PSYCHOLOGICAL ADJUSTMENT TO WIDOWHOOD: THE ROLE OF INCOME, WEALTH AND TIME[1]

Sponsored by
Society of Actuaries'
Pension Section Research Committee

Prepared by

Karen C. Holden[2]
University of Wisconsin–Madison

Jeungkun Kim
University of Michigan

Beatriz Novak
University of Wisconsin–Madison

Table of Contents

EXECUTIVE SUMMARY

Overview

The death of a spouse is likely to have long-term psychological consequences due to the loss of an intimate companion and because income and wealth may also be diminished. While the typical assumption is that financial shocks and long-term financial insecurity are detrimental to psychological well-being, there is little research on the role financial resources play in mitigating the shock of widowhood and their importance to the psychological well-being of widows.

This paper uses data from two longitudinal surveys to examine the relationship between psychological well-being and financial well-being of older women and men, with specific interest in differences by marital status and duration of widowhood. The Wisconsin Longitudinal Study (WLS) provides a look at the consequences of relatively early widowhood. The Health and Retirement Study (HRS) has interviewed a representative sample of individuals 50 and older over the last two decades. We use the data from that survey to examine the adjustment to widow(er)hood over a larger age range, but with likely less precision to measure differences among women of a single age.

To understand the separate effects of financial resources and the loss of a spouse on psychological well-being, we first explore the predictive effect of widowhood and its duration on financial satisfaction. We then compare the psychological well-being of widowed women to married women distinguishing the predictive effects of financial resources from that of widowhood timing and duration. The basic assumption underlying this analysis is that the two major traumas that occur upon the death of a spouse—the loss of companionship and the loss of resources the spouse brought to the household—have distinguishable effects on the psychological well-being of women and men and adjustments to them may be of a different nature and different timing. Over time widows may adjust to both effects: financial resources may improve or budgets adjust and widows may form new friendships and relationships. Over time grief and the sense of loss may diminish or, alternatively, grief may remain but individuals may acquire ways to offset that grief. We examine as well how the components of psychological well-being change with widowhood duration.

Literature Review

This report first reviews the relevant literature on economic and psychological well-being (or "happiness"). One literature has consistently shown that non-married older women (who are primarily widows) are worse off in terms of income and wealth than are married couples of like age. Another body of literature has examined the effect of marital status on psychological wellbeing. This literature is generally consistent in finding that marriage matters a great deal to happiness, that women report higher levels of happiness than men and widows report lower levels than married women. However the greater happiness among women than men reverses with age as women are widowed and men retire, retirement presumed to increase reported happiness and widowhood to decrease it.

The consistent finding that marital status matters to happiness counters the adaptation hypothesis that individuals have a "set-point" from which they may deviate due to changes in

life circumstances but to which they adapt over time. The few studies that look specifically at widows' psychological wellbeing by duration of widowhood confirm the psychological shock of widowhood with greater mental health problems among more recently widowed women. However there is little literature that relates the psychological well-being for widows and widowers to their economic resources. Some investigators speculate that economic dependence in marriage leads to financial and emotional stress when a partner dies, but do not investigate that issue directly. International comparisons that find greater levels of happiness reported by citizens of countries which provide greater economic security suggest the importance of pre-widowhood resources continuing into widowhood.

Data and Key Measures

Data: Data come from two sources: the Wisconsin Longitudinal Study (WLS) and the Health and Retirement Study (HRS). The WLS is a longitudinal panel study that has tracked a cohort of over 10,000 men and women from 1957 when they graduated from high schools across Wisconsin. The most recent (2004) interview when they were all age 64–66 provides particularly rich financial information on income, and assets, as well as on psychological wellbeing and satisfaction with financial status. Those who were widowed in 2004 would have lost their spouses at a relatively young age. The HRS samples were aged 51 to 61 when first interviewed in 1992 and were interviewed every two years after that with additional and older cohorts added in subsequent years.

The WLS sample selected for this study consisted of women and men who were interviewed in 2004 but had been married in 1993, the next most recent interview of this cohort. We added to this sample women who were divorced in 1993 and remained so in 2004 in order to draw some comparisons of long-term divorced and long-term married individuals with those whose marriages dissolved because of a spousal death. Our HRS sample is individuals who were married or already divorced in 1998 and also interviewed in 2006. Because a key variable is satisfaction with financial resources as a widow, the HRS sample is limited to those who responded in 2006 to the "leave behind" questionnaire from which the financial satisfaction variable was obtained. In addition, because the WLS is composed by individuals who are high school graduates, for comparability the HRS sample is restricted to individuals with at least high school (or GED) diploma. While the WLS allows us to examine the impact of widowhood among a group of women and men who are at similar age-related risk of widowhood, the HRS allows us to examine how age at and duration of widowhood affects individuals' financial and overall life satisfaction. In the WLS long-term widows were also widowed at younger ages and so age and duration effects cannot be distinguished.

Measures of Psychological Well-Being: Our primary interest is in the relationship between psychological well-being and a spouse's death and the mediating influence of economic resources. To measure psychological well-being we use the Center for Epidemiologic Studies Depression Scale (CES-D). The CES-D is a 20-item self reported scale that asks the frequency of depressive symptoms that may have been experienced during the past week. It captures both the positive and negative aspects of psychological wellbeing, asking about three broad categories of affects: somatic/depressive symptoms, which are consistent with individual bereavement; interpersonal/depressive affects, which relate to one's interaction with others; and positive affects.

Both the WLS and HRS use modified versions of the CES-D-20 scale. The WLS modifies the CES-D's four-point response scoring only slightly by asking the number of days per week these symptoms were experienced. This provides a greater CES-D range (from 0 to 140) as well as capturing finer distinctions in days per week that may be important to psychological differences among women and men and over time. As in the standard scale, responses to the 20 items are summed, with the positive affect symptoms reverse coded. Higher scores (the net balance of negative and positive affects) indicate greater likelihood or frequency of depressive feelings.

The HRS CES-D measure consists of eight items from the CES-D-20: four of the nine somatic symptoms, two of the seven somatic symptoms and two of the four positive affects. The HRS CES-D question asks whether or not the individual had experienced these "feelings…for …much of the time during the past week." With a score ranging from 1 to 8, the HRS CES-D index may capture fewer changes in affect over time and identify only shifts from feeling "mostly" a particular way as subjectively defined by the respondent. As with the WLS measure we sum the responses with the positive feelings reverse coded.

Despite these differences in CES-D scales in the two surveys, variations in the summary measures across marital status groups are quite consistent. The negative affects are more frequently reported and positive affects less often reported by widowed women and men compared to married women and men. WLS widowed women and men on average report about one and half more days of negative affects than do married individuals. The largest differences were for days feeling depressed, crying, feeling lonely and sad, not being able to shake off the blues, and days in which they less often enjoyed life and felt hopeful for the future. The affects with the greatest difference between married and widowed individuals in the HRS are for the probability of feeling "mostly" depressed, lonely or sad (being greater for HRS widowed individuals than married individuals) and the probability of feeling happy or enjoying life (lower for widowed than for married individuals). Divorced women and men fall in an intermediate range for most of these measures.

Measures of Financial Well-Being: In the most recent survey (but not the earlier surveys) both the WLS and HRS ask about satisfaction with financial resources. Both ask:

> How satisfied are you with your present financial situation—completely, very, somewhat, not very, or not at all satisfied?

Widowed women in the WLS are less likely to be completely satisfied with their financial status than are widowers or married women. However, widowed women in the HRS are in fact more likely to be completely satisfied than married women, despite—or perhaps because of—their older average age. A much smaller percentage of divorced women than married or widowed women fall in the higher satisfaction category.

Analytical Results

Financial Satisfaction: We first explore the predictors of satisfaction with financial resources. The key question is whether widowhood affects financial satisfaction and whether that effect diminishes with duration of widowhood. We estimate an ordered logit, with the dependent variable having five possible values corresponding to the five-item response scale to the question asking how satisfied the respondent was with his or her financial resources. A higher

score indicates greater *dissatisfaction* with financial resources. Probabilities of being dissatisfied for divorced or widowed women and men are relative to married women and men, respectively. A statistically significant difference indicates that women (or men) in the specific marital status group (e.g., women widowed for seven or more years) are more (or less) likely to be dissatisfied with their resources than are women (or men) who were married throughout the period and that this measured difference is unlikely to have arisen by chance. Income and wealth (all in 2004 dollars) are adjusted for family size and so reflect any reduction in consumption requirements of the smaller households following a spouse's death and any other changes in household composition.

For both women and men greater income and wealth and their own better health reduces *dissatisfaction* with their financial situation. Current income and wealth has a greater effect than does income and wealth in the initial year, when all (but the divorced) were married. Indeed for the WLS sample, wealth and income in 1993 has no significant effect on current levels of financial satisfaction. This suggests that satisfaction with financial resources is driven by their present situation, not current resources relative to the prior married state.

Own poor health increases dissatisfaction with one's financial situation, an indication that, controlling for type of health insurance coverage, individuals assess resource adequacy in light of their own current or probable health care costs. Interestingly, working for pay increases dissatisfaction with financial resources. These results suggest that when income must come from work rather than from, for example, pensions and social security, individuals feel much less satisfied with the financial situation than do those with the same income and wealth who do not work.

Widowhood status and duration have no significant effect on how women and men evaluate their financial status. For WLS widows the probability of being dissatisfied (or more dissatisfied than married women) is higher the more recently they were widowed, but none of the probabilities are significantly different from married women. For the WLS men and the HRS sample, there is no observable (even non-significant) trend. It is interesting that long-term divorced women are far more dissatisfied with their financial resources than are their married peers even when controlling for income and wealth and for work, their own health and health insurance coverage.

Psychological Well-Being-All Widows Compared to Married: We turn next to predictors of psychological well-being as measured by the available CES-D measures, with a higher score on this dependent variable representing *more* days of psychological distress. We include as an independent variable the individuals' satisfaction with their financial status which captures the effect of health and education on that variable. Thus own health and education in these predictive estimates capture their incremental effects on psychological well-being. All sample members are included in this analysis—effects of widowhood (and divorce) are compared with those who remained married.

Despite differences in CES-D scales and sample age distributions, the HRS and WLS results lead to similar conclusions about the effect of widowhood and its duration on psychological well-being. More recent widowhood, greater dissatisfaction with one's finances, and the individual's poorer health uniformly increase the chances of reporting more frequent depressive symptoms. While there is some evidence that widowhood effects on depressive symptoms diminish over time, CES-D levels remain significantly higher for the longest term widows compared to married women. Being divorced, which significantly increased

dissatisfaction with financial resources, does not additionally contribute to the chances of being depressed.

Because the WLS is a sample of individuals of the same age we can observe effects of widowhood duration that cannot be clearly identified with a broader age range of women and widows for whom effects of current age, duration of widowhood, and age of widowhood cannot be clearly distinguished. In the WLS sample, the most recently widowed women and men (widowed within the past three years) express a much higher degree of depression than do like-aged married women and men, respectively. While women widowed somewhat longer—for 3–7 years—report CES-D levels that are *not* significantly different from married women, women widowed for more than seven years report significantly *higher* CES-D scores. We speculate this represents adjustment to widowhood, the effects of very early widowhood, and who remains a widow. WLS women widowed 3–7 years appear to be adjusting psychologically to widowhood, perhaps some forming new relationships. Women (recall, the sample is all the same current age) who had been widowed for more than seven years (but since 1993) were widowed in their early to mid-50s when children and the requirement to work may have meant a more difficult adjustment to widowhood. It is also the case that this group of early widows are observed only because they have not remarried, a condition that may both be due to higher levels of depressive symptoms and be a cause of those higher levels.

We discuss the effects of several other factors: Poorer health increases CES-D scores and health insurance has an effect in addition to its effect on financial satisfaction. Having only Medicare coverage is associated with higher depression levels and, curiously, having no insurance reduces the CES-D. The greater psychological well-being that is associated with absence of any health care coverage may indicate the selectivity into this category of those less concerned about their likely need for and cost of health care or of those who prefer alternative non-covered care (and therefore their not acquiring traditional medical care coverage).

Psychological Well-Being-Widows Only: To better understand CES-D differences among widowed women, we duplicate the previous analysis for widowed women only. The longest widowed women are now the comparison case. We do not do this analysis for widowers because the small numbers make estimates for differences in widowhood duration unreliable. This analysis shows the stronger effect of dissatisfaction with financial status as an explanatory factor of differences in depressive symptoms *among* widowed women. More recently widowed women report significantly more depressive symptoms. In this analysis we include the CES-D reported by these same women in the initial year (1993 for the WLS and 1998 for the HRS). A higher CES-D score in 1993, when all were married, increases the chances of an HRS individual being in a higher CES-D category and increases the mean number of days of reported depressive symptoms for WLS widows. Thus, the effect of widowhood on psychological well-being is in part a legacy of greater depression prior to a husband's death, but the effect is far smaller than is the effect of widowhood itself.

