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JOB CHARACTERISTICS AND THE PSYCHOLOGICAL WELL-BEING OF OLDER
WORKERS

BY

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THESIS

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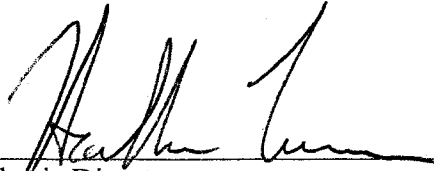
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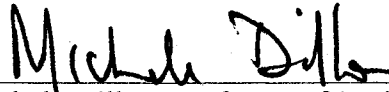
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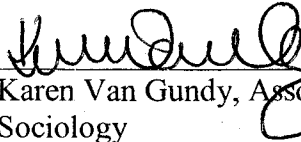
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TABLE OF CONTENTS

LIST OF TABLES.....	v
ABSTRACT.....	vi
CHAPTER	PAGE
INTRODUCTION.....	1
I. BACKGROUND AND SIGNIFICANCE.....	4
Historical Trends in Labor Force Participation Among Older Adults.....	4
The Changing Face of Retirement.....	6
Previous Research on the Impact of Work on Older Adults.....	12
Job Characteristics and Older Workers.....	18
Opportunities for Older Workers and Structural Lag.....	20
II. RESEARCH DESIGN AND METHODS.....	22
Research Questions and Hypotheses.....	22
Sample.....	23
Measures.....	25
III. RESULTS.....	35
Descriptive and Bivariate Statistics.....	35
Cross-Sectional Multivariate Analyses.....	45
Longitudinal Multivariate Analysis.....	54
IV. DISCUSSION AND CONCLUSIONS.....	60
Summary of Findings.....	61

Limitations and Future Research Directions.....67

LITERATURE CITED.....71

APPENDIX: IRB APPROVAL LETTER.....76

LIST OF TABLES

	PAGE
Table 1: Demographic Characteristics of Sample Cohorts.....	35
Table 2: 2004 Depressive Symptoms and Job Characteristics by Gender, Race, and Ethnicity – HRS and EBB Cohorts Combined.....	37
Table 3: 2004 Descriptive Statistics by Cohort for Key Variables in Analyses.....	40
Table 4: Regression of 2004 Depressive Symptoms on Job Characteristics by Cohort.....	46
Table 5: Regression of 2004 Depressive Symptoms on Job Characteristics – Financial Strain Subsample.....	51
Table 6: Regression of 2002 Depressive Symptoms on 2002 Job Characteristics – HRS Cohort Only.....	55
Table 7: Regression of 2004 Depressive Symptoms on 2002 Job Characteristics and Control Variables – HRS Cohort Only.....	57

ABSTRACT

JOB CHARACTERISTICS AND THE PSYCHOLOGICAL WELL-BEING OF OLDER WORKERS

By

Anne M. Shattuck

University of New Hampshire, September, 2007

Changes in public and private pensions as well as demographic and economic changes will likely lead to higher labor force participation rates for older adults in the future. Little research has examined the impact of work on the well-being of older adults beyond simply comparing those who work with those who do not. Using data from the 2002 and 2004 waves of the Health and Retirement Study, this thesis examined whether specific job characteristics—namely job flexibility, job stress, and the workplace climate’s friendliness to older workers—were associated with depressive symptoms among a group of workers aged 62 to 73. Cross-sectional analyses indicated that job stress and workplace climate were associated with depressive symptoms. Longitudinal analysis revealed that workers whose employers would permit older workers to move to less demanding jobs showed decreases in depressive symptoms across survey waves compared with those who could not make such a move.

INTRODUCTION

The past century has witnessed major changes in the lives of older Americans. Better health and increasing longevity mean that on average, today's older adults have more years in which they can remain active and productive. Over the same period of time, demographic changes combined with unprecedented economic prosperity altered the life course of Americans, with retirement emerging as a new and normative phase of the life cycle (Moen and Roehling 2005). As I will describe further in Chapter I, the percent of older adults participating in the labor force declined steadily across most of the last century as did the average age at retirement. An American might now spend one quarter to as much as one third of his or her life in retirement.

However, not all older adults wish to or can afford to retire from paid labor. Indeed recent and future trends in public and private pensions, as well as demographic and economic changes, also discussed in Chapter I, might once again move the pendulum back in the direction of where it was in the early part of the 20th century, with older adults participating in the paid labor force well into what are now considered the traditional retirement years. Such a shift may already be underway. Labor force participation rates of adults over 65 have been increasing since the 1990's (Federal Interagency Forum on Aging Statistics 2006). However, older Americans who wish to continue working for pay often find that it is difficult to do so in their career jobs. Most employers still expect their workers to adhere to what Joan Williams (2000) describes as the "ideal worker norm" of demanding, full-time, year-round work. Yet many older adults would prefer

flexible part-time work at this stage of their lives. Employment structures have not evolved in step with the changing desires of older adults.

Work at older ages may in fact be beneficial for workers' well-being, but there has been only a limited amount of research assessing the impact of work on older adults. What research there has been has focused primarily on comparing individuals who work with those who do not (Luoh and Herzog 2002; James and Spiro 2007; Kim and Moen 1999). In general, individuals who continue working tend to fare better physically and psychologically than those who do not. However, only a few studies have examined specific aspects of jobs that might affect well-being (Herzog, House, and Morgan 1991; Calvo 2006). In addition, most studies have included very limited control variables so it is difficult to say whether there may be confounding factors that impact both older adults' well-being and their participation in the labor force.

The purpose of this thesis is to expand the body of research on the impact of work on older adults by examining whether specific job characteristics are related to the psychological well-being of older workers. In particular, I evaluate whether job flexibility, job difficulty and stress, and the friendliness of the workplace climate to older workers are associated with depressive symptoms. These job characteristics are likely to be particularly salient to older workers and to represent the areas in which current employment structures may not accommodate their needs.

I use data from the 2002 and 2004 University of Michigan Health and Retirement Study. My sample consists of 1,362 workers born between 1931 and 1941, and for comparison, a group of 1,840 slightly younger workers born between 1948 and 1953. I assess whether current job characteristics are associated with current depressive

symptoms for both groups, and for the older cohort, whether job characteristics are associated with depressive symptom over time. This thesis goes beyond previous research by including a broader array of control variables representing situations and life events that could potentially impact the psychological well-being of older adults.

CHAPTER I

BACKGROUND AND SIGNIFICANCE

Historical Trends in Labor Force Participation Among Older Workers

Retirement from the paid labor force is a relatively recent phenomenon. Before the middle of the last century, most older workers remained productive members of the workforce as long as their health and circumstances would allow. In 1900, approximately two-thirds of men age 65 and older were working for pay. However, this rate declined steadily across most of the twentieth century. By 1950, the percentage of men over 65 still working for pay had dropped to 46 percent (Schooler, Caplan and Oates 1998). In 1985, only 16 percent of men age 65 or over were still in the paid labor force (Burtless and Quinn 2002). The labor force participation rates of older women across the last century reflect a more complex story. Earlier cohorts of women worked for pay at much lower rates than successive cohorts. Therefore, although labor force participation rates for older women who had previously worked for pay have declined, the proportion of women reaching retirement age having been employed has increased dramatically, and this has masked the increase in retirement rates among working women. As a result, labor force participation rates for older women have not declined dramatically as they have for men; instead they remained more or less stable through the mid-1980's. (Federal Interagency Forum on Aging Statistics 2006). For both men and *working* women, though, participation in paid employment beyond one's mid-sixties declined substantially across most of the last century.

This shift was driven largely by changes in public and private pensions and by the accumulation of wealth in the post World-War II economic boom. Earlier generations of elders worked until they no longer could, then they relied on savings, family, and if necessary, charity to see them through their later years (Sass 1997). Social Security began providing income to the elderly in 1941, and today Social Security benefits comprise about 40 percent of the total income of the elderly (Burtless and Quinn 2002). In addition, the years during and after the war saw a rapid expansion of private employer-sponsored pensions (Sass 1997). By and large, these plans were “defined-benefit” plans where employers set aside and invest funds in order to be able to pay out a lifetime annuity to employees upon their retirement. Retirement was thus made possible by both public and private sources of retirement income.

Indeed, not only did withdrawal from the labor force become *possible* for many more Americans, but there were strong incentives built into both Social Security and private pensions that made retirement more financially attractive than continuing to work. These incentives effectively pulled workers out of the labor force in their later years (Burtless and Quinn 2002). Social Security’s normal retirement age was set at 65. However, beginning in 1956 for women and 1961 for men, workers could collect reduced benefits at age 62 (Burtless and Quinn 2002) and many workers began to do so (Quinn 1997, Munnell 2000). Workers who delay their receipt of benefits until age 65 get an increased monthly payment compared with those who retire between the ages of 62 and 64 (Burtless and Quinn 2002). However, there is no additional increase in benefits for delaying retirement beyond age 65. In addition, until 2000, workers aged 65 to 69 were subject to an earnings test that reduced their benefits if they earned income that exceeded

a certain amount (Burke 2000). Thus until 2000, for those eligible for Social Security benefits, disincentives for continued employment were built into the program's rules.

Similarly, the rules of most employer-sponsored defined-benefit pension plans generally contain incentives for workers to leave their jobs by a certain age. First eligibility for pension benefits often occurs at a relatively early age, and although workers who work past the earliest age of benefit eligibility do accrue additional pension benefits, these additional benefits generally amount to less than the pension benefits that would have been collected through early retirement (Henretta 2000; Munnell 2006). Moreover, the accrual of additional pension benefits usually stops at the plan's normal retirement age, often 65, so that working past normal retirement age makes no financial sense.

Thus, developments in both the public and private sector not only made retirement possible for many older Americans but provided strong incentives for them to leave the labor force. As a result, retirement arose as a distinct and normative phase of the life cycle in the United States. As withdrawal from paid work became a nearly universal transition in late life, retirement became "institutionalized" as the final phase of what Moen and Roehling (2005) refer to as the "lockstep life course" (p. 13). Childhood and the education years are followed by entrance into the workforce and the assumption of adult work and family roles and responsibilities. Retirement has come to represent a relinquishment of these roles to embark on what is often an extended period of leisure (Moen and Roehling 2005).

The Changing Face of Retirement

Despite the normative nature of retirement, a considerable portion of older adults who are healthy enough to do so continue working for pay in some capacity beyond age

65. Moreover, there are indications that older adults' rate of withdrawal from paid labor is beginning to slow and will continue to slow in the future. Beginning in the 1990's, labor force participation rates of older adults began slowly rising. By 2005, 33.6 percent of men aged 65 to 69 and 13.5 percent of men aged 70 and over were still participating in the paid labor force. The corresponding figures for women were 23.7 percent for aged 65 to 69 and 7.1 percent for age 70 and older (Federal Interagency Forum on Aging-Related Statistics 2006). Many older workers may be working in what are often referred to as "bridge jobs." Bridge jobs are jobs which workers take up after retiring from their primary career jobs (Quinn 1997). Retirement has thus become a "process" where workers leave their primary career job and then work at other, often more flexible and less demanding jobs before eventually retiring completely (Moen and Roehling 2005, Quinn 1997). The clean exit from the labor force that once characterized retirement is changing and is likely to change further in the decades ahead (Moen and Roehling 2005).

There are several reasons to think that elders will remain in the workforce in increasing numbers in the future. First, increases in health and longevity mean that older adults have more years in which they can remain active and productive. The life expectancy of both men and women has increased substantially since the middle of the last century (Burtless and Quinn 2002), and these additional years of life are generally spent in greater health and with fewer disabilities than in previous generations (Henretta 2000). Successive cohorts of healthier elders may therefore "redefine the social meaning of age" (Henretta 2000, p. 289) and challenge the lack of a meaningful role that complete retirement brings. Work is a central adult role that provides meaning and social interaction, and many healthy older adults are not ready to completely relinquish that

role. Indeed, role theory (Thoits 1983) and social integration theory (Ekerdt 1987; Moen, Dempster-McClain, and Williams 1992) would suggest that retaining the work role at least on some level might be helpful in aging well and maintaining good psychological well-being (Kim and Moen 1999).

