

ABSTRACT

MAIR, CHRISTINE ARMTRONG. Social Support and Mental Well-Being: The Intersectionality of Age, Race, Gender, and Class. (Under the direction of Feinian Chen.)

Aging literature often links social support to higher levels of mental well-being for older adults. Findings concerning variations in the impact of social support on mental well-being according to race, age, gender, and class, however, are not consistent. This paper argues that the reason for these inconsistencies is due to a lack of attention to the intersectionality of inequality in older populations and resulting cumulative disadvantages. I employ an intersectionality perspective to examine how processes of social support (marriage, children, frequency, proximity, and perceptions) interact with race, age, gender, and class to produce differential outcomes in terms of mental well-being. Using data from the 2004 wave of the Health and Retirement Study (HRS), I use split samples to test the effect of social support and intersections of inequality on the depressive symptoms of adults over the age of 50. Findings indicate that there is a clear interaction between social support and inequality. Contrary to many theories, women and minorities in this sample are more different than similar. Individuals aged 80 and older of all race and gender groups are less responsive to social support than other age groups. Black men, in particular, emerge as a group particularly at risk for higher depression. The findings demonstrate the necessity of using an intersectionality perspective when studying (increasingly diverse) aging populations.

Social Support and Mental Well-Being:
The Intersectionality of Age, Race, Gender, and Class

by

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DEDICATION

To my perfect husband and favorite person in the world, Lamar.

P.S. Thank you for making me all those delicious dinners at 2 am.

BIOGRAPHY

Christine Mair was born in Mesa, Arizona at Williams Air Force Base. She received her Bachelor's degree in Sociology and Anthropology with a minor in Classics from the University of Florida in Gainesville, Florida.

TABLE OF CONTENTS

LIST OF TABLES.....	v
LIST OF FIGURES.....	vi
SOCIAL SUPPORT AND MENTAL WELL-BEING:	
THE INTERSECTIONALITY OF AGE, RACE, GENDER, AND CLASS.....	1
Introduction.....	1
Review of Literature.....	2
Diversity and Intersectionality in Aging Studies.....	2
Social Support and Mental Well-Being.....	3
A Case for Intersectionality Frameworks.....	10
Hypotheses.....	13
Data.....	14
Sample.....	14
Mental Well-Being and Depressive Symptoms.....	15
Social Support.....	16
Other Independent Variables.....	19
Methods.....	21
Results.....	23
Nested OLS Regression Models Predicting Depressive Symptoms.....	23
Split Samples.....	24
Discussion.....	27
Conclusions.....	33
References.....	36
Tables.....	42
Figures.....	49

LIST OF TABLES

Table 1	Bivariate of Social Support by Race and Gender, HRS 2004.....	42
Table 2	Bivariate of Social Support by Age, HRS 2004.....	43
Table 3	Descriptive Statistics of Additional Variables in the HRS Sample.....	44
Table 4	Nested OLS Regression Models Predicting Depressive Symptoms.....	45
Table 5	OLS Regression Models Predicting Depressive Symptoms for Split Sample by Gender and Race.....	46
Table 6	OLS Regression Models Predicting Depressive Symptoms for Split Sample by Age and Gender.....	47
Table 7	OLS Regression Models Predicting Depressive Symptoms for Split Sample by Age and Race.....	48

LIST OF FIGURES

Figure 1	Mean Depressive Symptoms by Race and Gender, HRS 2004.....	49
Figure 2	Mean Depressive Symptoms by Age, HRS 2004.....	49

Introduction

Patricia Hill-Collins (1992) first developed the concept of intersectionality to help account for how oppressive, structural inequalities such as gender, race, and class combine in the social world to shape how individuals perceive and experience their lives. Although the intersectionality framework originated in feminist theory, this perspective has wonderful theoretical and practical potential for many other fields of study, especially aging and gerontology. Because very few studies have employed an intersectionality framework in their analysis of aging populations, there are many key areas left to be explored particularly with regard to social support and mental well-being of older adults.

Research on social support indicates that social network size, network composition, social support needs and expectations, and types of support available may all differ according to age, race, gender, and possibly class (Ajrouch, Blandon, and Antonucci 2005; Antonucci and Akiyama 1987a; Antonucci and Akiyama 1987b; Sarkisian and Gerstel 2004). Furthermore, various forms of social support may have differential effects on mental well-being for various groups of people (Antonucci, Akiyama, and Lansford 1998; Pinqart and Sorensen 2001; Zhang and Hayward 2001). By what means does the intersection of age, gender, class, and race structure the social support networks of older adults? How do those variations in social support structures according to age, gender, race, and class influence mental well-being? In other words, how do conditions of various age groups, racial categories, gender identifications, and class positions combine with social support structures to create differential mental health outcomes?

Using data from the Health and Retirement Study (HRS), I utilize an intersectionality framework to explore how inequality structures and social support networks interact to influence the mental well-being of older adults. Through detailed data comparisons, I hope to gather a wealth of information on the role of social support in promoting positive mental well-being and how that role is filtered through gendered, racial, socioeconomic, and age-related lenses. By examining social support in this manner I address a crucial gap in the literature and hope to illuminate new directions for aging research. If older adults' social experiences do vary by race, gender, class, or age across the life course then it is the task of social scientists to thoroughly investigate these differences and address them both theoretically and practically.

Review of Literature

Diversity and Intersectionality in Aging Studies

The intersectionality framework is new to the field of elderly well-being. In 1996, Toni Calasanti called for increased focus on diversity in aging studies. She argued that incorporating diversity includes more than just diverse "content." Diversity is a process of theorization. Indeed, theoretical attention to diversity in aging populations has increased in recent years. Paula Dressel, Meredith Minkler, and Irene Yen (1997:18) provided an overview of the role of gender, race, class, and aging in gerontology and encouraged other scholars to incorporate these oppressive, "interlocking systems of inequality" in their understanding of the processes of aging.

In the field of aging, feminist gerontologists have been the most prolific group in providing examples of how to incorporate systems of inequality, in particular gender, with aging (for examples, see Arber and Ginn 1995; Calasanti and Slevin 1988). Theories of cumulative advantage and disadvantage (CAD) across the life course have also contributed to the aging field's acknowledgement of diversity and differentially structured outcomes in terms of class, race, gender, and aging (Dannefer 2003; O'Rand 1996). Despite the success of the intersectionality framework in feminist theory, cries for attention to diversity in the aging field, and, theoretical acknowledgement of systems of inequality in the lives of older individuals, there is a clear lack of intersectionality studies in aging literature. To the author's knowledge, there are only a few studies in the field of aging and gerontology that directly invoke an intersectionality framework and only one or two that use this framework to conceptualize elderly well-being (Kobayashi 2003; McMullin and Cairney 2004). McMullin and Cairney (2004), although limited by their data, are the only scholars thus far to use this framework to predict mental well-being in older adults. The lack of elderly well-being studies using the intersectionality framework may very well be the result of the difficulties of quantitatively testing this theory (McCall 2005). As I hope to show, however, intersectionality is not only essential to the field of aging but is also a practical and logical basis for testing the influence of social support on mental well-being in aging populations.

Social Support and Mental Well-Being

The relationship between social support and mental well-being is one tempered by gender, race, age, and class. Although, in general, the evidence suggests that social

involvement with friends and family may help moderate the negative effects of ill health and depression by offering emotional, functional, and financial assistance (see Baker et al. 2005; Cobb 1976; Fast et al. 2004; Kahn and Antonucci 1980; Lang and Baltes 1997; Litwin and Shiovitz-Ezra 2006; Moren-Cross and Lin 2006; Nezlek et al. 2002), some studies suggest that more intensive networks can actually lead to increased levels of anxiety, particularly for women (Antonucci et al. 1998; Haines and Hurlbert 1992; Israel and Antonucci 1987). In this section, I will review common social support relationships and discuss how gender, race, class, and the life course may shape these experiences, leading to differential mental health outcomes.

One of the most documented forms of social support is marriage. It is well known in family and mental health literature that married individuals are more likely to have higher levels of emotional well-being than their single, divorced, and sometimes widowed counterparts. Dean, Kolody, and Wood (1990) found that spousal support was the strongest social support predictor of decreased depression for elderly people. Marriage and divorce rates, however, differ by race, gender, class, and age. Therefore, not every individual has equal access to the purported benefit of marriage. Although, Dean et al. (1990) did not find significant variation by age or gender in the effect of spousal support, there may be an interaction between age, gender, race, and class in which younger individuals or those with lower income, for example, are less likely to become or stay married and thus received fewer of the benefits that marital social support offers. Divorced women, for example, may suffer from poverty and depression at higher rates than divorced men because they are socially disadvantaged. At the same time, women are more likely to be widowed (due to their longer

life spans) and thus older women in particular may be vulnerable to emotional challenges (Scott and Wenger 1995).

