1.079
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.016***	-0.044***	0.005	-0.034	-0.016***	0.046	0.005	-0.036
	(0.003)	(0.014)	(0.005)	(0.133)	(0.004)	(0.045)	(0.005)	(0.138)
colleagues = 1	0.016**	0.011	0.011	0.010	0.013	0.022	0.007	0.006
	(0.008)	(0.009)	(0.008)	(0.012)	(0.009)	(0.018)	(0.009)	(0.017)
1.retired#1.colleagues					0.017	-0.041	0.020	0.021
					(0.020)	(0.048)	(0.020)	(0.056)
Constant	0.069***	0.079***	0.284***	-0.053	0.070***	0.048***	0.287***	-0.059
	(0.002)	(0.005)	(0.059)	(0.845)	(0.002)	(0.016)	(0.059)	(0.860)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170

retired = 1	-0.017***	-0.044***	0.005	-0.034	-0.018***	0.049	0.004	-0.037
	(0.003)	(0.014)	(0.005)	(0.133)	(0.004)	(0.046)	(0.005)	(0.136)
other = 1	0.016	0.018	0.013	-0.003	-0.005	0.014	-0.009	-0.025
	(0.011)	(0.011)	(0.011)	(0.018)	(0.015)	(0.020)	(0.015)	(0.023)
retired==1 & other==1					0.046**	-0.031	0.049**	0.050
					(0.022)	(0.050)	(0.022)	(0.055)
Constant	0.070***	0.079***	0.288***	-0.053	0.070***	0.048***	0.292***	-0.063
	(0.002)	(0.005)	(0.059)	(0.843)	(0.002)	(0.016)	(0.059)	(0.851)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.017***	-0.042***	0.004	-0.028	-0.019***	0.063	0.002	-0.035
	(0.003)	(0.014)	(0.005)	(0.130)	(0.004)	(0.056)	(0.005)	(0.173)
otherfamily = 1	0.026***	0.026***	0.021***	0.016*	0.022***	0.035*	0.016***	0.013
	(0.004)	(0.004)	(0.004)	(0.009)	(0.005)	(0.019)	(0.005)	(0.015)
retired==1 & otherfamily==1					0.010	-0.061	0.015*	0.009

	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)
					(0.008)	(0.055)	(0.008)	(0.061)
Constant	0.066***	0.074***	0.273***	-0.009	0.066***	0.041**	0.289***	-0.031
	(0.002)	(0.005)	(0.059)	(0.827)	(0.002)	(0.019)	(0.060)	(0.973)
Observations	30,212	30,212	30,212	17,170	30,212	30,212	30,212	17,170
retired = 1	-0.016***	-0.044***	0.005	-0.036	-0.017***	0.048	0.005	-0.037
	(0.003)	(0.014)	(0.005)	(0.133)	(0.003)	(0.046)	(0.005)	(0.133)
healthcare = 1	0.037	0.036	0.032	0.040	0.010	0.016	0.004	0.011
	(0.029)	(0.029)	(0.029)	(0.040)	(0.035)	(0.034)	(0.035)	(0.049)
1.retired#1.healthcare					0.087	0.020	0.086	0.084
					(0.060)	(0.070)	(0.060)	(0.086)
Constant	0.070***	0.080***	0.287***	-0.063	0.070***	0.048***	0.289***	-0.066
	(0.002)	(0.005)	(0.059)	(0.847)	(0.002)	(0.016)	(0.059)	(0.848)

Note: Standard errors in parentheses Statistical significance *** p<0.01, ** p<0.05, * p<0.1. Columns OLS (2) and IV (2) include control variables. Columns OLS (3) and IV (3) include interaction effect retired x social network types). Columns OLS (4) and IV (4) include control variables and the include interaction effect (retired x social network types). The OLS columns include fixed effects.

Appendix

Table 1A: The effect of retirement on general health.

General health	OLS (1)	IV (1)	OLS (2)	IV (2)	OLS (3)	IV (3)	OLS (4)	IV (4)

retired	-0.026***	0.061***	-0.016*	-0.012	-0.021***	0.188***	-0.016	0.036
	(0.004)	(0.018)	(0.009)	(0.184)	(0.006)	(0.045)	(0.011)	(0.210)
sn_size	0.004	0.001	0.020	-0.000	0.001	0.068***	0.020	0.009
	(0.004)	(0.004)	(0.013)	(0.016)	(0.005)	(0.015)	(0.013)	(0.034)
Gender			-0.002	-0.001			-0.002	-0.000
			(0.007)	(0.008)			(0.007)	(0.008)
Age			-0.000	0.001			-0.000	-0.001
			(0.001)	(0.006)			(0.001)	(0.005)
activities of daily living			-0.288***	-0.260***			-0.288***	-0.269***
			(0.014)	(0.014)			(0.014)	(0.014)
primary education			0.048*	0.048			0.048*	0.050*
			(0.029)	(0.031)			(0.029)	(0.030)
secondary education			0.089***	0.097***			0.089***	0.100***
			(0.029)	(0.031)			(0.029)	(0.030)
tertatiary education			0.127***	0.140***			0.127***	0.143***
			(0.029)	(0.032)			(0.029)	(0.030)
Total household income			0.000**	0.000***			0.000**	0.000***
			(0.000)	(0.000)			(0.000)	(0.000)
Married with cohabitation			0.017	0.021			0.017	0.020
			(0.015)	(0.016)			(0.015)	(0.016)
Partnership registered			0.004	0.024			0.004	0.023
			(0.027)	(0.028)			(0.027)	(0.028)
Marriedwithnocohab			0.037	0.039			0.037	0.041
			(0.031)	(0.035)			(0.031)	(0.033)
Marriednever			-0.021	-0.011			-0.021	-0.010
			(0.020)	(0.022)			(0.020)	(0.021)
Divorced			-0.003	0.014			-0.003	0.015
			(0.017)	(0.019)			(0.017)	(0.018)
Number of children			0.011	0.008			0.011	0.009
			(0.013)	(0.014)			(0.013)	(0.014)

Number of grandchildren			-0.010	-0.006			-0.010	-0.007
			(0.007)	(0.009)			(0.007)	(0.008)
physicallystrained = 1			-0.036***	-0.035			-0.037***	-0.034**
			(0.008)	(0.044)			(0.008)	(0.014)
Managers = 1			-0.040***	-0.035**			-0.040***	-0.037***
			(0.012)	(0.017)			(0.012)	(0.012)
1.retired#1.sn_size					0.003	-0.188***	-0.001	-0.037
					(0.008)	(0.042)	(0.014)	(0.141)
Constant	0.822***	0.798***	0.757***	0.710	0.825***	0.755***	0.757***	0.770**
	(0.004)	(0.007)	(0.072)	(0.468)	(0.003)	(0.016)	(0.072)	(0.308)
Observations	30,231	30,231	17,182	17,182	30,231	30,231	17,182	17,182

Note: Standard errors in parentheses Statistical significance *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Columns OLS (2) and IV (2) include control variables. Columns OLS (3) and IV (3) include interaction effect retired x social network types). Columns OLS (4) and IV (4) include control variables and the include interaction effect (retired x social network types). The OLS columns include fixed effects.