Psychological Well-Being-Anticipating Widowhood: While our results indicate an added effect of widowhood itself on psychological well-being, pre-widowhood psychological well-being is almost certainly a combination of long-term psychological conditions and the pending death of a husband. If this were the case, we'd expect to see pre-widowhood CES-D scores affected most strongly by those who were soonest to be widowed. There is some support for this hypothesis. In 1998, HRS married women whose husbands would die in the next two years (the longest-term widows in 2004) were significantly more likely to be in a

higher CES-D category. We do not see this same affect among the WLS widows, perhaps because early death is more likely unexpected. Nevertheless, even for HRS widows the higher odds of being depressed just prior to widowhood (1.7) is much lower than the odds associated with the post-widowhood effect of recent widowhood (4.72). While post-widowhood depression is in part a consequence of dealing with pending death, at least among older women, it is widowhood itself that is the greatest contributor to post-widowhood depression.

For both samples, it is the respondents' health that matters most to psychological well-being when married, with spouses' health having no effect for WLS women and a small effect for HRS women and men.

Psychological Well-Being-Psychological Adaptation: We are interested in how psychological symptoms change as widowhood lengthens. CES-D scores could diminish as days with negative affects decline, as days with positive affects increase or both occur. These changes have clinical implications, and perhaps implications for financial interventions. If negative affects of widowhood alone fall while positive affects remain low, the resilience that comes with more positive feelings would not be experienced. An increase in positive affects alone might indicate compensating changes that obscured but did not diminish the negative feelings—and their consequences—associated with widowhood. Among HRS and WLS widows, the chances of experiencing somatic symptoms (feeling depressed, not eating, crying) are higher than for married women only in the early years of widowhood. Positive affects also are significantly less likely to be experienced for the most recently widowed. In contrast interpersonal symptoms, much higher in the first two years of widowhood, are persistently more likely to be reported by all widows than they are by married women.

The WLS results provide a clue to the curious lower and then higher CES-D scores as widowhood lengthens among these early widows. The most recently widowed reported more days with somatic and interpersonal depressed feelings. While all three components of the CES-D scale improved with longer widowhood, interpersonal symptoms persisted at higher levels even as days with somatic symptoms and positive experiences were no longer significantly different from the numbers reported by their married peers. It is not surprising that days of sadness and loneliness continued to be reported even as more troubled feelings diminished and happiness and joy increased. The U-shaped effect of widowhood duration seen in the WLS widows' CES-D scores is apparently the consequence of persistence of interpersonal/depressed affects among the women who became widows at a quite young age and did not remarry.

Conclusions

The purpose of this paper was to understand the adjustment to widowhood over time, the effect of early widowhood and the separate influence of financial resources and widowhood on psychological well-being of widows and widowers. The WLS allows us to examine the impact of relatively early widowhood—for some in their 50's—on subjective financial and psychological well-being. The HRS sample is a more representative sample of older persons, providing a more generalizable picture of widowhood but with limited ability to distinguish the separate effects of current age for that of age at and duration of widowhood. The WLS sample is of women and men who were married in 1993 and were interviewed in 2004, some of whom widowed during that interval. Our HRS sample is of women and men who were

married in 1998 and interviewed in 2004; during that period some were widowed. Because the WLS is a sample of high school graduates only, we limit our HRS sample to individuals who hold a high school diploma. We also include a sample of individuals who were divorced in both those years.

The results from the analyses of both samples indicate an immediate, fairly large rise in CES-D scores. The effect of widowhood diminishes over time, but does not disappear entirely, due to the persistence of what are labeled "interpersonal/depressed" days—those during which individuals experience feelings of sadness and loneliness. When contrasting widowed individuals with married individuals and contrasting widows only with the longest term widows, those most recently widowed report significantly more depressive symptoms. The most recently widowed HRS women and men are 4–5 times as likely as were married women and men to be in the higher CES-D category and WLS women and men report about 11 and 5, respectively, of days during which particular depressive symptoms were experienced.

For all men and women, both married and widowed, dissatisfaction with their financial status increases CES-D scores. Widowhood itself does not have an effect on financial satisfaction, indicating that widows and married individuals assess resources in much the same way, largely based on current income and wealth and health status. However, financial concerns are a larger contributor to depression for widowed women. When income must be gained through work, both men and women are less likely to rank their financial satisfaction as high.

Higher CES-D scores among widows are in part a consequence of pre-widowhood depression, associated with pending spousal death. While pre-widowhood higher CES-D scores carry into the post-widowhood period, widowhood itself has a much larger effect.

The examination of how CES-D components change, suggest that while joy increases and depressive symptoms diminish, feelings of loneliness and sadness persist well into widowhood. The early years of widowhood are indeed difficult ones psychologically with joy sharply diminished and depression markedly higher; indicating the inability to share in joyful moments even as loneliness and depression is experienced. This confirms earlier studies that found more severe mental health problems and higher rates of suicide among the most recently widowed women.

These results have implications for financial planners who work with recently widowed individuals. First, findings on financial satisfaction indicate that widowed individuals are not any less likely to feel financially insecure than married individuals with the same resources. Widowed individuals appear on average to be realistic assessors of their financial status—at least no less so than are their married peers. Individuals in poorer health and those who receive some of their income through paid work, are less satisfied with a given level of income and wealth, even though work for pay reduces depressive symptoms. Planners may wish to explore with their clients the nature of their paid work to assess the financial necessity and the potential psychological gains (or losses). They may also wish to explore health concerns individuals have to assess adequacy of resources to cover anticipated uncovered health care costs.

Of more concern is the very real depression that is associated with being widowed. Financial advisers must recognize the challenges of working with individuals who are not just experiencing feelings of "depression," but are more likely than just prior to widowhood to feel as if "everything is an effort," or that they "cannot get going." Even as these feelings diminish over the long-term, widows remain lonely and sad, symptoms that may make them

vulnerable to ideas (and scams) that might promise to ease their loneliness. Finally, though widows may be just as (dis)satisfied with a given level of income and wealth as are married individuals, dissatisfaction with that level has a greater effect on the psychological well-being of widows than it does for married individuals. It is this difference that may be the important insight of this study. Even when widowed individuals express no less satisfaction with their financial status than they may have when married (or compared to married peers), existing concerns may be contributing to depressive feelings which may not be evident or as easily identified by financial planners. Ways to assess depression among clients may not be part of financial advisor training, but may be required to appropriately advise widowed individuals.

PSYCHOLOGICAL ADJUSTMENT TO WIDOWHOOD: THE ROLE OF INCOME, WEALTH AND TIME INTRODUCTION

The loss of a spouse through death is widely accepted as a traumatic change in life circumstances that is likely to have long-term consequences due to the loss of an intimate companion and because income and wealth may also be diminished. Individuals are known to be differently affected and cope more or less successfully with a spouse's death. While the typical assumption is that financial shocks and long-term financial insecurity are detrimental to psychological well-being, there is little research on how financial resources assist in the psychological adjustment to widowhood and how the subjective well-being of widows compares over the duration of widowhood to that of married and divorced women, the latter whose marriages were also dissolved though for a different reason.

This paper uses data from two longitudinal surveys to examine the relationship between psychological well-being and financial well-being of older women and men, with specific interest in differences by marital status and duration of widowhood. The Wisconsin Longitudinal Study (WLS) provides a look at the consequences of relatively early widowhood. The WLS has repeatedly interviewed a single cohort—1957 Wisconsin High School graduates—and thus allows us to analyze more precisely the psychological adjustment to widowhood prior to age 64–65, respondents' age at the most recent interview. The Health and Retirement Study has interviewed a representative sample of individuals 50 and older over the last two decades. Because it is a nationally representative sample, and therefore a representative sample of widows and widowers, we can examine the adjustment to widow(er)hood over a larger age range, but with likely less precision to measure differences by age of widowhood.

BACKGROUND

It is well known and documented that the probability of being a widow increases as women and men age; in 2000 just over one-third of men in the U.S. age 85 or older and almost three-quarters of women were widowed (Kreider & Simmons, 2003). However, widowhood is not an event that occurs at older ages only; in 2002 half of widowed men and women were under the age of 74 and about one-quarter were under the age of 64. Shoen and Weinick (1993) estimate the average age in 1988 at which men and women experienced a spouse's death was about age 69 for women and 72 for men. Interestingly, the increasing age of widowhood has led to declining remarriage rates for both widowed men and women; in 1988 only 17 percent of men and 6 percent of women could expect to remarry, down from 27 percent and 10 percent in 1970. For widows and widowers in general, that status is increasingly likely to be long-term as husbands live longer and marriage rates decline. In this study we examine how widowhood and its duration influence psychological adjustment among widowed men and women and the role of income and wealth in that adjustment.

There is an extensive literature on the economic status of widows and widowers. This literature, while making no strong assertions about individual income and wealth preferences of individuals, assumes that groups with lower income and wealth are on average less well off in terms of life satisfaction. National and cross-national studies have consistently shown

that non-married older women (who are primarily widows) are worse off in terms of income and wealth than are married couples of like age (Bradshaw & Chen, 1996; Shaver, 1996; Siegenthaler, 1996; Smeeding, 2001). Holden and Zick (1998) examined changes in income as married women were widowed and show that some share of the lower income of widows is due to pre-widowhood differences in income between couples who remain intact and those in which the husband dies. Nevertheless, a substantial decline in (household size adjusted) income occurs upon widowhood. Sevak, Weir and Willis (2003/2004) document that while women widowed at younger ages were more likely to be poor prior to widowhood they also experienced a sharper decline in income and wealth than did those widowed at 70 and older. These younger widows may be ineligible for survivor benefits from the Old Age and Survivors Insurance (OASI) program which pays benefits to surviving spouses age 60 or older (50+ if they are disabled) of retired workers and only to younger widows if there are children under 16 in their care.[3] While employer-provided pensions may pay survivor benefits, Holden and Brand (2003) document that this is a more uncertain source of income for survivors in part because pensioners may select a single-life payment and pensions may delay payment of survivor benefit payment until the year when the deceased worker would have been pension eligible. Holden and Brand (2003), using longitudinal data that track individuals over several decades, show that the initial income gap between intact couples and newly widowed women diminishes overtime, as husbands of intact couples retire and insurance and estates to widows are fully settled.

Another body of literature has examined the effect of marital status on psychological wellbeing.[4] This literature is generally consistent in finding that marriage matters a great deal to happiness, that women report higher levels of happiness than men (Gerdtham & Johannesson, 2001) and widows report lower levels than married women (Vennhoven, 1989; Glenn 1975; Glenn & Weaver 1979). While controlling for cohort, marital status and other individual characteristics yields a U shaped happiness-age profile with happiness generally increasing with age beyond ages 45–50 (Blanchflower & Oswald, 2007), women on average report diminishing levels of happiness over time. Easterlin (2003a) also finds that the greater happiness for women than men reverses with age as women are widowed and men retire, retirement presumed to increase reported happiness. Widowhood is correlated with a large negative shift in happiness for both women and men (Blanchflower & Oswald, 2000, 2005).

The consistent finding that marital status matters to happiness counters the adaptation hypothesis that individuals have a "set-point" from which they may deviate due to changes in life circumstances but to which they adapt over time. Easterlin (2003b) argues against this hypothesis in the case of marital dissolution; married individuals report happiness levels significantly higher than nonmarried individuals, regardless of duration of marriage and widows' self-reported happiness levels do not recover to the level of married individuals. He argues that even if some psychological adjustment occurs, adaptation is not complete because expectations formed during marriage for family and companionship are not likely to fully

---

[3]Surviving divorced spouses are eligible for benefits if the marriage lasted at least 10 years. Men and women are eligible for benefits without gender distinction in eligibility provisions and benefit calculations.

[4]This is part of a growing literature that attempts to understand why increased economic prosperity of countries and individuals is not accompanied by comparable increases in satisfaction. Frey and Stutzer (2002) review the literature on the relationship between economic resources and happiness.

shift to conform to current circumstances.[5] Widows appear to maintain a sense of relative disadvantage well after their husbands' deaths.

The few studies that look specifically at widows' psychological wellbeing over duration of widowhood confirm the psychological shock of widowhood. Wilcox et al (2003) using data from the Women's Health Initiative compare married and widowed women, with the latter distinguished by time since widowhood. They find that more recently widowed women report more mental health problems than do married women and longer term widows but that longer term widows actually had better mental health than did comparably aged married women. This may reflect the effects on mental health of spousal care both for recent widows and comparable married women. An indication of the immediate mental health consequences of widowhood is the elevated risk of suicide reported by Luoma and Pearson (2002) among young widows and widowers.[6]

There is little literature that relates the psychological well-being for widows and widowers to their economic resources. While Carr et al. (2000) argue that the emotional consequences of widowhood are affected by the quality of the marriage and dependence—financial and emotional—on the deceased partner, they do not examine how financial dependence separately contributes to emotional dependence. Earlier studies of widowhood noted the additional stress on bereaved widows who were financially dependent on deceased husbands (Morgan, 1981; Lopata, 1973). This pre-widowhood dependence may have been what Lee and DeMaris (2007) were attempting to capture by including pre-widowhood resources in their study of post-widowhood depression. That they found no effect may be because it is post-widowhood resources (or those resources relative to pre-widowhood resources) that are the appropriate explanatory variable.

