How Does Voluntary and Involuntary Retirement Affect Psychological Well-Being and Health Status Later in Life?

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Abstract

This paper assesses whether voluntary retirees experience better long-term health than involuntary retirees using six waves of the Health and Retirement Study. Some evidence in the literature sugges that retirement has a negative effect on well-being, while others suggest that this difference results from a selection bias effect. Other literature argues that bad health leads to early retirement. While these two bodies of literature relating to health and retirement are well-developed, the intersection of health and the timing of retirement has received less attention. We believe that the measures of planned retirement in previous work is limited. We take advantage of a more innovative measure of retirement planning: prospective subjective probability of working.

1 Introduction

Over the past century life expectancy has risen significantly, yet labor force participation rates of older workers have declined substantially (Wise 1997). These two simultaneous effects mean that the average worker is spending a larger portion of his life in retirement. This trend has increased the interest in how retirees are living during this period (Hurd 1990). A lot is known about the financial and general health status of retirees (Smith (2005), Crimmins (2004) and Haveman, Holden, Wilson, and Wolfe (2003)). However, very little is discussed about their psychological well-being.

Financial well-being and health are two of the most widely-studied aspects of retirees. Andrews (1993) and Radner (1998) review the literature on financial well-being, demonstrating the increased wealth of future retirees compared to past ones, but also persistence of poverty among certain groups. Haveman, Holden, Wilson, and Wolfe (2003) show that one key factor contributing to poverty in retirement is the age of exit from the labor force. Earlier retirees are more likely to begin and live out their retirement in poverty. On the health side, older Americans have become healthier over the course of the 20th century. Costa (2002) shows a decline in functional limitation in among U.S. males age 50-74 over the 20th century, and Manton and Gu (2001) and Freedman, Martin, and Schoeni (2002) have found evidence of acceleration in the disability decline in the 1980s and 1990s. While these two bodies of literature are well-developed, the intersection of health and the timing of retirement has received less attention.

Age at retirement in the United States has decreased over the 20th century (Costa 1998). The main hypothesis for this trend is that individuals can afford to retire at an earlier age. However, within this general trend, earlier retirement may be voluntary or involuntary. The evidence on how decision of retirement influences health is not conclusive. Shultz, Morton, and Weckerle (1998) find that negative factors that force early retirement (before age 62) lead to lower self-reported ratings of physical and emotional health and retirement satisfaction, compared to those who elected early retirement. Bender (2004) shows that older individuals that were forced to retire have lower health status than their counterparts who chose to retire. Charles (2002) finds that retirement increases well-being, as compared to the working years[1]. In some countries, early retirees have higher mortality than

[1]In general, involuntary transitions out of the labor force are correlated with nega-

later ones (Quaade, Engholm, Johansen, and Moller 2002). At the same time, poor health may be a cause of involuntary early retirement, and some early retirees may begin retirement with a health disadvantage. McGarry (2004) shows that changes in health affects retirement decisions. Smith (1999) finds evidence that the onset of serious health conditions decreases the probability of working.

The few studies, to our knowledge, that focus on the impacts of retirement on psychological well-being use a questionable measure of retirement planning (McGarry 2004). Charles (2002) assumes that all individuals who reported being retired have done so voluntarily, and Bender (2004) uses retrospective self-response to asses whether retirement was planned or not[2]. We take advantage of an alternative and innovative measure, subjective retirement expectations, to prospectively capture voluntariness of retirement (Benitez-Silva and Dwyer 2005) [3]

In this paper we explore whether voluntary retirement, in comparison to involuntary retirement, leads to more positive physical and psychological health outcomes. We measure voluntariness of retirement through the individual's expectation of working at age 62 (and 65). Based on this measure we can also assess the health impacts for individuals who work into older years beyond what they had anticipated. We use 6 waves of the Health and Retirement Study (1992-2002). Depending on the age of recipient at baseline and the year of retirement, we can assess post-retirement health between two to ten years. The longitudinal nature of this study also allows us to determine whether negative health events induce unplanned retirement, signaling that these individuals start retirement with a health disadvantage.