A number of studies of marital social support specifically examine African American samples (Ball 1983; Ball and Robbins 1986; Brown and Gary 1985; Ellison 1990). Overall, these studies yielded conflicting results. Ball (1983) found that married, divorced, and widowed African American women were happier than never married black women. Among a sample of black women, Brown and Gary (1985) discovered evidence that non-married black women were able to gain significant social support from extended kin in lieu of marital social support. In a later study, Ball and Robbins (1986) found that after controlling for all socio-demographics, married black men had the lowest levels of life satisfaction of all. These findings contradict a majority of findings that suggest that that divorce and widowhood have strong detrimental effects on mental well-being and that married individuals are always happiest. Most importantly, these studies offer strong support for the importance of using the intersectionality perspective. The findings of Ball (1983), Ball and Robbins (1986) and Brown and Gary (1985) suggest that not only are the benefits of marriage not equally accessible to everyone, but also that the experience of marriage in terms of mental well-being may also differ across groups.

Adult children of older adults may also serve as a potential source of social support and thus lower levels of depression. Dependent children, however, can be a drain on resources and negatively influence mental well-being. Indeed, evidence of the importance of children in promoting positive mental well-being is inconclusive (for a review, see Connidis 2001; Connidis and McMullin 1993). Zhang and Hayward (2001) suggested that older men

and women differ in their responses to childbearing and childlessness. Unmarried, childless elderly men suffered the highest rates of depression and loneliness than elderly women in a similar situation. Women may rely on other forms of social support if childless. Sudha, Mutran, Williams, and Suchindran (2006) found that childlessness was not associated with lower well-being for women of any race. Debra Umberson (1992) found that the positive effect of childbearing on mental well-being in later life is contingent upon the strength of the relationship between parents and children. This relationship could be more strained for parents who are significantly older than their children or for those of lower income that must work more intensive hours, for example. Thus, the extent (and process) of social support offered by children may differ depending on gender, age structures, and inequality.

In addition to spouses and children, friends and other relatives located in close proximity may also provide social support and help to promote better mental well-being for older adults. Studies have found that contact with friends is more effective in decreasing depression in elderly populations than contact with adult children (Dean et al. 1990; Pinquart and Sorensen 2001). Like marriage and parenthood, however, the influence of friends and family on the mental well-being of older adults may differ by gender, race, age, and class. Women and ethnic minorities tend to have lower levels of emotional well-being than white men (Geronimus 2001; Mirowsky 1996; Mills and Henretta 2001; Pinquart and Sorensen 2000) and there is evidence to suggest that this gender and racial gap in well-being may increase with old age (Geronimus 2001; Pinquart and Sorensen 2001). Older women may be less likely than older men to have friends and family located within a close proximity (Ajrouch et al. 2005). Among all individuals, older groups (70 and above) experience

increased vulnerability to the psychological stress of losing a friend or loved one (Matt and Dean 1993). Although higher numbers of friends is associated with higher levels of subjective well-being, this effect does not hold for African Americans in old age (Ellison 1990). Thus, the oldest African Americans may be at risk for depression not only because they are experiencing shrinking friend and family networks with age but also because the influence of friends on well-being may decrease with age in black populations. Although family and friend proximity is often indicative of strong social support and thus better well-being for older adults, there are a few studies that conclude that kin interaction has no concrete impact on elderly well-being (Spakes 1979; Lee and Ellithorpe 1982; and Ball 1983) or even a negative effect (Ellison 1990). More research is needed to understand how nearby friends and family influence elderly mental well-being and to what extent this effect varies by age, race, and gender.

While proximity is important, there is also evidence that the frequency of social interactions may be related to elderly well-being, although the effect is not always consistent. A number of studies have found that women tend to have more active and frequent social interactions (Antonucci and Akiyama 1987a; Antonucci et al. 1998) which is often related to more social support and higher levels of happiness. Among women, however, the oldest old tend to have the smallest social networks with the lowest frequency of interaction (Ajrouch et al. 2005) and women have higher levels of depression than men. Although women are disadvantaged in terms of emotional well-being over the life course, there is evidence to suggest that elderly men may also be a particularly vulnerable population. Men are more likely than women to arrange their social networks around their spouse. Thus, women's

social support networks are typically more robust than men's and widowed men may be at a particular risk for losing crucial connections to social support networks and drastic reductions in frequency of interaction. Van Tilburg (1995) found that elderly, unmarried men have the smallest social networks of all groups. Social support may impact the emotional well-being of men differently than women. Recently, Bourque, Pushkar, Bonneville, and Beland (2004) found that social support was associated with life satisfaction more for women than for men in a sample of elderly individuals. Overall, the aging literature provides reasons to suspect that both men and women may be vulnerable to isolation and poor emotional well-being in later life. A more thorough analysis of inequality is needed to disentangle the effects of cumulative disadvantage for women, isolated elderly men, and minorities.

As a final note on social support, studies suggest that an older person's personal perception of support availability has a stronger influence on their well-being than proximity or frequency of interaction (Bothell, Fischer, Hayashida 1999; Wallsten, Tweed, Blazer, and George 1999). The feeling that one has a supportive individual to turn to in times of need is one of the most primary predictors of lower levels of depression. In terms of intersectionality, however, one's expectations for social support may differ depending on one's race. In a recent study, Moriarty and Butt (2004) found that different ethnic groups have not only different expectations for social support but that their actual forms of social support vary widely in terms of diversity, consistency, and purpose. Whites in their study were much more likely to only ask their adult children for help in the case of a crisis as compared to other ethnic groups. African and Caribbean Americans reported more diverse availability of social support than whites and Asians, such as extended kin and church community members.

Sarkisian and Gerstel (2004) and others (Lincoln, Chatters, and Taylor 2003) also noted differences in social support in white populations and African American populations. Specifically, in terms of familial support, whites are more likely to receive emotional help while blacks are more likely to be involved in more practical support such as help with childcare and housework (Sarkisian and Gerstel 2004). Moreover, the same study found that black men and white men are more similar than black women and white women in terms of familial support, indicating further intersections between race, gender, and social support. Therefore, not only do forms of social support vary according to age, race, gender, and class, but so may individual expectations of support.

As individuals age, they experience changes in their social support networks, their perceptions and experiences of their own inequalities, and also their mental well-being. Thus, it is important to take into account individual and cohort life course experiences (Elder 1994, 2006). Over the course of a life time, people engage in a variety of social roles, which can both constrict and enable an individual. For example, divorce and widowhood may each have varying effects depending on the time in the person's life in which these events occur as well as their sociodemographic background. Retirement, divorce, or widowhood, for example, may lead to greater risk of social isolation and poor health (Elwert and Christakis 2006). This effect may be amplified for those of lower socioeconomic position.

The actual process of aging also has important implications for social support. Although evidence of shrinking networks in later life is inconsistent (for a review, see Antonucci and Akiyama 1987b; Levitt, Weber, and Guacci 1993; Litwin 2001), there is growing consensus that network composition tends to shift with age. A recent study of older

peoples' discussion networks found that network size decreased from 1984 to 2004, possibly due to shifts in family structure (McPherson, Smith-Lovin, and Brashears 2006). Elderly adults have more family and less friends in their support networks than younger adults (Antonucci and Akiyama 1987a, Matt and Dean 1993). Older individuals may also have more geographically distant networks and less frequent contact compared to young adults. Despite sometimes conflicted evidence, a number of studies support the idea that increased social contact leads to greater life satisfaction (Baker et al. 2005, Lang and Baltes 1997, Nezlek et al. 2002). If older peoples' networks are actually shifting or shrinking, these changes could have a profound impact on their well-being. Further, these effects can sometimes vary by class, race, and gender with women and people of high SES having larger, more diverse networks and blacks receiving different types of support from their friends and family than whites (Antonucci and Akiyama 1987a; Antonucci et al. 1998; Sarkisian and Gerstel 2004). Aging inequality literature often focuses on how inequalities play out over time, resulting in cumulative advantage and disadvantage over the life course (for a review, see Dannefer 2003). With such diversity in experiences, it is likely that inequalities based upon age, race, gender, and class combine over the life course and manifest in differential social support networks and mental well-being outcomes.

A Case for Intersectionality Frameworks

After reviewing the key findings in terms of the impact of social networks on emotional well-being according to age, race, and gender, it is clear that there is a very complex association between individuals and their social worlds. Indeed these relationships

are intertwined and reinforced across the life course through classifications of young-old, white-nonwhite, and male-female. In reality, however, an individual's life experience can hardly be summarized by simply his/her age, race, gender, or class. Rather, these characteristics interact and intersect to form individual life experiences.