Beyond the reasons mentioned above, there are several concrete economic and demographic factors that will likely contribute to more elders staying in the workforce longer. First, the incentives to retire early built into Social Security and defined-benefit pension are changing. The normal retirement age for Social Security has already been raised from 65 to 65½ and is slated to increase to 67 by 2022 (Burtless and Quinn 2002). Also, benefits for early retirees who opt to begin collecting Social Security earlier than the normal retirement age will be reduced (Munnell 2006). The system of employer-sponsored pensions, while previously dominated by defined-benefit plans which provide a lifetime annuity at retirement, has increasingly shifted to defined-contribution plans such as 401k's which depend upon the employee to save for retirement and to manage his or her own retirement investments (Munnell 2006; Pitt-Catsouphes and Smyer 2005). Defined-contribution retirement plans are age-neutral. Since employees' retirement income from such plans comes from their own savings and investments, often matched by some employer contributions, there is no incentive in these plans to leave the workforce early as there is under defined-benefit plans (Burtless and Quinn 2002, Munnell 2006).

These trends in public and private pensions will not only reduce the incentives to retire early but promise to contribute to the second economic factor which may keep older workers working longer—financial need. With Social Security's normal retirement

age increasing and taxes for Medicare, which are deducted from benefit checks, also increasing, Social Security benefits will replace a lower percentage of pre-retirement income than in the past (Munnell 2006). As fewer older workers are covered by defined-benefit pension plans, more will have to rely on their own retirement savings to supplement Social Security. Most workers' private pension savings in the form of 401k's and IRA's are insufficient to support them through a long period of retirement, and personal saving outside of retirement plans is practically non-existent (Munnell 2006). In fact, according to Munnell (2006), "in recent years, saving outside of pensions has actually been negative" (p. 5). On top of that, approximately half of U.S. workers have no workplace-based retirement plan, either defined-benefit or defined-contribution (Pitt-Catsouphes and Smyer 2005). These trends would indicate that in the future, fewer American workers will have the luxury of retiring completely by age 65.

A third economic factor which may lead more older adults to remain in the workforce longer is the changing nature and structure of jobs in the U.S. The last few decades have witnessed a shift from a manufacturing to a service-based economy in the U.S. As a result, many of today's jobs make fewer physical demands on employees compared with jobs in the past (Munnell 2006). Given that workers in physically demanding jobs are more likely to retire earlier, the increasing prevalence of "knowledge-based jobs" (Munnell 2006, p. 14) may mean that more older workers will remain in the labor force longer. In addition, as Henretta (1994) describes, the age structuring of careers has decreased in recent decades as employers have moved away from a career model of offering lifetime employment where pay and job security increase with age and where workers leave their employment through a well-defined exit pathway

with generous pension benefits. Instead, employers are turning increasingly to contingent labor in order to control costs (Henretta 1994). The demise of the age structured model of careers and the rise in the availability of contingent work arrangements will lead to more variability in exit paths from the labor force (Henretta 1994), and this will likely mean that higher proportions of older workers will work longer.

The final factor that may lead to higher rates of labor force participation among older adults is the shortage of workers that is projected to arise as baby boomers begin to retire. Declining fertility rates in the United States since the post-war baby boom mean that there will be fewer young workers available to replace those that retire (Henretta 2000; U.S. General Accounting Office 2001). Indeed, the looming “brain drain” of baby boomers leaving the workplace and the coming shortage of skilled workers to replace them is garnering attention in the business community (Dychtwald, Erickson, and Morison 2004, 2006). As this trend develops, employers may begin to try to retain skilled older workers rather than encourage them to leave the workforce. Greater demand for the labor of older workers will likely contribute to higher labor force participation rates for them in the future.

In summary, then, although retirement became institutionalized in the post-World War II era as a normative phase in an increasingly age-structured American life course, there are indications that change is underway. Increased longevity and improved late-life health will likely spur a desire for more activity and more meaningful roles in late life. The changing structure of both public and private pensions will erode incentives to leave the workforce by any particular age. The reduced generosity of these sources of retirement income as well as low personal savings rates will mean that more elders will

have financial reasons for continuing to work. The changing nature of jobs and careers in the U.S. will provide more jobs that are less physically taxing and that have more variability in when and how workers make their final exit from the labor force. Finally, the aging of the large baby boom cohort means that there will be fewer young workers available to take their place when they retire, thus creating a need for older workers to continue working longer.

The reversal of the trend toward earlier and earlier retirement that characterized the last half century might hold benefits, both for individuals and society as a whole. As I will discuss below in a review of previous research, work at older ages has been found to be associated with better physical and mental well-being among older adults. In addition, the aging of the baby boom generation and the “graying” of American society has long been anticipated as a development that would overburden our systems of supporting our elders. Higher rates of labor force participation among older adults would help ease the burden of funding obligations such as Social Security and Medicare (Munnell 2006; McNamara and Williamson 2004). There are therefore some very real advantages to making it possible for those older adults who want or need to continue working to do so. Because we face both an increased likelihood that older adults will want to work longer and an increased need as a society for them to do just that, it is important to understand the impact of paid employment on older adults and to determine whether there are certain job characteristics that may encourage or discourage workers from remaining in the labor force.

I will now move to a review of the literature that has examined the impact of work on older adults. I will then turn to a discussion of the employment characteristics that

appear to be most important to older workers and describe, using Riley and Riley's (1994) concept of structural lag, how the present structure of employment in the United States offers insufficient opportunities for older adults to work in jobs with these characteristics and thus remains ill-suited to integrating larger numbers of older workers.

Previous Research on the Impact of Work on Older Adults

Given the widespread trend toward earlier retirement from paid work over the past century, as described above, it is perhaps not surprising that there is a somewhat limited sociological literature that empirically assesses the impact of employment on older adults. However, some research has begun to examine the connection between older adults' employment and their physical and psychological well-being in late life. Of studies that have been done, most evaluate differences in well-being between individuals who are working for pay and individuals who are not. While these studies include some controls for possible confounding factors such as health, marital status, age, and gender, the control variables used are generally limited in scope and fail to cover a broad enough range of late-life events and transitions that could affect both well-being and participation in the labor force. Absent from most studies are other important factors such as care giving responsibilities, spouse's health, and financial strain. Only a few studies have attempted to assess whether any particular kind of work is better or worse for well-being.

Luoh and Herzog's 2002 study used longitudinal data from 4 waves of the Asset and Health Dynamics among the Oldest Old Study (AHEAD) to assess whether participation by older adults in paid work and volunteer work had any impact on physical health and mortality. Their sample consisted of 4,860 respondents born in 1923 or before. Controlling for age, gender, marital status, race/ethnicity, education, family

income, net worth, former smoking as well as for several health-related variables measured at Wave 2, the authors found that individuals who volunteered or worked for pay for more than 100 hours annually at Wave 3 were less likely to report poor or fair health, to report any ADL limitations or to have died at Wave 4. In addition, they found that depressive symptoms mediated slightly the relationship between paid or volunteer work and health, ADL limitations, and mortality; those individuals who participated in paid or volunteer work exhibited fewer depressive symptoms and in turn reported better health and were less likely to have died. Luoh and Herzog's multivariate analysis used dummy variables representing whether respondents volunteered or worked for pay for more or less than 100 hours per year. Effects were found for those doing more than 100 hours of paid or volunteer work annually. The authors found some evidence that health at Wave 2 influenced participation in volunteer and paid work at Wave 3 while controlling for volunteer and paid work at Wave 2. They concluded that the effect of paid and volunteer work on health is therefore likely to be bi-directional.

James and Spiro (2007) used six waves of data from the Rand D version of the Health and Retirement Study. Their sample consisted of 9,824 respondents born between 1931 and 1941. Using work status (full-time, part-time, unemployed, partly retired, fully retired, or not in the labor force) as their independent variable and an 8-item version of the Center for Epidemiologic Studies Depression scale (CES-D) as their dependent variable, they performed both cross-sectional and longitudinal analyses to assess whether work status was associated with depressive symptoms, whether depressive symptoms predicted later retirement, and whether depressive symptoms were influenced by changes in work status. They controlled for age, gender, race, ethnicity, education, marital status,

total assets, self-rated health, and baseline depression scores. Results of their cross-sectional analyses indicated that the retired report more depressive symptoms than respondents working full or part-time. No differences were found between full-time workers and part-time workers or partly retired respondents. In longitudinal analyses, James and Spiro found that changes in work status between waves were associated with differences in depressive symptoms, with those individuals who went from work to retirement showing higher levels of depressive symptoms and those moving from retirement back to work showing lower levels of symptoms. Despite these findings, James and Spiro's study indicated that the association between retirement and depression is almost certainly bi-directional with depressive symptoms at one wave predicting retirement at the next. Notably absent from this study, however, were controls for other important stressors associated with aging, such as illness of a spouse or care giving responsibilities, which could lead both to depressive symptoms and to retirement. In addition, analyses were based on simple work status and reflected nothing about specific characteristics of work.

Esteban Calvo (2006) also used data from the Health and Retirement Study to examine the effect of work on well-being. Using the main HRS cohort born between 1931 and 1941, Calvo examined whether paid work in 2000 was associated with self-rated health, psychological well-being, ability to perform activities of daily living (ADL) and instrumental activities of daily living (IADL) and mortality in 2002. In assessing the impact of work in 2000 on these outcome variables in 2002, Calvo controlled for 1998 self-rated health, limitations on ADL and IADL, depressive symptoms, chronic diseases, and smoking as well as for age, gender, race, ethnicity, marital status, education, and

household income in 2000. His results indicated that those who worked for pay in 2000 reported better health, fewer depressive symptoms, fewer limitations in ADL, and lower risk of mortality in 2002. In addition, Calvo attempted to determine if the desirability of the job occupied by older adults mattered for well-being by examining two aspects of respondents' jobs. The first was an HRS variable that measures how much people enjoy going to work. The second was an index measuring job demands by combining several job characteristic variables from the HRS. The components of the job demands index included "physical effort, lifting heavy loads, stooping/kneeling/crouching, good eyesight, and stress" (p. 6). Calvo found that having a job that was demanding did not change the beneficial effects of working for pay on self-rated health, ADL, or IADL, but demanding work was associated with worse psychological well-being and with mortality in the follow-up wave. Enjoying going to work was associated with better psychological well-being.

A study by Kim and Moen (1999), using data from the longitudinal Cornell Retirement and Well-Being Study, examined the effect of couples' retirement transitions on the psychological well-being of 534 married men and women. The authors reported, among their other findings, that depressive symptoms were lower and morale higher among retired and then reemployed men compared with men who were retired and did not become reemployed. No differences in morale or depressive symptoms were found for women based on their current retirement status.

In contrast to the studies mentioned thus far, a study by Herzog, House, and Morgan (1991) found no connection between work status and several indicators of physical and psychological well-being among adults aged 55 to 74. Using cross-sectional

data from 1,339 respondents in the 1986 Americans' Changing Lives survey, Herzog and her colleagues examined whether work status, work preferences, and the nature of work performed by older adults were associated with physical health, depressive symptoms, life satisfaction, verbal aptitude, and cognitive impairment. Respondents who had never worked for pay, who were disabled, or who had left the workforce for health reasons were not included in the analyses. Herzog et al. controlled for demographic variables of age, race, marital status, gender and education level. They found that whether and how many hours respondents worked had no association with the physical and mental health outcome variables nor did the interaction between respondents' work status and type of occupation (professional, clerical/sales, or blue collar). Interestingly, however, they did find that respondents whose work schedules conformed to their stated preferences did better both physically and psychologically than workers whose schedules were unsatisfactory to them. Workers who were working about as many hours as they wanted to work showed better physical health and lower levels of depression than workers who expressed a desire to work either more or fewer hours. Herzog and her colleagues speculated that being able to work in accordance with one's preferences might provide older workers with a greater sense of control that enhances well-being.

Herzog, House, and Morgan also found that the nature of older adults' work made a difference in their well-being. Workers who had greater "decision latitude" in their work showed lower levels of depression and higher levels of life satisfaction, while workers who experienced high levels of job stress from "psychosocial demands" had higher levels of depressive symptoms and lower life satisfaction. Among workers aged

65 and over, higher levels of physical demands were found to be related to improved physical health.