2 Data

We make extensive use of the Health and Retirement Study (HRS) in our study (Juster and Suzman 1995). The HRS is a nationally representative longitudinal survey of mature residents of the United States collected by the

tive health outcomes (Gallo, Bradley, Siegel, and Kasl 2000), and on future employment probabilities (Chan and Stevens 2001).

[2]A discussion about the validity of retrospective measures relating to wantedness can be found elsewhere (Rosenzweig and Wolpin 1993)

[3]Benitez-Silva and Dwyer (2005) used retirement expectations to show that individuals correctly anticipate uncertain events when planning their retirement.

University of Michigan. The survey began in 1992, when respondents were between the ages of 51 and 61. It has been collected every two years, and currently there are six waves. The data contains extensive information on employment, health, wealth, retirement plans, and subjective expectations. The purpose of the HRS is to study retirement behavior, including causes and consequences of retirement and the relationship between health and wealth over time. In this paper, we use the first 6 waves of data, covering the period between 1992 and 2002. We use the RAND version of the HRS which is more user-friendly but does not contain all the variables present in the original data.

We include observations for respondents who were working full-time or part-time in 1992 (wave 1), who were the that job for at least 3 years, had at least one job lasting more than 5 years, and report retirement plans. We selected individuals with long job tenures because we are interested in the impacts of voluntary and involuntary retirement on health outcomes. Workers who did not have a steady working life would be less able to plan their labor force transitions. The final sample has 4543 individuals at baseline (Table 1).

3 Empirical Strategy

Our dependent variables of interest are overall and psychological health. We measure overall health status using self-reported health and changes in health status. Psychological health is measured by the Center for Epidemiologic Studies Depression Scale (CES-D). We use the CES-D scale as well as its individual components in our study (e.g. sadness, happiness, depression status). We also use comparison of satisfaction in retirement to working years.

We measure whether retirement was planned or not from the following question: "Thinking about working generally and not just your present job, what do you think are the chances that you will be working full-time after you reach age 62 (65)?". McGarry (2004) argues that this variable provides better measure of the worker's labor force attachment. Benitez-Silva and Dwyer (2005) shows that individuals update subjective probability over time and correctly anticipate uncertain events. Thus, instead of using a retrospective question about whether retirement was planned, we have a variable that measures expected labor force participation before any actual change. This

time reference allows us to avoid the possibility that retired individuals misclassify an unexpected event as planned retirement [4].

The goal is to estimate the impact of retirement planning on health outcomes. We estimate equations of the following form:

$$Health_i = \beta_0 + +\beta_1 * \text{Planned} + \beta_2 * \text{X} + \epsilon_i \quad (1)$$

where Health indicates the measure of health outcome, Planned is the retirement plan variable, X is a matrix of demographic and socioeconomic variables, such as age, sex, educational attainment, marital status, region of residence. We also control for health shocks and spouse's situation and characteristics. The equations are estimated as ordered probit and probits, depending on the dependent variable and also take into account the longitudinal characteristics of the data.

4 Preliminary Results

Table 1 reports the means and distributions of several variables that we will use in the analysis. For comparison we report the mean values and distribution for the first (1992) and last (2002) waves we use. We observe expected variations from wave 1 to wave 6. We observe that individuals in wave 6 have worse general health status, with the percentage of respondents reporting fair/poor health increasing from 12% to 20%. In wave 6, about 60% of our baseline sample have moved to retirement.

Table 2 shows the distribution of subjective probability of continuing work to age 62. In each wave, individuals aged 61 and under were asked to report the chance of working full time at age 62. The average probability at first declines from wave 1 to 2, 48.04% to 45.11%, and then increases to 59.32% in wave 6. This trend reflects the reduction in time uncertainty (with respect to age 62) as younger respondents age.