STATA DO-FILE

```
 1   ***MASTER'S THESIS IN PUBLIC ADMINISTRATION - ECONOMINCS AND GOVERNANCE**
 2   * STUDENT NAME: Androniki Zmpogkou
 3   * STUDENT NUMBER: s2902311
 4   * SUPERVISOR: Eduard Suari- Andreu
 5   * THESIS TITLE: The moderating effects of social networks on the influence of retirement on
     personal health.******
 6   *************************************************************************
 7
 8   log using "C:\Users\anta1\Dropbox\logfilefinal.smcl"
 9   clear all
10   set more off
11   adopath
12   sysdir set PLUS D:\STATA
13   cd "C:\Users\anta1\OneDrive\Έγγραφα\thesis\SHARE waves dataset"
14
15   *Merge data
16
17   *Wave 4
18   use sharew4_rel8-0-0_ep, clear
19   merge 1:1 mergeid using sharew4_rel8-0-0_ph
20   drop _merge
21   merge 1:1 mergeid using sharew4_rel8-0-0_dn
22   drop _merge
23   merge 1:1 mergeid using sharew4_rel8-0-0_cf
24   drop _merge
25   merge 1:1 mergeid using sharew4_rel8-0-0_sn
26   drop _merge
27   merge 1:1 mergeid using sharew4_rel8-0-0_hh
28   drop _merge
29   merge 1:1 mergeid using sharew4_rel8-0-0_mh
30   drop _merge
31   merge 1:1 mergeid using sharew4_rel8-0-0_ch
32   drop _merge
33   merge 1:1 mergeid using sharew4_rel8-0-0_ac
34   drop _merge
35   merge 1:1 mergeid using sharew4_rel8-0-0_gv_health
36   drop _merge
37   merge 1:1 mergeid using sharew4_rel8-0-0_gv_isced
38   drop _merge
39   merge 1:1 mergeid using sharew4_rel8-0-0_gv_imputations
40   drop _merge
41   merge 1:1 mergeid using sharew4_rel8-0-0_gv_networks
42   drop _merge
43   gen wave=4
44   save wave_4
45
46   *Wave 5
47
48   use sharew5_rel8-0-0_ep, clear
49   merge 1:1 mergeid using sharew5_rel8-0-0_ph
50   drop _merge
51   merge 1:1 mergeid using sharew5_rel8-0-0_dn
52   drop _merge
53   merge 1:1 mergeid using sharew5_rel8-0-0_cf
54   drop _merge
55   merge 1:1 mergeid using sharew5_rel8-0-0_hh
56   drop _merge
57   merge 1:1 mergeid using sharew5_rel8-0-0_mh
58   drop _merge
59   merge 1:1 mergeid using sharew5_rel8-0-0_ch
60   drop _merge
61   merge 1:1 mergeid using sharew5_rel8-0-0_ac
62   drop _merge
63   merge 1:1 mergeid using sharew5_rel8-0-0_gv_health
64   drop _merge
65   merge 1:1 mergeid using sharew5_rel8-0-0_gv_isced
66   drop _merge
67   merge 1:1 mergeid using sharew5_rel8-0-0_gv_imputations
```

```
 68    drop _merge
 69    gen wave=5
 70    save wave_5
 71
 72    *Wave 6
 73
 74    use sharew6_rel8-0-0_ep, clear
 75    merge 1:1 mergeid using sharew6_rel8-0-0_ph
 76    drop _merge
 77    merge 1:1 mergeid using sharew6_rel8-0-0_dn
 78    drop _merge
 79    merge 1:1 mergeid using sharew6_rel8-0-0_cf
 80    drop _merge
 81    merge 1:1 mergeid using sharew6_rel8-0-0_sn
 82    drop _merge
 83    merge 1:1 mergeid using sharew6_rel8-0-0_hh
 84    drop _merge
 85    merge 1:1 mergeid using sharew6_rel8-0-0_mh
 86    drop _merge
 87    merge 1:1 mergeid using sharew6_rel8-0-0_ch
 88    drop _merge
 89    merge 1:1 mergeid using sharew6_rel8-0-0_ac
 90    drop _merge
 91    merge 1:1 mergeid using sharew6_rel8-0-0_gv_health
 92    drop _merge
 93    merge 1:1 mergeid using sharew6_rel8-0-0_gv_isced
 94    drop _merge
 95    merge 1:1 mergeid using sharew6_rel8-0-0_gv_imputations
 96    drop _merge
 97    merge 1:1 mergeid using sharew6_rel8-0-0_gv_networks
 98    drop _merge
 99    gen wave=6
100    save wave_6
101
102    *Wave 7
103
104    use sharew7_rel8-0-0_ep, clear
105    merge 1:1 mergeid using sharew7_rel8-0-0_ph
106    drop _merge
107    merge 1:1 mergeid using sharew7_rel8-0-0_dn
108    drop _merge
109    merge 1:1 mergeid using sharew7_rel8-0-0_cf
110    drop _merge
111    merge 1:1 mergeid using sharew7_rel8-0-0_hh
112    drop _merge
113    merge 1:1 mergeid using sharew7_rel8-0-0_mh
114    drop _merge
115    merge 1:1 mergeid using sharew7_rel8-0-0_ch
116    drop _merge
117    merge 1:1 mergeid using sharew7_rel8-0-0_ac
118    drop _merge
119    merge 1:1 mergeid using sharew7_rel8-0-0_gv_health
120    drop _merge
121    merge 1:1 mergeid using sharew7_rel8-0-0_gv_isced
122    drop _merge
123    merge 1:1 mergeid using sharew7_rel8-0-0_gv_imputations
124    drop _merge
125    gen wave=7
126    save wave_7
127
128    *Wave 8
129
130    use sharew8_rel8-0-0_ep, clear
131    merge 1:1 mergeid using sharew8_rel8-0-0_ph
132    drop _merge
133    merge 1:1 mergeid using sharew8_rel8-0-0_dn
134    drop _merge
135    merge 1:1 mergeid using sharew8_rel8-0-0_cf
```

```
136   drop _merge
137   merge 1:1 mergeid using sharew8_rel8-0-0_sn
138   drop _merge
139   merge 1:1 mergeid using sharew8_rel8-0-0_hh
140   drop _merge
141   merge 1:1 mergeid using sharew8_rel8-0-0_mh
142   drop _merge
143   merge 1:1 mergeid using sharew8_rel8-0-0_ch
144   drop _merge
145   merge 1:1 mergeid using sharew8_rel8-0-0_ac
146   drop _merge
147   merge 1:1 mergeid using sharew8_rel8-0-0_gv_health
148   drop _merge
149   merge 1:1 mergeid using sharew8_rel8-0-0_gv_isced
150   drop _merge
151   merge 1:1 mergeid using sharew8_rel8-0-0_gv_imputations
152   drop _merge
153   merge 1:1 mergeid using sharew8_rel8-0-0_gv_networks
154   drop _merge
155   gen wave=8
156   save wave_8
157
158   *Append data
159
160   use wave_4
161   forvalues i=5/8{
162   append using wave_`i'
163   }
164
165   *Selection
166
167   *Drop
168
169   clear
170   set more off
171   cd "C:\Users\anta1\OneDrive\Έγγραφα\thesis\master thesis"
172
173   use "C:\Users\anta1\OneDrive\Έγγραφα\thesis\master thesis\wave_4.dta"
174
175   tab country
176   label list
177   drop if country==29|country==32|country==33|country==19|country==61|country==59|country==57|
      country==55|country==53|country==51|country==48|country==47|country==31|country==30|country==25|
      country==19|country==63
178   save wave_4, replace
179
180   tab language
181   label list
182   drop if language==36|language==37|language==38|language==39|language==40|language==43
183   save wave_4, replace
184
185   tab ep005_
186   label list
187   drop if ep005_==-1|ep005_==-2|ep005_==1|ep005_==3|ep005_==4|ep005_==5|ep005_==97|ep005_==.
188   save wave_4,replace
189
190   tab age
191   label list
192   drop if age<50|age>70
193   save wave_4, replace
194
195   use "C:\Users\anta1\OneDrive\Έγγραφα\thesis\master thesis\wave_5.dta"
196
197   tab country
198   label list
199   drop if country==25|country==31|country==63|country==61|country==59|country==57|country==55|
      country==53|country==51|country==48|country==47|country==33|country==32|country==30|country==29|
      country==25|country==19
```

```
200    save wave_5, replace
201
202    tab language
203    label list
204    drop if language==36|language==37|language==38|language==39|language==40|language==43
205    save wave_5, replace
206
207    tab ep005_
208    label list ep005_
209    drop if ep005_==-1|ep005_==-2|ep005_==3|ep005_==4|ep005_==5|ep005_==97|ep005_==.
210    save wave_5, replace
211
212    tab age
213    label list
214    drop if age<50|age>70
215    save wave_5,replace
216
217    use "C:\Users\anta1\OneDrive\Έγγραφα\thesis\master thesis\wave_6.dta"
218
219    tab country
220    label list
221    drop if country==19|country==25|country==31|country==33|country==47|country==29|country==30|
           country==32|country==48|country==51|country==53|country==55|country==57|country==59|country==61|
           country==63
222    save wave_6, replace
223
224    tab language
225    label list
226    drop if language==36|language==37|language==38|language==39|language==40|language==43
227    save wave_6, replace
228
229    tab ep005_
230    label list
231    drop if ep005_==-1|ep005_==-2|ep005_==3|ep005_==4|ep005_==5|ep005_==97|ep005_==.
232    save wave_6, replace
233
234    tab age
235    label list
236    drop if age<50|age>70
237    save wave_6,replace
238
239    use "C:\Users\anta1\OneDrive\Έγγραφα\thesis\master thesis\wave_7.dta"
240
241    tab country
242    label list
243    drop if country==19|country==25|country==31|country==33|country==47|country==29|country==30|
           country==32|country==48|country==51|country==53|country==55|country==57|country==59|country==61|
           country==63
244    save wave_7, replace
245
246    tab language
247    label list
248    drop if language==36|language==37|language==38|language==39|language==40|language==43
249    save wave_7, replace
250
251    tab ep005_
252    label list
253    drop if ep005_==-1|ep005_==-2|ep005_==3|ep005_==4|ep005_==5|ep005_==97|ep005_==.
