

2014

DEPRESSION, SOCIAL SUPPORT, AND SELF-RATED HEALTH IN OLDER ADULTS

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DEPRESSION, SOCIAL SUPPORT, AND SELF-RATED
HEALTH IN OLDER ADULTS

BY

KRISTEN FRADY

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE
IN
HUMAN DEVELOPMENT AND FAMILY STUDIES

UNIVERSITY OF RHODE ISLAND

2014

MASTER OF SCIENCE THESIS
OF
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2014

ABSTRACT

Little research has explored factors indirectly related to health that may influence self-rated health (SRH) in older adults. Even less research has explored the relationship between perceived social support and SRH. The purpose of this study was to explore a health-related factor, depression, and an indirectly related to health factor, social support, as predictors of self-rated health in older adults. It explored three primary research questions: 1) Are there significant differences in older adults' SRH scores when examined by demographic factors such as age, education, and marital status? 2) Are depression and social support correlated with SRH and is one more strongly correlated? 3) If depression and social support are correlated with SRH, how much do they explain SRH after controlling for demographic factors?

This study used a subsample (n=577) of older adults aged 60 years and older from the national Aging, Status, and Sense of Control study conducted by Mirowsky and Ross in 2001. Analyses found significant differences in SRH scores only by differences in education. Both depression and social support were found to be correlated with SRH, though depression was found to be more strongly correlated. A regression analysis found that depression and education predicted SRH scores, but social support did not.

ACKNOWLEDGMENTS

I extend my gratitude to my thesis advisor and mentor, Phil Clark, for his support during my undergraduate and graduate years at URI. It was his encouragement and wealth of information that brought me to the field of gerontology, where a part of my researching heart will always lie.

I would also like to extend my sincerest gratitude to Karen McCurdy, for her guidance, kindness, and, most importantly, her patience, during my graduate career. I am also grateful towards Diane Martins for participating in my thesis adventures.

I'd lastly like to thank those who have been on this journey with me—my graduate school colleagues, my family, and my friends—for their love, patience, encouragement, support, and laughs.

This thesis is dedicated to all those who have aged gracefully and taught me more lessons than I can thank them for. It is also dedicated to those who challenge themselves and persevere.

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CHAPTER 1

INTRODUCTION

With the growth in the older adult population in the United States, more research is being done on positive human development. Many studies have begun to explore the relevance of self-rated health (SRH) scores provided by older adults and how these scores relate to actual health and future outcomes. There have been studies exploring the relationship between SRH and depression, but there has not yet been much research exploring the relationship between SRH and other measures that are not directly related to health in older adults. This study is one of the first to explore how social support may be related to subjective health. The study explores the relationships between both depression and SRH and social support and SRH. It first explores whether depression and social support are individually correlated with SRH and by how much each is correlated to determine if depression as a health indicator or social support as an indirectly related factor is more related to SRH than the other.

CHAPTER 2

REVIEW OF LITERATURE

Theoretical Framework

Researchers have recognized that health is comprised of a multitude of factors, including biological, psychological, and social, suggesting that health and successful aging are a reflection of well-being in all three areas of an individual (Lindau, Laumann, Levinson, & Waite, 2003). This study will utilize the biopsychosocial model, which was developed in the 1950s to explore factors beyond biology that may contribute to poor health and illness, recognizing that psychological and social factors also have an impact on a person's perception of their health (Bengtson, 2009). By taking a holistic, interdisciplinary approach to recognizing the relationship among biological, social, and psychological factors, this study will utilize the model to explore whether depression (psychological) or perceived social support (social) is a better predictor of SRH (biology) in older adulthood.

Using the biopsychosocial model to examine multiple factors (e.g., depression and social support) that may contribute to health additionally allows for predicting populations of people who are likely to be at particular risk of unhealthy aging or development. Moreover, the connection between social support and health follows the social-cognitive model of social support, which suggests that people's perceptions regarding social support are directly related to health (Lakey & Cohen, 2000). The study will look at whether this is a valid connection among older adults.