In light of mounting evidence, it is necessary to reexamine the impact of social support on emotional well-being with the distinct mission of examining differences according to age, race, gender, class, and the intersections between these. The elderly represent a unique population with particular needs and expectations. Likewise, individuals are all surrounded by circumstances of cumulative advantage and disadvantage that persist and transform across the life course (Dannefer 2003). Without a concerted effort to analyze the intersectionality of cumulative inequality, we will continue to lump the elderly into broad categories and risk neglecting the needs of particular subgroups.

In a recent article, Julie Ann McMullin and John Cairney (2004) broke new ground in aging research by utilizing the concept of intersectionality to examine self-esteem in aging adults. The authors found lower levels of self-esteem in older age groups with particularly low self-esteem for elderly women. For middle-aged and older individuals only (not for younger individuals), those from lower social classes had the lowest self-esteem. Although this article was an important step for the field of aging, data limitations prevented the authors from including any measures of race, thus limiting their conclusions. Despite this limitation, their study thoroughly demonstrated the usefulness (and some would say necessity) of an intersectionality framework that pays careful attention to age, gender, class, and race in the study of elderly well-being. In addition to establishing intersectionality as a legitimate basis

for aging research, their results raised more questions about the processes of intersectionality with regard to the mental well-being of older adults. Although they demonstrated a preliminary relationship between intersecting inequality and low self-esteem, their study was not able to test some of the processes by which inequality influences well-being.

In this paper, I seek to build upon the work of McMullin and Cairney (2004) by invoking an intersectionality framework to examine how the process of social support networks combine with age, gender, race, and class to shape the mental well-being of older adults. It is my hope that this study will address some of the limitations of McMullin and Cairney (2004) by incorporating the dimension of race and also by examining a potentially crucial process in the relationship between intersectionality and mental well-being: social support.

More specifically, I will investigate if social support influences mental well-being differently for older adults of various races, genders, and ages. I will examine how marriage, parenthood, proximity of friends and relatives, frequency of interaction with others, and ability to rely on others interact with, gender, race, and class to create differential mental well-being outcomes. On the most basic level, I will test for evidence of an interaction effect between social support and race, gender, and age. Then, I will focus my attention within subgroups of race, gender, and age to see if and to what extent the effect of social support differs or remains consistent across groups and income levels. By directly theorizing and testing for the intersectionality as it relates to social support and mental well-being, I hope to yield a greater understanding of the advantages, disadvantages, and needs of an increasingly diverse elderly population.

Hypotheses

Drawing from the literature, I have formulated a series of hypotheses. First, I predict that social support will be associated with lower levels of depressive symptoms and thus better mental well-being. While there is debate over what forms of social support are most influential, evidence suggests that social support overall is beneficial to the mental well-being of older adults.

Secondly, I predict that there will be an interaction between social support and intersections of inequality. Previous research has yielded scattered conclusions concerning inequality, social support, and mental well-being. These unclear conclusions, however, are overwhelming the result of differential outcomes due to racial, gendered, socioeconomic, or age-related variations. With this in mind, I argue that there is reason to believe that women and men, blacks and whites, old and young, poor and rich experience social support differently and consequently, are likely to have different life course patterns in terms of mental well-being.

My third prediction is that women and non-whites will have similar responses to social support. In line with feminist theorizations, women and ethnic minorities are both under substantial pressure from cumulative disadvantage and thus will be more similar than different in old age in terms of social support and mental well-being.

Finally, I predict that the oldest age group will have the greatest response to social support compared with other age groups. As the most vulnerable group physically (and possibly financially), the oldest age group will be the most reliant upon friends and family to provide support and thus the most responsive to most forms of social support.

Data

Sample

To address the impact of social support and intersectionality on elderly subjective well-being, I use data from the 2004 wave of the Health and Retirement Study (HRS). The HRS is a national, longitudinal panel study of adults over the age of 50 in the United States. Respondents are interviewed every two years on a variety of topics including physical health, mental health, cognition, economics, retirement, family relations, and social support. The study is funded primarily by the National Institute on Aging (NIA) with additional resources from the Social Security Administration.

To gather my final working dataset, I collected select variables (such as measures of social support) from the original HRS Core data and merged them with the RAND HRS data. The RAND HRS data is a cleaned version of the original HRS data and includes a majority of the most commonly used HRS variables such as socio-demographics, economics, and physical and mental health. The original raw sample size was 20,139. There was no one variable responsible for a large proportion of missing cases. Number of living children had largest number of missing cases with 17,935 individuals responding. My final working data set included 15,405 individuals ranging in age from 50 to 107, consisting of 58 percent females and 80 percent whites. This data set is unique because it provides a very large and quite diverse nationally representative sample of individuals aged 50 and older. In addition, the HRS has extensive measures on health, mental well-being, and social support availability. These features are particularly well-suited to my research question because the large, diverse sample size allows me to examine subsamples of individuals along age, racial, gendered, and

socioeconomic lines. In addition, detailed measurements of mental well-being and social support provide credible and valid measures of the key variables.

Mental Well-Being and Depressive Symptoms

For the purposes of this analysis, the dependent variable is “mental well-being” or “mental health.” The RAND HRS provides an index of “mental health” using the Center for Epidemiologic Studies Depression (CESD) scale. The CESD is a summation scale that has been tested in previous research to have high internal consistency with reliability (Cronbach’s alpha = 0.85 for the general population) and consistent validity across a range of populations (Radloff 1977). The full CESD scale uses 20 items, but there are a variety of shorter versions of this scale available that show similarly high levels of reliability, obtain information on the same dimensions of depression, and are comparable to the 20 item version (Kohout et al. 1993). In fact, there is evidence to suggest that shorter versions of the CESD scale are preferable in for use in populations aged 65 and older in particular because they alleviate respondent burden (Kohout et al. 1993). For the purposes of this paper, I use an eight item CESD scale from the compiled RAND dataset. The eight items used for the RAND CESD score are derived directly from the longer version of the CESD and use eight of the original 20 items. These eight include: depression, everything is an effort, sleep is restless, felt alone, felt sad, could not get going, felt happy, and enjoys life. Experiencing the first negatively-oriented 6 items “all” or “most of the time” earns a point on the CESD scale while experiencing one of the last two positively-oriented items “all” or “most of the time” subtracts a point. Therefore, a higher score on the CESD would indicate higher levels of

depression and thus poorer mental well-being. Low scores on the CESD scale reflect fewer depressive symptoms and thus, better mental well-being. The use of the CESD scale is a common proxy for mental health for studies using HRS data (Benjamins 2005; Brown, Bulanda, and Lee 2005; Fultz et al. 2005; Gallo et al. 2006; Luo and Waite 2005; Siegel, Bradley, Gallo, and Kasl 2004; Sobal and Rauschenbach 2003).

Figures 1 and 2 provide descriptive information concerning the mental well-being of my final working sample. Overall, women had higher levels of depressive symptoms than men, with minority women demonstrating the highest levels of depression overall (See Figure 1). Among men, blacks showed the greatest amount of depressive symptoms. Across age groups, depression seems to have a curvilinear direction with individuals in their 50s and over the age of 80 demonstrating the highest levels of depression (See Figure 2).

Social Support

My main independent variables reflect an individual's social support network. To measure social support, I use a combination of variables including: marital status, number of all living children, frequency of interaction with friends/relatives/neighbors, whether he/she has relatives living nearby, whether he/she has friends living nearby, and whether he/she has relatives or friends to help with future needs. The HRS provides very detailed information on marital status using the following categories: married, married/spouse absent, partnered, separated, divorced, separated/divorced, widowed, and never married. Previous studies with the HRS that focused on marital status that use the HRS collapsed these detailed categories into three or four more condensed classifications (for examples, see Sobal and Rauschenbach

2003; Sudano and Baker 2006; and Zhang and Hayward 2006). Following this precedent and using descriptive statistics to identify similarities between the original HRS classifications, I condensed these categories into four marital status classifications: 1) married/partnered, 2) divorced/separated, 3) widowed, and 4) never married. I created dummy variables for each category, using married/partnered as the baseline.

The number of living children for a respondent includes all living children, including step children, and ranges from 0 to 22 with a mode of 2. Frequency of interaction with others was derived from a two-step question. The first part of the question asked the number of times one “gets together with others” and the second part asked if the number given referred to per day, per week, biweekly, per month, per year, or almost never. I combined these two variables to get a raw number of interactions per year. For example, an individual answering “one” in the first part of the question and “per day” in the second would have a raw score of 365 interactions annually. After calculating this raw interaction score, I divided the count of yearly interactions by 52 to yield a final variable that represents the number of interactions each respondent has per week. Therefore, someone with “one” interaction “per day” would have an estimated seven interactions per week. Choi, Burr, Mutchler, and Caro (2007) used a similar method with HRS data to quantify older adults’ frequency of volunteering into weekly estimates. Although this manner of quantifying frequency of interaction is not as realistic as, for example, a time-use journal, it is useful because it provides a standard formula for assessing and measuring average levels of social interaction.