254    save wave_7, replace
255
256    tab age
257    label list
258    drop if age<50|age>70
259    save wave_7,replace
260
261
262    use "C:\Users\anta1\OneDrive\Έγγραφα\thesis\master thesis\wave_8.dta"
263
```

```
264    tab country
265    label list
266    drop if country==19|country==25|country==31|country==33|country==47|country==29|country==30|
       country==32|country==48|country==51|country==53|country==55|country==57|country==59|country==61|
       country==63
267    save wave_8, replace
268
269    tab language
270    label list
271    drop if language==36|language==37|language==38|language==39|language==40|language==43
272    save wave_8, replace
273
274    tab ep005_
275    label list
276    drop if ep005_==-1|ep005_==-2|ep005_==3|ep005_==4|ep005_==5|ep005_==97|ep005_==.
277    save wave_8, replace
278
279    tab age
280    label list
281    drop if age<50|age>70
282    save wave_8,replace
283
284
285    ///*Append into one wave
286    clear
287    set more off
288    cd "C:\Users\anta1\OneDrive\Έγγραφα\thesis\master thesis"
289
290
291    use wave_4
292    forvalues i=5/8{
293    append using wave_`i'
294    gen thesiswave=1
295    save thesiswave1,replace
296    }
297
298    append using wave_5
299    append using "C:\Users\anta1\OneDrive\Έγγραφα\thesis\SHARE waves\wave_6.dta"
300    gen wave=1
301    save wave1
302
303    log using "C:\Users\anta1\Dropbox\thesis.smcl"
304    cd "C:\Users\anta1\OneDrive\Έγγραφα\thesis\SHARE waves"
305    use wave_6
306    append using wave_7
307    append using wave_8
308    gen wave=2
309    save wave2
310
311    *Analysis
312
313    clear
314    set more off
315    cd "C:\Users\anta1\OneDrive\Έγγραφα\thesis\master thesis"
316
317
318    *Declare dataset to be panel dataset
319
320    use "C:\Users\anta1\OneDrive\Έγγραφα\thesis\master thesis\wave1.dta"
321
322    xtset ep005_
323
324    gen retired=0
325    replace retired=1 if ep005_==1//retirement
326    replace retired=0 if ep005_==2// employement
327    by mergeid, sort: egen firsttime = min(cond( retired == 0, wave,.))
328    by mergeid : egen lasttime = max(cond( retired == 0, wave, .)) //employment
329    by mergeid,sort:egen firsttime2= min(cond(retired==1,wave,.))
```

```stata
330    by mergeid: egen lasttime2= max(cond(retired==1,wave,.)) //retirement
331
332
333    *Marital status
334    gen maritalstatus=0
335    replace maritalstatus=1 if dn014_==1|dn014_==2
336    replace maritalstatus=0 if dn014_==3|dn014_==4|dn014_==5|dn014_==6
337
338
339    *Gender
340    rename dn042_ gender
341    recode gender (1=1) (2=0)
342    *1=male, 2=female
343    duplicates report
344    duplicates report mergeid
345    duplicates list, sepby (mergeid)
346    duplicates tag mergeid, gen (dup_id)
347    tab dup_id
348    drop if dup_id==0
349
350    *** Drop those that are only once observed in the dataset since we want to observe transitions
       through the waves***////
351
352    tab dup_id
353    label list
354    drop if dup_id==0
355    save
356
357    tab firsttime
358    label list
359    drop if firsttime==.//// drop those who are not working in the baseline wave
360
361    tab firsttime2
362    label list
363    drop if firsttime2==.
364    save
365    /// those who are not have retired in the subsequent waves
366
367    *******Education********
368    *Primary education
369    gen primaryeduc=0
370    replace primaryeduc=1 if isced1997_r==1|isced1997_r==2|isced2011_r==1|isced2011_r==2|isced2011_r==
       0
371
372    *Secondary education
373    gen seceduc=0
374    replace seceduc=1 if isced1997_r==3|isced1997_r==4|isced2011_r==3|isced2011_r==4
375
376    *Tertiary education
377    gen terteduc=0
378    replace terteduc=1 if isced1997_r==5|isced1997_r==6|isced2011_r==5|isced2011_r==6|isced2011_r==7|
       isced2011_r==8
379    drop if isced1997_r==-2|isced1997_r==-1|isced1997_r==95|isced1997_r==97|isced2011_r==-1|
       isced2011_r==95|isced2011_r==97
380    drop isced1997_r isced2011_r
381
382    *Type of employment
383    drop if ep009_==-1| ep009_==-2
384    recode ep009_ (2=1) (1=0) (3=0), gen (publicsector)
385    recode ep009_ (3=1) (1/2=0), gen (selfemployed)
386    recode ep009_ (1=1) (2/3=0), gen (privatesector)
387
388    *Retirement year
389    tab ep329_
390    label list
391    drop if ep329_<2011
392
393    *Ocuppation
```

```
394
395    gen Managers=0
396    replace Managers=1 if ep016_==1|ep616isco==110|ep616isco==1100|ep616isco==1111|ep616isco==1112|
       ep616isco==1114|ep616isco==1120|ep616isco==1211|ep616isco==1212|ep616isco==1213|ep616isco==1219|
       ep616isco==1221|ep616isco==1222|ep616isco==1223|ep616isco==1311|ep616isco==1321|ep616isco==1323|
       ep616isco==1324|ep616isco==1330|ep616isco==1341|ep616isco==1342|ep616isco==1343|ep616isco==1344|
       ep616isco==1345|ep616isco==1346|ep616isco==1349|ep616isco==1411|ep616isco==1412|ep616isco==1420|
       ep616isco==1431|ep616isco==1439
397
398    gen Professionals=0
399    replace Professionals=1 if ep016_==2|ep616isco==2111|ep616isco==2113|ep616isco==2114|ep616isco==
       2120|ep616isco==2131|ep616isco==2132|ep616isco==2133|ep616isco==2141|ep616isco==2142|ep616isco==
       2143|ep616isco==2144|ep616isco==2145|ep616isco==2146|ep616isco==2149|ep616isco==2151|ep616isco==
       2152|ep616isco==2153|ep616isco==2161|ep616isco==2162|ep616isco==2163|ep616isco==2164|ep616isco==
       2165|ep616isco==2166|ep616isco==2211|ep616isco==2212|ep616isco==2221|ep616isco==2222|ep616isco==
       2230|ep616isco==2240|ep616isco==2250|ep616isco==2261|ep616isco==2262|ep616isco==2263|ep616isco==
       2264|ep616isco==2265|ep616isco==2266|ep616isco==2269|ep616isco==2310|ep616isco==2310|ep616isco==
       2320|ep616isco==2330|ep616isco==2341|ep616isco==2341|ep616isco==2342|ep616isco==2351|ep616isco==
       2352|ep616isco==2353|ep616isco==2354|ep616isco==2355|ep616isco==2356|ep616isco==2359|ep616isco==
       2411|ep616isco==2412|ep616isco==2413|ep616isco==2421|ep616isco==2422|ep616isco==2423|ep616isco==
       2424|ep616isco==2431|ep616isco==2432|ep616isco==2433|ep616isco==2434|ep616isco==2511|ep616isco==
       2512|ep616isco==2513|ep616isco==2514|ep616isco==2519|ep616isco==2521|ep616isco==2522|ep616isco==
       2529|ep616isco==2611|ep616isco==2612|ep616isco==2619|ep616isco==2621|ep616isco==2622|ep616isco==
       2631|ep616isco==2632|ep616isco==2634|ep616isco==2635|ep616isco==2636|ep616isco==2641|ep616isco==
       2642|ep616isco==2643|ep616isco==2651|ep616isco==2652|ep616isco==2654|ep616isco==2655|ep616isco==
       2659
400
401    gen ProfessionalsandAssociates=0
402    replace ProfessionalsandAssociates=1 if ep016_==3|ep616isco==3112|ep616isco==3113|ep616isco==3114|