Relevance of SRH

SRH has been found to be a more reliable predictor of actual health than objective measures, especially in predicting mortality, suggesting that people have an accurate assessment of their own health (Maddox & Douglas, 1973). Research suggests that the association between poorer SRH and mortality remains after controlling for demographic variables. It is likely that SRH predicts mortality, because it incorporates changes in health status and predicts functional decline (DeSalvo, Bloser, Reynolds, He, & Muntner, 2006; Idler & Kasl, 1995). Although older adults typically overestimate their health in comparison to others and objective reports, there is still a consistent correlation between SRH and mortality, particularly in the young-old (Eriksson, Unden, & Elofsson, 2000; Jylha, 2009). Evidence suggests that SRH may have a higher correlation with mortality in younger adults than older adults, as well as those in lower socio-economic groups (Fiske, Wetherell, & Gatz, 2009; Penninx, Guralnik, Ferrucci, Simonsick, & Deeg, 1998). This study recognizes the potential influence of both age and socioeconomic status by controlling for age and educational attainment. The use of education as a measure of socioeconomic status will be discussed later.

Depression

Prevalence. Depression is challenging to measure, especially in community-dwelling adults. Reports of the prevalence of depression vary as a result. Research suggests, however, that depression is prevalent in 16.3 million-18.8 million (7.5-9.9%) adults 18 and older in the United States (Conner et al., 2010; Substance Abuse and Mental Health Services Administration, 2008).

It has been commonly misrepresented that older adults 65 and older are the most depressed population of adults. Studies reflect that community-dwelling older adults do not have a high prevalence of major depression, especially in comparison to other adult populations. One to five percent of older adults experience major depression, in comparison to young adults 18-25 (8.9%) and those aged 26-49 (8.5%) (Hasin, Goodwin, Stinson, & Grant, 2005; Penninx et al., 1998; Substance Abuse and Mental Health Services Administration, 2008). The high rate of major depression is only true for institutionalized older adults, with depression rates as high as 42% of this population (Blazer, 2003). However, it is important to recognize that depression is highly under-diagnosed in the United States and that depression rates may be higher, particularly in older adults, because, as a cohort, they are less likely to seek treatment for depression than other age groups (Conner et al., 2010).

In addition, it is important to recognize that data suggest Baby Boomers have had higher lifetime rates of depression (13%) in comparison to younger generations, and therefore may face issues surrounding depression in older age (Substance Abuse and Mental Health Services Administration, 2008). This situation reflects the prediction that the prevalence of depression is expected to double within the older adult population as Baby Boomers age, making it meaningful to study (Conner et al., 2010; Substance Abuse and Mental Health Services Administration, 2008).

Although pervasiveness of major depressive disorder is low, because many older adults do not meet the diagnostic criteria for major depression, a significant portion of community-dwelling older adults (8-20%) reports a prevalence of depressive symptoms (Hasin et al., 2005 as cited in Fiske et al., 2009; Penninx et al.,

1998). These symptoms are consistent with those of major depression; however, scores on these symptoms fall below those that would qualify an individual for major clinical depression (Penninx et al., 1998). Many older adults say they find their depressive symptoms to be intrusive, and research confirms that depressive symptoms are as influential on well-being, morbidity, physical functioning, and mortality as major depressive disorder (Gallo & Coyne, 2000; Hasin et al., 2005 as cited in Fiske et al., 2009). As a result, there has been an expansion in research focusing on depressive symptoms that do not meet diagnostic guidelines, and a suggestion that depression be studied on a continuum of high to low rather than with a cutoff point (Fiske et al., 2009; Streiner, 2008). Consistent with this view, this study will look at depression on a continuum of more or less symptoms rather than utilizing a cutoff point that denotes major clinical depression.