The HRS provides measurements of proximity of relatives and friends by asking respondents to respond “yes” or “no” if they have “relatives living nearby” and “friends

living nearby.” I created dummy variables for both of these measurements with “no relatives living nearby” and “no friends living nearby” as baselines. My final social support variable was “having relatives or friends to help with future needs.” Like the previous two measurements, respondents answered “yes” or “no.” This measurement was also converted into a dummy variable with “not having friends or relatives to help with future needs” serving as the baseline.

Table 1 provides descriptive data of the social support measures by race and gender. Of the total sample, over half of the sample is married and over 20 percent widowed. A majority (70 percent) have relatives or friends to help with future needs, although only 30 percent have relatives living nearby. White males are the most likely to be married while black females are the most likely to be divorced or separated (see Table 1). Although never married individuals are rare, black females and black males make up a larger portion of the never married than other races or whites. Number of living children was relatively stable across gender and race. Black males reported the highest numbers of living children overall as well as the more frequent interactions per week. Black respondents reported living near relatives slightly more than whites and other races. White men and black men were the most likely to report living near friends, while black women and “other” races were the least likely to have friends near. Black males and black females were both more likely to respond that they had relatives or friends to help with future needs than their white counterparts. White men were the least likely to report having friends or relatives to help with their needs.

Table 2 provides data on social support by age group. For this sample, individuals aged 50-59 have the highest rates of divorce and/or separation. As would be expected, those

aged 80 and older are the most likely to be widowed. Those in their 70s had the highest numbers of adult children. Individuals 80 and older reported the most frequent interactions per week while those aged 50-59 had the fewest. The oldest age group (80+) were the most likely to have relatives in close proximity while those age 70-79 had slightly higher rates of friends near than other groups. Individuals aged 80 and over were slightly more likely to report that they had people to help with their needs than other age groups. Tables 1 and 2 clearly suggest that the type of social support differs by gender, race, and age. The next question to be explored is: What are the implications of these differences for mental well-being?

Other Independent Variables

Beyond race, gender, and age, socioeconomic class and physical health are also important predictors of mental well-being. Class is measured through three variables: income, wealth, and education. Income is the overall income of a household in one year. The same household income variable from the HRS has been used by other studies of older adults to demonstrate economic position (Benjamins, 2005; Luo and Waite 2005; Siegel et al. 2004; Sobal and Rauschenbach, 2003). Because the sample includes large numbers of retirees, however, hundreds of respondents in my sample reported no income at all resulting in a skewed distribution. Rather than lose these cases to missing data, I log transformed the income variable by adding one and taking the log of the values (Zhang and Hayward 2006). As a result of many of the respondents in the sample reporting no income, I chose to also use a measurement of net wealth. The HRS provides a measure of wealth that includes the total

net wealth of a household including all income, savings, assets, and housing values minus any household debt (also used by Fultz et al. 2005; Siegel et al. 2004; Sobal and Rauschenbach 2003). Due to the wide range of the data and the large values for wealth, I divided the value by 10,000 so that a household's wealth is presented in tens of thousands of dollars (following Siegel et al. 2004). Education is measured in number of years of education total.

In addition to class, there is extensive theorization and literature linking mental well-being to physical health (for summaries, see Cobb 1976; House, Umberson, and Landis 1988). Because my focus is on mental well-being, I choose not to focus directly on physical health but to carefully control for its effects in my model. I include two measurements of physical health: self-rated health and a scale of functional limitations or instrumental activities of daily living (IADL). Self-rated health and functional limitations are two common measurements of physical health in gerontological literature predicting mental well-being (Balaswamy and Richardson 2001; Fiori, Antonucci, and Cortina 2006; Lee and Ellithorpe 1982; Okabayashi et al. 2004; Wenger, Davies, and Shahtahmasebi 1995) and also in other studies using HRS data (Benjamins 2005, Luo and Waite 2005; Siegel et al. 2004).

The HRS provides a measurement of self-rated health by asking respondents to rate their physical health as "excellent," "very good," "good," "fair," or "poor." Therefore lower scores on self-rated health indicate feeling healthier. The data set also includes a measure of functional limitations (IADL). Respondents are asked if they have "any difficulty" (answering "yes" or "no"), with using a phone, handling money, taking medications, shopping, or preparing a meal. To create the scale, the HRS takes a sum of the total of

functional limitations. Therefore, higher scores on the IADL scale indicate poorer functional health.

Methods

After performing preliminary descriptive statistics (see Table 1, Table 2, and Table 3), I created a series of nested OLS regression models predicting depressive symptoms. Because there is extensive literature documenting the relationship between physical health and mental health, my first model (Model 1, see Table 4) serves as a foundation by examining the relationship between self-rated health and functional limitations on depressive symptoms. My second model (Model 2) adds sociodemographic variables, including income, wealth, age categories, race, and gender. For Model 3, I introduce the primary social support measurements: 1) marital status, 2) number of living children, 3) frequency of interaction, 4) relatives living nearby, 5) friends living nearby, and 6) ability to rely on friends or relatives for help. In the last two models of Table 4, I introduce interaction terms to test whether there was a more complex relationship between gender, race, age, and social support. Model 4 includes a basic interaction between just gender and race (black*female, other race*female). Finally, I add a series of interaction terms that pair race/gender/social support variables and also age categories/social support variables, while also controlling for the basic interaction between gender and race. Although tedious, the purpose of these interactions is to establish whether or not there is a more complex, and possibly intersectional, relationship between age, gender, and race. Of all possible interactions tested, only those yielding statistically significant results are shown in Table 4.

Although the OLS regression models are extremely useful in testing interaction effects, such complex combinations are often difficult to interpret. Three-way interaction effects are extremely cumbersome to interpret and thus are not the clearest possible way to present my data. Rather than interpret each three-way interaction effect independently, I chose to split my sample by age, race, and gender.

Taking advantage of my large sample size, I created a series of split sample OLS regressions. For these split samples, I used the full regression model (Model 3, Table 4) examines the impact of social support and sociodemographics on depressive symptoms, controlling for health. The first split sample (see Table 5) divides the sample by race and gender, showing separate regressions for white males, black males, other males, white females, black females, and other females. The purpose of this sample split is to investigate more clearly how characteristics of inequality intersect to create differential outcomes for the mental well-being of aging adults.

Following this first split sample, I wanted to further examine the intersecting effects of race and gender in relation to age. Rather than simply splitting the sample by age categories, I found that including divisions of age by both gender and race yielded a clearer understanding of how different subgroups may experience social support and depressive symptoms differently or similarly depending their age, age category, or possibly generation. Therefore, my second division (see Table 6) separates the sample by gender and age with regressions for males 50-59, males 60-69, males 70-79, males 80 and above, females 50-59, females 60-69, females 70-79, and females 80 and above. My final split sample (see Table 7) divides the total sample into groups according to age and race. The final group regressions

shown in Table 8 include: whites 50-59, whites 60-69, whites 70-79, whites 80 and above, blacks 50-59, blacks 60-69, blacks 70-79, and blacks 80 and above. By comparing these three split samples, I hope to gain a clearer understanding of how age, race, and gender shape the experience of social support and mental well-being.

Results

Nested OLS Regression Models Predicting Depressive Symptoms

In general, health (both self-rated and functional limitations) has a strong relationship with depressive symptoms in all of the nested models (see Table 4). Consistent with the bivariate shown in Table 1 and 2, the results of Model 2 reveal that women and minorities have higher levels of depressive symptoms. Increases in income and education, however, are related to a decrease in depressive symptoms. Although Figure 2 suggests a curvilinear relationship between age and depressive symptoms, after controlling for health, sociodemographics and social support (see Model 3) this relationship appears to actually be linear. Individuals aged 60 and old all have fewer depressive symptoms compared to those in their 50s and the magnitude of this difference increases with age group.

Also in Model 3, social support variables reveal a strong relationship between being married (versus divorced/separated, widowed, and never married) and fewer depressive symptoms. Friends living nearby and having friends or relatives to help with needs, however, is linked to fewer symptoms of depression. Frequency of interaction and proximity of relatives did not have a statistically significant effect on depressive symptoms. In general, the addition of social support variables slightly moderated the strong effect of physical health on

depression and yielded a model that is statistically a better fit to the data than Models 1 and 2.

Models 4 and 5 add interactions between race, gender, and age. In Model 4, the interaction between gender and race is statistically significant and improves the overall fit of the model. After adding interactions between race, gender, and social support as well as age categories and social support, however, the interaction between just race and gender is no longer statistically significant. Model 5 is the best fit to the data overall and includes statistically significant interaction effects between race, gender, and marital status as well as between age category and marital status, age category and number of children, and age category and having relatives or friends to help with needs. The addition of the interaction effects, however, has little impact on the other variables in the model. Poorer physical health, being an ethnic minority, being female, divorce, widowhood, and more children all remain statistically significantly related to increased levels of depressive symptoms, net of all other variables in the model. Higher income, more years of education, being older than 59, and having friends nearby or people to help with future needs also remain statistically significantly associated with lower levels of depression, controlling for health and all other factors. Although the interaction effects provide a better fit to the data, the relationship between gender, race, age, and social support remains scattered.