       ep616isco==3115|ep616isco==3116|ep616isco==3117|ep616isco==3118|ep616isco==3119|ep616isco==3121|
       ep616isco==3122|ep616isco==3123|ep616isco==3132|ep616isco==3133|ep616isco==3135|ep616isco==3139|
       ep616isco==3141|ep616isco==3142|ep616isco==3143|ep616isco==3152|ep616isco==3154|ep616isco==3211|
       ep616isco==3212|ep616isco==3213|ep616isco==3214|ep616isco==3221|ep616isco==3240|ep616isco==3251|
       ep616isco==3253|ep616isco==3254|ep616isco==3255|ep616isco==3256|ep616isco==3257|ep616isco==3258|
       ep616isco==3259|ep616isco==3312|ep616isco==3313|ep616isco==3315|ep616isco==3321|ep616isco==3322|
       ep616isco==3323|ep616isco==3324|ep616isco==3331|ep616isco==3332|ep616isco==3333|ep616isco==3334|
       ep616isco==3341|ep616isco==3342|ep616isco==3343|ep616isco==3344|ep616isco==3351|ep616isco==3352|
       ep616isco==3353|ep616isco==3354|ep616isco==3355|ep616isco==3411|ep616isco==3412|ep616isco==3413|
       ep616isco==3422|ep616isco==3423|ep616isco==3431|ep616isco==3432|ep616isco==3433|ep616isco==3434|
       ep616isco==3435|ep616isco==3511|ep616isco==3512|ep616isco==3513|ep616isco==3521|ep616isco==3522
403
404    gen Clerks=0
405    replace Clerks=1 if ep016_==4|ep616isco==3112|ep616isco==4110|ep616isco==4120|ep616isco==4211|
       ep616isco==4214|ep616isco==4221|ep616isco==4222|ep616isco==4223|ep616isco==4224|ep616isco==4225|
       ep616isco==4226|ep616isco==4227|ep616isco==4229|ep616isco==4311|ep616isco==4312|ep616isco==4313|
       ep616isco==4321|ep616isco==4322|ep616isco==4323|ep616isco==4411|ep616isco==4412|ep616isco==4415|
       ep616isco==4416|ep616isco==4419
406
407    gen SalesandService=0
408    replace SalesandService=1 if ep016_==5|ep616isco==5111|ep616isco==5112|ep616isco==5113|ep616isco==
       5120|ep616isco==5131|ep616isco==5132|ep616isco==5141|ep616isco==5142|ep616isco==5151|ep616isco==
       5152|ep616isco==5153|ep616isco==5162|ep616isco==5163|ep616isco==5164|ep616isco==5169|ep616isco==
       5211|ep616isco==5221|ep616isco==5222|ep616isco==5223|ep616isco==5230|ep616isco==5244|ep616isco==
       5245|ep616isco==5246|ep616isco==5249|ep616isco==5311|ep616isco==5312|ep616isco==5321|ep616isco==
       5322|ep616isco==5329|ep616isco==5411|ep616isco==5412|ep616isco==5414|ep616isco==5419
409
410    gen SkilledAgriFishForestry=0
411    replace SkilledAgriFishForestry=1 if ep016_==6|ep616isco==6111|ep616isco==6112|ep616isco==6113|
       ep616isco==6114|ep616isco==6121|ep616isco==6123|ep616isco==6129|ep616isco==6130|ep616isco==6210|
       ep616isco==6221|ep616isco==6222|ep616isco==6310|ep616isco==6330
412
413    gen CraftRelatedTradeWorkers=0
414    replace CraftRelatedTradeWorkers=1 if ep016_==7|ep616isco==7111|ep616isco==7112|ep616isco==7113|
       ep616isco==7114|ep616isco==7115|ep616isco==7119|ep616isco==7122|ep616isco==7123|ep616isco==7124|
       ep616isco==7126|ep616isco==7131|ep616isco==7132|ep616isco==7133|ep616isco==7211|ep616isco==7212|
       ep616isco==7213|ep616isco==7214|ep616isco==7221|ep616isco==7222|ep616isco==7223|ep616isco==7224|
       ep616isco==7231|ep616isco==7233|ep616isco==7312|ep616isco==7313|ep616isco==7317|ep616isco==7318|
       ep616isco==7321|ep616isco==7322|ep616isco==7323|ep616isco==7411|ep616isco==7412|ep616isco==7413|
```

```
         ep616isco==7421|ep616isco==7511|ep616isco==7512|ep616isco==7514|ep616isco==7515|ep616isco==7521|
         ep616isco==7522|ep616isco==7523|ep616isco==7531|ep616isco==7532|ep616isco==7533|ep616isco==7535|
         ep616isco==7543|ep616isco==7549
415
416      gen PlantMachineOperators=0
417      replace PlantMachineOperators=1 if ep016_==8|ep616isco==8112|ep616isco==8113|ep616isco==8121|
         ep616isco==8122|ep616isco==8131|ep616isco==8141|ep616isco==8142|ep616isco==8143|ep616isco==8152|
         ep616isco==8157|ep616isco==8182|ep616isco==8189|ep616isco==8211|ep616isco==8212|ep616isco==8219|
         ep616isco==8311|ep616isco==8322|ep616isco==8331|ep616isco==8332|ep616isco==8342|ep616isco==8343|
         ep616isco==8344
418
419      gen ElementaryOccupations=0
420      replace ElementaryOccupations=1 if ep016_==9|ep616isco==9111|ep616isco==9112|ep616isco==9122|
         ep616isco==9129|ep616isco==9211|ep616isco==9212|ep616isco==9213|ep616isco==9214|ep616isco==9215|
         ep616isco==9216|ep616isco==9312|ep616isco==9313|ep616isco==9321|ep616isco==9329|ep616isco==9333|
         ep616isco==9411|ep616isco==9412|ep616isco==9510|ep616isco==9520|ep616isco==9612|ep616isco==9622|
         ep616isco==9623|ep616isco==9626|ep616isco==9999
421
422      gen ArmedForces=0
423      replace ArmedForces=1 if ep016_==10
424
425      *Physiccaly demanding Occupation
426
427      *Sector
428
429      gen Agriculture=0
430      replace Agriculture=1 if ep018_==1
431
432      gen MiningQuarrying=0
433      replace MiningQuarrying=1 if ep018_==2
434
435      gen Manufacturing=0
436      replace Manufacturing=1 if ep018_==3
437
438      gen Electricity=0
439      replace Electricity=1 if ep018_==4
440
441      gen Construction=0
442      replace Construction=1 if ep018_==5
443
444      gen Wholesaleretail=0
445      replace Wholesaleretail=1 if ep018_==6
446
447      gen HotelsRestaurants=0
448      replace HotelsRestaurants=1 if ep018_==7
449
450      gen TransportCommunication=0
451      replace TransportCommunication=1 if ep018_==8
452
453      gen FinancialInter=0
454      replace FinancialInter=1 if ep018_==9
455
456      gen RealEstate=0
457      replace RealEstate=1 if ep018_==10
458
459      gen PublicAdministration=0
460      replace PublicAdministration=1 if ep018_==11
461
462      gen Education=0
463      replace Education=1 if ep018_==12
464
465      gen HealthSocialNetwork=0
466      replace HealthSocialNetwork=1 if ep018_==13
467
468      gen Othercommunity=0
469      replace Othercommunity=1 if ep018_==14
470
471      *Participation in activities
```

```
472    gen activities=0
473    replace activities=1 if ac035d1==1|ac035d4==1|ac035d5==1|ac035d6==1|ac035d7==1|ac035d8==1|ac035d9
       ==1|ac035d10==1
474    drop if ac035d1==-1| ac035d1==-2| ac035d4==-1| ac035d4==-2| ac035d5==-1| ac035d5==-2| ac035d7==-1|
        ac035d7==-2| ac035d8==-1| ac035d8==-2| ac035d9==-1| ac035d9==-2| ac035d10==-1| ac035d10==-2
475
476    *Total Household Income
477    tab thinc
478    label list
479    drop if thinc>2000000
480    save masterwave1,replace
481
482
483    forvalues i=1/2{
484    use wave`i',clear
485    *General health
486    gen generalhealth=0
487    replace generalhealth=1 if ph003_==1|ph003_==2|ph003_==3
488    drop if ph003_==-2|ph003_==-1|ph003_==.