International comparisons suggest the importance of securing pre-widowhood resources into widowhood. A report by the International Labour Organization, (2004) concludes that citizens of countries which provide greater economic security report greater levels of happiness. Cross-cultural comparisons indicate that financial satisfaction is a greater contributor to life satisfaction in poorer countries than in wealthier nations (Oishi et. al, 1999). Findings by Bender and Jivan (2005) have implications for widowhood effects on satisfaction. In examining "satisfaction with retirement" among fully retired persons in the Health and Retirement Study, they find that those who retired voluntarily (versus involuntarily) are more likely to be in the higher satisfaction category, as are those with a defined benefit plan (versus defined contribution plan only), those who are older and those in poor health. Being married had a small but significant contribution to satisfaction. Both effects suggest that "expected" changes are more likely to be weathered, that financial security contributes to a sense of well-being, and that companionship matters even when economic resources are controlled for.

---

[5]This is an assertion about psychological adjustment to social relationships rather than to a change in pecuniary status. The cited literature finds that though higher income may be aspired to, when achieved it is over time insufficient to maintain that increase in happiness levels. Likewise, when a diminishing of income is experienced, individuals adjust their aspirations and report unchanged happiness.

[6]At older ages suicide rates among widows and widowers approached those of married individuals while suicide rates among divorced persons were higher.

THEORETICAL APPROACH

We are interested in the psychological adjustment to widowhood over time and the role financial resources play in mitigating the psychological effects of a spouse's death. To understand the separate effects of financial resources and the loss of a spouse on psychological well-being we first explore the predictive effect of widowhood and its duration on financial satisfaction.[7] We then compare the psychological well-being of widowed women to married and divorced women distinguishing the predictive effects of financial resources from that of widowhood timing and duration. The basic assumption underlying this analysis is that the two major traumas that occur upon the death of a spouse—the loss of companionship and the loss of resources the spouse brought to the household—have distinguishable effects on the psychological well-being of women and men and adjustments to them may be of a different nature and different timing. The former loss has by definition occurred with a widow(er) event. The spouse is deceased, eliminating the joint utility gains that came from marriage. Lane (2000) argues that companionship, which is not easily measured as to its amount and quality, may have even greater utility than does income, implying that for widows this may be the greater loss. Over time the psychological consequences of that loss may diminish. Widows may find support from family members and friends, including from other widows who may suggest ways to mitigate the psychological costs of widowhood. Some may find new partners, completely off-setting this relational loss.[8] Adjustments may take two alternative forms. Over time grief and the sense of loss may diminish with a return to the same weighting of various aspects of psychological well-being in a single overall measure of "happiness." Alternatively, grief may remain but individuals may acquire ways to offset that grief. In this case the components of psychological well-being are differently weighted in an aggregate measure of psychological well-being that would appear unchanged from pre-widowhood levels.

The loss of income that was received by the spouse or of assets in the spouse's name may compound the psychological consequences of a spouse's death unless it is offset through income from private or public insurance programs.[9] For a spouse who has lost an income-receiving partner and has insufficient insurance against that loss, consumption adjustments may have to be made. Indeed, Bernheim, Carman, Gokhale, and Kotlikoff (2003) argue that failure of couples to purchase sufficient life insurance against the husbands' deaths is a major factor in declines in income and wealth upon widowhood. Zick and Holden (2000) find that while couples about to be widowed have less wealth prior to widowhood than do couples who remain intact, an additional decline is experienced upon widowhood. McGarry and Shoeni (2003) attribute some of the decline in wealth and income at widowhood to the out of pocket medical expenditures associated with end of life health care expenses for the dying spouse.

To the extent that important utility-providing consumption must fall, psychological well-being will as well. To offset this consumption decline, some survivors may enter the work-

---

[7]For clarity the discussion is about the effect of widowhood. We do examine widowers as well, but the number of widows is small and our conclusions about them are quite tentative.

[8]Due to their low occurrence in the samples of the size we have of widows we do not examine remarriage patterns among widows, although some of our findings may be influenced by who over time does and does not remarry.

[9]This assumes that income is "fungible," that it does not matter to the survivor if the income received and used to purchase goods comes from income received by the spouse or from a substitute source (e.g., OASI).

force with either positive or negative consequences for psychological well-being depending on whether work provides a greater sense of personal control and new forms of companionship or emphasizes the survivor's loss in economic security. On the other hand, Dutt (2008) in his review of the happiness and consumption literature suggests that declines in consumption may actually lead to greater well-being as less time is spent on prior consumption demands and lifestyle stress is lessened. Kaun (2005) makes the same argument. It may also be that couples purposively allocated a greater share of resources to assure higher consumption when both are alive even if requiring reduced consumption for the survivor. To the extent this is the case, the decline in income/consumption may be fully expected by the widow and exact no permanent decline in psychological well-being. Finally, widows may shift their comparison group from other married couples to widows whose lower average income level leaves the survivor in the same relative income position and therefore subjectively as well-off. Relative income theories of happiness would support this hypothesis.

DATA

Our data come from two sources, the Wisconsin Longitudinal Study (WLS) and the Health and Retirement Study (HRS). The WLS is a longitudinal panel study that has tracked a cohort of over 10,000 men and women from their senior year in high school (in 1957) through age 64–66 (2003–04).[10] Individuals in this sample are the high school graduate; this is an individual rather than a household sample. The most recent survey provides particularly rich financial information on income, and assets, as well as measures of psychological wellbeing and satisfaction with financial status. We use these data to examine a relatively large sample of women and men who lost their spouses sometime between the ages of 52 and 66.

The WLS is a sample of largely non-Hispanic white high school graduates and so results from analyses with these data cannot be generalized to lower educated individuals or to older women and men. For this reason we also use data from the HRS,[11] a household panel study of individuals (age-eligible household member, aged 51 to 61 at first interview, and spouse regardless of age) first interviewed in 1992 and every two years after that. Additional cohorts have been added to the original cohort so that the HRS remains broadly representative of the population 50 years of age and older. While our sample includes both the primary respondent and spouse, the inclusion of both spouses in our sample presents no analytical problem since males and females are separately analyzed.

Sample

Our WLS analysis sample includes women and men who were married in 1993, the next most recent interview, and also interviewed most recently in 2004. We include women who were divorced in 1993 and remained so in 2004 in order to draw some comparisons of long-term divorced and long-term married individuals with those whose marriages dissolved because of

---

[10]A public use file of data from the Wisconsin Longitudinal Study is available from the Data and Program Library Service, University of Wisconsin–Madison, 1180 Observatory Drive, Madison, Wisconsin 53706 and at http://dpls.dacc.wisc.edu/WLS/wlsarch.htm.

[11]Public datasets and files from the Health and Retirement Study as well as the RAND version are available at: http://hrsonline.isr.umich.edu/.

a spousal death. Our HRS sample is of individuals who were married or already divorced in 1998 and also interviewed in 2006. We began with the year 1998 since in that year additional, older cohorts were added to the HRS sample, providing a larger number and age range. Because a key variable is satisfaction with financial resources as a widow, our sample is limited to those who responded in 2006 to the "leave behind" questionnaire from which the financial satisfaction variable was obtained. This sample includes the WLS age cohort but provides a broader age range for those who became widows between 1998 and 2006, the most recent interview year.

Our WLS sample includes 552 widows and widowers among the 1957 graduates who were interviewed in that year and also in 2004. There were 5,584 married graduates. An advantage of using these cohort-specific data is that a major issue plaguing widow-married comparisons is largely avoided; the difference in age between widows and divorced and married individuals. Thus differences in other characteristics between these marital groups are not due to the differences in birth-cohort related events but to the different life paths of men and women graduates and couples who experienced divorce and early widow(er)hood and those who did not.

Because the WLS is composed of individuals who are high school graduates, for comparability the HRS sample is restricted to individuals with at least high school (or GED) diploma. Our HRS sample includes 429 widows and widowers. While the WLS allows us to examine the impact of widowhood among a group of women and men who are at similar age-related risk of widowhood, the HRS allows us to examine how age at and duration of widowhood affects individuals' financial and overall life satisfaction. In the WLS long-term widows were also widowed at younger ages and so age and duration effects cannot be distinguished.

Measures of Psychological Well-Being

Our primary interest is in the relationship between psychological well-being and a spouse's death and the mediating influence of economic resources. To measure psychological well-being we use the Center for Epidemiologic Studies Depression Scale (CES-D), a scale designed to measure depressive symptoms in the general population (Radloff, 1977). Several studies have examined the reliability and validity of the CES-D, including in its application to older populations (Beekman, et al. 1997) and for only selected depressive symptoms (Kahout, Berkman & Evans, 1993). The CES-D measure has several advantages over more global measures of "happiness." First it is a measure of depression that has been widely validated in the psychology literature to measure changes in depressive (and joyous) symptoms across a wide range of situations and individuals. It is widely used to assess clinical depression. Second, it is composed of distinct affects that capture both positive and negative aspects of life events and thus can measure not only whether they do but how individuals adjust over time to those events, whether by negative affects diminishing or being offset by positive affects. Third, questions are asked about frequency over the past week, which while still perhaps a relatively short period of time, is a better measure of adaptation than is a single question about one's feeling at the moment.[12]

---

[12]The General Social Survey asks "Taken all together, how would you say things are these days—would you say that you are very happy, pretty happy or not too happy." This is unlikely to distinguish differences in psychological well-being when changes to only some aspects of life are experienced. The Gallup

The CES-D is a 20-item self reported scale that asks the frequency of depressive symptoms that may have been experienced during the past week. The CES-D captures both the positive and negative aspects of psychological wellbeing, asking about three broad categories of affects: somatic/depressive symptoms, which are consistent with individual bereavement; interpersonal/depressive affects, which relate to one's interaction with others; and positive affects. The original scale provides four responses:

- Rarely or none of the time (<1 day);

- Some or a little of the time (1–2 days);

- Occasionally or a moderate amount of the time (3–4 days);

- Most or all of the time (5–7 days).

The CES-D has often been modified in studies of depression with researchers arguing comparability in results to those obtained with the CES-D-20 measure. Andresen, Malmgren, Carter and Patrick (1994) use a 10-item version with the four-point scale. These 10 items were selected because they had the highest correlation with the full-item scale. Blazer, Burchett, Service and George (1991) used the CES-D-20 but converted responses about symptoms during the past week to yes/no responses. Comparing their empirical results with those from a study site that used the full CES-D, they conclude that the "modified CES-D scale is comparable to the traditional CES-D scale as a measure of the prevalence of depressive symptoms" (p.M212).

Both the WLS and HRS use modified versions of the CES-D-20 scale. The WLS modifies the four-point response (above) to ask the number of days per week. This provides a greater CES-D range as well as capturing finer distinctions in days per week that may be important to psychological differences among women and men and over time. As in the standard scale, responses to the 20 items are summed, with the positive affect symptoms reverse coded.

The HRS CES-D measure includes eight items from the CES-D-20, six of which are included in Andresen et al's CES-D-10 scale. The HRS CES-D questions have only binary responses, indicating whether or not the individual had experienced these "feelings…for …much of the time during the past week." The HRS CES-D items are components of the full set asked in WLS: four of the nine somatic symptoms, two of the seven somatic symptoms and two of the four positive affects (See Table 2, below).[13] As with the WLS measure we sum the responses with the positive feelings reverse coded.

The CES-D scale has been used both as a summary score (see Carr, 1997) and as separate factors (e.g., Williams, et al. 2007). We use summary scores in this paper although in an earlier paper on the WLS alone we examined the three subcategories (Holden, Kim and

---

World Poll does propose a 10-point scale but presents it as measuring from the "best possible" to the "worst possible" and asks where the respondent stands "at the present time." This scale is subject to individuals imagining extremes that may not be very probable or change with the event. Thus, individuals may adjust the extremes rather than the point representing where they are "at the present time."

[13]HRS respondents were asked to give a "yes" or "no" answer to the questions whether "Much of the time during the past week you felt that everything you did was an effort…Your sleep was restless.....You were happy.....You felt lonely.......You enjoyed life......You felt sad.........You could not get going........You had a lot of energy." The last we interpret as reverse equivalent to the CES-D-20 item: "feel you could not get going."

Fontes, 2008). Our WLS estimates are of a continuous CES-D score with a range from 0 to 140, while the HRS is a categorical variable that we analyze as such, ranging from 1 to 8. Higher scores (the net balance of negative and positive affects) indicate more days of negative affects. The higher score indicates greater likelihood or frequency of depressive feelings, though we have no direct evidence of the depth of those feelings.