Taken together, these studies offer some encouraging evidence that employment among older adults may have beneficial effects on both physical and mental health but that the effects may depend upon characteristics of the job itself. Most of the research summarized above focused on exploring whether simple participation in paid work (or volunteer work in the case of Luoh and Herzog) is a determinant of well-being. All but one study (Herzog, House, and Morgan) found that work status *was* related to well-being with those working being better off physically and psychologically. The Calvo study and the Herzog, House, and Morgan study went a bit further by attempting to determine if certain characteristics of work made a difference. Calvo used an index of job demands, but 4 of the 5 items that comprised his index related to the physical aspects of the job (whether it requires physical effort; heavy lifting; stooping, kneeling, or crouching; and good eyesight). Older workers will almost certainly be influenced by more factors than just the physical demands of the job, especially given that jobs in today's economy are generally less physically demanding than in the past (Burtless and Quinn 2002).

Herzog, House, and Morgan's research used more comprehensive measures of job characteristics that included stress from physical demands, psychosocial demands, and lack of decision-making authority. Two of their findings—1) that older adults who were working as many hours as they preferred fared better than those whose hours did not match their preferences and 2) that psychosocial demands and decision making authority were associated with depressive symptoms and life satisfaction—offer some evidence that employment characteristics are indeed important to older workers' well-being.

However, their study, like that of James and Spiro (2007), did not include controls for other potentially important late life stressors. Additional research that examines the effect of specific employment characteristics on well-being while including a broader range of control variables is clearly warranted, and this thesis will provide such analyses.

Job Characteristics and Older Workers

What characteristics might be likely to impact older workers' well-being? An overwhelming amount of evidence indicates that the single most important job characteristic to older workers is workplace flexibility (Henretta 2004; Munnell 2006; Pitt-Catsouphes and Smyer 2005, 2006; U.S. General Accounting Office 2001). Most older workers want to continue working past traditional retirement age (Henretta 2004), but most do not want to continue working in the full-time inflexible schedules that characterize their regular career jobs. Older workers frequently want the option to reduce their work hours in the later years of their work lives (Pitt-Catsouphes and Smyers 2005, 2006) Often their desire for reduced hours reflects an interest in pursuing activities outside of work or a need to fulfill family responsibilities, such as care giving to an ailing parent or spouse (Pitt-Catsouphes and Smyer 2006).

Unfortunately, flexible arrangements are not widely available to older workers. Although surveys of older workers indicate that a large portion would like to reduce their work hours (U.S. General Accounting Office 2001), flexible arrangements are not usually available in their career jobs (Pitt-Catsouphes and Smyer 2005; Quinn 1997). As a 2001 U.S. General Accounting office report describes, "survey data and interviews with employers suggest that few of these arrangements are widespread among private employers or involve large numbers of workers at individual firms even though the

majority of older workers are interested in them” (p. 23). Older workers who wish to keep working must often choose between remaining in an inflexible work environment, moving to a bridge job that is often low-paying and lacks benefits, or leaving the workforce completely. The option to pursue a “phased retirement” from one’s career job is ordinarily not available (Pitt-Catsouphe and Smyer 2005). What effect might an inflexible work environment have on older workers? Herzog, House and Morgan (1991) found that adults aged 55-74 who were working the number of hours that they wished to work were better off physically and psychologically than those whose work schedule did not match their preferences. Working in accordance with one’s preference requires flexibility in the workplace. In this thesis, I will examine the question of whether a lack of workplace flexibility has a detrimental impact on psychological well-being among those who continue working at older ages.

Another employment characteristic that could potentially impact the psychological well-being of older workers is the culture of the work environment itself. Age discrimination, although illegal, undoubtedly still exists and “may shape workplace culture” (Munnell 2006, p.17). Older workers are frequently perceived by employers and coworkers as being less productive and less able to learn new skills (U.S. General Accounting Office 2001). This thesis will explore whether working in a workplace culture that is unfriendly to older workers has an effect on their psychological well-being.

Finally, what about workers’ perceptions of job demands and stress? If workers want more flexibility and the ability to reduce their hours as described above, it seems likely that they might also prefer to experience fewer demands and lower levels of job-related stress than younger workers would be willing to tolerate. I will examine whether

high-stress, difficult jobs have any impact on the psychological well-being of older workers. Based on the Herzog, House, and Morgan (1991) study, we can tentatively conclude that some types of stressors are associated with older workers' well-being, but further examination of this question is needed to help clarify this issue.

Opportunities for Older Workers and Structural Lag

A lack of flexible work arrangements for the large portion of older adults who want them and workplace cultures that are unfriendly to older workers may be seen as a symptoms of what Riley and Riley (1994) refer to as “structural lag” where “changes in age structures lag behind changes in lives” (p. 16). In 1994, they described it as follows:

In society at large, lives have been drastically altered over this century—as a consequence of increased longevity, advances in science and education, the gender revolution, improvements in public health, and other historical trends and events—but numerous inflexible social structures, roles, and norms have lagged behind. There is a mismatch or imbalance between the transformation of the aging process from birth to death and the role opportunities, or places in the social structure, that could foster and reward people at the various stages of their lives. While the 20th century has experienced a revolution in human development and aging, there has been no comparable revolution in the role structures of society to keep pace with the changes in the ways people grow up and grow old. The lag involves not only institutional and organizational arrangements but also the many aspects of culture that, in addition to being internalized by people, are built into role expectations and societal mores and laws. (Pp. 16-17)

It seems clear from the available evidence that many older workers leave the workforce before they are entirely ready because there are few opportunities for them to continue working in a manner that fits well with their lifestyle in the later years. To the extent that negative workplace experiences resulting from structural lag push people out of the labor force, we are losing the skills and talent of older workers at a time when they are likely to both want and need to work and when our economy is facing an impending

shortfall of labor. The outdated structures of work would seem, therefore, to be failing to serve the best interests of older adults or society in general. The central focus of this study will be to investigate whether structural lag in employment structures, in the form of workplace inflexibility, workplace unfriendliness to older workers, and workplace stress/difficulty, have an impact on the psychological well-being of older adults who remain in the workforce past traditional retirement age. Certain job characteristics may encourage or discourage workers from remaining in the labor force by affecting their well-being. Given the aging of the American workforce and the likelihood that more older workers will be able to continue working and will need to do so, it is critical to understand what these characteristics are. In addition, in order to determine if employment characteristics that may be salient to older workers are specific to them while operating differently for younger workers, my analysis will include a comparison group of slightly younger workers.

CHAPTER II

RESEARCH DESIGN AND METHODS

Research Questions and Hypotheses

This thesis expands on existing research by investigating whether specific employment characteristics are related to psychological well-being among older workers. It includes controls for a broader range of important late life stressors that could impact mental health than have been included in previous studies. Using data from two cohorts of older workers—one past traditional retirement age and one still in their 50's, it will address the following research questions:

- 1) Do older adults who are still working past traditional retirement age report levels of job flexibility, workplace friendliness to older workers, and job difficulty and stress that are similar to or different from those reported by a slightly younger cohort of workers who have not yet reached usual retirement age?
- 2) Are job flexibility, workplace climate, and job difficulty and stress related to depressive symptoms among the post-retirement age workers?
- 3) Is the relationship between job characteristics and depressive symptoms similar for the cohort of pre-retirement age workers?
- 4) For the older cohort of workers, do job characteristics at one survey wave predict changes in depressive symptoms by the next wave?

Based on these questions, I offer the following hypotheses:

- H₁: Workers who are still in the labor force past traditional retirement age will, on average, report more job flexibility, more elder-friendly work environments, and lower levels of job difficulty and stress than workers in a pre-retirement age cohort. This would reflect the fact that older workers are more likely to have transitioned into bridge jobs that offer these characteristics. Also, adults in this cohort who had inflexible, unfriendly, and/or stressful jobs will be more likely to have already retired.
- H₂: Lack of flexibility, unfriendly climate, and higher levels of difficulty and stress will be associated with higher levels of depressive symptoms among the older cohort of workers.
- H₃: Job characteristics will be similarly associated with depressive symptoms among the younger cohort, but the relationship will not be as strong as it is among the older cohort since these job characteristics are not likely to be as salient to pre-retirement age workers.
- H₄: Among the older cohort, job characteristics at one wave will be associated with depressive symptoms at the next wave, with those whose jobs are less flexible, more unfriendly, and more stressful/demanding showing higher levels of depressive symptoms at the next wave.

Sample

Data for this study will come from the 2002 and 2004 waves of the University of Michigan Health and Retirement Study (HRS) and the Rand HRS Version F. The HRS is a large, nationally representative longitudinal survey of adults over the age of 50 that began in 1992. Participants are interviewed every two years on a wide range of issues

including physical and mental health, financial matters, labor force participation, retirement planning, and family structure and support. The Rand HRS is a cleaned-up and user-friendly version of the main HRS which contains data from all seven waves of the HRS on a subset of processed variables.

For the purposes of investigating the research questions above, I will use data from two cohorts of HRS respondents. The first cohort consists of respondents born between 1931 and 1941 who would have been between the ages of 62 and 73 during the 2004 interview wave. This cohort is referred to as the “HRS” cohort because it comprises the study’s original respondents. Workers in this age group had all reached the early Social Security eligibility age of 62 and most had already reached the normal retirement age of 65 in 2004, so they were beyond the two most common retirement ages. The overall sample size of this cohort is 10,304. I will use data from only those respondents who reported they were working for pay in 2004 but were not self-employed and who also answered the mental health interview questions and the questions regarding job characteristics. There were 1,362 such respondents in the 2004 wave. (I exclude the self-employed since they are likely to differ in important respects from those working for an employer, especially in their job flexibility.)

The second cohort of workers, which I will compare to the HRS cohort in cross-sectional analyses, consists of individuals born between 1948 and 1953. This cohort is referred to as the Early Baby Boomer or “EBB” cohort. They were added to the Health and Retirement Study in the 2004 wave. There were 3,509 such respondents in 2004 and they would have fallen between the ages of 51 and 56 at that time. Of these, 1,840 were

working for pay, were not self-employed, and provided answers to questions on depressive symptoms and job characteristics.

Thus, for the cross-sectional analyses of research questions 1 through 3, the analysis subsample consists of 1,362 HRS cohort respondents and 1,840 EBB cohort respondents who were working for pay in 2004. The longitudinal analyses of research question 4 will make use of 2002 and 2004 data from only the HRS cohort. There were 1,007 HRS cohort respondents who were working for pay in both waves and for whom data is available on all of the variables of interest.

Measures

Measures are drawn from both the Rand HRS Version F and the core 2002 and 2004 Health and Retirement Study. The Rand version contains all waves and many of the variables of interest. However, some of the pertinent variables relating to employment characteristics as well as some of the important control variables are not included in the Rand HRS. These were extracted from the main HRS data set and merged with Rand HRS variables.

Dependent Variable

The dependent variable is *depressive symptoms* in 2004 taken from the Rand HRS. It is an 8-item modified version of the 20-item Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff 1977). Respondents answered yes or no to questions about whether they had experienced any of the 8 items for “much of the time” in the past week. The 8 items are: felt depressed; felt that everything he/she did was an effort; sleep was restless; felt happy; felt lonely; enjoyed life; felt sad; could not “get going.” After reverse-coding the 2 positive items, the scores are summed to form a scale of depressive

symptoms with a possible integer score of 0 to 8. The mean 2004 depressive symptoms score for both cohorts combined is 1.1 with a standard deviation of 1.7. This variable is positively skewed, and efforts to transform it to a more normal distribution were unsatisfactory. However, as a check, a few of the regression analyses were repeated using robust regression techniques on unweighted data. These produced similar results to ordinary least squares regression, so I present only the weighted OLS regression results in Chapter III.