489    save wave`i', replace
490
491    gen poorhealth=0
492    replace poorhealth=1 if ph003_==4|ph003_==5
493
494
495    *Euro-D scale (mental health)
496    recode euro1 (0=0) (1=1), gen(Depression)
497    recode euro2 (0=0) (1=1), gen(Pessimism)
498    recode euro3 (0=0) (1=1), gen(Suicidality)
499    recode euro4 (0=0) (1=1), gen(Guilt)
500    recode euro5 (0=0) (1=1), gen(Sleep)
501    recode euro6 (0=0) (1=1), gen(Interest)
502    recode euro7 (0=0) (1=1), gen(Irritability)
503    recode euro8 (0=0) (1=1), gen(Appetite)
504    recode euro9 (0=0) (1=1), gen(Fatigue)
505    recode euro10 (0=0) (1=1), gen(Concentration)
506    recode euro11 (0=0) (1=1), gen(Enjoyment)
507    recode euro12 (0=0) (1=1), gen(Tearfulness)
508    rename eurod Euro_D
509    recode Euro_D (1/12=1)
510    }
511
512
513    forvalues i=1/2{
514    use wave`i',clear
515    //*Social networks
516
517    *sn002a_1-6 more people with whom you discuss important things often)
518    gen oftencommunication=0
519    replace oftencommunication=1 if sn002a_1==1|sn002a_2==1|sn002a_3==1|sn002a_4==1|sn002a_5==1|
       sn002a_6==1|sn003a_==1
520    replace oftencommunication=0 if sn002a_1==5|sn002a_2==5|sn002a_3==5|sn002a_4==5|sn002a_5==5|
       sn002a_6==5|sn003a_==5
521    drop if sn003a_==-1|sn003a_==-2
522    save wave`i', replace
523
524    *Social network confidants
525    gen spouse1=0
526    replace spouse1=1 if sn005_1==1|sn005_2==1|sn005_3==1|sn005_4==1|sn005_5==1|sn005_6==1|sn005_7==1
527    save wave`i', replace
528
529    *Social confidants
530    // Dummy variable for changes in the network confidants from different waves
531    // Reasons for not mentioning the same person again
532    gen children=0
533    replace children=1 if ch001_==1|ch001_==2|ch001_==3|ch001_==4|ch001_==5|ch001_==6|ch001_==7|ch001_
       ==8|ch001_==9|ch001_==10|ch001_==11|ch001_==12
534    replace children=0 if ch001_==0
```

```
535     drop if ch001_==-1|ch001_==-2
536     save wave`i', replace
537
538     drop if ch021_==-2
539     recode ch021_ (1/2010=1) (0=0),gen (grandchildren)
540     save wave`i', replace
541
542     gen child_grandch=0
543     replace child_grandch=1 if sn005_1==10|sn005_1==11|sn005_1==14|sn005_2==10|sn005_2==11|sn005_2==14
        |sn005_3==10|sn005_3==11|sn005_3==14|sn005_4==10|sn005_4==11|sn005_4==14|sn005_5==10|sn005_5==11|
        sn005_5==14|sn005_6==10|sn005_6==11|sn005_6==14|sn005_7==10|sn005_7==11|sn005_7==14
544     save wave`i', replace
545
546     gen friends=0
547     replace friends=1 if sn005_1==21|sn005_2==21|sn005_3==21|sn005_4==21|sn005_5==21|sn005_6==21|
        sn005_7==21
548     save wave`i', replace
549
550     gen otherfamily=0
551     replace otherfamily=1 if sn005_1==2|sn005_1==3|sn005_1==4|sn005_1==6|sn005_1== 8|sn005_1==9|
        sn005_1==12|sn005_1==13|sn005_1== 15|sn005_1==16|sn005_1== 17|sn005_1==18|sn005_1==19|sn005_1==20|
        sn005_2==2|sn005_2==3|sn005_2== 4|sn005_2==5|sn005_2==6|sn005_2==8|sn005_2==9|sn005_2==12|sn005_2
        ==13|sn005_2==16|sn005_2==17|sn005_2==18|sn005_2==19|sn005_2==20|sn005_3==2|sn005_3==3|sn005_3==4|
        sn005_3==5|sn005_3==6|sn005_3==7|sn005_3== 8|sn005_3== 9|sn005_3== 13|sn005_3==15|sn005_3==16|
        sn005_3==17|sn005_3==18|sn005_3== 19|sn005_3==20|sn005_4==2|sn005_4== 3|sn005_4== 4|sn005_4==5|
        sn005_4== 6|sn005_4==7|sn005_4==8|sn005_4==9|sn005_4==12|sn005_4== 13|sn005_4==15|sn005_4==16|
        sn005_4==17|sn005_4==18|sn005_4==19|sn005_4== 20|sn005_5==2|sn005_5== 3|sn005_5== 4|sn005_5==5|
        sn005_5== 6|sn005_5== 8|sn005_5==9|sn005_5==12|sn005_5==13|sn005_5==15|sn005_5== 16|sn005_5== 17|
        sn005_5== 18|sn005_5== 19|sn005_5== 20|sn005_6==2|sn005_6==3|sn005_6== 4|sn005_6== 5|sn005_6== 8|
        sn005_6==9|sn005_6==12|sn005_6==13|sn005_6==16|sn005_6==18|sn005_6==19|sn005_6==20|sn005_7==2|
        sn005_7==3|sn005_7==4|sn005_7==5|sn005_7== 6|sn005_7==8|sn005_7==9|sn005_7==12|sn005_7== 13|
        sn005_7==15|sn005_7==16|sn005_7==17|sn005_7==18|sn005_7==19|sn005_7==20
552     save wave`i', replace
553
554     gen colleagues=0
555     replace colleagues=1 if sn005_1==22|sn005_2==22|sn005_3==22|sn005_4==22|sn005_5==22|sn005_6==22|
        sn005_7==22
556     save wave`i', replace
557
558     gen other=0
559     replace other=1 if sn005_1==23|sn005_1==24|sn005_1==25|sn005_2==23|sn005_2==24|sn005_2==25|sn005_3
        ==23|sn005_3==24|sn005_3==25|sn005_4==23|sn005_4==24|sn005_4==25|sn005_5==23|sn005_5==24|sn005_5==
        25|sn005_6==23|sn005_6==24|sn005_6==25|sn005_7==23|sn005_7==24|sn005_7==25
560     save wave`i', replace
561
562     gen healthcare=0
563     replace healthcare=1 if sn005_1==26|sn005_1==27|sn005_2==26|sn005_2==27|sn005_3==26|sn005_3==27|
        sn005_4==26|sn005_4==27|sn005_5==26|sn005_5==27|sn005_6==26|sn005_6==27|sn005_7==26|sn005_7==27
564     save wave`i', replace
565
566     gen noconfidants=0
567     replace noconfidants=1 if sn005_1==96|sn005_2==96|sn005_3==96|sn005_4==96|sn005_5==96|sn005_6==96|
        sn005_7==96
568     save wave`i', replace
569     }
570
571
572
573     *Social confidants
574     // Dummy variable for changes in the network confidants from different waves
575     // Reasons for not mentioning the same person again
576     gen children=0
577     replace children=1 if ch001_==1|ch001_==2|ch001_==3|ch001_==4|ch001_==5|ch001_==6|ch001_==7|ch001_
        ==8|ch001_==9|ch001_==10|ch001_==11|ch001_==12
578     replace children=0 if ch001_==0
579     drop if ch001_==-1|ch001_==-2
580
581     gen child_grandch=0
```

```
582    replace noconfidants=0 if sn005_1==10|sn005_1==11|sn005_1==14|sn005_2==10|sn005_2==11|sn005_2==14|
       sn005_3==10|sn005_3==11|sn005_3==14|sn005_4==10|sn005_4==11|sn005_4==14|sn005_5==10|sn005_5==11|
       sn005_5==14|sn005_6==10|sn005_6==11|sn005_6==14|sn005_7==10|sn005_7==11|sn005_7==14
583
584
585    *Summary Statistics
586
587    asdoc by noconfidants, sort : summarize generalhealth retired Gender age Nra children
       grandchildren Marriedcohab Partnershipreg Marriednocohab Marriednever Divorced Widowed activities
       primaryeduc seceduc terteduc thinc publicsector selfemployed privatesector Managers Professionals
       ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers PlantMachineOperators
       ElementaryOccupations ArmedForces physicallystrained Agriculture MiningQuarrying Manufacturing
       Electricity Construction Wholesaleretail HotelsRestaurants TransportCommunication FinancialInter
       RealEstate PublicAdministration Education HealthSocialNetwork Othercommunity generalhealth
       actdail2 inactdail2 depression pessimism suicidality guilt sleep interest irritability appetite
       fatigue concentration enjoyment tearfulness Fluency Orientation numeracy immrecall delayrecall
       sn_size spouse child_grandch friends colleagues other otherfamily healthcare noconfidants
588
589
590    *Moderator
591    xi I.retired*I.sn_size, prefix(_I)
592
593
594    ///////******* Regressions**************
595
596    ///////****General Health///////
597
598    xtreg generalhealth i.retired i.other i.wave i.country
599    outreg2 using results2,word ctitle (Model 1, OLS) label bdec(3) sdec(3)
600
601    xtreg generalhealth i.retired i.other i.gender c.age activities primaryeduc seceduc terteduc thinc
        mstat Managers Professionals ProfessionalsandAssociates Clerks SalesandService
       CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
602    outreg2 using results2,word ctitle (Model 2, OLS) label bdec(3) sdec(3)
603
604    xtreg generalhealth i.retired##i.other,fe
605    outreg2 using results2,word ctitle (Model 3, OLS) label bdec(3) sdec(3)
606
607    xtreg generalhealth i.retired##i.other i.gender c.age activities primaryeduc seceduc terteduc
       thinc mstat Managers Professionals ProfessionalsandAssociates Clerks SalesandService
       CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
608    outreg2 using results2,word ctitle (Model 4, OLS) label bdec(3) sdec(3)
609
610    ****Instrumental Variables
611    xtivreg generalhealth other (retired = Nra),fe
612    outreg2 using results2IV,word ctitle (Model 1, IV) label bdec(3) sdec(3)
613
614    xtivreg generalhealth other (retired = Nra) Gender age activities primaryeduc seceduc terteduc
       thinc Marriedcohab Partnershipreg Marriednocohab Marriednever Divorced Widowed children
       grandchildren physicallystrained Managers Professionals ProfessionalsandAssociates Clerks
       SalesandService CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
615    outreg2 using results2IV,word ctitle (Model 2, IV) label bdec(3) sdec(3)
616
617    xtivreg generalhealth other _AretXoth_1_1 (retired = Nra),fe
618    outreg2 using results2IV,word ctitle (Model 3, IV) label bdec(3) sdec(3)
619
620    xtivreg generalhealth other _AretXoth_1_1 (retired = Nra) Gender age activities primaryeduc
       seceduc terteduc thinc Marriedcohab Partnershipreg Marriednocohab Marriednever Divorced Widowed
       children grandchildren physicallystrained Managers Professionals ProfessionalsandAssociates Clerks
        SalesandService CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,
       fe
621    outreg2 using results2IV,word ctitle (Model 4, IV) label bdec(3) sdec(3)
622
623
624    ****//////Mental Health*******
625
626    ****Depression
627    xtreg Depression i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
```

```
        otherfamily i.healthcare,fe
628     outreg2 using results701,word ctitle (Model 1, OLS) label bdec(3) sdec(3)
629
630     xtreg Depression i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
        otherfamily i.healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat
        Managers Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
        PlantMachineOperators ElementaryOccupations ArmedForces,fe
631     outreg2 using results701,word ctitle (Model 2, OLS) label bdec(3) sdec(3)
632
633     xtreg Depression _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
        _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
        otherfamily i.healthcare,fe
634     outreg2 using results701,word ctitle (Model 3, OLS) label bdec(3) sdec(3)
635
636     xtreg Depression _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
        _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
        otherfamily i.healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat
        Managers Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
        PlantMachineOperators ElementaryOccupations ArmedForces,fe
637     outreg2 using results701,word ctitle (Model 4, OLS) label bdec(3) sdec(3)
638
639     ****Instrumental Variables
640     xtivreg Depression i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
        healthcare (retired = Nra),fe
641     outreg2 using results701IV,word ctitle (Model 1, IV) label bdec(3) sdec(3)
642
643     xtivreg Depression i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
        healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc Marriedcohab
        Partnershipreg Marriednocohab Marriednever Divorced Widowed children grandchildren
        physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
        CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
644     outreg2 using results701IV,word ctitle (Model 2, IV) label bdec(3) sdec(3)
645
646     xtivreg Depression _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
        _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
        otherfamily i.healthcare (retired = Nra),fe
647     outreg2 using results701IV,word ctitle (Model 3, IV) label bdec(3) sdec(3)
648
649     xtivreg Depression _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
        _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
        otherfamily i.healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc
        Marriedcohab Partnershipreg Marriednocohab Marriednever Divorced Widowed children grandchildren
        physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
        CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
650     outreg2 using results701IV,word ctitle (Model 4, IV) label bdec(3) sdec(3)
651
652     ****Pessimism
653
654     xtreg Pessimism i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily
         i.healthcare,fe
655     outreg2 using results801,word ctitle (Model 1, OLS) label bdec(3) sdec(3)
656
657     xtreg Pessimism i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily
         i.healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat Managers
        Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
        PlantMachineOperators ElementaryOccupations ArmedForces,fe
658     outreg2 using results801,word ctitle (Model 2, OLS) label bdec(3) sdec(3)
659
660     xtreg Pessimism _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
        _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
        otherfamily i.healthcare,fe
661     outreg2 using results801,word ctitle (Model 3, OLS) label bdec(3) sdec(3)
662
663     xtreg Pessimism _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
        _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
        otherfamily i.healthcaree i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat
        Managers Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
        PlantMachineOperators ElementaryOccupations ArmedForces,fe
```

```
664    outreg2 using results801,word ctitle (Model 4, OLS) label bdec(3) sdec(3)
665
666    ****Instrumental Variables
667    xtivreg Pessimism i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
       healthcare (retired = Nra),fe
668    outreg2 using results801IV,word ctitle (Model 1, IV) label bdec(3) sdec(3)
669
670    xtivreg Pessimism i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
       healthcare(retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc Marriedcohab
       Partnershippreg Marriednocohab Marriednever Divorced Widowed children grandchildren
       physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
       CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
671    outreg2 using results801IV,word ctitle (Model 2, IV) label bdec(3) sdec(3)
672
673    xtivreg Pessimism i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
       healthcare (retired = Nra),fe
674    outreg2 using results801IV,word ctitle (Model 3, IV) label bdec(3) sdec(3)
675
676    xtivreg Pessimism _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
       _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc
       Marriedcohab Partnershippreg Marriednocohab Marriednever Divorced Widowed children grandchildren
       physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
       CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
677    outreg2 using results801IV,word ctitle (Model 4, IV) label bdec(3) sdec(3)
678
679    ****Suicidality
680
681    xtreg Suicidality i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcare,fe
682    outreg2 using results901,word ctitle (Model 1, OLS) label bdec(3) sdec(3)
683
684    xtreg Suicidality i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcarei.Gender c.age activities primaryeduc seceduc terteduc thinc mstat
       Managers Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
       PlantMachineOperators ElementaryOccupations ArmedForces,fe
685    outreg2 using results901,word ctitle (Model 1, OLS) label bdec(3) sdec(3)
686
687    xtreg Suicidality _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
       _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcare,fe
688    outreg2 using results901,word ctitle (Model 3, OLS) label bdec(3) sdec(3)
689
690    xtreg Suicidality _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
       _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcarei.Gender c.age activities primaryeduc seceduc terteduc thinc mstat
       Managers Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
       PlantMachineOperators ElementaryOccupations ArmedForces,fe
691    outreg2 using results901,word ctitle (Model 4, OLS) label bdec(3) sdec(3)
692
693    ****Instrumental Variables
694    xtivreg Suicidality i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
       healthcare (retired = Nra),fe
695    outreg2 using results901IV,word ctitle (Model 1, IV) label bdec(3) sdec(3)
696
697    xtivreg Suicidality i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
       healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc Marriedcohab
       Partnershippreg Marriednocohab Marriednever Divorced Widowed children grandchildren
       physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
       CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
698    outreg2 using results901IV,word ctitle (Model 2, IV) label bdec(3) sdec(3)
699
700    xtivreg Suicidality _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
       _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcare (retired = Nra),fe
701    outreg2 using results901IV,word ctitle (Model 3, IV) label bdec(3) sdec(3)
702
703    xtivreg Suicidality _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
```

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         _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
         otherfamily i.healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc
         Marriedcohab Partnershipreg Marriednocohab Marriednever Divorced Widowed children grandchildren
         physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
         CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
704      outreg2 using results901IV,word ctitle (Model 4, IV) label bdec(3) sdec(3)
705
706      ****Guilt
707      xtreg Guilt i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
         healthcare,fe
708      outreg2 using results101,word ctitle (Model 1, OLS) label bdec(3) sdec(3)
709
710      xtreg Guilt i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
         healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat Managers
         Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
         PlantMachineOperators ElementaryOccupations ArmedForces,fe
711      outreg2 using results101,word ctitle (Model 2, OLS) label bdec(3) sdec(3)
712
713      xtreg Guilt _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1 _LretXspo_1_1
         _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
         healthcare,fe
714      outreg2 using results101,word ctitle (Model 3, OLS) label bdec(3) sdec(3)
715
716      xtreg Guilt _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1 _LretXspo_1_1
         _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
         healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat Managers
         Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
         PlantMachineOperators ElementaryOccupations ArmedForces,fe
717      outreg2 using results101,word ctitle (Model 4, OLS) label bdec(3) sdec(3)
718
719      ****Instrumental Variables
720      xtivreg Guilt i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
         healthcare (retired = Nra),fe
721      outreg2 using results101IV,word ctitle (Model 1, IV) label bdec(3) sdec(3)
722
723      xtivreg Guilt i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
         healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc Marriedcohab
         Partnershipreg Marriednocohab Marriednever Divorced Widowed children grandchildren
         physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
         CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
724      outreg2 using results101IV,word ctitle (Model 2, IV) label bdec(3) sdec(3)
725
726      xtivreg Guilt _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1 _LretXspo_1_1
         _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
         healthcare (retired = Nra),fe
727      outreg2 using results101IV,word ctitle (Model 3, IV) label bdec(3) sdec(3)
728
729      xtivreg Guilt _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1 _LretXspo_1_1
         _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
         healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc Marriedcohab
         Partnershipreg Marriednocohab Marriednever Divorced Widowed children grandchildren
         physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
         CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
730      outreg2 using results101IV,word ctitle (Model 4, IV) label bdec(3) sdec(3)
731
732      ****Sleep
733      xtreg Sleep i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
         healthcare,fe
734      outreg2 using results111,word ctitle (Model 1, OLS) label bdec(3) sdec(3)
735
736      xtreg Sleep i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
         healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat Managers
         Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
         PlantMachineOperators ElementaryOccupations ArmedForces,fe
737      outreg2 using results111,word ctitle (Model 2, OLS) label bdec(3) sdec(3)
738
739      xtreg Sleep _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1 _LretXspo_1_1
         _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
```

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     healthcare,fe
740  outreg2 using results111,word ctitle (Model 3, OLS) label bdec(3) sdec(3)
741
742  xtreg Sleep _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1 _LretXspo_1_1
     _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
     healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat Managers
     Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
     PlantMachineOperators ElementaryOccupations ArmedForces,fe
743  outreg2 using results111,word ctitle (Model 4, OLS) label bdec(3) sdec(3)
744