CHARACTERISTICS OF THE SAMPLE

Socio-Economic Characteristics

Table 1 presents characteristics of the two samples, distinguished by gender and current marital status. All WLS respondents, members of the same high school graduation cohort, are within a narrow age range (63–66) with mean age slightly higher for men.[14] Differences in other characteristics are consistent with patterns of marriage and education and the greater likelihood that married men in this cohort would be the primary wage earner. The still married men were more likely than their female and widowed male classmates to have gone to college and men are in households with higher average earnings and wealth.[15] Recall that all WLS respondents are high school graduates. Married and divorced men were the most likely to have gone on to college than were their currently widowed classmates.[16]

Both mean income and mean wealth of widows and widowers, even when adjusted for household size, are less than those of their married peers.[17] The percent of this largely Wisconsin resident group with income below the official U.S. poverty threshold is lower than the 2004 percent for all Wisconsin elderly, but is higher for WLS women than men and for widows and widowers compared to married women and men.[18]

The characteristics of the HRS sample reflect their broader age range. Widows and widowers are older than the married and divorced respondents, an issue we deal with in our analysis by controlling for age. That women become widows in the later years of marriage is reflected in differences between married and widowed individuals in other characteristics—in the type of health insurance and household and asset levels.

---

[14]This likely reflects differences in timing of school entry since parents have some discretion about first enrolling their children in school when children's birthdays are around the earliest start date.

[15]Although all WLS respondents are in the same high school cohort, they are married to individuals in different cohorts, with women on average married to older men.

[16]The higher percentage of divorced women in both the HRS and WLS with a college education may be partly a consequence of women returning to college following their divorce.

[17]We adjust for household size using the OECD equivalence scale (Hagenaars, de Vos and. Zaidi, 1994) and for the rate of inflation using the Consumer Price Index (CPI) (2004=100). The WLS and HRS ask about income of the household from all sources during the previous year; we use a WLS-provided summary measure and the HRS-RAND provided variables that incorporate all imputations from "bracketed" answers. WLS adopted the same bracket questions as did the HRS for respondents who did not provide a single numeric answer. Both surveys found this substantially reduced missing income and wealth values. Wealth is reported financial and property wealth including defined contribution type retirement accounts. We use the WLS summary variable and the HRS-RAND file variables which also incorporate bracketed imputations. The wealth measure does not include the wealth value of social security or defined benefit plans.

[18]In 2004 9 percent of the population 65+ in Wisconsin was poor. The lower WLS poverty rate is due in part to this sample being currently married or having had on average long-term marriages, to its being primarily a younger, white sample, and all having at least a high school education.

Table 1: Characteristics of WLS and HRS Samples by Marital Status

WLS Sample-2004

Characteristic	Widowed Women	Widowed Men	Married Women	Married Men	Divorced Women	Divorced Men
Age (mean)	64.4	64.5	64.3	64.4		
Education level (percent)						
HS only	80.4	80.4	75.6	63.8	68.1	68.9
Some college	2.9	0.0	3.1	2.6	5.0	2.6
College graduate	16.7	19.6	21.4	33.7	26.9	28.6
Widow duration						
Widowed 1 to 2 years	31.0	41.7				
Widowed 3 and 4 years	13.6	19.8				
Widowed 5 to 7 years	16.6	16.7				
Widowed 8 years and more	38.9	21.9				
Health Insurance(percent)						
Employer only	40.6	37.9	47.2	47.7	47.2	35.2
Medicare only	11.2	13.7	6.4	8.8	9.4	17.8
Only private purchase	11.2	2.1	9.3	4.9	6.5	5.3
Medicare plus private purchase	27.8	35.8	31.8	34.3	25.4	28.0
Government	4.3	3.2	2.5	2.4	3.6	5.3
No health insurance	4.9	7.4	2.9	1.8	7.9	8.3
Percent Poor	5.8	2.1	1.0	0.9	8.7	3.0
Income and Wealth ($)						
Size adjusted household income 2004						
mean	41,078	45,782	48,695	61,968	40,393	56,045
median	30,200	39,521	35,504	39,936	30,389	33,701
Size adjust household net worth 2004						
mean	511,745	493,824	505,609	627,731	330,001	1,127,383
median	275,363	340,000	291,749	319,992	177,121	206,000
Size adjusted household income 1993						
mean	43,939	41,850	49,143	65,902	37,447	61,958
median	31,703	32,285	38,276	41,302	29,406	41,012
Size adjust household net worth—1993						
mean	143,855	140,894	161,477	186,818	122,263	188,710
median	76,388	87,750	97,203	114,353	59,162	103,490
N	455	97	2,823	2,861	458	273

HRS Sample-2006

Characteristic	Widowed Women	Widowed Men	Married Women	Married Men	Divorced Women	Divorced Men
Age (1998)	67.0	69.4	59.1	62.2	60.4	60.2
Education level (percent)[a]						
HS only	45.5	35.7	47.2	41.4	40.1	47.7
Some college	31.1	33.3	29.9	23.6	31.6	27.3
College graduate	23.5	31.0	23.0	35.0	28.3	25.0
First survey year of widowhood						
Widowed 2006	27.0	38.8	—	—	—	—
Widowed 2004	26.7	23.5	—	—	—	—
Widowed 2002	22.7	15.3	—	—	—	—
Widowed 2000	23.6	22.4	—	—	—	—
Age at widowhood less than 65 (%)	22.7	17.6	—	—	—	—
Health Insurance (percent)						
Employer only	37.7	38.6	56.1	51.2	49.2	33.3
Medicare only	25.0	27.7	17.1	21.4	23.5	38.2
Only private purchase	0.6	1.2	3.6	1.2	3.3	3.5
Medicare plus private purchase	24.9	20.5	15.3	16.6	11.5	8.1
Government	9.7	9.7	5.4	9.3	8.2	18.4
No health insurance	2.1	2.4	2.6	1.5	4.4	4.6
Percent Poor	8.1	2.4	1.7	1.3	12.8	10.2
Income and Wealth ($)						
Size adjusted household income 2006						
mean	27,100	35,596	49,699	51,023	31,020	36,389
median	18,453	26,797	34,272	35,518	19,284	23,312
Size adjust household net worth 2006						
mean	323,712	424,074	543,653	560,477	215,719	393,274
median	187,460	216,639	246,354	263,430	97,294	140,710
Size adjusted household income 1998						
mean	34,331	33,170	56,741	58,871	34,354	46,469
median	25,116	27,163	40,523	42,392	26,181	30,313
Size adjust household net worth—1998						
mean	246,879	280,760	365,014	379,962	129,408	265,511
median	140,113	152,178	184,974	193,086	64,564	86,027
N	344	85	1,638	1,544	187	88

Source: Authors calculations from the Wisconsin Longitudinal Study and Health and Retirement Study.
[a] For comparability with the WLS, the HRS samples are individuals with at least a High School degree.
Income and Wealth are in 2004 U.S. dollars.

Mean and median income and wealth are presented in the lower panel of Table I. Both are adjusted for household size to take account of the lower consumption needs of the smaller widowed households. These also take account of inflation by adjusting all figures to 2004 price levels. Differences between the two samples in asset and income levels are generally consistent with the boarder age and geographic range of the HRS.

Widowhood Duration

We are particularly interested in this paper in the psychological adaptation of widows to their widowhood and so we distinguish widows by duration of widowhood. The WLS sample are relatively young widows and widowers, all widowed in their mid 50s to early 60s. We indicate duration of widowhood for the WLS by the number of years they had been widowed in 2004. For the HRS, we identify the first biannual survey the initially married women and men were identified as a widow or widower.

Almost one-third of the WLS widows lost their husbands in the two years before the 2004 interview and over one-third had been widowed for eight years or more. Because men marry younger women, they are on average older when widowed and hence a higher proportion of widowers than widowed women lost their spouses more recently. Higher remarriage rates for men than women also reduce the percentages who are longer term widowers. This sample on average is in or has had quite long marriages, with women having married younger and thus, if still married, in longer marriages.[19]

The later age at which men become widowers is also seen in the higher proportion of men in the HRS who had been widowed between the two most recent surveys. Only 18 percent of men compared to 23 percent of HRS women were widowed before reaching age 65. This emphasizes the value of the WLS in being able to tell us something about early widowhood when they may be less prepared financially and emotionally for a spouse's death including having well formed estate plans and post-widowhood social support. HRS women became widows in fairly even proportions over the four two year periods between the 1998 and 2004 surveys. As was the case for the relatively young WLS widowers, the men who lost spouses did so more recently, with over one-third being widowed during the most recent two year inter-survey period.

Psychological Well-Being

Table 2 presents our key "happiness" measures for the two samples. As described, they are both based on the CES-D measure. The WLS measure is only a slight modification of the CES-D score in a way that would differentiate among the various feelings and emotions that affect psychological well-being upon and during widow(er)hood. The HRS asks about a select set of symptoms and only those that are felt "mostly" during the previous week. Thus, the HRS CES-D index may capture fewer changes in affect over time and identify only shifts from feeling "mostly" a particular way as subjectively defined by the respondent. Recall also

---

[19]We do not consider never married individuals in this study. About 4 percent of both male and female graduates never married and about 5 percent married their current spouse after age 50. About 19 percent of the ever-married had married more than once (Hauser and Roan, 2006).

Table 2: CES-D Factors: WLS and HRS Samples by Marital Status

	WLS-Mean Days						HRS-Yes/No [a]					
	Widowed		Married		Divorced		Widowed		Married		Divorced	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Overall score CES-D (Mean)	19.5	16.1	13.7	11.8	16.3	15.3	2.0	1.9	1.1	0.9	1.8	1.4
Somatic	6.2	5.2	4.8	4.0	5.2	5.1	1.0	0.9	0.7	0.6	1.1	0.8
Interpersonal	5.6	4.1	3.2	2.6	4.3	3.8	0.7	0.8	0.2	0.1	0.4	0.4
Positive	21.8	21.7	23.0	23.2	22.4	22.3	1.7	1.8	1.9	1.9	1.7	1.7
CES-D Question												
SOMATIC/DEPRESSED AFFECT	how many days in past week did you						much of the time in past week did you					
• feel bothered by things that usually don't bother you	0.61	0.43	0.46	0.36	0.43	0.54	—	—	—	—	—	—
• not feel like eating, your appetite was poor	0.53	0.36	0.23	0.21	0.42	0.48	—	—	—	—	—	—
• feel you could not shake off the blues even with help from family & friends	0.55	0.36	0.26	0.17	0.28	0.35	—	—	—	—	—	—
• have trouble keeping your mind on what you were doing	0.88	0.78	0.73	0.65	0.76	0.76	—	—	—	—	—	—
• feel depressed	0.84	0.71	0.44	0.31	0.56	0.55	0.18	0.18	0.10	0.07	0.16	0.13
• feel everything you did was an effort	0.95	0.80	0.84	0.84	1.01	1.11	0.25	0.23	0.18	0.16	0.33	0.20
• sleep restlessly	1.92	1.84	1.82	1.45	1.81	1.36	0.30	0.23	0.28	0.21	0.35	0.30
• have crying spells	0.64	0.27	0.19	0.05	0.22	0.03	—	—	—	—	—	—
• feel you could not get going	1.21	0.88	0.88	0.72	1.11	0.93	0.26	0.26	0.16	0.15	0.29	0.17
INTERPERSONAL/DEPRESSED AFFECT							—	—	—	—	—	—
• think your life had been a failure	0.27	0.16	0.13	0.11	0.18	0.22	—	—	—	—	—	—
• feel fearful	0.66	0.23	0.53	0.36	0.68	0.38	—	—	—	—	—	—
• talk less than usual	0.78	0.51	0.58	0.51	0.69	0.60	—	—	—	—	—	—
• feel lonely	1.65	1.64	0.54	0.37	1.07	1.21	0.37	0.51	0.07	0.06	0.21	0.17
• feel that people were unfriendly	0.58	0.49	0.53	0.54	0.50	0.53						
• feel sad	1.31	1.05	0.69	0.44	0.84	0.65	0.32	0.29	0.15	0.08	0.20	0.19
• feel that people disliked you	0.41	0.07	0.24	0.24	0.32	0.22	—	—	—	—	—	—
POSITIVE AFFECT							—	—	—	—	—	—
• feel happy	5.60	5.60	5.86	5.77	5.56	5.39	0.83	0.83	0.91	0.92	0.81	0.83
• enjoy life	5.74	5.82	6.11	6.15	5.76	5.95	0.90	0.92	0.95	0.95	0.90	0.89
• feel you were just as good as other people	5.56	5.73	5.70	5.83	5.75	5.77	—	—	—	—	—	—
• feel hopeful about the future	5.24	5.10	5.63	5.67	5.42	5.41	—	—	—	—	—	—

Source: Authors calculations from the Wisconsin Longitudinal Study and the Health and Retirement Study

[a] For comparability with the WLS, the HRS samples are individuals with at least a High School degree..

WLS: Mean days group experienced these symptoms in past week; HRS: mean of yes responses to feeling these "mostly" in past week (see text).

that differences between widowed and married and divorced individuals in the HRS will reflect any age-specific effects on depression measures.