Split Samples

To better understand the relationship between race, gender, class, age, and social support, I split my overall sample into subgroups according to race, gender, and age and

performed a series of regressions. In the first split sample, respondents are grouped by gender and race (see Table 5). Overall, physical health remains an important predictor of depressive symptoms across all groups, net of sociodemographics and social support. Income is a statistically significant predictor of depressive symptoms for black and white females as well as white males. Black males, however, do not demonstrate this relationship between higher income and lower depression. Although this effect on black males would be the result of lower statistical power, the effect is still statistically significant and worth examining. For nearly all groups, more education is statistically significantly associated with fewer depressive symptoms, net of all other variables. For all groups in this split sample, those aged 60 and older have lower levels of depression than those aged 50-59. This effect is particularly strong for older blacks. The effect of being aged 80 and older (as compared to 50-59 years old) on depressive symptoms is two times stronger for older black males than for older white males. Only white males, however, are associated with higher levels of depression if they are “never married.” An increase in the number of children is related to higher levels of depression only for white males in this split sample. “Other” males demonstrate a weak relationship between increases in frequency of interaction per week and reduced depressive symptoms. Having friends living nearby is statistically significantly associated with a reduction in depressive symptoms only for whites. Compared to whites and black females, black males are the only group that does not demonstrate a statistically significant relationship between having friends or relatives to help with needs and fewer depressive symptoms.

In my last two split samples, I divided respondents by age category and gender (see Table 6) as well as age category and race (see Table 7). For respondents grouped by age and gender, only younger respondents (69 and younger) displayed a statistically significant relationship between higher income and lower depression while females demonstrated a stronger and more consistent relationship between education and fewer depressive symptoms than men, net of all other variables in the model. Widowhood was a statistically significant predictor of higher levels of depression for those of any age, except for females aged 80 and above. Likewise, divorce/separation was statistically significantly associated with higher depression for every group except those aged 80 and up. Higher numbers of children were associated with higher depression only for the youngest male members of the sample (males aged 50-59). Having friends living nearby was associated with lower depression for the youngest males in the sample (aged 50-59) as well as the oldest females (aged 70 and above). Finally, having relatives or friends to help was associated with lower depression for nearly every age group (with an especially strong relationship for those aged 50-59) with the exception the oldest respondents aged 80 and older. In general, the regression model was a best fit with the youngest subsamples and demonstrated a decrease in predictive power with older age groups.

My final series of split samples grouped respondents by age and race (see Table 7). Because “other” was the smallest race group in the sample, it did not contain enough respondents to subgroup and thus has been left out of this final analysis. In general, younger individuals (69 and younger) of all races demonstrated a statistically significant association between higher income and fewer depressive symptoms. Education is an important predictor

of lower depression across all groups, but its effect is nearly two times stronger for blacks than it is for whites. For the most part, married individuals had lower levels of depression as compared with divorced/separated, widowed, and never married respondents. All age groups of white widowed respondents had higher depression than black widowed respondents and married individuals. In fact, for blacks, widowhood was statistically significantly related to higher depression only for those aged 70-79. Among the never married, blacks aged 50-59 experienced higher depression than married blacks aged 50-59. Higher numbers of living children was associated with higher depression only for the youngest respondents (whites and blacks aged 50-59). Although whites of nearly all ages demonstrated a relationship between friends living nearby and lower depression, there was no statistically significant relationship between friends and lower depression for blacks of any age group. Having relatives or friends to help was associated with lower depression for most groups except blacks in their 60s. The effect of friends and relatives to help was especially pronounced amongst blacks in their 70s with a coefficient over three times larger than that for whites and twice that of younger blacks. As with the previous split sample, the predictive power of the models decreases with older age groups as indicated by a decrease in R^2 .

Discussion

The purpose of this paper was to examine how social support impacts the mental well-being of older populations, particularly along the lines of age, race, gender, and class. I hypothesized that 1) social support would be associated with lower levels of depression for the sample, 2) there would be an interaction between social support and race, gender, and

age, 3) women and non-whites will have similar responses to social support in terms of mental well-being, and 4) the oldest age group will have the greatest response to social support due to their increased vulnerability.

The data supported my first hypothesis. In Table 4, Model 3 the addition for social support variables to the model improved the overall fit of the model and mediated the negative effects of poor health on depressive symptoms (if only slight). Also in Model 3, married individuals had fewer depressive symptoms, and those with friends living nearby or relatives and friends to help with future needs had fewer depressive symptoms. More children led to an increase in depressive symptoms for younger white males and young blacks, furthering evidence for some theorizations that children can act as a burden to aging individuals, especially for men in traditional breadwinner roles or single mothers. Thus, higher numbers of children does not necessarily indicate one will have a stronger social support network. Although not all of the social support variables (such as frequency of interaction and relatives living nearby) decreased depressive symptoms, the overall effect of the model is positive in terms of mental well-being. Even though the effect of social support is rather small, especially compared to the effect of physical health, the influence is still real. It appears that social support helps to mediate poor health in older adults and also decrease depressive symptoms.

My second hypothesis was also supported by the data. I predicted that there would be an interaction effect between social support and race, gender, and age. Model 5, Table 4, included interaction terms between race, gender, and age with social support variables. Model 5 was the best fit to the data, providing preliminary evidence of the interaction

between inequality and social support in predicting depressive symptoms. This finding is one of the most significant in my analysis. By demonstrating that these elements interact statistically, we can begin to explore what they mean substantively. Although the interaction terms are interpretable, I turn to the split samples for a more clear-cut representation of how intersectionality influences mental well-being via social support.

Looking at Table 5, it appears that the data do not support my third hypothesis. After breaking down the sample into gender-race groups, females and racial minorities do not have a great deal in common. Rather, the most unique, but not necessarily most disadvantaged, group in Table 5 is black females. In terms of social support, black females depressive symptoms were decreased only by marriage (versus just divorce) and having relatives or friends to help. White males, black males, and white females have more in common in these subsamples. The males in the sample associated increased number of children with higher depressive symptoms. This may be because of traditional role of the male as the financial provider of the family. Even in the case of non-nuclear or non-traditional families, this expectation may still exist. Only whites (men and women) had a decrease in depression because of friends living nearby. This may reflect different patterns of socialization (Lincoln et al. 2003; Sarkisian and Gerstel 2004). One possible speculation may be that whites spend more time socializing with neighbors nearby while blacks may focus their social circles around organizational memberships like volunteering, church, etc (Taylor, Chatters, and Jackson 1997). In terms of class (income and wealth), it is important to note the lack of relationship between my measures of income and wealth and depressive symptoms of black males. Likewise, black males and black females demonstrated a particularly strong

relationship between education and fewer depressive symptoms. For minority groups, higher education may be the key to escaping many of the pitfalls of class and racial discrimination. As a socioeconomically disadvantaged group in terms of the work force, older black males may have adapted to structural constraints by not basing their morale on economic gain. Younger women with higher income, on the other hand, have lower levels of depression. This may also be a compensatory response. Studies show that women gain a great deal of self-esteem and confidence from working outside the home (McMullin and Cairney 2004). Therefore, income and education may be measures of professional success for working women, thus leading to better mental well-being.

My final prediction was that the oldest age group (80+) would respond the most intensely to social support. This finding was not supported by the data. By looking at Table 6 and Table 7, you will see two different breakdowns of the sample by age. Although, admittedly, the sample size becomes significantly smaller in for the aged 80 and above subgroup which may lead to a lack of statistical power, the results seem to suggest that the social support measures tested in this study actually lose influence in older age groups. Because these data are cross-sectional, we cannot determine if the relative lack of response to social support on the part of the 80 and above group is an effect of age or cohort, but it does raise some striking questions about elderly care and support. If the mental well-being of the oldest age group is not responding to interaction, friend/relative proximity, or reliance on friends or relatives then who are they turning to? It could be that the oldest individuals are already institutionalized and thus rely on formal structures for social support and care. In addition, the oldest respondents displayed remarkably fewer depressive symptoms than any

other age groups after controlling for all other variables, indicating that although they are not responding to the social support measures used here, perhaps they are being supported in other ways.