745  ****Instrumental Variables
746  xtivreg Sleep i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
     healthcare (retired = Nra),fe
747  outreg2 using results111IV,word ctitle (Model 1, IV) label bdec(3) sdec(3)
748
749  xtivreg Sleep i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
     healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc Marriedcohab
     Partnershipreg Marriednocohab Marriednever Divorced Widowed children grandchildren
     physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
     CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
750  outreg2 using results111IV,word ctitle (Model 2, IV) label bdec(3) sdec(3)
751
752  xtivreg Sleep _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1 _LretXspo_1_1
     _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
     healthcare (retired = Nra),fe
753  outreg2 using results111IV,word ctitle (Model 3, IV) label bdec(3) sdec(3)
754
755  xtivreg Sleep _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1 _LretXspo_1_1
     _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
     healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc Marriedcohab
     Partnershipreg Marriednocohab Marriednever Divorced Widowed children grandchildren
     physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
     CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
756  outreg2 using results111IV,word ctitle (Model 4, IV) label bdec(3) sdec(3)
757
758  ****Interest
759  xtreg Interest i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily
     i.healthcare,fe
760  outreg2 using results121,word ctitle (Model 1, OLS) label bdec(3) sdec(3)
761
762  xtreg Interest i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily
     i.healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat Managers
     Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
     PlantMachineOperators ElementaryOccupations ArmedForces,fe
763  outreg2 using results121,word ctitle (Model 2, OLS) label bdec(3) sdec(3)
764
765  xtreg Interest _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1 _LretXspo_1_1
      _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
     healthcare,fe
766  outreg2 using results121,word ctitle (Model 3, OLS) label bdec(3) sdec(3)
767
768  xtreg Interest _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1 _LretXspo_1_1
      _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
     healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat Managers
     Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
     PlantMachineOperators ElementaryOccupations ArmedForces,fe
769  outreg2 using results121,word ctitle (Model 4, OLS) label bdec(3) sdec(3)
770
771  ****Instrumental Variables
772  xtivreg Interest i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
     healthcare (retired = Nra),fe
773  outreg2 using results121IV,word ctitle (Model 1, IV) label bdec(3) sdec(3)
774
775  xtivreg Interest i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
     healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc Marriedcohab
     Partnershipreg Marriednocohab Marriednever Divorced Widowed children grandchildren
     physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
     CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
```

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776    outreg2 using results121IV,word ctitle (Model 2, IV) label bdec(3) sdec(3)
777
778    xtivreg Interest _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
       _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcare (retired = Nra),fe
779    outreg2 using results121IV,word ctitle (Model 3, IV) label bdec(3) sdec(3)
780
781    xtivreg Interest _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
       _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc
       Marriedcohab Partnershipreg Marriednocohab Marriednever Divorced Widowed children grandchildren
       physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
       CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
782    outreg2 using results121IV,word ctitle (Model 4, IV) label bdec(3) sdec(3)
783
784    ****Irritability
785    xtreg Irritability i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcare,fe
786    outreg2 using results131,word ctitle (Model 1, OLS) label bdec(3) sdec(3)
787
788    xtreg Irritability i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat
       Managers Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
       PlantMachineOperators ElementaryOccupations ArmedForces,fe
789    outreg2 using results131,word ctitle (Model 2, OLS) label bdec(3) sdec(3)
790
791    xtreg Irritability _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
       _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcare,fe
792    outreg2 using results131,word ctitle (Model 3, OLS) label bdec(3) sdec(3)
793
794    xtreg Irritability _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
       _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat
       Managers Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
       PlantMachineOperators ElementaryOccupations ArmedForces,fe
795    outreg2 using results131,word ctitle (Model 4, OLS) label bdec(3) sdec(3)
796
797    ****Instrumental Variables
798    xtivreg Iritability i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
       healthcare (retired = Nra),fe
799    outreg2 using results131IV,word ctitle (Model 1, IV) label bdec(3) sdec(3)
800
801    xtivreg Irritability i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
       healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc Marriedcohab
       Partnershipreg Marriednocohab Marriednever Divorced Widowed children grandchildren
       physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
       CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
802    outreg2 using results131IV,word ctitle (Model 2, IV) label bdec(3) sdec(3)
803
804    xtivreg Irritability _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
       _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcare (retired = Nra),fe
805    outreg2 using results131IV,word ctitle (Model 3, IV) label bdec(3) sdec(3)
806
807    xtivreg Irritability _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
       _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc
       Marriedcohab Partnershipreg Marriednocohab Marriednever Divorced Widowed children grandchildren
       physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
       CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
808    outreg2 using results131IV,word ctitle (Model 4, IV) label bdec(3) sdec(3)
809
810    ************Appetite
811    xtreg appetite i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily
       i.healthcare,fe
812    outreg2 using results141,word ctitle (Model 1, OLS) label bdec(3) sdec(3)
813
```

```
814    xtreg Appetite i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily
       i.healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat Managers
       Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
       PlantMachineOperators ElementaryOccupations ArmedForces,fe
815    outreg2 using results141,word ctitle (Model 2, OLS) label bdec(3) sdec(3)
816
817    xtreg Appetite _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1 _LretXspo_1_1
       _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
       healthcare,fe
818    outreg2 using results141,word ctitle (Model 3, OLS) label bdec(3) sdec(3)
819
820    xtreg Appetite _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1 _LretXspo_1_1
       _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
       healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat Managers
       Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
       PlantMachineOperators ElementaryOccupations ArmedForces,fe
821    outreg2 using results141,word ctitle (Model 4, OLS) label bdec(3) sdec(3)
822
823    ****Instrumental Variables
824    xtivreg Appetite i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
       healthcare (retired = Nra),fe
825    outreg2 using results141IV,word ctitle (Model 1, IV) label bdec(3) sdec(3)
826
827    xtivreg Appetite i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
       healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc Marriedcohab
       Partnershipreg Marriednocohab Marriednever Divorced Widowed children grandchildren
       physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
       CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
828    outreg2 using results141IV,word ctitle (Model 2, IV) label bdec(3) sdec(3)
829
830    xtivreg Appetite _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
       _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcare (retired = Nra),fe
831    outreg2 using results141IV,word ctitle (Model 3, IV) label bdec(3) sdec(3)
832
833    xtivreg Appetite _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
       _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc
       Marriedcohab Partnershipreg Marriednocohab Marriednever Divorced Widowed children grandchildren
       physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
       CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
834    outreg2 using results141IV,word ctitle (Model 4, IV) label bdec(3) sdec(3)
835
836    ************Fatigue
837    xtreg Fatigue i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i
       .healthcare,fe
838    outreg2 using results151,word ctitle (Model 1, OLS) label bdec(3) sdec(3)
839
840    xtreg Fatigue i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i
       .healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat Managers
       Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
       PlantMachineOperators ElementaryOccupations ArmedForces,fe
841    outreg2 using results151,word ctitle (Model 2, OLS) label bdec(3) sdec(3)
842
843    xtreg Fatigue _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1 _LretXspo_1_1
       _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
       healthcare,fe
844    outreg2 using results151,word ctitle (Model 3, OLS) label bdec(3) sdec(3)
845
846    xtreg Fatigue _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1 _LretXspo_1_1
       _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
       healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat Managers
       Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
       PlantMachineOperators ElementaryOccupations ArmedForces,fe
847    outreg2 using results151,word ctitle (Model 4, OLS) label bdec(3) sdec(3)
848
849    ****Instrumental Variables
850    xtivreg Fatigue i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
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      healthcare(retired = Nra),fe
851   outreg2 using results151IV,word ctitle (Model 1, IV) label bdec(3) sdec(3)