Nevertheless, the differences between marital status groups are quite consistent for the common measures in the WLS and HRS, suggesting the validity of comparing our subsequent analyses of predictors of the different CES-D measures. The negative affects are more frequently reported for widowed women and men compared to married women and men; for positive affects the mean days are fewer for both surveys. For the WLS sample widowed women and men on average report about one and half more days of negative affects than do married individuals. The largest differences were for days feeling depressed, crying, feeling lonely and sad, not being able to shake off the blues, and days in which they less often enjoyed life and felt hopeful for the future. Widowed women were no more likely on average to have difficulty sleeping and widowhood does not appear to be associated with their sense of self worth, although the average number of days that widows feel that people dislike them doubled the mean number of days that married women have the same feeling. In the case of widowers, the mean number of days corresponding to this item is more than three times greater than for married men. We can also observe that widows report that the mean number of days that they do not feel like eating is twice the mean number of days reported by married females. The affects with the greatest difference for married and widowed individuals who were asked about in the HRS are for the probability of feeling "mostly" depressed, lonely or sad (being greater for HRS widowed individuals than married individuals) and the probably of feeling happy or enjoying life (lower for widowed than for married individuals). Divorced women and men fall in an intermediate range for most of these measures.

Financial Well-Being and Widowhood

How individuals subjectively view their financial status is likely to affect their psychological well-being. Perhaps the earliest study to address how subjective views of financial well-being shaped widows' adjustment to widowhood was Lopata's study of 12,000 widows in the Chicago area (Lopata, 1973). She found that widows were less well-off as widows than they had been when married, but were also more worried about finances than was warranted by their financial status. She attributed this in part to the less active involvement in paid work and family financial decisions by that generation of older women. McGloshen and O'Bryant (1988) speculate that widows' sense of economic independence and self-sufficiency increases psychological well-being. In their study they found no direct effect of income, but a strong negative effect on psychological well-being from work outside the home and dissatisfaction with one's housing. Cutler and Gregg (1991) and George (1987) discuss the "unexpectedly high levels of subjective financial satisfaction" among the elderly, attributing it in part to measurement error—to objective resources being understated by traditional income and wealth measures (e.g., due to age-related tax deductions)—but also to the greater security of their income sources and probable diminished consumption. Ben-Zur (2009) and Islam, Wills-Herrera, and Hamilton (2009) discuss how different social comparisons can mediate the effect of objective financial status on subjective measures of financial satisfaction.

In the next section we first explore predictors of financial satisfaction, testing the hypothesis that how individuals perceive the adequacy of their financial status, rather than objective financial status itself, is the key factor in the psychological adjustment to widowhood. In the latest surveys (but not the earlier surveys) both the WLS and HRS ask about satisfaction with financial resources.

Both the WLS and HRS ask:

> How satisfied are you with your present financial situation—completely, very, somewhat, not very, or not at all satisfied?

Table 3 shows the distribution of women and men by marital status across the five categories of satisfaction states. These distributions do not control for income and wealth differences across marital groups in either the WLS and HRS samples nor for age differences in the HRS. So variations across marital groups are likely to reflect economic status differences (and in the HRS age differences) correlated with marital status rather than marital status per se. We do remark on the much smaller percentage of divorced women in the higher satisfaction category. Widowed women in the WLS are less likely to be completely satisfied with their financial status than are widowers or married women. However, widowed women in the HRS are in fact more likely to be completely satisfied than married women, despite—or perhaps because of—their older average age. That issue is explored next.

RESULTS

Financial Satisfaction

We first explore the predictors of satisfaction with financial resources among men and women by marital status, hypothesizing that greater income and assets contributes to subjective satisfaction with one's financial status. While education and health are predictors of financial status, they also are expected to have a direct effect on financial satisfaction. First, individuals with greater human capital attributes would anticipate being able to weather financial shocks either through paid work and more meaningful civic and social engagement. Higher levels of completed education may also indicate greater knowledge about how to manage changes in financial circumstances and poorer health may indicate an additional draw on financial resources which would not be reflected by objective income and wealth measures.

Our key question is whether widowhood affects financial satisfaction and whether that effect diminishes with duration of widowhood. We categorize widowhood timing by year for the HRS and by time since first widowhood for the WLS. In the HRS, the year in which widows are first identified as such could be 2000, 2002, 2004, or 2006. Because of small sample size over a large age range, we aggregate widowers in the HRS and do not separately classify them by the year in which they first report their change of marital status. In the WLS, time since first widowhood could be less than 3 years (widowed prior to the 2004 survey), 3 to 7 years, and more than 7 years (long-term widowhood). Because health insurance coverage is an important component of financial wellbeing in the U.S., and health insurance coverage may cease or change when a spouse dies, we include variables for type of health insurance coverage, both as a predictor of financial satisfaction and as an additional call on resources if coverage is not complete (or the widow is concerned it might not be). The health insurance

Table 3: Financial Satisfaction: WLS and HRS Samples by Marital Status

| | WLS 2004 | | | | | | HRS 2006[*] | | | | | |
| | Widowed | | Married | | Divorced | | Widowed | | Married | | Divorced | |
Financial Satisfaction	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Completely satisfied	23.6	29.8	28.7	24.7	13.3	21.1	17.0	15.8	15.2	13.0	4.0	5.1
Very satisfied	33.0	38.3	38.2	40.1	30.2	31.2	32.7	40.8	33.4	36.6	16.6	22.8
somewhat satisfied	35.2	25.5	28.1	30.9	38.7	40.2	32.7	31.6	37.3	36.4	42.9	43.0
Not very satisfied	5.6	6.4	3.3	3.0	11.6	5.3	12.6	9.2	9.8	9.7	23.4	19.0
Not at all	2.7	—	1.7	1.2	6.2	2.3	5.0	2.6	4.4	4.3	13.1	10.1

Source: Authors calculations from the Wisconsin Longitudinal Study and Health and Retirement Study.
* For comparability with the WLS, the HRS samples are individuals with at least a High School degree..

variables indicate the effect of a plan compared to that of employer-provided coverage, the most likely coverage when married.[20]

The five possible responses to the financial satisfaction question are the values in our ordered logit regressions, with a higher score indicating greater *dissatisfaction* with financial resources.[21] Table 4 presents the log-odds estimates; an odds ratio greater than 1.0 indicates that the probability of being in a higher category (more dissatisfied) increases with a more positive value for that variable. We present comparable ordered logits for the WLS and HRS. The HRS estimates include age and race controls while the WLS estimates need not because of the uniform age of that primarily white sample. Race has no significant effect in any of our estimates while age effects are small even if significant.

For both women and men, as expected, greater income and wealth and their own better health reduces *dissatisfaction* with their financial situation. Current income and wealth has a greater effect than does income and wealth in the initial year, when all (but the divorced) were married. Indeed for the WLS sample, wealth and income in 1993 has no significant effect on levels of financial satisfaction in 2004. This suggests that satisfaction with financial resources is driven by the present situation, not current resources relative to the prior married state. Note that both income and wealth are adjusted for family size (and price changes) and so reflect any reduction in consumption requirements of the smaller households following a spouse's death and other household composition changes.

Interestingly, human capital (education) is associated with a greater dissatisfaction with financial status, although the effect is most often not significant. Consistent with McGloshen and O'Bryant (1988) current employment actually reduces satisfaction. While paid work may be a source of social connections and support for older women and men, individuals who must depend on work to achieve a given level of income would be expected to feel less secure about their financial status than would others receiving the same income without having to work for pay. These results suggest that when income must come from work rather than from, for example, pensions and social security, individuals feel much less satisfied with the financial situation than do those who do not work.

We include health insurance variables to test whether financial concerns are also driven by the ability to cover unexpected medical expenses through insurance. In general, health care coverage and the type of coverage make no difference to financial satisfaction. The WLS estimates indicate that coverage by privately purchased medical care, increases financial concerns among women. This may be because at the age of the WLS cohort, some may be losing employer-provided coverage as they retire or are widowed and must purchase expensive or low coverage policies in the private market. The "Medicare only" coverage among males in the HRS may be a consequence of having some individuals—more likely to be men—receiving Social Security Disability benefits, which after a waiting period makes them also eligible for Medicare. While health insurance has little effect on financial satisfaction, current self-reported health status does. As one moves away from reporting excellent health, dissatisfaction with a given level financial conditions rises for both WLS and HRS men and women.

---

[20]Medicare covers individuals age 65 and over but provides incomplete coverage for medical care. Maxwell, Moon and Segal (2000) estimate that low income elderly without additional coverage pay about 22 percent of their income out in health care dollars.

[21]We reverse the scale from that in Table 3 so that for both the financial satisfaction and depression dependent variables a larger value indicates a "worse" state.

Table 4: Financial Satisfaction: HRS and WLS Women and Men

	WLS					HRS			
	All Females		All Males			All Females		All Males	
Variable	Odds Ratio	Std. Err.	Odds Ratio	Std. Err.	Variable	Odds Ratio	Std. Err.	Odds Ratio	Std. Err.
					Age in 2006[a]	0.96	0.01***	0.96	0.01***
					Race (White=1)	0.82	0.12	0.96	0.19
Education (HS = 0)					Education (HS = 0)[b]				
Some college	1.40	0.17	0.86	0.18	Some College	1.28	0.13**	1.28	0.16*
College degree	1.24	0.10	1.03	0.10	College degree	1.13	0.13	0.91	0.11
Beyond college	1.35	0.12	0.92	0.10					
Health Insurance (employer = 0)					Health Insurance (employer = 0)				
Medicare only	1.05	0.15	0.83	0.14	Medicare only	1.21	0.15	1.36	0.18**
No Insurance	0.81	0.18	0.64	0.24	No Insurance	1.24	0.37	1.40	0.85
Government	0.94	0.20	0.90	0.22	Government	0.74	0.14	0.82	0.15
Private Purchase only	1.32	0.12**	0.97	0.17	Private Purchase only	1.11	0.29	1.11	0.50
Private plus Medicare	1.09	0.09	0.80	0.09	Private plus Medicare	1.31	0.17**	0.95	0.14
Work for Pay	1.93	0.04***	1.60	0.04***	Work for Pay	1.81	0.20***	1.35	0.16**
R's Health (excellent = 0)					R's Health (excellent = 0)				
Very Good	1.26	0.08***	1.35	0.09**	Very Good	1.25	0.18	1.23	0.21
Good	1.76	0.09	1.78	0.09	Good	1.61	0.24***	1.47	0.25**
Fair	2.45	0.13**	2.88	0.14***	Fair	1.99	0.35***	2.27	0.45***
Poor	3.91	0.22***	1.75	0.23	Poor	2.00	0.55**	1.75	0.50**
Marital Status Variables					Marital Status Variables				
Divorced 1993 and 2004	1.91	0.13***	0.87	0.23	Divorced 1998 and 2006	1.64	0.28***	1.14	0.28
					Widowed at <65	1.11	0.32	0.50	0.29
Married = 0					*Women (Married = 0)*				
Widowed >7 years	0.88	0.18	0.69	0.35	Widowed 2000	0.66	0.18		
Widowed 3–7 years	1.16	0.18	1.08	0.33	Widowed 2002	0.91	0.23		
Widowed <3 year	1.24	0.26	0.62	0.62	Widowed 2004	1.01	0.23		
					Widowed 2006	0.98	0.23		
					Men (Married =0)				
					Widowed 2000–2006			0.85	0.22
Log Adjusted income 2004	0.68	0.07***	0.86	0.07**	Log Adjusted income 2006	0.74	0.05***	0.85	0.07**
Log Adjusted wealth 2004	0.61	0.04***	0.62	0.06***	Log Adjusted wealth 2006	0.69	0.03***	0.68	0.04***
Log Adjusted income 1993	0.92	0.05	0.89	0.07	Log Adjusted income 1998	0.87	0.06**	0.99	0.08
Log Adjusted wealth 1993	1.00	0.04	0.95	0.05	Log Adjusted wealth 1998	0.89	0.05**	0.82	0.05***

Source: Authors calculations from the Wisconsin Longitudinal Study and Health and Retirement Study.

*** p<.01 ** p<.05 * p<.1

[a] Age and race included for HRS only since WLS is a sample of a single birth cohort and with very few non-whites.

[b] For comparability with the WLS, the HRS samples are individuals with at least a High School degree.

The results for widowhood status and timing indicate that widowhood has no significant effect on how women or men evaluate their financial status. For WLS widows the odds ratio rises with more recent widowhood, but is not significant. For the WLS men and the HRS sample, there is no observable (even nonsignificant) trend. It is interesting that long-term divorced women are far more dissatisfied than are their married peers even when controlling for income and wealth and for health and health insurance coverage. Because there are so few widowers in the HRS, we compare all widowers combined with married men. We caution that our conclusions about widow(er)hood effects for males must be taken with a great deal of caution given the small number of widowers in the WLS and HRS. Finally, we note that it is only in this estimate that we find an age effect, with older HRS respondents being more satisfied with any given level of income and wealth. This is entirely consistent with older individuals being indeed more financially secure having on average an expected shorter lifetime over which resources must be conserved.