In Table 3 we only use respondents who turn 62 or 63 years of age in a survey year to compare their actual labor force status against their prediction from the previous wave. Respondents who reported a high probability of

[4]Individuals are also asked when they plan to withdraw from the labor force, whether they think much about retirement, and if they are retired whether the transition was planned or not. These questions are not contained in the RAND version of the HRS. However, the final paper will include this conceptualization. We include this second measure of voluntary retirement as a comparison to Bender (2004)

working to age 62 (above 70%) were very likely to work in the next wave. However, approximately 1/5 of those who were at least 70% certain that they would work at age 62 were not working in the next wave. This provides preliminary evidence that respondents did not always plan their retirement. On the other hand, all other respondents had a mixed outcome. This result is also interesting, and we will investigate general and psychological health of those who worked past their predicted age of retirement.

Next, we concentrate on those who retire at early retirement age (62). In Table 4, we present a comparison of satisfaction in the wave of retirement to working years. Although there is some noise at certain probability levels, we observe that regardless of predicted working probabilities, the vast majority of retirees considered themselves to have at least the same level of satisfaction as during their working years. These results are preliminary, and our next step is to consider other factors known to influence the timing of retirement and psychological well-being, such as physical health and education. In addition, we will expand the analysis to other ages of retirement besides 62.

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Table 1: Respondents Sample Characteristics, Waves 1 and 6

Variable	**Wave 1 - 1992**	**Wave 6 - 2002**
Age	55.34	65.08
Sex (%)		
Male	55.62	54.68
Female	44.38	45.32
Education (%)		
Less than H.S	21.87	19.88
High School	37.57	37.02
Some College	20.32	20.57
College and above	21.04	22.53
Marital Status (%)		
Married/Partnered	78.21	73.22
Separated/Divorced	13.30	12.33
Widowed	4.91	11.16
Never married	3.59	3.29
Labor Force Status (%)		
Working	100	33.10
Unemployed	-	1.01
Retired	-	61.83
Disabled/Not in LF	-	4.06
Race (%)		
White	79.62	80.38
Black	17.26	16.59
Other	3.13	3.03
Hispanic (%)	6.89	6.71
Household Income	56100	62915
Health Status (%)		
Excellent	25.84	13.89
Very Good	32.20	33.14
Good	29.54	32.68
Fair	10.08	15.36
Poor	2.33	4.93
Number of Observations	4543	3471

Source: Heath and Retirement Study, 1992-2002

Table 2: Distribution of Subjective Probability of Continuing Work to Age 62, United States, 1992-2002

Variable	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6
Mean	48.04	45.11	47.84	48.52	55.42	59.32
Std. Dev.	39.47	39.39	40.97	40.69	41.29	42.14
Median	50.00	50.00	50.00	50.00	60.00	80.00
25th Perc.	0.00	0.00	0.00	0.00	10.00	10.00
75th Perc.	90.00	90.00	100.00	90.00	100.00	100.00
Num. Obs	4501	3367	2255	1567	967	456

Source: Health and Retirement Study, 1992-2002

Table 3: Subjective Probability of Working to Age 62 and Actual Outcome, Individuals Aged 62-63 Years in Wave Actual Outcome

Probability (%)	Not Working	Working
0-10	52.80	47.20
10-20	52.75	47.25
20-30	28.57	71.43
30-40	38.67	61.33
40-50	21.21	78.79
50-60	33.07	66.93
60-70	40.00	60.00
70-80	20.69	79.31
80-90	17.16	82.84
90-100	17.05	82.95
100	17.12	82.88
Num. Obs.	691	1506

Source: Heath and Retirement Study, 1992-2002

Table 4: Subjective Probability of Working to Age 62 and Comparison of Retirement Satisfaction to Working Years, Individuals Aged 62-63 Years in Wave of Retirement

Probability (%)	**Better**	**About Same**	**Not as Good**
0-10	75.18	21.58	3.24
10-20	61.22	32.65	6.12
20-30	70.59	29.41	0.00
30-40	66.57	33.33	0.00
40-50	100.00	0.00	0.00
50-60	60.56	32.39	7.04
60-70	66.69	25.00	8.33
70-80	50.00	50.00	0.00
80-90	55.56	27.78	16.57
90-100	71.43	28.57	0.00
100	63.16	27.37	9.47
Num. Obs	404	151	30

Source: Heath and Retirement Study, 1992-2002