852
853   xtivreg Fatigue i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
      healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc Marriedcohab
      Partnershipreg Marriednocohab Marriednever Divorced Widowed children grandchildren
      physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
      CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
854   outreg2 using results151IV,word ctitle (Model 2, IV) label bdec(3) sdec(3)
855
856   xtivreg Fatigue _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
      _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
      otherfamily i.healthcare (retired = Nra),fe
857   outreg2 using results151IV,word ctitle (Model 3, IV) label bdec(3) sdec(3)
858
859   xtivreg Fatigue _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
      _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
      otherfamily i.healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc
      Marriedcohab Partnershipreg Marriednocohab Marriednever Divorced Widowed children grandchildren
      physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
      CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
860   outreg2 using results151IV,word ctitle (Model 4, IV) label bdec(3) sdec(3)
861
862
863   *********** Concentration
864   xtreg Concentration i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
      otherfamily i.healthcare i.children i.grandchildren,fe
865   outreg2 using results161,word ctitle (Model 1, OLS) label bdec(3) sdec(3)
866
867   xtreg Concentration i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
      otherfamily i.healthcare i.children i.grandchildren i.Gender c.age activities primaryeduc seceduc
      terteduc thinc mstat Managers Professionals ProfessionalsandAssociates Clerks SalesandService
      CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
868   outreg2 using results161,word ctitle (Model 2, OLS) label bdec(3) sdec(3)
869
870   xtreg Concentration _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
      _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
      otherfamily i.healthcare,fe
871   outreg2 using results161,word ctitle (Model 3, OLS) label bdec(3) sdec(3)
872
873   xtreg Concentration _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
      _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
      otherfamily i.healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat
      Managers Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
      PlantMachineOperators ElementaryOccupations ArmedForces,fe
874   outreg2 using results161,word ctitle (Model 4, OLS) label bdec(3) sdec(3)
875
876   ****Instrumental Variables
877   xtivreg Concentration i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
      healthcare i.children i.grandchildren (retired = Nra),fe
878   outreg2 using results161IV,word ctitle (Model 1, IV) label bdec(3) sdec(3)
879
880   xtivreg Concentration i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
      healthcare i.children i.grandchildren (retired = Nra) Gender age activities primaryeduc seceduc
      terteduc thinc Marriedcohab Partnershipreg Marriednocohab Marriednever Divorced Widowed children
      grandchildren physicallystrained Managers Professionals ProfessionalsandAssociates Clerks
      SalesandService CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
881   outreg2 using results161IV,word ctitle (Model 2, IV) label bdec(3) sdec(3)
882
883   xtivreg Concentration _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
      _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
      otherfamily i.healthcare (retired = Nra),fe
884   outreg2 using results161IV,word ctitle (Model 3, IV) label bdec(3) sdec(3)
885
886   xtivreg Concentration _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
      _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
      otherfamily i.healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc
      Marriedcohab Partnershipreg Marriednocohab Marriednever Divorced Widowed children grandchildren
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        physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
        CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
887     outreg2 using results161IV,word ctitle (Model 4, IV) label bdec(3) sdec(3)
888
889     *********** Enjoyment
890     xtreg Enjoyment i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily
         i.healthcare i.children i.grandchildren,fe
891     outreg2 using results171,word ctitle (Model 1, OLS) label bdec(3) sdec(3)
892
893     xtreg Enjoyment i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily
         i.healthcare i.children i.grandchildren i.Gender c.age activities primaryeduc seceduc terteduc
        thinc mstat Managers Professionals ProfessionalsandAssociates Clerks SalesandService
        CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
894     outreg2 using results171,word ctitle (Model 2, OLS) label bdec(3) sdec(3)
895
896     xtreg Enjoyment _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
        _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
        otherfamily i.healthcare,fe
897     outreg2 using results171,word ctitle (Model 3, OLS) label bdec(3) sdec(3)
898
899     xtreg Enjoyment _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
        _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
        otherfamily i.healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat
        Managers Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
        PlantMachineOperators ElementaryOccupations ArmedForces,fe
900     outreg2 using results171,word ctitle (Model 4, OLS) label bdec(3) sdec(3)
901
902     ****Instrumental Variables
903     xtivreg Enjoyment i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
        otherfamily i.healthcare i.children i.grandchildren (retired = Nra),fe
904     outreg2 using results171IV,word ctitle (Model 1, IV) label bdec(3) sdec(3)
905
906     xtivreg Enjoyment i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
        otherfamily i.healthcare i.children i.grandchildren (retired = Nra) Gender age activities
        primaryeduc seceduc terteduc thinc Marriedcohab Partnershipreg Marriednocohab Marriednever
        Divorced Widowed children grandchildren physicallystrained Managers Professionals
        ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers PlantMachineOperators
        ElementaryOccupations ArmedForces,fe
907     outreg2 using results171IV,word ctitle (Model 2, IV) label bdec(3) sdec(3)
908
909     xtivreg Enjoyment healthcare _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
         _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
        otherfamily i.healthcare (retired = Nra)
910     outreg2 using results171IV,word ctitle (Model 3, IV) label bdec(3) sdec(3)
911
912     xtivreg Enjoyment healthcare _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
         _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
        otherfamily i.healthcare (retired = Nra) Gender age activities primaryeduc seceduc terteduc thinc
        Marriedcohab Partnershipreg Marriednocohab Marriednever Divorced Widowed children grandchildren
        physicallystrained Managers Professionals ProfessionalsandAssociates Clerks SalesandService
        CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
913     outreg2 using results171IV,word ctitle (Model 4, IV) label bdec(3) sdec(3)
914
915     *********Tearfulness
916     xtreg Tearfulness i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
        otherfamily i.healthcare i.children i.grandchildren ,fe
917     outreg2 using results181,word ctitle (Model 1, OLS) label bdec(3) sdec(3)
918
919     xtreg Tearfulness i.retired i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
        otherfamily i.healthcare i.children i.grandchildren i.Gender c.age activities primaryeduc seceduc
        terteduc thinc mstat Managers Professionals ProfessionalsandAssociates Clerks SalesandService
        CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
920     outreg2 using results181,word ctitle (Model 2, OLS) label bdec(3) sdec(3)
921
922     xtreg Tearfulness _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
        _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
        otherfamily i.healthcare,fe
923     outreg2 using results181,word ctitle (Model 3, OLS) label bdec(3) sdec(3)
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924
925    xtreg Tearfulness  _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1 _OretXchi_1_1
       _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcare i.Gender c.age activities primaryeduc seceduc terteduc thinc mstat
       Managers Professionals ProfessionalsandAssociates Clerks SalesandService CraftRelatedTradeWorkers
       PlantMachineOperators ElementaryOccupations ArmedForces,fe
926    outreg2 using results181,word ctitle (Model 4, OLS) label bdec(3) sdec(3)
927
928    ****Instrumental Variables
929    xtivreg Tearfulness (retired = Nra) i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.
       otherfamily i.healthcare i.children i.grandchildren,fe
930    outreg2 using results181IV,word ctitle (Model 1, IV) label bdec(3) sdec(3)
931
932    xtivreg Tearfulness i.spouse i.child_grandch i.friends i.ex_colleagues i.other i.otherfamily i.
       healthcare i.children i.grandchildren (retired = Nra) Gender age activities primaryeduc seceduc
       terteduc thinc Marriedcohab Partnershipreg Marriednocohab Marriednever Divorced Widowed children
       grandchildren physicallystrained Managers Professionals ProfessionalsandAssociates Clerks
       SalesandService CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
933    outreg2 using results181IV,word ctitle (Model 2, IV) label bdec(3) sdec(3)
934
935    xtivreg Tearfulness healthcare _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1
       _OretXchi_1_1 _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.
       other i.otherfamily i.healthcare (retired = Nra),fe
936    outreg2 using results181IV,word ctitle (Model 3, IV) label bdec(3) sdec(3)
937
938    xtivreg Tearfulness healthcare  _EretXex__1_1 _PretXoth_1_1 _AretXoth_1_1 _NretXfri_1_1
       _OretXchi_1_1 _LretXspo_1_1 _KretXhea_1_1 i.spouse i.child_grandch i.friends i.ex_colleagues i.
       other i.otherfamily i.healthcare (retired = Nra) Gender age activities primaryeduc seceduc
       terteduc thinc Marriedcohab Partnershipreg Marriednocohab Marriednever Divorced Widowed children
       grandchildren physicallystrained Managers Professionals ProfessionalsandAssociates Clerks
       SalesandService CraftRelatedTradeWorkers PlantMachineOperators ElementaryOccupations ArmedForces,fe
939    outreg2 using results181IV,word ctitle (Model 4, IV) label bdec(3) sdec(3)
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