Psychological Well-Being

Tables 5 and 6 explore predictors of psychological well-being among our full sample and of widows separately. Because the summed CES-D-8 measure from the HRS can take on only nine distinct values, from 0 to 8, the HRS estimates are of ordered logits. The WLS CES-D-20 measure is of days during the week the symptom was experienced and can take on values from 0 to 140. The actual range is 1 to 119. For the WLS we do a linear regression. For both measures, a higher CES-D score represents *more* days of psychological distress. As noted, these are measures of symptom frequency not necessarily of symptom intensity, although the CES-D has been validated as a measure of depression intensity. We first discuss the WLS results. Note that these results are for all women (and men) with widowhood (and divorce) effects compared to the excluded married category. That is, women married (or divorced) in the initial year but widowed (or remaining divorced) in the latest year are compared with women who remained married.[22] We include the individual's satisfaction with their financial status which captures the effect of health and education on that variable's level. Thus health and education are entered for their incremental effect on CES-D levels.

CES-D—WLS Results: Among these fairly young widow(er)s—all widowed prior to reaching age 65 with longer duration widowhood also indicating younger age at widowhood—widowhood duration has an effect on number of days of negative affects that dissipates for men, but not entirely for women. The most recently widowed women and men (widowed within the past three years) report more days of depression symptoms than do like-aged married women and men, respectively. The higher CES-D among women widowed more than seven years (i.e., widowed between 1993 and 1996–97) may seem anomalous, but is likely due to age-selection out of widowhood. Women widowed 3–7 years may by that time be somewhat adjusted to widowhood, with some forming new relationships. The longer term widowed women, widowed in their early to mid-50s when many would have minor children may have had a more difficult adjustment to widowhood—or more than seven years later be selective of those less likely to remarry because of higher levels of depressive symptoms. It is interesting that, in contrast to their lower satisfaction with financial resources and controlling for that dissatisfaction, divorced women are no more likely to be depressed than are married women. While divorced women have somewhat lower CES-D scores that effect is small and only marginally significant for both women and men.

----

[22]Continuously married women remained married to the same husband.

Table 5: Marital Status as a Predictor of CES-D: HRS and WLS

WLS (2004)[a]					HRS (2006)[b]				
	All Females		All Males			All Females		All Males	
Variable	Coefficient	Std. Err.	Coefficient	Std. Err.	Variable	Odds Ratio	Std. Err.	Odds Ratio	Std. Err.
					Age in 2006	1.00	0.01	1.00	0.01
Intercept	9.25	1.07***	5.35	0.97***	Race (Caucasian Yes = 1)	1.27	0.19	1.15	0.23
Education (HS = 0)					Education (HS = 0)[c]				
Some college	1.08	1.33	-2.26	1.45	Some College	1.19	0.13	1.03	0.14
College degree	-0.04	0.69	-0.36	0.60	College degree	0.92	0.11	0.88	0.12
Beyond college	-0.52	0.92	-0.04	0.61					
Health Insurance (employer = 0)					Health Insurance (employer = 0)				
Medicare only	2.51	1.09**	1.78	0.84**	Medicare only	0.97	0.12	0.86	0.13
No Insurance	-3.67	1.29***	-1.54	1.53	No Insurance	0.76	0.22	0.56	0.33
Government	0.74	1.42	-1.30	1.39	Government	0.89	0.17	0.97	0.19
Private Purchase only	0.16	0.86	-1.37	1.02	Private Purchase only	0.80	0.22	1.14	0.51
Private plus Medicare	0.61	0.56	0.49	0.50	Private plus Medicare	0.88	0.12	0.83	0.14
Work for Pay	-0.13	0.50	0.55	0.45	Work for Pay	0.71	0.08***	0.81	0.11
R's Health (excellent = 0)					R's Health (excellent = 0)				
Very Good	1.65	0.61***	1.84	0.57***	Very Good	1.51	0.26**	1.43	0.31*
Good	4.09	0.69***	4.17	0.62***	Good	2.41	0.42***	2.00	0.43***
Fair	7.98	1.07***	5.38	0.98***	Fair/Poor	6.58	1.26***	6.85	1.57***
Poor	11.07	1.69***	8.21	1.60***					
CESD score 1993	0.40	0.02***	0.45	0.02***	CESD score 1998	1.44	0.04***	1.45	0.06***
Marital Status					Marital Status Variables				
Married = 0					Widowed at <65	0.92	0.27	0.64	0.43
Divorced 1993	-1.51	0.83*	1.75	1.00*	Divorced 1998	1.38	0.22**	1.14	0.28
Widowed >7 years	5.56	1.70***	1.14	4.41	*Women(Married =0)*				
Widowed 3–7 years	1.76	1.26	3.59	2.03*	Widowed 2000	1.70	0.44**		
Widowed <3 year	10.80	1.31***	5.39	1.99***	Widowed 2002	1.66	0.44*		
					Widowed 2004	1.83	0.43**		
					Widowed 2006	4.72	1.04***		
					Men(Married =0)				
					Widowed 2000–2006			5.34	1.43***
Financial satisfaction (0=completely satisfied)					Financial satisfaction (0=completely satisfied)				
Very satisfied	0.64	0.60	0.20	0.56	Very satisfied	1.24	0.19	0.78	0.15
Somewhat satisfied	1.97	0.66***	1.99	0.60***	Somewhat satisfied	1.67	0.26***	1.27	0.24
Not very satisfied	7.17	1.28***	2.23	1.38	Not very satisfied	2.22	0.42***	2.81	0.65***
Not at all	5.44	1.89***	5.87	2.45**	Not at all	2.48	0.59***	3.00	0.91***

Source: Authors calculations from the Wisconsin Longitudinal Study and Health and Retirement Study.

*** p<.01 ** p<.05 * p<.1

[a] The WLS CES-D measure is a continuous variable and a multivariate regression is estimated.

[b] The HRS CES-D is an 8 point measure. An ordered logit is estimated.

[c] For comparability with the WLS, the HRS samples are individuals with at least a High School degree.

Table 6: Predictors of CES-D of Widow(er)s: HRS and WLS

WLS (2004)[a]					HRS (2006)[b]				
	Widows		Widowers			Widows		Widowers	
Variable	Coefficient	Std. Err.	Coefficient	Std. Err.	Variable	Odds Ratio	Std. Err.	Odds Ratio	Std. Err.
					Age in 2006	0.98	0.02	1.00	0.04
Intercept	7.38	3.93*	13.20	7.43*	Race (Caucasian Yes = 1)	1.64	0.63	0.46	0.55
Education (HS = 0)					Education (HS = 0)[c]				
Some college	0.34	5.16	—	—	Some College	0.99	0.27	0.59	0.35
College degree	-1.00	2.57	-3.79	4.76	College degree	0.69	0.22	0.10	0.09***
Beyond college	-2.71	4.03	-10.04	8.14					
Health Insurance (employer = 0)					Health Insurance (employer = 0)				
Medicare only	-0.75	3.30	9.67	6.21	Medicare only	1.01	0.30		
No Insurance	-8.76	4.16**	-1.73	6.60	No Insurance	1.11	1.02		
					Medicare only or No Insurance			1.35	0.90
Government	-2.11	4.31	-11.75	10.48	Government	0.87	0.34	6.50	6.15**
Private Purchase only	-1.19	2.88	-22.56	14.39	Private only or plus Medicare	0.95	0.27	2.80	1.78
Private plus Medicare	-1.27	2.13	-3.36	4.84					
Work for Pay	1.07	1.80	0.80	3.95	Work for Pay	0.76	0.28	0.80	0.61
R's Health (excellent = 0)					R's Health (excellent = 0)				
Very Good	3.21	2.31	-3.15	5.38	Very Good	1.59	0.80	0.43	0.46
Good	8.62	2.58***	0.81	4.76	Good	2.44	1.25*	0.82	0.90
Fair	3.76	3.75	-7.05	6.92	Fair/Poor	6.88	3.71***	0.91	1.01
Poor	22.25	5.64***	—	—					
CESD score 1993	0.52	0.05***	0.40	0.13***	CESD score 1998	1.31	0.09***	1.26	0.48
Marital Status					Marital Status Variables				
Widowed >7 years = 0					Widowed at <65	0.73	0.30	0.90	0.94
Widowed 3–7 years	1.34	2.07	1.98	4.93	*Widows(Widowed 2000 = 0)*				
Widowed <3 year	9.70	2.13***	7.98	5.25	Widowed 2002	1.04	0.35		
					Widowed 2004	1.10	0.36		
					Widowed 2006	2.74	0.91***		
					Widowers (2000-04=0)				
					Widowed 2006			1.13	0.64
Financial satisfaction					Financial satisfaction				
Satisfaction(0=completely satisfied)					*Satisfaction(0=completely satisfied)*				
Very satisfied	0.18	2.34	1.98	4.22					
Somewhat satisfied	0.44	2.37	9.76	4.98*	Very satisfied	2.09	0.73**		
Not very satisfied	10.19	4.32**	9.92	8.96	Somewhat satisfied	2.76	0.97***		
Not at all	13.53	6.77*	—	—	Not very / Not at all satisfied	2.83	1.11***		
					Satisfaction(0=completely/very/somewhat satisfied)				
					Not very / Not at all satisfied			4.97	4.87

Source: Authors calculations from the Wisconsin Longitudinal Study and Health and Retirement Study.

*** p<.01 ** p<.05 * p<.1

[a] The HRS CES-D is an 8 point measure. An ordered logit is estimated.

[b] The WLS CES-D measure is a continuous variable and a multivariate regression is estimated.

[c] For comparability with the WLS, the HRS samples are individuals with at least a High School degree.

While very recent widowhood has a large effect on the CES-D scores of the WLS women and men, dissatisfaction with financial status and individuals' health status are also major contributors. For both women and men, greater dissatisfaction with their financial situation increases their CES-D level. Those who feel more secure financially are also more secure psychologically.

We included several other factors that we expected would modify the effects of financial variables (and other factors) on the CES-D level. Poorer health increases CES-D.[23] It is interesting that while working for pay increases dissatisfaction with one's financial status it has no effect on the CES-D level of these relatively young widows.

The effect of health insurance is the effect beyond that on financial satisfaction. While having only privately purchased health insurance coverage increased financial dissatisfaction, having that coverage does not have a direct effect on the CES-D level. Rather Medicare only coverage is associated with higher depression levels and, curiously, having no insurance reduces the CES-D. The Medicare effect, compared to employer coverage, may be a consequence of an involuntary shift some women must make upon their own retirement or their husband's death or retirement to Medicare-only coverage. The greater psychological well-being that is associated with absence of any health care coverage may indicate the selectivity into this category of those less concerned about their likely need for and cost of health care or those who prefer alternative non-covered care (and therefore their not acquiring traditional medical care coverage).

CES-D—HRS Results: The WLS widows and widowers were relatively young when widowed and widowhood may have been less anticipated and less well-prepared for and so their experience may reflect a somewhat unusual widowhood experience. The HRS results give us a view of how widows of all ages fare psychologically. Nevertheless, the story is much the same as for the WLS widows. For women, more recent widowhood, dissatisfaction with one's finances, and poorer health uniformly raise the odds of reporting more depressive symptoms. While the effect of widowhood diminishes for the HRS widows over time, CES-D levels remain higher for the longest term widows.[24] We include a variable indicating if widowhood occurred prior to age 65 in an attempt to capture what might be unique for the early widowhood experienced by the WLS-cohort.[25] The effect is not significant. This suggests that indeed the *average* experience is no different for younger and older widows, but that the pattern observed *among* these relatively young widows as widowhood lengthens is picked up when a large sample of young widows are observed.[26]

To better understand CES-D differentials among widowed women, Table 6 duplicates the analysis in Table 5 but for widowed individuals only. The effects of financial satisfaction and respondents' health on CES-D for widow(er)s are consistent with those in Table 5 for all women with some notable differences. When widows alone are analyzed, level of satisfaction

---

[23]Note that the CES-D components do not include specific physical or mental health conditions but are symptoms that measure individuals' ability to cope with medical conditions.

[24]In the HRS we combine the far smaller number of men widowed into one category that includes all those men who reported being a widow in the 2000 to 2006 surveys.

[25]Ideal would be if we were able to analyze the same birth cohort of women and men. However, the number of widowed individuals in that cohort is too small for such an analysis.

[26]It may be this pattern holds for any age group as widowhood lengthens but that surveys with widows of different ages do not have enough of any single age to distinguish age from duration effects.

with financial status appears to be a stronger contributor to CES-D level differences among widowed groups. Comparing other widows with those widowed for the longest period, only most recent widows report more depressive symptoms than do longer term widows. This does not negate the findings in Table 5 which show widows of all durations having higher CES-D scores than married women. This analysis only confirms the significantly higher CES-D score of the most recently widowed women.

We include the CES-D for the initial year (1993 for the WLS cohort and 1998 for the HRS sample), when all were married, to begin our disaggregation of the components of post-widowhood depression—in this analysis that due to widowhood itself and that associated with pre-widowhood conditions which may include long term mental health conditions or that association with spousal illness and care. Post-widowhood psychological well-being appears to be in part a continuation of pre-widowhood mental health. A higher CES-D score in 1998 (for the HRS sample) and 1993 (for the WLS sample), years prior to being widowed, increases the chances of an HRS widow being in a higher CES-D category in 2006 and increases the mean number of days of depressive symptoms reported by WLS widows in 2004.