Independent Variables

The independent variables have been drawn from the employment section (Section J) of the main HRS, and they relate to several job characteristics discussed in Chapter I that may be particularly salient to older workers. The first three variables relate to three different aspects of *job flexibility*. Respondents who were working for pay were asked whether their employer would allow them to a) *reduce their paid work hours*, b) *increase their paid work hours*, or c) *move to a less demanding job*. With respect to reducing paid work hours, respondents were asked, “Could you reduce the number of paid hours in your regular work schedule?” Respondents could answer simply yes or no. In the analysis that follows, the “reduce paid work hours” variable is a dummy-coded variable where a score of 1 indicates a “yes” response and a score of 0 indicates a “no” response. The “increase paid work hours” variable is similarly dummy-coded. Respondents were asked, “Could you increase the number of paid hours in your regular work schedule?” A score of 1 indicates that a respondent could increase his or her paid work hours. In 2004, 36 percent of the combined HRS and EBB cohorts reported that

they could reduce their work hours and 33 percent said that they could increase their work hours.

The third job flexibility variable was derived as follows. Respondents were asked their level of agreement with the following statement: "My employer would let older workers move to a less demanding job with less pay if they wanted to." Response possibilities were: "strongly agree," "agree," "disagree," or "strongly disagree." To simplify analysis, I have converted this variable to a dummy-coded variable.

Respondents who answered "strongly agree" or "agree" were assigned a score of 1, while those who replied "strongly disagree" or "disagree" were assigned a score of 0. Thus, like the first two job flexibility variables, a score of 1 on the "move to a less demanding job" variable indicates that the respondent reports more flexibility in his or her job situation. The distribution of responses on the raw variable for both cohorts combined in 2004 was as follows: 11% - strongly disagree; 50% - disagree; 33% - agree; 6% - strongly agree. Thus in the dummy variable used in the analyses that follow, 39% of respondents agreed that their employer would let older workers move to a less demanding job while 61% disagreed.

The fourth independent variable relates to *job difficulty and stress*, another aspect of employment that could affect older workers' well-being. Respondents were asked their level of agreement with the following two statements: "My job requires me to do more difficult things than it used to;" and "My job involves a lot of stress." In the HRS data, responses were coded as 1 – "strongly agree," 2 – "agree," 3 – "disagree," and 4 – "strongly disagree." For this analysis, I have reversed coded these two variables and combined them into a single scale of job difficulty/stress. Possible scores on this scale

range from 2 to 8 with higher scores indicating higher reported levels of job difficulty and stress. Cronbach's alpha for this two-item scale is .67. The mean job difficulty and stress score for the combined cohorts in 2004 was 5.3, with a standard deviation of 1.5 and skewness of .17.

The fifth and final independent variable is a scale reflecting workplace climate in terms of its *friendliness to older workers*. Two questions in the main HRS ask respondents their perceptions about this. Respondents are how much they agree with the following statements: "In decisions about promotion, my employer gives younger people preference over older people;" and "My co-workers make older workers feel that they ought to retire before age 65." Response possibilities range from 1 ("strongly agree") to 4 ("strongly disagree"). I have combined these two items into a single scale (Cronbach's alpha = .68) where higher scores indicate greater disagreement with these two statements and thus higher levels of perceived friendliness to older workers. Mean 2004 workplace friendliness score for the combined cohorts was 6.0, with a standard deviation of 1.1 and skewness of -.53.

It should be noted that because all of these job-related independent variables are reported by employees themselves, it is possible that responses may be colored by employees' cognitive or emotional dispositions and may not accurately reflect actual job circumstances. Inaccurate reports of job characteristics could represent a fundamental confounding of the job-related independent variables and the dependent variable of depressive symptoms. Although the use of perceptual measures for both independent and dependent variables is not uncommon in mental health research, it carries the risk that both are tapping into a single underlying dimension such as a personality characteristic

rather than accurately representing what are separate and distinct concepts. The job characteristics variables of flexibility, workplace climate, and difficulty/stress that I describe above must therefore be seen as imperfect measures of respondents' actual job circumstances. While I acknowledge the possibility that employee-reported job characteristics might be confounded with depressive symptoms, I proceed under the assumption that that the two are separate. The correlations between the dependent variable of depressive symptoms and each of the job characteristic variables are weak, which is consistent with this assumption. (Pearson's coefficients for each job variable and depressive symptoms are as follows: ability to decrease hours = -.03; ability to increase hours = -.01; ability to move to less demanding = -.01; job difficulty/stress scale = .10; workplace friendliness scale = -.14) In addition, the available Health and Retirement Study employment variables do not permit assessment of job flexibility, workplace climate, and job stress except by the report of workers themselves. Since little attention has been given to the effect of job characteristics on the well-being of older adults, these measures should still provide new information about this relationship.

Control Variables

Given that aging may bring a number of life events and transitions that can influence mental health, it is essential that adequate control variables be included so that as many potentially confounding factors as possible are taken into account. The following control variables will be included in multivariate analyses. These variables pertain to basic demographic information and to potentially important late-life situations that, while not necessarily connected to respondents' employment, could lead to depressive symptoms.

Demographic controls will include the following: *Age* – respondent’s age measured in years. In the 2004 interview members HRS cohort members ranged in age from 62 to 73 years old, and EBB cohort members ranged in age from 50 to 56. *Gender* – coded 0 for male and 1 for female; *race* – whether respondent is white/Caucasian, black/African American, or “other.” Dummy-coded variables were created for each of the three racial categories for use in multivariate analyses. A score of 1 in a particular racial category indicates that the respondent belongs to that category. Whites are used as the comparison group in regression analyses. *Hispanic* – a dummy-coded variable indicating whether a respondent is Hispanic (score of 1) or non-Hispanic (score of 0). *Education* – measured in years. The range for this variable is 0 to 17 years with those having more than 17 years coded as having 17. *Total household income* – total household income in thousands of dollars for respondent and spouse only. *Total non-housing wealth* – total household wealth in thousands of dollars excluding value of housing. Detailed information about the demographic characteristics of the two sample cohorts is provided in Chapter III.

A comment is in order about the race and ethnicity variables. Race in the Health and Retirement Study is described by the three categories mentioned above (white, black, and other), and ethnicity is captured in a separate variable indicating whether the respondent is Hispanic or non-Hispanic. Thus, in these analyses, the race and ethnicity variables are separate, and respondents are categorized by both race and by ethnicity. For example, a respondent could be both black and Hispanic. This departure from the usual convention of treating race and ethnicity together in a single variable enables me to consider Hispanic ethnicity separately from race.

Control variables that attempt to capture life events or conditions that might lead to depressive symptoms include the following: *self-rated health* – respondent’s evaluation of his or her own health. Possible scores are 1 – “excellent,” 2 – “very good,” 3 – “good,” 4 – “fair,” and 5 – “poor.” Thus, higher scores indicate worse self-rated health. *Spouse’s self-rated health* – for married respondents; the same scale is used as for respondent’s self-rated health. *Depressive symptoms in 2002* – this variable is measured in the same manner as the dependent variable, 2004 depressive symptoms, described above, and will be used as a control in the longitudinal analyses of research question 4. *Financial dependents* – a dummy-coded variable indicating whether or not the respondent and his or her spouse had “any children, parents, or other relatives” dependent upon them for “more than half of their support” in the last calendar year. A score of 1 indicates that the respondent and spouse (if any) had one or more financial dependents. *Care of grandchildren* – a dummy-coded variable indicating whether or not the respondent and/or respondent’s spouse spent more than 100 hours in the previous two years caring for grandchildren or great grandchildren. A score of 1 indicates a “yes” response to this question. Respondents who were not asked this question because they had no grandchildren or great grandchildren had missing values in the data set. These missing values were converted to zeros for analysis purposes. The two final control variables relate to time spent caring for elderly parents: *helping parents with basic personal needs* and *helping parents with chores or errands*. Respondents with living parents or a living mother-in-law or father-in-law were asked if they or their spouses had spent 100 or more hours in the previous two years helping parents “with basic personal activities like dressing, eating, and bathing” or if they or their spouses had spent 100 or

more hours in the previous two years helping parents “with other things such as household chores, errands, or transportation.” Responses are coded 1 for “yes” and 0 for “no.” Respondents who had missing data for these questions because they had no living parents or in-laws were recoded to 0 for these analyses.

In addition to the control variables listed above, another important life circumstance that could affect depressive symptoms among older adults is financial strain. I have included total household income and total non-housing wealth as control variables, but the perception that one is having difficulty financially, while certainly related to wealth and income, may not be adequately reflected in those two variables. Financial strain is somewhat subjective in that perceptions of financial strain may differ from one person to the next even at the same level of income (Angel et al. 2003). There have been numerous studies showing that older adults who are experiencing more financial strain exhibit more depressive symptoms (Angel et al. 2003; Kahn and Fazio 2005; Kahn and Pearlin 2006; Keith 1983; Krause 1986; Krause 1987; Mirowsky and Ross 2001) even when controlling for other types of stressors commonly experienced in late life. Thus, if possible, an examination of job characteristics and depressive symptoms among older workers should include financial strain in the model, especially since those older adults who are still working may frequently be doing so out of financial need.

However, not all HRS respondents are asked about financial strain. In 2004, a subset of respondents answered financial strain questions that were included as part of a psychosocial “leave-behind” questionnaire given to only a portion of respondents. Individuals who completed this questionnaire answered 3 questions relating to financial

difficulty: 1) “How satisfied are you with your present financial situation?” (Response choices were: 1 – “not at all satisfied,” 2 – “not very satisfied,” 3 – “somewhat satisfied,” 4 – “very satisfied,” or 5 – “completely satisfied.”) 2) “How difficult is it for you/your family to meet monthly payments on family bills?” (1 – “not at all difficult,” 2 – “not very difficult,” 3 – “somewhat difficult,” 4 – “very difficult,” 5 – “extremely difficult”) and 3) “Are you experiencing any current and ongoing financial strain that has lasted for more than 12 months, and if so, how upsetting is it?” (1 – “no, didn’t happen,” 2 – “yes but not that upsetting,” 3 – “yes, somewhat upsetting,” 4 - “yes, very upsetting.”) I reverse-coded the responses to question 1 regarding satisfaction with one’s financial situation so that, like the other two questions, higher scores indicate higher levels of financial strain. The scores for all three questions were then standardized and combined to form a scale of *financial strain*. The Cronbach’s alpha coefficient for this 3-item scale is .86.

Of the cross-sectional analysis subsample of 1,362 HRS cohort respondents and 1,840 EBB cohort respondents, there were 262 HRS respondents and 370 EBB respondents who answered the financial strain questions. I will replicate the cross-sectional multivariate analyses of research questions 2 and 3 for these respondents using the financial strain scale as an additional control variable and will compare the results to those obtained from the analyses with no control for financial strain.

Data Analysis

In the following pages, I present the results of data analyses in three broad categories: descriptive and bivariate statistics, cross-sectional multivariate analyses addressing research questions 2 and 3, and longitudinal multivariate analyses addressing

research question 4. Descriptive statistics provide basic characteristics of the sample including depressive symptoms, job characteristics, race, age, gender, level of education, and median levels of income and wealth. Bivariate statistics on the dependent variable and key independent variables are present by cohort and by gender, race and ethnicity. Ordinary least squares regression is used to assess the relationship between job characteristics and depressive symptoms for both cohorts in the 2004 cross-sectional analyses. OLS regression is also used in the longitudinal analyses assessing the relationship between job characteristics and changes in depressive symptoms. The Health and Retirement Study oversamples blacks and Hispanics. Analyses are weighted with the Rand HRS Version F person-level weight to correct for this oversampling.