Although, in general the oldest ages responded less to social support, there are a few notable exceptions. Women aged 70 and above have a particularly stronger reaction to friends living nearby than males of the same age (Table 6). The effect of friend proximity on better mental well-being holds only for white women aged 70 and above and not for black women or men. This could reflect the structure of retirement communities where upper class white women predominate as the result of males' shorter life spans and minorities' socio-structurally limited access to such facilities. On the opposite end of the age spectrum, younger males (in particular, white males) also show a significant response to friends living nearby. Again, this may reflect different patterns of socialization preferences for whites and for blacks. It is concerning, however that in many of the models blacks (and women) have higher depressive symptoms even after controlling for socioeconomics, health, and marital status. One interesting pattern to note is among black males. Black males aged 50-59 have elevated depression levels compared to whites. But, this effect disappears for black males aged 60-69 and reappears again for black males 70-79. This unique pattern could reflect life course experiences. Stress and depression may be higher while black men are younger and engaged in the work force. Those stressors may decrease during initial retirement years (60s) but increase again in response to the financial strains associated with retirement, for example.

While the oldest group was not responsive to having relatives or friends to help with future needs, almost every other group in the sample is. Males and females younger than 80

all experience decreased depression in association with having friends and relatives to assist them. For most groups, the coefficient is similar with about a 0.20 to 0.30 decrease in depressive symptoms. One very unique group is blacks aged 70-79. They have a decrease in depression of nearly three times the magnitude of other groups in association with having friends or relatives to help. Again, cross-sectional data limits me from determining if this is an age or a cohort effect. At the same time, I speculate that this pattern for black men reveals different stages in the life course.

Although there is a lot of information in the tables, five main themes emerge. First, social support, taken as a combined force, is associated with a decrease in depressive symptoms and thus a positive increase in mental well-being. Second, there is an intersection between social support and age, race, and gender (and also with consistent themes in terms of class). Third, although women and racial minorities both operate within oppressive structures of inequality throughout the life course, their later life outcomes in terms of social support and mental well-being are more different than they are similar. White women respond to friends while blacks in older age groups (most likely older black women) demonstrate a relationship between relatives/friends to help with future needs and better mental well-being. Black men, although similar to white men in their association between larger numbers of children and increased depression, are a unique group because they show little to no association between having friends and family to help and better mental well-being. The fourth theme is that despite race, gender, age, and health, aspects of class are important in determining mental health outcomes. Only black males demonstrated immunity from the relationship between income and fewer depressive symptoms. This lack of a relationship

between income and depression is likely indicative of a class and status problem for black men rather than some ability to operate outside of the boundaries of class systems. Likewise, the strong relationship between blacks, education, and fewer depressive symptoms may suggest a compensatory effect with education as a means to bypass some of the setbacks of minority racial status. Fifth, the oldest age group appears to have a very weak response to the social support forms tested here (with the exception of oldest white women who show a relationship between friends living nearby and decreases in depression). Older blacks (70-79), on the other hand, reveal an exceptionally strong relationship between having friends and relatives to help with future needs and better mental well-being. Overall, the oldest age group shows significantly fewer depressive symptoms than the youngest (50-59) age group after controlling for health, sociodemographics, and social support.

Conclusions

The themes that emerge from this analysis highlight some important issues about aging populations. The most obvious is that we must stop theorizing, discussing, analyzing, and treating elderly populations as a homogenous group. As Calasanti (1996) reminded us, it is not enough to merely discuss diversity; it must be an intricate part of our theorization and our conceptualization of the life course. Moreover, Patricia Hill-Collins' (1992) conceptualization of intersectionality is an appropriate and useful framework for analyzing the mental health of older adults. My results indicate that there are a number of divisions amongst races, genders, and ages that merit future attention. In particular, aging black men emerge as a subgroup with unique needs and a lack of positive response to forms of social

support studied here. Older white women emerge as a particularly privileged group, at least in terms of their response to friends' social support. That being said, there are a few consistent similarities across races, genders, and nearly all age groups. Being married and having increased income is associated with fewer depressive symptoms across all nearly all groups (except black men). In addition, women and minorities continue to display heightened levels of depression well into old age. These divisions, particularly those along race, are some that may not have been recognizable in previous attempts at using intersectionality to deal with the well-being of aging populations (McMullin and Cairney 2004). To the author's knowledge, the present study is unique in its field in addressing the concerns of intersecting inequality with relation to social support and mental well-being.

Future studies should continue to investigate intersections of inequality that are inherent in aging populations. Although thought-provoking, the results of this study are far from conclusive. With the use of cross-sectional data it is difficult to determine if groups, such as older black men, are at risk due to age-specific events or because of generational differences. Longitudinal analysis would help to clarify the life course pathways of these individuals. In addition, the split-sample method of analysis can be cumbersome and table-heavy. At this point, however, it is one of the clearest options for presenting quantitative intersectionality data (McCall 2005). Multi-level modeling may be a possibility, but with so many ways to nest inequality (race, gender, age, class), the modeling may become rather involved and limit the degrees of freedom in the analysis. Future researchers, however, should continue to experiment with different methods of presenting intersectionality analysis. Finally, of course, is the awkwardness of applying a historically qualitative theory to

quantitative analysis. Statistics is only a tool for studying complex theorizations and cannot do justice to such a complex theory. Strict categorizations of race such as “white,” “black,” and “other” along with constrictive gender classifications of “male” and “female” that statistics often require ignore ethnic and sexual diversity. If we are to truly expand our knowledge of how intersections of inequality influence social support and mental well-being of aging adults, mixed methods and detailed qualitative studies are necessary.

It is my hope that the results of this analysis can help to address some of the crucial gaps in gerontological literature today and also open new pathways for applying intersectionality. Although researchers often incorporate issues of gender and feminism, or race and discrimination, or increasing age, or problems of social class, few have attempted to incorporate these ideas into one theoretical framework and analysis. Although not without flaws and limitations, the present study at the very least demonstrates the need for continuing research into the unique needs, experiences, and perceptions that structure the life course of an increasingly diverse aging society.

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	Total Sample (100%)	White Men (34%)	Black Men (5%)	Other Men (2%)	White Females (48%)	Black Females (9%)	Other Females (2%)
Marital Status							
Married/Partnered	65.15	81.39	66.95	79.85	58.02	36.54	54.65
Divorced/Separated	11.21	7.51	16.48	9.34	10.71	23.17	18.99
Widowed	20.41	8.28	11.27	7.37	28.85	33.31	20.35
Never Married	3.23	2.82	5.30	3.44	2.41	6.98	6.01
Mean Numb. of All Living Children	3.37	3.29	4.04	3.70	3.25	3.72	3.63
Mean Frequency of Interaction (per week)	1.83	1.85	2.21	1.47	1.83	1.76	1.38
Relatives Living Nearby	29.63	30.21	32.70	29.88	28.57	32.16	26.16
Friends Living Nearby	65.17	67.67	66.54	57.78	64.94	59.93	57.17
Rel/Friends to Help with Future Needs	70.51	64.97	78.44	65.47	71.33	84.55	69.72

N=15405

Table 1. Bivariate of Social Support by Race and Gender, HRS 2004

	Age Category			
	50-59 (26%)	60-69 (34%)	70-79 (24%)	80 + (16%)
Marital Status				
Married/Partnered	74.04	72.16	65.27	35.14
Divorced/Separated	16.75	12.69	7.56	4.45
Widowed	4.49	12.19	24.59	58.08
Never Married	4.72	2.96	2.58	2.34
Mean Num. of All Living Children	2.98	3.55	3.68	3.13
Mean Frequency of Interaction (per week)	1.35	1.76	2.00	2.55
Relatives Living Nearby	24.22	30.16	31.78	34.16
Friends Living Nearby	56.46	66.42	71.49	67.16
Has Rel/Friends to Help with Future Needs	71.71	69.82	68.27	73.40

N=15405

Table 2. Bivariate of Social Support by Age, HRS 2004

	Mean	Min	Max	Std. Dev.
Self-Rated Health ¹	2.90	1	5	1.14
Sum of Functional Limit. (IADL)	0.34	0	5	0.97
Income (ln)	3.49	0	14.51	4.81
Wealth (in 10,000)	43.98	-224.55	7722.50	150.72
Age (years)	67.51	50	107	10.79