To identify the degree to which pending widowhood may contribute to pre-widowhood CES-D scores we estimated the predictive effect of eventual widowhood on the initial year's CES-D score (Table 7). Widows are identified as they have been in previous tables by year of widowhood (in the HRS) or duration of widowhood as of 2004 (in the WLS); the longest widowed individuals in 2004/2006 are the soonest to be widowed after 1998 (HRS) and 1993 (WLS). For example those HRS who in 2006 had been widowed the longest (first identified in 2000) were widowed within two years after the 1998 interview. In contrast to expectations for them in 2006, we would expect them to report the highest CES-D symptoms in 1998. The HRS results give some support to this hypothesis—women soonest to be widowed report significantly more depressive symptoms in this pre-widowhood year than do other married women, including women widowed in later years. This is not the case for WLS widows who are not more likely to report depressive symptoms in 1993 than are other married women. This may be because widowhood at younger ages is more sudden and unexpected. This is supported in the HRS analysis by the significant odds ratio of .56 when widowhood occurred earlier than age 65.

Curiously, men widowed furthest in the future report significantly fewer days of depressive symptoms. This may be a result of some outliers in relatively small samples although the similar findings for both HRS and WLS men gives us pause in passing this result off as a small sample problem. This at least indicates the need for far better data on widowers.

The analysis in Tables 5, 6 and 7 suggests three components of post-widowhood depression: that which results from pending widowhood, from widowhood itself, and from the diminishing of depressive symptoms as widowhood lengthens. The pre-widowhood depression contribution is a phenomenon largely seen among older widows and is probably associated with spousal health conditions and care. WLS widows, widowed at younger ages, do not exhibit this same pre-widowhood pattern. For them a higher pre-widowhood CES-D score does raise post-widowhood scores, but the pre-widowhood CES-D score is not associated with pending widowhood which for them is more often likely to be fairly sudden and unexpected.

Table 7: Pending Widowhood as a Predictor of CES-D Among Married Women and Men : HRS and WLS

WLS (2004)[a]					HRS (2006)[b]				
	All Females		All Males			All Females		All Males	
Variable	Coefficient	Std. Err.	Coefficient	Std. Err.	Variable	Odds Ratio	Std. Err.	Odds Ratio	Std. Err.
Intercept	31.53	4.37***	22.73	4.61***	Age in 2006	0.99	0.01*	1.00	0.01
					Race (Caucasian Yes = 1)	1.07	0.16	0.74	0.14
Education (HS = 0)					Education (HS = 0)[c]				
Some college	0.74	1.90	1.84	1.82	Some College	0.92	0.09	0.84	0.11
College degree	-2.58	0.93***	0.68	0.79	College degree	0.68	0.08***	0.78	0.10*
Beyond college	-1.39	1.27	0.55	0.81***					
R's Health (excellent = 0)					R's Health (excellent = 0)				
Good	4.02	0.73***	2.55	0.67***	Very Good	1.39	0.18**	1.69	0.29***
Fair	14.90	1.22***	8.27	1.08***	Good	2.37	0.32***	2.74	0.47***
Poor	27.07	3.71***	26.38	3.12***	Fair/Poor	6.36	1.04***	6.12	1.23***
Very Poor	-4.80	6.00	20.70	5.75***					
Spouse's Health (excellent = 0)					Spouse's Health (excellent = 0)				
Good	1.66	0.65**	0.76	0.59	Very Good	0.98	0.14	0.90	0.14
Fair/Poor/Very Poor	1.36	4.19	11.93	5.86**	Good	0.99	0.14	0.96	0.16
					Fair/Poor	1.22	0.19	0.98	0.19
Marital Status					Marital Status Variables				
Married = 0					Widowed at <65	0.56	0.15**	2.53	1.68
Widowed >7 years	-2.03	1.69	-0.08	2.62	*Widows(Married =0)*				
Widowed 3–7 years	-2.05	1.59	-1.52	2.50	Widowed 2000	2.23	0.52***		
Widowed <3 year	-1.74	2.36	-13.28	5.71**	Widowed 2002	1.45	0.34		
					Widowed 2004	1.10	0.25		
					Widowed 2006	1.41	0.30		
					Widowers (Married =0)				
					Widowed 2000–2002			0.91	0.36
					Widowed 2004–2006			0.37	0.13**
Log Adjusted income 1993	-1.06	0.41***	-0.32	0.44	Log Adjusted income 1998	1.09	0.07	1.15	0.09*
Log Adjusted wealth 1993	-0.66	0.31**	-0.66	0.31**	Log Adjusted wealth 1998	0.95	0.04	0.86	0.04***

Source: Authors calculations from the Wisconsin Longitudinal Study and Health and Retirement Study.

[a] The HRS CES-D is an 8 point measure. An ordered logit is estimated.

[b] The WLS CES-D measure is a continuous variable and a multivariate regression is estimated.

[c] For comparability with the WLS, the HRS samples are individuals with at least a High School degree.

*** p<.01 ** p<.05 * p<.1

It is interesting that spousal health in the initial years plays only a small or no role in depression scores. Rather own health matters a lot with poorer health raising depressive symptoms among all women and men.

CES-D Adjustments to Widowhood

The higher CES-D scores of new widows could fall either because negative affects diminished, positive affects increased or both took place. A diminishing of negative affects would have clinical implications since it would suggest that the negative consequences of widowhood were diminished but the resilience that comes with more positive feelings did not increase. An increase in positive affects alone might indicate compensating changes that obscured but did not diminish the negative feelings associated with widowhood.

Table 8 addresses this issue for WLS and HRS widows. These estimates adjust for characteristics included in other analyses—we show here the coefficients on widowhood duration. The small samples of widowers prohibit analysis of subscale changes over the several periods of widowhood.

For both HRS and WLS samples, CES-D scores are higher for all categories (but one for the WLS) for the most recently widowed women. Symptoms asked about in each of these categories are listed in Table 2. Over time the probability of experiencing days with these symptoms diminishes, but interpersonal affects remain significantly higher than for married women. Among HRS and WLS widows, the chances of experiencing somatic symptoms (feeling depressed, not eating, crying) are higher than for married women only in the early years of widowhood. Positive affects (feeling happy, enjoying life) are less likely to be experienced for the most recently widowed. In contrast Interpersonal symptoms (feeling lonely, sad) are significantly higher in the first two years of widowhood and the difference with married women persists well into widowhood.

The WLS results provide a clue to the curious lower and then higher CES-D scores as widowhood lengthens among these early widows. The most recently widowed women reported more days with somatic and interpersonal depressed feelings. All three components of the CES-D scale improved with longer widowhood, with the exception of interpersonal symptoms rising to higher levels for women widowed more than seven years. It is not surprising that days of sadness and loneliness continued to be reported even as more troubled feelings diminished and happiness and joy increased. The U-shaped effect of widowhood duration seen in the WLS widows' CES-D scores is apparently the consequence of persistence of interpersonal/depressed affects among the women who became widows at a quite young age and did not remarry.

CONCLUSIONS

The purpose of this paper was to understand the adjustment to widowhood over time, the effect of younger age widowhood and the separate influence of financial resources and widowhood on psychological well-being of widows and widowers. We use data from the HRS and WLS, the former which is a representative sample of women and men (and therefore widowed and married individuals), and the latter a sample of women and men who were aged 63–66 when interviewed in 2004. The WLS allows us to examine the impact of

Table 8: CES-D Components as Widowhood Lengthens: HRS and WLS Women

Marital Status	Subscale		
	Somatic	Interpersonal	Positive Affect
HRS: Married 1998 = 0[a]			
Widowed 2006	1.95***	12.79***	0.22***
Widowed 2004	1.25	3.01***	0.46**
Widowed 2002	1.00	3.91***	0.68
Widowed 2000	1.35	2.21***	0.65
WLS: (married 2004=0)[b]			
Widowed <3 years	2.62****	3.73****	-1.41
Widowed 3–7 years	0.14	0.96**	0.26
Widowed >7 years	0.29	1.39****	-0.65

Source: Authors calculations from the HRS and WLS.

*** p<.01 ** p<.05 * p<.1

[a]The HRS CES-D is an 8 point measure. An ordered logit is estimated.

[b]The WLS CES-D measure is a continuous variable and a multivariate regression is estimated.

relatively early widowhood—for some in their 50's—on subjective financial and psychological well-being. The advantage of this sample is its homogeneity—all respondents are high school graduates in the same year, mainly white, and subject to similar labor market conditions as they entered the work force. This allows us to isolate the effect of early widowhood and its duration more precisely. The advantage of the HRS is its inclusion of a broader age range, race, and geographic area. The analytical samples selected for this study include women and men who were married in the initial year, which is 1998 for the HRS sample and 1993 for the WLS sample, and interviewed in 2006 and 2004, respectively. Some of these married women and men were widowed between the two years and we track the duration of widowhood. We also provide a contrast with individuals divorced in both the sample years. This allows us to examine whether widowhood effects are unique to widows or are shared by women whose marriages have been dissolved through divorce.

The results of our investigation suggest that loss of intimate companionship through death of a spouse is a major psychological blow, but one to which individuals adjust—at least partially. The analyses of both samples indicate an immediate and fairly large rise in CES-D scores upon widowhood. The effect of widowhood on the CES-D score diminishes over time, but does not disappear entirely. When contrasting widowed individuals with married individuals and contrasting widows only with the longest term widows, those most recently widowed report significantly more depressive symptoms. The most recently widowed HRS women and men are 4–5 times as likely as were married women and men to be in the higher CES-D category and WLS women and men report, respectively, about 11 and 5 more days during which particular depressive symptoms were experienced.[27]

For all men and women, both married and widowed, dissatisfaction with their financial status increases CES-D scores. Widowhood itself does not have an effect on financial satisfaction, indicating that widows and married individuals assess resources in much the same way, largely based on current income and wealth and health status. However, when financial concerns exist they are a larger contributor to depression for widowed women. Divorced women, but not divorced men, are more dissatisfied than are their married and widowed peers with their financial status, controlling for objective financial resources. When income must be gained through work, both men and women are less likely to rank their financial satisfaction as high.

Depressive symptoms recorded in widowhood are a consequence of pre-widowhood conditions, of widowhood itself, and the passage of time as a widow. Initial CES-D scores in general carry into the post-widowhood period. For the older HRS sample, earlier CES-D scores are shaped by pending widowhood. This is not the case however for early widowhood—as indicated by the absence of a pending widowhood effect in the WLS sample. We have less confidence in our results for males, but the initial years of widowhood also appear to increase CES-D scores for the HRS sample. That they do not for younger widowers may be a sample size problem or a reflection of younger widowers' greater ability to find new partners.

The analysis of change over time in CES-D components suggests that depressive symptoms are most likely recorded in the early years of widowhood. Feelings of loneliness and sadness persist over a longer duration in widowhood even as other depressive symptoms diminish and

---

[27]Note that while the WLS asked about symptoms during the past week (7 days), the CES-D measures the number of days each symptom was experienced. Hence the "number of days" can add up to more than 7.

joy returns. This is consistent with the findings of Wilcox et al (2003) that more recently widowed women report more mental health problems than do married women. It adds to concerns raised by Luoma and Pearson (2002) about the greater likelihood of suicide among individuals most recently widowed. Our results also lend support to concerns raised by studies that report a relationship between depression and subsequent mortality among recent widows (Helsing, Moyers, and George,1981). While some studies pose a mechanism for that relationship, including loss of appetite and poor nutrition (Anstey and Luszcz, 2002; Shahar, Schultz, Shahar and Wing, 2001; Shahar et al. 2009), this study does not. We do show the effect of pending widowhood on mental health and the much larger effect of widowhood itself, with financial concerns raising CES-D scores. The results for divorced women, all long-term divorce, suggest that while the death of a husband is particularly traumatic for mental health, widows share with divorced women the effects of companion loss over the longer term.

The WLS results may provide a more nuanced view of widowhood adjustment in providing evidence on both timing of mental health adjustment to widowhood and the specific CES-D components that change. For these early age widows, the death of a spouse may lead to a more complex set of depressive symptoms than in the case of later widowhood, although we must say that with some caution since the HRS asks about only a few symptoms. Over time it appears that psychological adjustment for relatively young widows is shaped not just by the passage of time but also by who is selected out of widowhood status through remarriage. The WLS results suggest that selective remarriage is an important factor in the observed mental health of longer-term early-age widows.

These results have implications for individuals who work with recently widowed individuals as financial advisors or who develop products that aim to target specific financial concerns. First, findings on financial satisfaction indicate that widowed individuals are not any less likely to feel financially insecure than married individuals with the same resources. Widowed individuals appear on average to be realistic assessors of their financial status—at least no less so than are their married peers. Individuals in poorer health and those receiving some of their income through paid work are less satisfied with a given level of income and wealth, even though work for pay reduces depressive symptoms. Planners should not assume that widowhood is associated with a tendency to feel less secure or less aware of financial concerns than is warranted, given a level of income and wealth. Planners, however, may wish to explore with their clients the nature of their paid work to assess the financial necessity and the potential psychological gains (or losses). They may also wish to explore health concerns individuals have to fully assess the adequacy of economic resources to cover anticipated uncovered health care costs.