CHAPTER III

RESULTS

Descriptive and Bivariate Statistics

Table 1 shows weighted demographic characteristics by cohort for the two groups of workers that I will examine in the cross-sectional analyses that follow. These sample cohorts consist only of individuals who were working for pay but were not self-employed in 2004; thus Table 1 gives an indication of the characteristics of working older people in these two age groups. The older HRS group has a higher percentage of whites and lower

Table 1. 2004 Demographic Characteristics of Sample Cohorts

Variable	Cohort	
	HRS (1931-1941)	EBB (1948-1953)
Mean Age	66.1	53.0
Percent female	54.2%	52.3%
Mean Education level (years)	13.1	13.8
Race		
White/Caucasian	88.1%	81.7%
Black/African American	8.6%	11.5%
Other	3.3%	6.8%
Hispanic	5.0%	7.8%
Median household income	\$50,398	\$66,684
Median non-housing wealth	\$53,100	\$38,000
N	1,362	1,840

percentages of blacks, other races, and Hispanics than the younger EBB cohort. This may be the result of higher rates of disability and mortality among minority groups as they age compared with whites. The younger cohort of workers appears to be slightly more educated than the older group, and household income and assets also differ between cohorts. These differences in education and wealth and income will be discussed further below. In both cohorts, the majority of workers is female.

Table 2 presents group comparisons of the dependent variable (CES-D score) and the key independent employment-related variables by gender, race (black, white, or other), and by ethnicity (Hispanic vs. non-Hispanic). Figures shown are for both cohorts of workers combined. Looking first at gender, women have significantly higher levels of depressive symptoms than men (mean score of 1.25 for women and .93 for men; $p < .001$). This is consistent with a large body of research on gender difference in mental health symptoms showing that women suffer from higher rates of depression than men (Mirowsky and Ross 1986; Rosenfield 1999). A significantly higher percentage of women, 38.2 percent, report that they could decrease their work hours compared with the 32.5 percent of men who say they could ($p < .001$). Women also report slightly higher workplace friendliness scale scores than men, with a mean for women of 6.09 compared to 5.97 for men ($p < .05$). These gender differences in job characteristics may reflect the different types of jobs held by men and women in our gender-segregated labor force. Women are more likely to be working in part-time, non-career type jobs than men. Women's jobs may thus offer more flexibility and may be less subject to the traditional age-graded promotion and retirement pressures than those of men.

Table 2. 2004 Depressive Symptoms and Job Characteristics by Gender, Race, and Ethnicity – HRS and EBB Cohorts Combined

Variable	<i>Gender</i>		<i>Race</i>			<i>Ethnicity</i>	
	Men	Women	White	Black	Other	Hispanic	Non-Hispanic
CES-D Score	.93	1.25 ^{a***}	1.03	1.46 ^{b***}	1.27	1.52 ^{e**}	1.07
Could decrease work hours	32.5%	38.2% ^{a**}	36.1%	34.5%	29.6%	29.1% ^{e*}	36.0%
Could increase work hours	33.6%	32.9%	33.8%	28.8% ^{b*}	33.6%	32.4%	33.3%
Move to less demanding job	38.9%	38.3%	40.6%	27.9% ^{b***}	30.6% ^{b**}	34.1%	38.9%
Job difficulty and stress score	5.42	5.52	5.51	5.28 ^{b**}	5.28 ^{b*}	5.20 ^{e**}	5.49
Workplace friendliness score	5.97	6.09 ^{a*}	6.08 ^{c***}	5.86 ^{d*}	5.64 ^{b***}	5.66 ^{e***}	6.06
N	1,435	1,767	2,454	526	222	321	2,881

* p < .05; **p < .01; ***p < .001

^a significantly different from men

^b significantly different from whites

^c significantly different from blacks/African Americans

^d significantly different from others

^e significantly different from non-Hispanics

Racial differences in depressive symptoms and job characteristics are also evident in Table 2. African Americans report higher levels of depressive symptoms than either whites or individuals in the “other” racial category. However, their mean CES-D score of 1.46 is significantly different only from that of whites ($p < .001$). With respect to job characteristics, there was no significant difference between African Americans and whites in their ability to decrease their work hours. However, blacks were less likely to say that they could increase their work hours (28.8 percent compared with 33.8 percent for whites; $p < .05$). Both blacks and individuals in the “other” racial category are less likely to feel that their employer would let older individuals move to a less demanding job. While 40.6 percent of whites felt that their employers would accommodate older workers in this fashion, only 27.9 percent of blacks ($p < .001$) and 30.6 percent of others ($p < .01$) felt this way. Interestingly, both blacks and others had a mean score of 5.28 on the job difficulty/stress scale, and this was significantly lower than the mean difficulty/stress score of 5.51 reported by whites. However, whites reported a mean workplace friendliness score of 6.08 that was significantly higher than the mean score of blacks of 5.86 ($p < .001$) and higher than the mean score of other respondents of 5.64 ($p < .001$). The workplace friendliness score of respondents who identified their race as “other” was significantly lower than that of blacks as well ($p < .05$).

Finally, Table 2 provides information on how Hispanics compare to non-Hispanics on the important variables in these analyses. Hispanics reported significantly higher levels of depressive symptoms than non-Hispanics; they had a mean CES-D score of 1.52 compared to 1.07 for non-Hispanics ($p < .01$). Hispanics also reported lower ability to reduce their paid work hours with 29.6 percent saying they could do so while 36

percent of non-Hispanics said they could ($p < .05$). With respect to their scores on the job difficulty/stress scale and on the workplace friendliness scale, Hispanics mirror the racial differences described above: they report a lower average job difficulty stress scale than non-Hispanics—5.2 compared with 5.49. This difference is significant at the .01 level. At the same time, they report workplaces that are on average less friendly to older workers than those of non-Hispanics. Their mean score of 5.66 on the workplace friendliness scale was significantly lower than the mean score of non-Hispanics of 6.06 ($p < .001$).

To summarize, then, Table 2 reveals some gender, racial, and ethnic differences in depressive symptoms and in the key job characteristics examined in this study. Women show higher levels of depressive symptoms than men, have a bit more flexibility in terms of reducing their work hours, and perceive that their workplaces are friendlier to older workers than men do. Racial and ethnic minorities seem to be worse off than whites on many but not all of these key variables. African Americans differ the most from whites and others. They have higher depression scores and less flexibility in their jobs on two of the three flexibility variables. Compared to whites, they feel that their jobs are less demanding and stressful, but they find their workplaces less friendly to older workers than whites do. Individuals of other races report the lowest scores on the workplace friendliness to older workers scale, and, like African Americans report lower levels of demands and stress on their jobs than whites, but they are less likely than whites to feel that their employer would let older workers move to less demanding jobs.

I will now move to an examination of cohort differences in depressive symptoms, job characteristics, and health and family-related factors. Table 3 presents cross-cohort

Table 3. 2004 Descriptive Statistics by Cohort for Key Variables in Analyses

Variable	Cohort	
	HRS (1931-1941)	EBB (1948-1953)
Depressive Symptoms	.82	1.19***
Males	.73	1.00**
Females	.90	1.38***
Could decrease work hours	51.3%	30.3%***
Could increase work hours	41.7%	30.4%***
Could move to less demanding job	37.3%	39.0%
Mean job difficulty/stress score	4.74	5.72***
Mean workplace friendliness score	6.13	6.00*
Self-rated health score	2.47	2.42
Spouse's self-rated health score (N=907 in HRS; N=1249 in EBB)	2.69	2.47***
Any financial dependents	9.6%	33.1%***
Caring for grandchildren	32.3%	22.6%***
Caring for parents:		
Basic personal needs	3.5%	5.8%**
Errands/chores/transportation	8.0%	21.4%***
Mean education level, years	13.1	13.8***
Median household income	\$50,398	\$66,684***
Median non-housing wealth	\$53,100	\$38,000***
N	1,362	1,840
Difference between cohorts significant at: *p<.05, **p<.01, ***p<.001		

comparisons for key variables. To test Hypothesis 1, I conducted difference of means tests by cohort to determine if HBB cohort members differed significantly from their younger EBB counterparts on these measures.

As Table 3 indicates, these tests revealed significant differences between the older and younger cohorts of workers on all but two of these indicators. Older workers suffered fewer depressive symptoms on average than younger ones. Their mean CES-D score was .82 compared with 1.19 for the younger cohort ($p < .001$). Older workers were far more likely to report that they could decrease or increase their work hours. Over half of them—51.3 percent—said they could reduce their paid work hours compared to only 30.3 percent of younger workers who said they could do so ($p < .001$). 41.7 percent of the HRS workers said they could increase their paid hours, but only 30.4 percent of early boomers could do so ($p < .001$). HRS workers, however, did not differ significantly from EBB workers in whether or not they felt that their employer would allow older workers to move to a less demanding job. HRS workers reported a significantly lower mean job difficulty/stress scale score (4.74 compared to 5.72 for the EBB workers; $p < .001$) and a higher mean workplace friendliness to older workers scale score (6.13 compared to 6.00 for the EBB; $p < .05$).

In summary, then, the older cohort of workers reports more flexibility, less stress, and more welcoming workplace climates than the younger cohort. Thus, the analyses shown in the first half of Table 2 support Hypothesis 1. These findings are not surprising when we consider that they very likely reflect a selection effect. As discussed in Chapter I, older workers often transition out of career jobs and into bridge jobs which are more likely to be part-time and to offer flexibility that may have been unavailable in their career jobs. Also, older workers whose career jobs were inflexible, stressful, or unwelcoming to older workers but who did not move into bridge jobs are probably not

represented in this sample since they had probably have already left the labor force if they could afford to do so.

The lower mean depression scores among the HRS cohort as compared with the EBB cohort can also be seen as consistent with what is known about individuals in the older age group. Physical health is a strong predictor of late life depressive symptoms (Mirowsky and Ross 1999, James and Spiro 2007). Impairments to physical functioning are particularly depressing (Mirowsky and Ross 1999), and the likelihood of suffering from such impairments increases with age. Older individuals who suffer from physical ailments or impairments are very likely to have already retired, at least in part because of those health problems, and would thus not be represented in this sample of older adults who are still working. Those remaining in the workforce are probably healthier and therefore less depressed than average for their age. It is not surprising, then, that the HRS cohort members still in the workforce would show lower levels of depressive symptoms than even their younger counterparts. The self-rated health scores of the older workers are only slightly higher than those of the early baby boomers (higher scores indicate poorer health) but this difference is not significant. The fact that the HRS cohort workers do not differ significantly in self-rated health from the EBB cohort workers who are on average 13 years younger is in itself remarkable and indicates that individuals working into their mid-sixties and beyond are healthier than we would expect based on their age alone. The health scores of spouses, on the other hand, are more in line with expectations based on age. Members of the younger cohort have spouses with significantly better self-rated health than do members of the older cohort of workers. Spouses of respondents in this sample may or may not be employed.

I will now discuss the cross-cohort comparisons of the remaining variables in Table 3. The family-related variables also differ significantly across cohorts, and these differences are once again in line with what we might expect. HRS cohort members are much less likely to have any financial dependents than their younger counterparts who, at an average age of 53, may be more likely to be supporting older children or aging parents. Only 9.6 percent of HRS sample members said they had financial dependents compared with 33.1 percent of EBB sample members ($p < .001$). In addition, EBB cohort members are more likely to report that they spent 100 or more hours in the last two years helping parents with basic personal needs (5.8 percent for EBB compared to 3.5 percent for HRS; $p < .01$) or with errands, chores, or transportation (21.4 percent for EBB versus 8.0 percent for HRS; $p < .001$). This probably reflects the fact that adults in their mid-50's are more likely than those in their mid-60's to still have living parents. Similarly, the HRS cohort members are more likely to say that they spent 100 or more hours in the last two years caring for grandchildren. 32.3 percent of them reported caring for grandchildren compared with 22.6 percent of early baby boomers ($p < .001$). The older group may simply be more likely to have grandchildren.

Differences in education, wealth, and income between these two age groups were also significant. HRS members' mean education level was 13.1 years compared with the mean education level of EBB members of 13.8 years ($p < .001$). This is consistent with the fact that in general, younger generations are attaining higher levels of education than preceding generations (Mirowsky and Ross 1999). Median household income among HRS cohort workers was substantially and significantly lower than that of EBB members' households (\$50,398 compared with \$66,684; $p < .001$). Given that workers in

their mid-50's are more likely to still be working full-time in career jobs compared with workers in early 60's to early 70's, this makes sense. Finally, median non-housing wealth among HRS cohort members was significantly higher than among EBB members (\$53,100 compared with \$38,000; $p < .001$), perhaps because older workers have had more years to save and accumulate wealth than younger ones.