N=15405

Table 3. Descriptive Statistics of Additional Variables in the HRS Sample

¹ Lower scores indicate better self-rated health

	Model 1: Health	Model 2: Sociodemo.	Model 3: Social Support	Model 4: Race/Gend. Interactions	Model 5: All Other Interactions
<i>Independent Variables</i>					
Physical Health					
Self-Rated Health	0.65* (0.01)	0.59* (0.01)	0.57* (0.01)	0.57* (0.01)	0.57* (0.01)
Sum of Funct. Limit.(IADL)	0.51* (0.02)	0.49* (0.02)	0.50* (0.02)	0.50* (0.02)	0.50* (0.02)
Socio-Demographics					
Income (ln)		-0.02* (0.003)	-0.03* (0.004)	-0.03* (0.004)	-0.03* (0.004)
Wealth (in 10,000)		<-0.001* (<0.001)	<-0.001 (<0.001)	<-0.001 (<0.001)	<-0.001 (<0.001)
Education (years)		-0.06* (0.004)	-0.05* (0.005)	-0.05* (0.005)	-0.05* (0.004)
Aged 60-69		-0.38* (0.04)	-0.40* (0.04)	-0.40* (0.04)	-0.53* (0.08)
Aged 70-79		-0.49* (0.04)	-0.53* (0.05)	-0.53* (0.05)	-0.50* (0.09)
Aged 80 +		-0.53* (0.05)	-0.70* (0.06)	-0.70* (0.06)	-0.61* (0.12)
Black		0.12* (0.04)	0.05 (0.04)	0.16* (0.07)	0.16* (0.07)
Other		0.10 (0.07)	0.05 (0.07)	-0.03 (0.10)	-0.02 (0.10)
Female		0.34* (0.03)	0.24* (0.03)	0.26* (0.03)	0.25* (0.03)
Social Support					
Divorced/Separated			0.58* (0.05)	0.59* (0.05)	0.69* (0.08)
Widowed			0.47* (0.04)	0.47* (0.04)	0.75* (0.13)
Never Married			0.24* (0.11)	0.24* (0.11)	0.37 (0.18)
Num. of All Living Children			0.06 (0.007)	0.006 (0.01)	0.01 (0.01)
Frequency of Interaction			-0.01 (0.004)	-0.01 (0.004)	-0.01 (0.004)
Relatives Living Nearby			0.02 (0.03)	0.02 (0.03)	0.02 (0.03)
Friends Living Nearby			-0.14* (0.03)	-0.14* (0.03)	-0.17* (0.06)
Has Rel./Friends to Help			-0.27* (0.03)	-0.27* (0.03)	-0.36* (0.06)
Race/Gender Interactions²					
Black*Female				-0.17* (0.08)	
Race/Gender/Social Interactions					
Black*Female*Div./Sep					-0.26* (0.13)
Black*Female*Widowed					-0.29* (0.12)
Other*Female*Widowed					-0.50* (0.23)
Age/Social Interactions					
80+*Widowed					-0.54* (0.15)
60-69*Rel./Friends to Help					0.20* (0.09)
Constant	-0.48* (0.04)	0.57* (0.09)	0.83* (0.10)	0.82* (0.10)	0.87* (0.11)
R Square (adjusted)	0.21	0.24	0.25	0.25	0.25
Model F	2059.49*	433.25*	274.99*	249.12*	115.19*
df	2	11	19	21	46

N=15405, * indicates $p \geq 0$

Table 4. Nested OLS Regression Models Predicting Depressive Symptoms

² For simplicity, only those interaction terms that yielded statistically significant results are shown here

	White Males (N=5159)	Black Males (N=760)	Other Males (N=295)	White Females (N=7399)	Black Females (N=1375)	Other Females (N=417)
Physical Health						
Self-Rated Health	0.50* (0.02)	0.45* (0.07)	0.53* (0.10)	0.64* (0.02)	0.47* (0.05)	0.82* (0.10)
Sum of Funct. Limit. (IADL)	0.53* (0.04)	0.46* (0.10)	0.62* (0.16)	0.43* (0.03)	0.57* (0.07)	0.68* (0.14)
Socio-Demographics						
Income (ln)	-0.02* (0.01)	-0.02 (0.02)	-0.06* (0.02)	-0.02* (0.01)	-0.05* (0.01)	-0.01 (0.03)
Wealth (in 10,000)	<-0.001 (<0.001)	-0.001 (<0.001)	<-0.001 (<0.001)	<-0.001 (<0.001)	-0.003 (0.003)	-0.01* (0.03)
Education (years)	-0.03* (0.01)	-0.09* (0.02)	-0.04 (0.03)	-0.06* (0.01)	-0.08* (0.02)	-0.03 (0.03)
Aged 60-69	-0.40* (0.06)	-0.86* (0.17)	-0.31 (0.25)	-0.32* (0.06)	-0.42* (0.13)	-0.48 (0.27)
Aged 70-79	-0.56* (0.07)	-0.70* (0.21)	-0.57 (0.33)	-0.46* (0.07)	-0.61* (0.17)	-0.50 (0.33)
Aged 80 +	-0.58* (0.09)	-1.20* (0.29)	-1.27 (0.70)	-0.68* (0.08)	-0.93* (0.23)	-1.17* (0.57)
Social Support						
Divorced/Separated	0.61* (0.08)	0.80* (0.18)	0.15 (0.35)	0.57* (0.07)	0.34* (0.14)	0.50 (0.27)
Widowed	0.84* (0.08)	0.40 (0.23)	0.21 (0.48)	0.42* (0.06)	0.21 (0.14)	0.10 (0.30)
Never Married	0.40* (0.20)	0.50 (0.33)	-0.70 (0.68)	-0.17 (0.22)	0.15 (0.23)	0.68 (0.47)
Num. of All Living Children	0.03* (0.01)	0.04 (0.03)	-0.07 (0.05)	-0.01 (0.01)	0.01 (0.02)	-0.06 (0.04)
Frequency of Interaction	<0.001 (0.01)	-0.02 (0.02)	-0.10* (0.005)	-0.01 (0.01)	0.004 (0.02)	-0.04 (0.05)
Relatives Living Nearby	-0.01 (0.05)	0.06 (0.14)	0.01 (0.23)	0.03 (0.05)	0.08 (0.11)	-0.07 (0.24)
Friends Living Nearby	-0.13* (0.05)	-0.26 (0.15)	0.33 (0.23)	-0.18* (0.05)	-0.07 (0.11)	0.17 (0.23)
Has Rel./Friends to Help	-0.23* (0.05)	-0.20 (0.16)	0.003 (0.23)	-0.29* (0.05)	-0.47* (0.15)	-0.06 (0.23)
Constant	0.60* (0.15)	1.83* (0.44)	1.00 (0.60)	1.05* (0.15)	2.13* (0.39)	0.22 (0.58)
R Square (adjusted)	0.24	0.22	0.25	0.25	0.22	0.30
Model F	100.70*	14.28*	7.25*	150.64*	24.82*	11.96*
df	16	16	16	16	16	16

N=15405, * indicates $p \geq 0.05$

Table 5. OLS Regression Models Predicting Depressive Symptoms for Split Sample by Gender and Race

	Males 50-59 (N=1610)	Males 60-69 (N=2183)	Males 70-79 (N=1634)	Males 80+ (N=787)	Females 50-59 (N=2492)	Females 60-69 (N=3191)	Females 70-79 (N=2156)	Females 80+ (N=1352)
Physical Health								
Self-Rated Health	0.51* (0.04)	0.45* (0.03)	0.50* (0.04)	0.42* (0.06)	0.56* (0.04)	0.63* (0.03)	0.62* (0.04)	0.62* (0.05)
Sum of Funct. Limit. (IADL)	0.85* (0.08)	0.81* (0.07)	0.34* (0.07)	0.29* (0.06)	0.82* (0.07)	0.65* (0.06)	0.46* (0.06)	0.27* (0.04)
Socio-Demographics								
Income (ln)	-0.03* (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.03)	-0.02* (0.01)	-0.03* (0.01)	-0.02 (0.01)	-0.03 (0.03)
Wealth (in 10,000)	< -0.001 (<0.001)	< -0.001 (<0.001)	< -0.001 (<0.001)	-0.001 (<0.001)	< -0.001 (<0.001)	< -0.001 (<0.001)	-0.001 (<0.001)	-0.002 (0.001)
Education (Years)	-0.01 (0.02)	-0.06* (0.01)	-0.04* (0.01)	-0.02 (0.02)	-0.07* (0.01)	-0.06* (0.01)	-0.08* (0.01)	-0.05* (0.02)
Black	0.33* (0.12)	-0.04 (0.09)	0.37* (0.13)	-0.02 (0.23)	-0.08 (0.11)	-0.05 (0.09)	0.06 (0.13)	0.004 (0.17)
Other	-0.06 (0.15)	0.05 (0.17)	0.13 (0.22)	-0.69 (0.57)	0.17 (0.14)	-0.07 (0.18)	-0.01 (0.20)	-0.25 (0.44)
Social Support								
Divorced/Separated	0.83* (0.12)	0.56* (0.10)	0.42* (0.17)	0.34 (0.31)	0.53* (0.10)	0.59* (0.10)	0.34* (0.14)	0.44 (0.26)
Widowed	1.33* (0.37)	0.78* (0.16)	0.80* (0.13)	0.57* (0.13)	0.57* (0.15)	0.41* (0.09)	0.45* (0.09)	-0.01 (0.12)
Never Married	0.64* (0.25)	0.09 (0.26)	0.10 (0.39)	0.44 (0.85)	0.39 (0.22)	0.11 (0.24)	-0.20 (0.35)	-0.07 (0.57)
Num. of All Living Children	0.06* (0.03)	0.02 (0.02)	0.01 (0.02)	-0.01 (0.03)	0.02 (0.02)	-0.01 (0.02)	-0.03 (0.02)	<-0.001 (0.02)
Frequency of Interaction	0.03* (0.02)	-0.01 (0.01)	-0.02 (0.01)	-0.01 (0.01)	-0.02 (0.02)	-0.02 (0.01)	-0.01 (0.01)	-0.03 (0.01)
Relatives Living Nearby	-0.01 (0.10)	-0.12 (0.07)	-0.12 (0.08)	-0.12 (0.13)	0.09 (0.09)	0.05 (0.07)	0.04 (0.08)	-0.035 (0.11)
Friends Living Nearby	-0.28* (0.09)	-0.11 (0.07)	-0.01 (0.09)	-0.001 (0.14)	-0.08 (0.08)	-0.10 (0.07)	-0.29* (0.09)	-0.22* (0.11)
Has Rel./Friends to Help	-0.39* (0.09)	-0.15* (0.07)	-0.26* (0.08)	0.01 (0.13)	-0.40* (0.09)	-0.24* (0.08)	-0.35* (0.09)	-0.15 (0.12)
Constant	0.38 (0.30)	0.53* (0.21)	0.23 (0.24)	0.20 (0.37)	1.28* (0.27)	0.62* (0.23)	1.04* (0.25)	0.66* (0.34)
R Square (adjusted)	0.32	0.25	0.21	0.15	0.27	0.26	0.25	0.19
Model F	51.11*	48.66*	30.14	10.06*	60.97*	76.92*	47.93*	22.11*
df	15	15	15	15	15	15	15	15