Of more concern is the very real depression that is associated with being widowed and the finding that when dissatisfaction with resources is warranted, it increases depressive symptoms. Financial advisers must recognize the challenges of working with individuals who are not just experiencing feelings of "depression," but are more likely than just prior to widowhood to feel as if "everything is an effort," or that they "cannot get going." Even as these feelings diminish over the long-term, widows remain lonely and sad, symptoms that may make them vulnerable to ideas (and scams) that might promise to ease their loneliness. Finally, though widows may be just as (dis)satisfied with a given level of income and wealth as are married individuals, dissatisfaction with that level has a greater effect on the psychological well-being of widows than it does for married individuals. It is this difference that may be the important insight of this study. Even when widowed individuals express no

less satisfaction with their financial status than they may have when married (or compared to married peers), existing concerns may be contributing to depressive feelings which may not be evident or as easily identified by financial planners. Ways to assess depression among clients may not be part of financial advisor training, but may be required to appropriately advise widowed individuals.

Findings on pending widowhood effects may also have important implications for financial practice. It appears that widowhood that is about to shortly occur leads to greater levels of depression, but among somewhat older widows. The absence of a pending widowhood effect among the younger WLS cohort suggests that widowhood was most likely sudden and unexpected. Both these findings point to the importance of discussing the consequences of widowhood in the years when it is not threatening—when couples are young but have financial responsibilities and when couples are older and health may be declining but mortality is not immediate. If financial planning is best done in non-depressive states, then pending widowhood is not the time to initiate that planning nor is the time immediately after a spouse's death when financial concerns, even if fairly assessed, may add to post-widowhood depression.

REFERENCES

Anstey, K. J., and M. A. Luszcz. 2002. "Mortality Risk Varies According to Gender and Change in Depressive Status in Very Old Adults." *Psychosomatic Medicine* 64: 880–888.

Andresen, E. M., J. A. Malmgren, W. B. Carter, and D. L. Patrick. 1994. "Screening for Depression in Well Older Adults: Evaluation of a Short Form of the CES-D." *American Journal of Preventive Medicine* 10(2): 77–84.

Beekman, A. T. F., D. J. H. Deeg, J. Van Limbeek, A. W. Braam, M. Z. De Vries, and W. Van Tilburg. 1997. "Criterion Validity of the Center for Epidemiologic Studies Depression Scale (CES-D): Results from a Community-Based Sample of Older Subjects in the Netherlands." *Psychological Medicine* 27: 231–235.

Bender, K. A., and N. A. Jivan. 2005. "What Makes Retirees Happy?" *Issue in Brief* 28. Chestnut Hill, MA: Center for Retirement Research at Boston College.

Ben-Zur, Hasida. 2009. "Social Comparisons and Well-Being Following Widowhood and Divorce." *Death Studies* 33(3): 220–238.

Bernheim, B. D., K. G. Carman, J. Gokhale, and L. J. Kotlikoff. 2003. "Are Life Insurance Holdings Related to Financial Vulnerabilities?" *Economic Inquiry* 41(4): 531–554.

Blanchflower, D. G., and A. J. Oswald. 2000. "Well-Being Over Time in Britain and the USA." NBER Working paper www.nber.org/papers/w7487.

—————. 2005. "Happiness and the Human Development Index: The Paradox of Australia." NBER Working Paper 11416 http://www.nber.org/papers/w11416.

—————. 2007. "Is Well-Being U-Shaped Over the Life Cycle?" NBER Working Paper 12935 http://www.nber.org/papers/w12935.

Blazer, F., B. Burchett, C. Service, and L. K. George. 1991. "The Association of Age and Depression among the Elderly: An Epidemiologic Exploration." *Journal of Gerontology* 46(6): M210–M214.

Bradshaw, J., and J. R. Chen. 1996. "Poverty in the U.K.: A Comparison with Nineteen Other Countries." LIS Working Paper No. 147.

Carr, D., J. S. House, R. C. Kessler, R. M. Nesse, J. Sonnega, and C. Wortman. 2000. "Marital Quality and Psychological Adjustment to Widowhood among Older Adults: A Longitudinal Analysis." *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences* 55: S197–S207.

Carr, D. J. 1997. "The Fulfillment of Career Dreams at Midlife: Does in Matter for Women's Mental Health." *Journal of Health and Social* Behaviors 38: 331–344.

Cutler, Neal E., and Davis W. Gregg. 1991. "The Human 'Wealth Span' and Financial Well-Being in Older Age." *Generations*15(1): 45–48.

Dutt, A. K. 2008. "The Dependence Effect, Consumption and Happiness: Galbraith Revisited." *Review of Political Economy* 20(4): 527–550.

Easterlin, R. A. 2003a. "Happiness of Women and Men in Later Life: Nature, Determinants, and Prospects." In *Advances in Quality-of-Life Theory and Research*, edited by M. J. Sirgy, D. Rahtz, and A. C. Samli. Dordrecth, The Netherlands: Kluwer Academic Publishers. 13–26.

Easterlin, R. A. 2003b. "Explaining Happiness." *PNAS* 100(19): 11176–11183.

Frey, B. S., and A. Stutzer. 2002. "What Can Economists Learn from Happiness Research?" *Journal of Economic Literature* 45: 402–435.

George, L. K., 1987. "Economic Status and Subjective Well-Being: A Review of the Literature and an Agenda for Future Research." BRI Invitational Symposium, Financial Security and General Well-Being in Life Course Perspective. Bryn Mawr, PA: Boettner Research Institute.

Gerdtham, U. G., and M. Johannesson. 2001. "The Relationship between Happiness, Health, and Socio-Economic Factors: Results Based on Swedish Microdata." *Journal of Socio-Economics* 30: 553–557.

Glenn, N. D. 1975. "The Contribution of Marriage to the Psychological Wellbeing of Males and Females." *Journal of Marriage and the Family* 37: 105–110.

Glenn, N. D., and C. N. Weaver. 1979. "A Note on Family Situation and Global Happiness." *Social Forces* 57: 960–967.

Hagenaars, A., K. de Vos, and M. A. Zaidi. 1994. *Poverty Statistics in the Late 1980s: Research Based on Micro-Data*, Office for Official Publications of the European Communities. Luxembourg.

Hauser, R. M., and C. L. Roan (editors). 2006. "The Class of 1957 in their Mid-60s: A First Look." CDE Working Paper No. 2006-03, University of Wisconsin–Madison: Center for Demography and Ecology.

Helsing, K. J., S. Moyers, and W. C. George. 1981. "Factors Associated with Mortality after Widowhood." *American Journal of Public Health* 71: 802–809.

Holden, K. C., and J. Brand. 2003. "Income Change and Distribution upon Widowhood: Comparison of Britain, U.S., and Germany." In *Pensions: Challenges and Reform*, edited by Einar Overbye and Peter Kemp. Aldershot, Ashgate.

Holden, K., J. Kim, and A. Fontes. 2008. "Happiness as a Complex Financial Phenomenon: The Financial and Psychological Adjustment to Widowhood in the U.S." In *Social Security, Happiness and Well-Being*, edited by J. Bradshaw. International Studies in Social Security, Volume 14. Foundation for International Studies on Social Security.

Holden, K. C., and C. Zick. 1998. "The Roles of Social Insurance, Private Pensions, and Earnings in Explaining the Economic Vulnerability of Widowed Women in the United States." Foundation for International Studies on Social Security, *International Studies on Social Security* 4. Ashgate.

International Labour Organization. 2004. *Economic Security for a Better World.* Socio-Economic Security Programme. Accessed at: http://www.ilo.org/public/english/protection/ses/info/publ/economic_security.htm.

Islam, G., E. Wills-Herrera, and M. Hamilton. 2009. "Objective and Subjective Indicators of Happiness in Brazil: The Mediating Role of Social Class." *The Journal of Social Psychology* 149(2): 267–271.

Kaun, D. E. 2005. "Income and Happiness: Earning and Spending as Sources of Discontent." *The Journal of Socio-Economics* 35: 161–177.

Kahout, F. J., L. F. Berkman, and D. A. Evans. 1993. "Two Shorter Forms of the CES-D Depression Symptoms Index." *Journal of Aging and Health* 5: 179–193.

Kreider, R. M., and T. Simmons. 2003. "Marital Status: 2000." Census 2000 Brief. C2 KBR-30. U.S. Department of Commerce. Economics and Statistics Administration. U.S. Census Bureau. Available at: http://www.census.gov/prod/2003pubs/c2kbr-30.pdf

Lane, R. 2000. "Diminishing Returns to Income, Companionship and Happiness." *Journal of Happiness Studies* 1: 103–119.

Lee G. R., and A. DeMaris. 2007. "Widowhood, Gender, and Depression: A Longitudinal Analysis." *Research on Aging* 29(1): 56–72. Accessed on June 1, 2007 at http://roa.sagepub.com/cgi/reprint/29/1/56.pdf.

Lopata, H. Z. 1973. *Widowhood in an American City*. Cambridge, MA: Shenkman.

Luoma, J. B., and J. L Pearson. 2002. "Suicide and Marital Status in the United States, 1991–1996: Is Widowhood a Risk Factor." *American Journal of Public Health* 92(9): 1518–1522.

Maxwell, S., M. Moon, and M. Segal. 2000. "Growth in Medicare and Out-Of-Pocket Spending: Impact on Vulnerable Beneficiaries." Urban Institute. Accessed at: http://www.urban.org/url.cfm?ID=410253.

McGarry, K., and R. F. Schoeni. 2000. "Social Security, Economic Growth, and the Rise in Elderly Widows' Independence in the Twentieth Century." *Demography* 37(2): 221–36.

McGloshen, T. H., and S. L. O'Bryant. 1988. "The Psychological Well-Being of Older, Recent Widows." *Psychology of Women Quarterly* 12(1): 99–106.

Morgan, L. 1981. "Economic Change at Midlife Widowhood: A Longitudinal Analysis." *Journal of Marriage and the Family* 43(4): 899–907.

Oishi, S., E. E. Diener, R. E. Lucas, and E. M. Suh. 1999. "Cross-Cultural Variations in Predictors Off Life Satisfaction: Perspectives from Needs and Values." *Personality and Social Psychology Bulletin* 25(8): 980–990.

Radloff, L. S. 1977. "The CES-D Scale: A Self-Report Depression Scale for Research in the General Population." *Applied Psychological Measurement* 1(3): 385–401.

Schoen, R., and R. M. Weinick. 1993. "The Slowing Metabolism of Marriage: Figures from 1988 U.S. Marital Status Life Tables." *Demography* 30(4): 737–746.

Sevak, P., D. R. Weir, and R. J. Willis. 2003/2004. "The Economic Consequences of a Husband's Death: Evidence from the HRS and AHEAD." *Social Security Bulletin* 65(3).

Shaver, S. 1996. "Universality and Selectivity in Income Support: An Assessment of the Issues." LIS Working Paper No. 145.

Shahar, D. R., R. Schultz, A. Shahar, and R. R. Wing. 2001. "The Effect of Widowhood on Weight Change, Dietary Intake, and Eating Behavior in the Elderly Population." *Journal of Aging and Health* 13(2): 186–199.

Shahar, D. R., B. Yu, D. K. Houston, S. B. Kritchevsky, J. S. Lee, S. M. Rubin, D. E. Sellmeyer, F. A. Tylavsky, and T. B. Harris. 2009. "Dietary Factors in Relation to Daily Activity Energy Expenditure and Mortality among Older Adults." *Journal of Nutrition Health & Aging* 13(5): 414–20.

Siegenthaler, J. 1996. "Poverty among Single Elderly Women Under Different Systems of Old-Age Security: A Comparative Review." LIS Working Paper No. 149.

Smeeding, T. M. 2001. "Income Maintenance in Old Age: What Can Be Learned from Cross-National Comparisons." LIS Working Paper No. 149.

Veenhoven, R. 1989. "Is Happiness Relative?" In *Recent Advances in Social Psychology: An Inter-National Perspective*, edited by J. P. Fargas and J. M. Innes. Amsterdam: Elsevier Science, pp. 235–247.

Wilcox, S., K. R. Evenson, A. Aragal, S. Wassertheil-Smoller, C. P Mouton, and B. L. Loevinger. 2003. "The Effects of Widowhood on Physical and Mental Health, Health Behaviors, and Health Outcomes: The Women's Health Initiative." *Psychology* 22(5).

Williams, C. D, T. R. Taylor, K. Makambi, J. Harrell, J. R. Palmer, L. Rosenberg, and L. L. Adams-Campbell. 2007. "CES-D Four-Factor Structure is Confirmed, but not Invariant, in a Large Cohort of African American Women." *Psychiatry Research* 150(2): 173–180.

Zick, C., and K. C. Holden. 2000. "An Assessment of the Wealth Holdings of Recent Widows." *Journal of Gerontology: Social Sciences: Social Science* 55(2): S90–S97.