To summarize, difference of means tests showed that there are some significant differences across gender and racial and ethnic groups in depressive symptoms and in some aspects of job flexibility, job difficulty and stress, and in the perceived friendliness of workplaces to older workers. More striking however than gender, racial and ethnic differences are the differences by birth cohort. Hypothesis 1 was supported by the cross-cohort comparisons. The older group of workers who are still in the workforce past the age when most of their same-age counterparts have completely retired report lower levels of depressive symptoms and more flexible, less stressful, and friendlier workplaces than workers still in their 50's. This does *not* indicate widespread availability of such jobs to older workers. Indeed, as discussed in Chapter I, such positions are not easy to find. Instead, cohort differences probably reflect the fact that individuals who continue working into their mid-60's and beyond are those who were able to secure such jobs.

Despite the fact that the older cohort of workers reports that their jobs are on average more worker-friendly with respect to the five job characteristics in question here, the possibility remains that those older workers whose jobs *are* inflexible, stressful, and unfriendly may suffer more negative psychological consequences when compared with same-age workers whose jobs are less so. In addition, in light of the evidence cited in Chapter I that many older workers prefer flexible work arrangements but often cannot

find them, it may be that individuals still working beyond traditional retirement age find unfavorable work situations to be more depressing than do younger workers in similar employment circumstances for whom these job characteristics may be less important. To explore whether older workers are negatively affected by their employment circumstances and whether they differ from younger workers in their response to these circumstances (Hypotheses 2 and 3), I will now move to cross-sectional regressions of job characteristics on depressive symptoms by cohort.

Cross-Sectional Multivariate Analyses

Table 4 shows ordinary least squares regression of 2004 depressive symptoms on 2004 job characteristics by cohort while controlling for the variables listed in the second portion of the table. The coefficients shown here and in all subsequent regression analyses are unstandardized. Model 1 includes the entire analysis sample of 1,362 HRS and 1,840 EBB cohort respondents. In this model, marital status is included as a control variable, and spouse's self-rated health is left out in order to maximize the sample size since not all respondents were married. Model 2 includes spouse's self-rated health as a control variable and so only those respondents who were married and whose spousal health information was available are included in this model. This group consists of 907 HRS and 1,249 EBB respondents.

These cross-sectional regressions offer only very limited support for Hypotheses 2 and 3. Model 1 indicates that of the five employment characteristics, only job difficulty/stress and workplace friendliness to older workers are associated with depressive symptoms. Contrary to expectations, none of the three job flexibility variables are significantly related to depressive symptoms in either the older or younger cohort of

Table 4. Regression of 2004 Depressive Symptoms on Job Characteristics by Cohort

<i>Cohort</i>	<i>Model 1</i>		<i>Model 2</i>	
	HRS	EBB	HRS	EBB
Independent Variables				
Could decrease work hours	.073	-.054	.135	-.104
Could increase work hours	-.002	.177	.037	.035
Could move to less demanding job	.036	.054	-.055	.139
Job difficulty/stress	.072*	.112***	.072	.107**
Workplace friendliness	-.103*	-.144***	-.039	-.106*
Control Variables				
Self-rated health	.326***	.495***	.267***	.405***
Any financial dependents	.050	.173	.023	.280**
Caring for grandchildren	-.010	.063	-.055	.199
Caring for parents:				
Basic personal needs	.391	.374	.597	.472
Errands/chores/transportation	.052	.012	-.027	.301
Female	.047	.278**	.105	.383***
Age	.010	.007	-.013	.030
Education	-.017	-.049*	-.001	-.013
Black	.194	-.017	.154	.257
Other race	-.371*	-.176	-.086	-.148
Hispanic	.321	.027	.364	.136
Household income	.000	.000	.000	.000
Non-housing wealth	.000	.000	.000	.000
Married	-.458***	-.488***		
Spouse's self-rated health			.120*	.056
N	1,362	1,840	907	1,249
R ²	.11	.16	.09	.12

*p < .05; **p < .01; ***p < .001

Note: Unstandardized coefficients are shown.

workers. Additional regressions (not shown) that included each one of the three job flexibility variables in the models alone, while leaving out the other two, did not show any significant separate effects of the job flexibility variables on depressive symptoms. As expected, however, workers in the HRS cohort who report higher levels of job stress and demands and lower levels of workplace friendliness show higher levels of depressive symptoms in Model 1. The relationships between these two variables and depressive symptoms are significant at the $p < .05$ level. Similar relationships exist for the Early Baby Boomer cohort, but contrary to Hypothesis 3, both job difficulty/stress and workplace friendliness to older workers appear to have a stronger association with depressive symptoms among this cohort than among the older HRS cohort. I had hypothesized the opposite—that job characteristics would be more strongly associated with depressive symptoms among the older workers. Nonetheless, two of the five job-related variables are significantly associated with depression scores in both cohorts while controlling for a fairly broad range of potentially confounding factors. Since these analyses are cross-sectional, the causal direction of these associations is not clear. It is entirely possible that depressed individuals perceive more stress and less friendliness in their workplaces rather than that stressful unfriendly workplaces cause people to feel depressed.

The coefficients on the control variables in Model 1 reveal some associations with depressive symptoms that are well documented in the mental health literature, and several differences are apparent between the two cohorts of workers. For both the HRS and EBB cohorts, self-rated health is a strong and consistent predictor of depressive symptoms as we would expect based on prior research (Mirowsky and Ross 1999) with poorer health

being associated with higher levels of depression. Also, as is typically the case (Gove, Style, and Hughes 1990), married respondents show significantly lower depression scores than the unmarried ($p < .001$). Women have higher levels of depressive symptoms than men, but this difference is significant only among the early baby boomers and not among the older HRS group. This age difference in the gender gap in depressive symptoms mirrors other research on age and depression (Mirowsky 1996) and will be discussed further in Chapter IV. Also among the early baby boomer group, higher levels of education are associated with lower levels of depressive symptoms ($p < .05$) a finding that is also consistent with previous research (Mirowsky and Ross 1999). Finally, respondents who fell into the “other” racial category had lower depression scores than whites ($p < .05$), but no other racial or ethnic difference emerge in these cross-sectional analyses.

Model 2 includes spouse’s self-rated health as a control variable and is thus limited to married respondents. Some differences from Model 1 are apparent. First, among the married, when controlling for spousal health, job difficulty/stress and workplace friendliness are less strongly associated with psychological well-being. In the case of HRS workers, they are no longer significant, although this is likely due to the reduced sample size since the coefficient remains unchanged at .072. For the EBB cohort members, workplace friendliness and job difficulty and stress remain significant predictors, but the strength of the relationships has been reduced from a p-value of less than .001 to less than .01 for difficulty/stress and less than .05 for workplace friendliness.

Looking at the control variables, spouse’s self-rated health appears as significantly related to psychological well-being among the older HRS group only

($p < .05$). Thus, for older married workers, the health of one's spouse appears to have some connection to one's psychological well-being. Among these married respondents, having any financial dependents emerges as a predictor of depressive symptoms for the younger EBB cohort ($p < .01$). Table 2 indicated that about one third of the EBB group have at least one financial dependent compared to only 9.6 percent of the HRS cohort. Therefore, providing financial support to older children or to aging parents is more much common among those in their early to mid-50's compared with the older group. The burden of providing such support appears to be more strongly associated with depressive symptoms among the younger cohort than among their older counterparts. In Model 2, respondents' health remains a strong predictor of depression. Once again, too, being female predicts higher levels of depressive symptoms but only among the younger EBB cohort.

Taken together then, the regressions shown in Table 4 offer only limited support for the idea that job characteristics are related to psychological well-being among workers in either cohort. There is no association between any of the three job flexibility measures and depressive symptoms. While there is some evidence that stress on the job and the workplace climate are tied to mental health, it is not possible to know the causal direction of these relationships. Instead, control variables known to be associated with psychological well-being—namely health, marital status, and gender (in the case of the EBB cohort)—emerge as important predictors of mental health.

I turn now to a replication of the above analyses on a subsample of respondents who answered financial strain questions as part of the 2004 Health and Retirement Study “leave-behind” questionnaire covering psychosocial measures. As I described in Chapter

II, financial strain has been associated with poorer mental health among older adults in a number of previous studies even while controlling for other potentially depressing late life events. Adding financial strain to the regression model will enable me to determine if the relationships between depressive symptoms and the job difficulty and stress and workplace friendliness that I found above still exist when financial strain is included in the model.

Table 5 shows two regression models for the financial strain subsample only (n=260 HRS; n=367 EBB). The first model, Model 3, is the same as that shown in Model 1 of Table 4. Marital status is controlled and financial strain is not included. In Model 4, I add financial strain to the analysis of this subsample while still controlling for marital status. In contrast with Model 1, Model 3 indicates that among this much smaller sample who provided financial strain data, there is *no* association between the job characteristics variables and depressive symptoms within the HRS cohort. In the EBB cohort, only workplace friendliness is still associated with depression scores with more friendly environments still tied to lower levels of depressive symptoms ($p < .01$). Self-rated health still appears as a strong predictor of psychological well-being, and being female is still tied to higher levels of depressive symptoms only in the EBB cohort. Education level is once again significantly and negatively associated with depression scores but only in the younger EBB cohort. Surprisingly, marital status is no longer significantly related to mental health for HRS members, although it remains significant for EBB members ($p < .05$). Having any financial dependents is also a significant predictor of depressive symptoms for EBB members in this subsample ($p < .05$).

Model 4 is the same as Model 3 except that the financial strain index has been

Table 5. Regression of 2004 Depressive Symptoms on Job Characteristics – Financial Strain Subsample

<i>Cohort</i>	<i>Model 3</i>		<i>Model 4</i>	
	HRS	EBB	HRS	EBB
Independent Variables				
Could decrease work hours	-.095	-.284	-.138	-.282
Could increase work hours	.054	-.080	.067	-.110
Could move to less demanding job	.110	.321	.044	.318
Job difficulty/stress	.079	.120	.092	.097
Workplace friendliness	-.140	-.236**	-.066	-.191*
Control Variables				
Self-rated health	.347***	.422***	.287***	.349***
Any financial dependents	-.352	.458*	-.621**	.386
Caring for grandchildren	.028	-.144	-.057	-.220
Caring for parents:				
Basic personal needs	.515	.540	.295	.433
Errands/chores/transportation	.020	-.200	-.051	-.120
Female	.226	.731***	.163	.645***
Age	.013	-.007	.008	-.028
Education	-.009	-.123**	-.004	-.118**
Black	.277	.138	.460	-.005
Other race	-.050	.140	.027	.228
Hispanic	.407	.216	.390	.125
Household income	-.001	.001	-.001	.001
Non-housing wealth	.000	.000	.000	.000
Married	-.267	-.628*	-.214	-.445
Financial Strain			.138**	.176***
N	260	367	260	367
R ²	.14	.22	.18	.26

*p < .05; **p < .01; ***p < .001

Note: Unstandardized coefficients are shown.

added as a control variable. Some changes are evident between Models 3 and 4. First, workplace friendliness remains the only job characteristic significantly associated with depressive symptoms and that is still the case only among the EBB cohort. The size of its coefficient has been reduced slightly and is now significant at only $p < .05$. The association between having financial dependents and psychological well-being is somewhat different when controlling for financial strain. Supporting dependents is no longer associated with depression among the EBB cohort members once financial strain is held constant, but surprisingly, having one or more financial dependents is associated with *better* mental health among the older cohort of respondents with financial strain controlled. Perhaps fulfilling a provider role for a loved one enhances well-being among older adults when finances are not tight. For the EBB cohort, education and gender remain similarly associated with depressive symptoms as in previous models. Most notable however is that financial strain itself is a significant predictor of depressive symptoms while controlling for the potentially depressing late life situations included in these analyses (HRS: $p < .01$; EBB: $p < .001$). Thus, although few of the relationships that I predicted between job characteristics and mental health emerged in these cross-sectional regressions, the finding that financial strain is associated with depressive symptoms among these older adults is consistent with previous research that has addressed this issue (Angel et al. 2003; Kahn and Fazio 2005; Kahn and Pearlin 2006; Keith 1983; Krause 1986; Krause 1987; Mirowsky and Ross 2001). This gives added support to the idea that financial strain may be an important potentially confounding factor when examining late life mental health and it should be taken into consideration.