N=15405, * indicates $p \geq 0.05$

Table 6. OLS Regression Models Predicting Depressive Symptoms for Split Sample by Age and Gender

	White 50-59 (N=3065)	White 60-69 (N=4343)	White 70-79 (N=3243)	White 80+ (N=1907)	Black 50-59 (N=673)	Black 60-69 (N=841)	Black 70-79 (N=416)	Black 80+ (N=205)
Physical Health								
Self-Rated Health	0.54* (0.03)	0.58* (0.03)	0.56* (0.03)	0.57* (0.04)	0.51* (0.08)	0.34* (0.07)	0.57* (0.10)	0.37* (0.13)
Sum of Funct. Limit. (IADL)	0.79* (0.07)	0.69* (0.05)	0.48* (0.05)	0.28* (0.04)	0.79* (0.12)	0.80* (0.11)	0.27* (0.12)	0.32* (0.11)
Socio-Demographics								
Income (ln)	-0.03* (0.01)	-0.02* (0.01)	-0.02 (0.01)	-0.03 (0.03)	-0.03 (0.02)	-0.04* (0.01)	-0.01 (0.03)	0.14 (0.14)
Wealth (in 10,000)	< -0.001 (<0.001)	< -0.001 (<0.001)	< -0.001 (<0.001)	-0.001 (<0.001)	-0.001 (0.002)	-0.001 (0.001)	-0.01 (0.01)	-0.01 (0.01)
Education (Years)	-0.04* (0.01)	-0.05* (0.01)	-0.05* (0.01)	-0.03* (0.01)	-0.11* (0.03)	-0.10* (0.02)	-0.10* (0.03)	-0.03 (0.04)
Female	0.21* (0.07)	0.30* (0.05)	0.31* (0.06)	0.17 (0.09)	-0.25 (0.16)	0.37* (0.14)	0.11 (0.21)	0.54 (0.32)
Social Support								
Divorced/Separated	0.71* (0.09)	0.61* (0.08)	0.36* (0.12)	0.49* (0.22)	0.52* (0.18)	0.56* (0.16)	0.44 (0.28)	0.07 (0.52)
Widowed	0.76* (0.16)	0.55* (0.08)	0.59* (0.07)	0.28* (0.09)	0.45 (0.28)	0.23 (0.17)	0.49* (0.24)	-0.33 (0.39)
Never Married	0.27 (0.24)	0.03 (0.25)	-0.19 (0.36)	-0.01 (0.59)	0.57* (0.28)	-0.01 (0.29)	0.03 (0.56)	0.16 (1.14)
Num. of All Living Children	0.04 (0.02)	0.03 (0.01)	-0.01 (0.01)	-0.003 (0.02)	0.08* (0.04)	0.01 (0.03)	-0.004 (0.03)	0.02 (0.04)
Frequency of Interaction	0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	0.001 (0.02)	-0.03 (0.03)	-0.02 (0.02)	0.04 (0.03)
Relatives Living Nearby	0.01 (0.08)	0.06 (0.06)	-0.04 (0.06)	-0.04 (0.09)	0.01 (0.17)	0.18 (0.14)	-0.03 (0.20)	-0.13 (0.29)
Friends Living Nearby	-0.16* (0.07)	-0.14* (0.06)	-0.22* (0.07)	-0.15 (0.09)	-0.27 (0.16)	0.07 (0.14)	-0.09 (0.23)	-0.22 (0.29)
Has Rel./Friends to Help	-0.38* (0.07)	-0.24* (0.06)	-0.27* (0.06)	-0.11 (0.09)	-0.43* (0.20)	-0.14 (0.16)	-0.94* (0.25)	0.07 (0.38)
Constant	0.68* (0.25)	0.27 (0.18)	0.41* (0.20)	0.16 (0.27)	0.57 (0.40)	1.40* (0.44)	1.83 (0.57)	0.80 (0.82)
R Square (adjusted)	0.26	0.27	0.25	0.19	0.28	0.21	0.19	0.08
Model F	78.05*	114.25	78.25	32.45*	20.67*	17.13*	7.78*	2.28*
df	14	14	14	14	14	14	14	14

N=14693 (+ 712 not shown) =15405, * indicates $p \geq 0.05$

Table 7. OLS Regression Models Predicting Depressive Symptoms for Split Sample by Age and Race³

³ “Other” race not shown due to inadequate subsample sizes

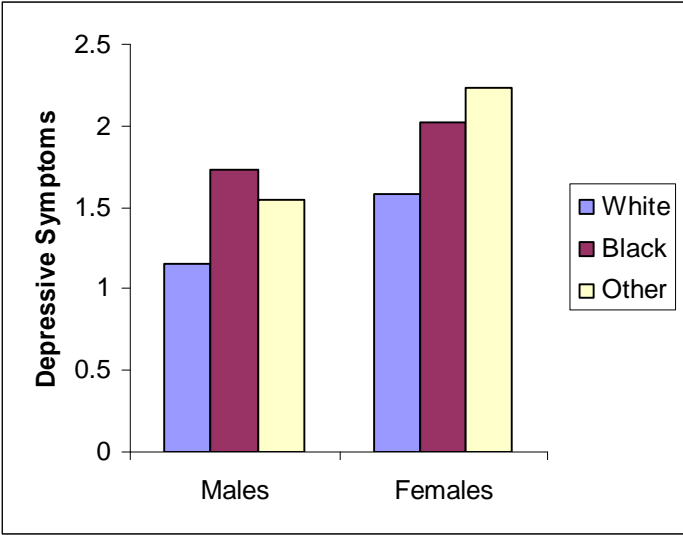


Figure 1. Mean Depressive Symptoms by Race and Gender, HRS 2004

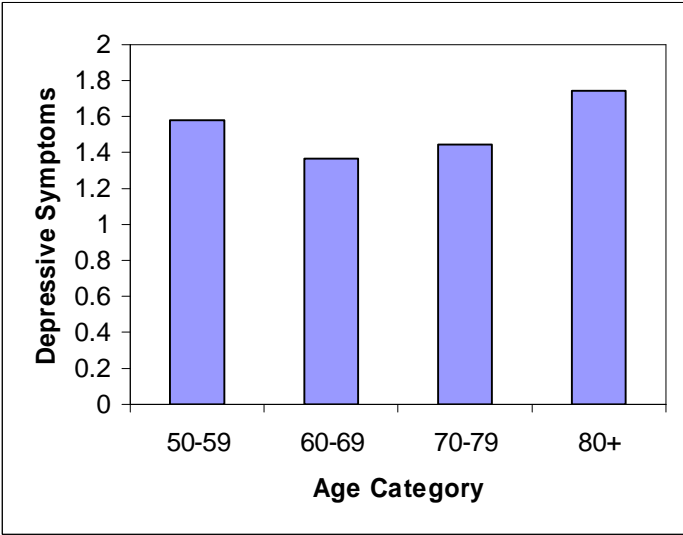


Figure 2. Mean Depressive Symptoms by Age, HRS 2004