In summary, then, the cross-sectional analyses of Tables 4 and 5 offer limited support for the idea that the selected job characteristics have any impact on the mental health of older adults who remain in the workforce. None of three measures relating to job flexibility were significantly associated with depressive symptoms. Only the scales measuring job stress and difficulty and workplace friendliness to older workers were found to be associated with depressive symptoms among the larger analysis sample. Contrary to the expectations expressed in Hypothesis 3, however, these aspects of employment were not found to be more strongly associated with depressive symptoms among the older workers who are still working into their 60's and early 70's as compared to workers in their early to mid 50's. In fact, the opposite appeared to be true. A separate analysis of a smaller sample of respondents who had provided financial strain information found that in this smaller group, without financial strain in the model, only workplace friendliness was related to depressive symptoms and this was true only for the younger cohort of workers, again contrary to the expectations of Hypothesis 3. Financial strain itself, however, is significantly associated with higher levels of depressive symptoms among both cohorts of workers.

The analyses presented thus far have been cross-sectional and thus cannot be used to infer the causal direction of the few relationships between job characteristics and psychological well-being that emerged. Depressed individuals may simply be more likely to view their jobs negatively and to perceive that their jobs are stressful and that their workplaces are not welcoming to older workers. In an attempt to clarify causal direction and to determine if there is a relationship between job characteristics and depressive symptoms over time, I will now analyze data from two waves of the Health

and Retirement Study—Wave 6 in 2002 and Wave 7 in 2004—for the older cohort of workers only.

Longitudinal Multivariate Analysis

The cross-sectional analyses of the previous section used data from the 2004 wave of the HRS because this was the first wave which included the Early Baby Boomer cohort, enabling comparison between these age groups, and because this wave included financial strain information for a subset of respondents. Before assessing whether job characteristics at Wave 6 are associated with depressive symptoms at Wave 7 among the HRS cohort, I first replicate the cross-sectional analyses to confirm relationships among variables for Wave 6. I use a subsample of 1,007 workers who were working at both waves and for whom data is available on all variables of interest. Table 6 shows the regression of 2002 depressive symptoms on 2002 job characteristics and control variables.

Model 1 of Table 6 includes all of the 1,007 respondents whether married or not and includes marital status as a control variable. The relationships shown in Model 1 look quite similar to those of the HRS cohort in Table 4. In 2002, as in 2004, among the job characteristic variables, only the scales of job difficulty/stress and workplace friendliness were significantly related to depressive symptoms. Once again, higher levels of difficulty and stress were associated cross-sectionally with higher levels of depressive symptoms ($p < .05$) and more friendly workplaces were associated with lower levels of depressive symptoms ($p < .01$). As for the control variables, poorer health and being unmarried are once again associated with worse psychological well-being.

**Table 6. Regression of 2002 Depressive Symptoms on 2002 Job Characteristics
HRS Cohort Only**

	<i>Model 1</i>	<i>Model 2</i>
Independent Variables		
Could decrease work hours	-.041	-.011
Could increase work hours	-.032	-.035
Could move to less demanding job	-.142	-.003
Job difficulty/stress	.086*	.082*
Workplace friendliness	-.153**	-.079
Control Variables		
Self-rated health	.426***	.374***
Any financial dependents	.026	.082
Caring for grandchildren	-.074	-.100
Caring for parents:		
Basic personal needs	-.275	-.248
Errands/chores/transportation	.244	.325
Female	.148	.212*
Age	.014	.036
Education	-.008	.020
Black	.247	.501*
Other race	.033	.121
Hispanic	.285	.453
Household income	.000	.000
Non-housing wealth	.000	.000
Married	-.376**	
Spouse's self-rated health		.093
N	1,007	676
R ²	.15	.13

* $p < .05$; ** $p < .01$; *** $p < .001$

Note: Unstandardized coefficients are shown.

Model 2 includes married respondents only and controls for spouse's self-rated health. Among these 676 individuals, only job difficulty and stress are still significantly associated with depression scores ($p < .05$). The coefficient on workplace friendliness has been reduced to non-significance when controlling for spouse's self-rated health among the married. Being female and being black (as compared to white) are associated with higher depression scores. Spouse's self-rated health is not itself a significant

predictor of mental health in this model, although it was in 2004 among married HRS respondents. I conducted a separate regression (not shown) of these 676 married individuals *without* controlling for spouse's health, and the results were very similar to the regression with spouse's health. The same coefficients were significant at the same probability levels. The R^2 for that model was .127, very close to the .133 of Model 2 above. It seems then, that spouse's health does little to explain the variance in 2002 depression scores and is itself not a significant predictor. I therefore omit it from the longitudinal analysis that follows.

In sum, then, the cross-sectional regressions of 2002 depression on 2002 predictors and control variables for the HRS cohort look fairly similar to the 2004 analyses shown in Table 4. None of the job flexibility variables were associated with depressive symptoms; only job difficulty and workplace climate were significantly related. As expected, health and marital status are predictors of psychological well-being.

I now explore the question of whether Wave 6 job characteristics are associated with changes in depressive symptoms from Wave 6 to Wave 7. Table 7 shows the regression of 2004 depressive symptoms on 2002 job characteristics while controlling for 2002 depression and 2002 control variables. Including 2002 depression scores as a control variable enables me to interpret the coefficients on 2004 depression scores as describing the relationship between the independent variables and *changes* in depressive symptoms from 2002 to 2004. For this longitudinal analysis, I show the sample including all respondents whether married or not, and I control for marital status. The cross-sectional analyses for 2002 shown in Table 6 (as well as the 2004 cross-sectional

Table 7. Regression of 2004 Depressive Symptoms on 2002 Job Characteristics and Control Variables - HRS Cohort Only

Independent Variables	
Could decrease work hours	.144
Could increase work hours	-.012
Could move to less demanding job	-.203*
Job difficulty/stress	.030
Workplace friendliness	.034
Control Variables	
2002 depressive symptoms	.392***
Self-rated health	.161**
Any financial dependents	.107
Caring for grandchildren	-.076
Caring for parents:	
Basic personal needs	-.114
Errands/chores/transportation	.053
Female	.114
Married	-.247*
Age	.008
Education	.000
Black	.101
Other race	-.529***
Hispanic	.358
Household income	.000
Non-housing wealth	.000
N	1,007
R ²	.24

*p < .05; **p < .01; ***p < .001

Note: Unstandardized coefficients are shown

analyses of Table 4) showed significant relationships between depressive symptoms and the scales of job difficulty and stress and of workplace friendliness. These same relationships are not present in the longitudinal analysis of Table 7. Employees who found their jobs difficult and stressful and who rated their workplace low on friendliness to older workers in 2002 did not show significant changes in depressive symptoms from 2002 to 2004 relative to other employees. This lack of association between these two job

characteristics and depression scores over time does not help to answer the question of whether these aspects of employment are the *cause* of psychological well-being. Instead, the fact that the relationship is present cross-sectionally but not over time leaves open the possibility of reverse causation—that employees who are currently depressed may perceive their jobs to be more stressful and unfriendly than non-depressed people. On the other hand, it is also possible that depression scores may be fairly constant over this short period of time. Any effects of job characteristics on psychological well-being may have already occurred and depressive symptoms might have remained stable from 2002 to 2004.

Table 7 does, however, reveal an interesting new relationship that was not present in cross-sectional analyses. Workers who reported in 2002 that their employer would let older workers move to a less demanding job for lower pay showed significant reductions in depressive symptoms over the two year period compared with workers who felt their employers would not offer that type of flexibility ($p < .05$). This was the only one of the three job flexibility variables that showed a relationship to changes in depression scores. Perhaps the knowledge that one has the option to change jobs provides older workers with a sense of control that improves psychological well-being, or perhaps some of these individuals actually did move into less demanding jobs over the two year time period and this resulted in improved depression scores. Unfortunately, I cannot determine this from the variables in this study.

Among the control variables, the expected relationships appear. Higher 2002 depression scores, poorer 2002 health, and being unmarried are associated with worse psychological well-being in 2004. In addition, individuals who fall into the “other” race

category showed significantly greater declines in depression scores over time than whites ($p < .001$). Only a few racial differences have appeared in the multivariate analyses of this study, probably because of the large number of control variables that I have included. The reason for the significant difference between other racial groups (other than black) and whites in depression scores over time is unclear.

I will now summarize the findings of this section. Using 2002 data for the HRS cohort only, I replicated the cross-sectional analysis that I had performed with 2004 data. I found that for the HRS cohort, the relationships between job characteristics and depressive symptoms were quite similar in 2002. Only employees' perceptions of job difficulty and stress and of workplace friendliness to older workers were significantly associated with depressive symptoms. In an attempt to help clarify the causal direction of these relationships, I conducted a regression of 2004 depressive symptoms on 2002 job characteristics and control variables. This longitudinal analysis showed no relationship between the scales of job difficulty and of workplace friendliness over time. However, a new relationship emerged in the longitudinal regression. Individuals who reported that their employer would let older workers move to a less demanding job at lower pay showed decreases in depression scores from 2002 to 2004 compared with workers whose employers would not permit such a move. Thus this longitudinal analysis provides only very limited support for Hypothesis 4. Only one of the five job characteristic, the ability to move to a less demanding job, was associated with changes in depressive symptoms over time.

CHAPTER IV

DISCUSSION AND CONCLUSIONS

As described in Chapter I, workplace structures have generally not changed as quickly as have the needs and desires of older Americans in the past few decades. Many elders express a desire to continue working into the traditional retirement years but at a reduced number of hours and in less demanding positions; however, few employers offer such accommodations to their workers as they age. Workplace structures and employer attitudes that have not evolved to reflect the new reality of an aging population that is healthier and able to contribute meaningfully to our economy for a longer span of years may be seen as a form of structural lag as described by Riley and Riley (1994).

The central purpose of this thesis was to determine if certain employment characteristics that may be particularly important to older workers—namely flexibility, stress, and workplace climate—have any impact on the psychological well-being of older workers who remain in the paid labor force beyond the most common retirement ages. Lack of flexibility, high stress, and workplace cultures that are not welcoming to older workers might be seen as symptoms of structural lag. Do older employees suffer negative consequences from their participation in such work environments? Are the effects of such employment situations worse for them than for slightly younger workers? In attempting to answer these questions, my thesis has gone beyond previous research by including controls for a wider range of potentially distressful late life situations that could easily impact older adults' mental health. Also, since only a few previous studies have

attempted to examine specific job characteristics and the well-being of older workers, this thesis expands the body of research in this area.

The results presented in the previous chapter offer very little evidence that older workers are adversely affected by the job characteristics in question and no evidence that they are more sensitive to those job characteristics than younger, pre-retirement age workers. In the remaining pages of this thesis, I will present a brief summary of the findings, I will discuss possible explanations for why the results turned out as they did, I will discuss the limitations of this research, and I will suggest possible directions for future research on work and older adults.

Summary of Findings

Bivariate analyses revealed significant differences by gender, race, and ethnicity on many of the key variables in this study. Women reported higher levels of depressive symptoms, friendlier work environments, and greater ability to reduce their work hours than men did. African Americans had higher depression scores and less flexibility in their jobs on two out of three flexibility variables than whites and others. Both African Americans and other racial groups reported less stressful and demanding jobs than whites but rated their work environments as less friendly to older workers than did whites. Hispanics had higher depression scores than non-Hispanics and were less able to reduce their work hours. They also reported less stressful jobs but less friendly workplaces.

However, very few gender, racial, and ethnic differences in depressive symptoms appeared in the regression analyses when the control variables were included. One that did appear consistently was that women still showed higher depression scores than men, but this was the case *only* in the Early Baby Boomer cohort. Women's higher level of

depression is expected and consistent with the established literature. Past research has also shown that although the gender gap in depression exists across the life course, the size of that gap varies by age. Using data from three different surveys, Mirowsky (1996) found that the gap between men and women in depression scores was largest in the 50-59 and 60-69 age groups and that it narrowed somewhat among those in the 70-79 year age group. All of the EBB cohort members are between 51 and 56 years of age, but some of the HRS cohort respondents are in their 70's. The depression difference between men and women in the older group is not as pronounced, possibly because some have entered the age range when the gender gap in depression narrows and possibly because men and women who are *workers* at this age may differ less in depressive symptoms than men and women in general.

It is also possible that the difference in the gender gap in depression between these two groups is a product of the different historical times in which these cohorts came of age. Previous research has shown that the experiences of a particular cohort's members during their formative years can have lasting impacts on their attitudes and values (Elder 1974; Cherlin 1992). Women in the younger cohort reached their twenties between 1968 and 1973, a tumultuous time in the history of the United States. The women's movement was in full swing, and the idea that women should work outside the home as a source of personal fulfillment became widespread. Perhaps women in the younger EBB cohort who are working but who do not experience their jobs as fulfilling are particularly disappointed by the disjunction between their own jobs and the ideal of women's employment that came to dominate the culture during their young adult years.

Hypothesis 1 that the older HRS workers would occupy more worker-friendly jobs was supported by difference of means tests by cohort. As expected, workers in the HRS cohort reported higher average levels of job flexibility on all three flexibility variables as well as more elder-friendly workplaces and lower levels of job difficulty and stress than workers in the younger Early Baby Boomer cohort. There is probably more than one explanation for this difference. Employees in the older cohort are more likely than the younger workers to have moved from career jobs into bridge jobs that offer these characteristics, perhaps upon reaching retirement age and qualifying for pension and social security benefits. Alternatively, individuals still in the workforce at this age may simply have had career jobs that offered the desired characteristics. In any case, the differences between cohorts in job characteristics probably reflect the fact that individuals in the older cohort who had jobs that were less worker-friendly and who could afford to leave the workforce have probably already done so by this age.

Cross-sectional regression analyses testing Hypotheses 2 and 3 produced only limited support for the idea that unfavorable job characteristics are related to the psychological well-being of workers in either cohort. Only the difficulty stress/scale and the workplace friendliness scale were associated with depressive symptoms. This was the case for both cohorts in the larger analysis sample, but the causal direction is not clear. Contrary to the expectations expressed in Hypothesis 3, however, these job characteristics do not appear to be more salient to the older group of workers. In fact, the results indicate the opposite, with workplace stress and friendliness appearing to be more strongly associated with depressive symptoms among the younger cohort than among the older cohort. One possible explanation for this is that individuals in the older age group

who continue to work are less sensitive to these characteristics to begin with. Workers still in stressful and unfriendly work climates when they are in the 62 to 73 year old age range may simply be people who have higher tolerance for such jobs. This would constitute a selection effect.

Such a selection effect may well be operating in conjunction with an aging effect. Previous research using cross-sectional data has found that depression follows a u-shaped curve across the life course, with levels of depressive symptoms decreasing across the adult years until middle age when they begin climbing, eventually reach their highest levels among the oldest old (Mirowsky and Ross 1992; Schieman, Van Gundy, and Taylor 2001). Some of the decrease in depression across the adult years and into middle age has been attributed to the maturity that comes with age as individuals improve their ability to deal with life's challenges (Mirowsky and Ross 1992). Most of the increase in depressive symptoms that occurs after middle age in the later years is attributed to declines in statuses such as health, physical abilities, and financial security (Mirowsky and Ross 1992; Schieman, Van Gundy, and Taylor 2001) that offset the improvements gained through maturity. Respondents in this older HRS sample cohort are still workers, and, as discussed in Chapter III, their self-reported health is not significantly different from that of their younger counterparts. As a result, this group may be benefiting from the maturity that aging brings without having yet suffered the offsetting status declines that accompany advanced age.

A cohort effect based on historical trends might also help to explain the apparent cohort differences in response to workplace climate and stress. As mentioned previously, although these age groups are separated by only a short span of years, the social,

economic and cultural contexts in which they grew to adulthood differed substantially. The older HRS group was born in the Depression era to parents raising children during that time of economic hardship. These parents may well have transmitted to them the value of working hard at whatever job might be available. In addition, this older group reached the age of 20 between 1951 and 1961, the height of the post-World War II economic boom in the United States when faith in the bureaucracy of the modern industrial firm and in the progress promised by capitalism and by America's economic preeminence were arguably at an all time high. In contrast, the younger baby boom cohort was born in a time of unprecedented economic prosperity but reached their 20's in a time of social upheaval and disillusionment with established institutions. The war in Vietnam, the women's movement, the cracks which began to appear in the U.S. economy in the early 1970's, and the change in social norms that accompanied this period may all have helped this generation develop a quite different view of work and of their own relationship to it (Sheehy 1995). These generational differences could also partially account for the fact that the younger workers appear to exhibit a stronger association between job stress, workplace climate, and depressive symptoms.

Among the smaller analysis samples of married individuals and of individuals who answered financial strain questions, the limited relationships between job characteristics and depressive symptoms either disappeared or were weakened. Only among EBB members was at least one of these job characteristics, workplace climate, consistently related to depressive symptoms. The addition of financial strain to the model among the financial strain subsample slightly weakened the association of workplace climate with depressive symptoms among the EBB members. In this subgroup, however,

financial strain itself turned out to be a strong predictor of depressive symptoms for both cohorts.

Hypothesis 4—that job characteristics at one wave would be associated with changes in depressive symptoms from one wave to the next—also received only very limited support. Of the five job characteristic variables from 2002, only the ability to move to a less demanding job was associated with 2004 depressive symptoms while controlling for 2002 depression scores. HRS cohort workers who reported in 2002 that their employers would let older workers move to a less demanding job for less pay showed significantly greater declines in depression scores two years later than those who reported that their employers would not allow such a move. The ability to make such a job change would almost certainly give employees a greater sense of control, and a sense of control has been consistently linked with better mental health outcomes in the literature (Pearlin 1999).

The other two flexibility variables, the ability to increase or decrease one's hours could certainly also be seen as giving employees greater control, however they were not associated with the dependent variable, either cross-sectionally or longitudinally. The Herzog, House, and Morgan (1991) study might provide a clue as to why this is the case. In that study, employees who were working about as many hours as they wanted to work were better off psychologically than those who were working either fewer or more hours than they preferred. Working a schedule that one prefers is not necessarily connected to having the ability to increase or decrease one's hours. A job might be accepted because it offers a preferred schedule but the job might not have any flexibility once accepted. If it meets a worker's desire for hours at the outset, perhaps flexibility in the future is less

important. Whatever the case, the longitudinal analysis gives no indication that flexibility in terms of the ability to change the number of hours worked is detrimental to the psychological well-being of older workers over time. Nor, as we have seen, is it associated with depressive symptoms in cross-sectional analysis. Given that flexibility is reported to be the most important job characteristic to older workers, as discussed in Chapter I, this finding is surprising. However, it may well be that older adults who want or need greater job flexibility select out of the workforce because they are unable to find it. It is also quite possible that job flexibility is indeed important to the well-being of older adults but that these particular HRS measures are not capturing the most important aspects of it.

Although the longitudinal analysis did indicate that the ability to move to a less demanding job was associated over time with reductions in depression scores, it also called into question the connection between depressive symptoms and the variables of job difficulty and stress and workplace friendliness that appeared in the cross-sectional regressions. Since these variables were not associated with changes in depressive symptoms over time, it may be that workers who are depressed perceive their jobs negatively rather than that these job characteristics lead to depressive symptoms.

Limitations and Future Research Directions

There are several limitations to this study which should be noted. First, the use of a single outcome variable, depressive symptoms, does not reflect other consequences of older workers occupying inflexible, stressful, and unfriendly jobs in the traditional retirement years. Single outcome variables may fail to capture the range of ways in which different groups might respond to the same stressor (Aneshensel, Rutter, and

Lachenbruch 1991; Horwitz, White, and Howell-White 1996). If employment characteristics in late life can be detrimental to older workers, then it is very likely that not all individuals would respond with depressive symptoms. The addition of other outcomes such as life satisfaction, anxiety, or alcohol use might produce different results. In addition, the measurement of depressive symptoms in the Health and Retirement Study is perhaps not optimal. Only 8 of the 20 CES-D scale items are used. Also, the full CES-D scale asks respondents to say how often in the past week they have experienced the items on the scale (“rarely or none of the time,” “some or a little of the time,” “occasionally or a moderate amount of time,” or “most or all of the time”), but the HRS modified version asks respondents to reply only yes or no to whether they had experienced the 8 symptoms “much of the time” in the past week. The resulting measure may fail to capture the range of variability in symptoms that would be captured by the full CES-D scale.

The fact that financial strain data was available for only a small portion of the overall sample is also a limitation to this study. There is clearly an association between financial strain and depressive symptoms. However, the smaller sample for whom this information was available did not show the same relationships between job characteristics and depressive symptoms that the larger analysis sample did even when financial strain was not included in the model. Therefore, I cannot say whether financial strain explains the relationship between job characteristics and depressive symptoms. Future research on employment and mental health among older adults should include financial strain variables.

Another limitation lies in the design of the study itself. I focused on *working* older adults because I wanted to see how they fared in employment situations that might not be well suited for them. However, by looking only at those who remain in the paid labor force, I am missing those who left the labor force *because* of the very job characteristics in question. An inability to find suitable employment is certainly pushing some out of the labor force to begin with. As James and Spiro (2007) found in their longitudinal analysis of HRS data, depression at one wave predicted retirement at the next. Mental health outcomes associated with work environments that are not older-worker friendly may be the *cause* of retirement for some and may occur less frequently among those who remain. The Health and Retirement Study began in 1992 so it is possible to follow employees over time to determine how job characteristic are associated with both mental health and labor force participation over a longer period of time. Future research should attempt to do just that.

Finally, as discussed in the description of measures in Chapter III, the fact that both the dependent variable and the independent variables are perceptual measures raises the possibility that job characteristics and psychological well-being are different expressions of one underlying dimension such as a personality characteristic or that job perceptions are colored by current depressive symptoms. Future research should be undertaken using job-related measures which carry less risk of being confounded with workers' or temperament or current emotional state.

It is my expectation, given the trends in public and private pension financing described in Chapter I, that fewer Americans will have the luxury of retiring completely in the coming generations. Today's older adults, however, live in what has been referred

to as the “golden age” of retirement income (Munnell and Soto 2005). At present, many more elders have the luxury of leaving undesirable jobs at retirement age than will likely be the case in the future. It is possible then, that were this research to be replicated some years in the future, different results might be obtained. The issue of whether our economy will provide meaningful and productive work that suits the needs of older adults is one that is only now coming to the fore because the demographic and economic changes described in Chapter I are only now getting underway. How older workers are affected by specific employment characteristics will certainly deserve more attention in the years ahead.

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APPENDIX
IRB APPROVAL LETTER

University of New Hampshire

Research Conduct and Compliance Services, Office of Sponsored Research
Service Building, 51 College Road, Durham, NH 03824-3585
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22-Mar-2007

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IRB #: 3959

Study: Job Characteristics and the Psychological Well-Being of Older Workers

Approval Date: 16-Mar-2007

The Institutional Review Board for the Protection of Human Subjects in Research (IRB) has reviewed and approved the protocol for your study as Exempt as described in Title 45, Code of Federal Regulations (CFR), Part 46, Subsection 101(b). Approval is granted to conduct your study as described in your protocol.

Researchers who conduct studies involving human subjects have responsibilities as outlined in the attached document, *Responsibilities of Directors of Research Studies Involving Human Subjects*. (This document is also available at <http://www.unh.edu/osr/compliance/irb.html>.) Please read this document carefully before commencing your work involving human subjects.

Upon completion of your study, please complete the enclosed pink Exempt Study Final Report form and return it to this office along with a report of your findings.

If you have questions or concerns about your study or this approval, please feel free to contact me at 603-862-2003 or Julie.simpson@unh.edu. Please refer to the IRB # above in all correspondence related to this study. The IRB wishes you success with your research.

For the IRB,


Julie F. Simpson
Manager

cc: File
Turner, Heather