Some research suggests that depressive symptoms increase with age due to declining physical functioning (Fiske et al., 2009). However, after controlling for education and physical functioning, Blazer (2003) found that that depressive symptoms decrease with age. Thus, it is unclear whether age has a negative or a positive correlation with depression. As a result, age will be controlled for in this study. Education level will also be controlled for in this study, since research has shown that education level is negatively associated with depression and predicts depression over time (Koster et al., 2006). As with age and education, marital status will also be controlled for. Research suggests that there is a negative influence on depression of being single or never married that is especially apparent in older age (Barrett, 1999). Additionally, those who are widowed or are single are likely to live

alone in older age, and therefore they may experience more loneliness and isolation, which have been found to be associated with more depressive symptoms in these populations (Cornwell & Waite, 2009; Zunzunegui, Beland & Otero, 2001).

Relationship with health. Depression, including both major depression and depressive symptoms, has a significant relationship with objective measures of health. Depression negatively affects older adults' well-being and increases morbidity (Conner et al., 2010; Penninx et al., 1998). It is additionally correlated with decreased mobility and ability to function cognitively, socially, and physically (including participation in activities of daily living) (Blazer, 2003 as cited by Fiske et al., 2009; Chapman & Perry, 2008; Penninx et al., 1998). Because depression and health are closely correlated, depression leads to, complicates, and exacerbates instances of disability and chronic conditions, as well as inhibits ability to recover from preexisting disability and chronic conditions (Blazer, 1993 as cited by Fiske et al., 2009; Callahan, et al., 2005; Chapman and Perry, 2008). This puts older adults with major depression or depressive symptoms at a particular risk for declining health. Research suggests that well-being and health declines may occur because depressed older adults self-neglect by making poor health choices; thus, depression is also positively related to mortality (Blazer, 2003).

Relationship with SRH. The relationship between depression and SRH specifically is also strong, becoming especially so in older adulthood around age 74, when the relationship is stronger than that of the relationship between chronic health issues and SRH (Pinquart, 2001; Schutteket, 2005). This may suggest that SRH in older adulthood is reflective of both physical and mental health. Those with depression

have lower SRH, again confirming this relationship. Evidence suggests that depressive symptoms contribute to low SRH scores even when physical and functional health are controlled for (Han, 2002). This relationship is so strong that when depression interventions occur, older adults' SRH improves even if there are no physical health changes (Han, 2002). The relationship between depression and SRH further serves to explain the negative influence of depression on objective measures of health, suggesting its importance in this study.

Social Support

Prevalence. This study will focus on subjective, or perceived, social support rather than objective support, because of its relevance in research. Perceived, as opposed to actual or objective, social support is described as both the instrumental and the emotional support an individual believes he or she does or could receive from others if necessary (Ross & Mirowsky, 2002). According to Lakey and Drew (1999), the Individual Differences Model of the Social Support Theory states that people perceive the same actions of support differently, either more or less positively than others, depending on their circumstances. High levels of actual support are not always perceived as positive and are therefore not as strongly correlated with the benefits of having social support (Lakey & Drew, 1999). This difference in perception reflects the importance of looking at perceived, rather than objective, support since high subjective reports of social support are correlated with less stress, positive health behaviors, and a sense of security (Ross & Mirowsky, 2002).

Study findings state that as adults age their social interactions and closeness with others decline, especially with those outside of family relations (Cornwell, 2011).

This is not surprising, since older adults may no longer be engaged in the workforce, a common source of social interaction in adulthood. Older adults also commonly live separately from others, such as their children. Age-related factors, such as widowhood and chronic illness, put older adults at further risk of decreased social interaction with others (Cornwell, 2011). This again reflects the importance of controlling for both age and marital status in this study. There is additional evidence for controlling for educational level since it is also correlated with social support, suggesting that as education level increases, social support also increases in size and quality (Koster et al., 2006).

Relationship with health. Perceived social support is positively correlated with both mental and physical health (Cornwell & Waite, 2009; Newsom & Schulz, 1996). In general, those with less perceived support and contact with others have poorer health, whereas those with more perceived support have better health (Cornwell, 2011). Research has found that social support is correlated with mortality as well as chronic health conditions (Uchino, 2006). The direction of this relationship as well as the relationship between anticipated social support and physical health have not been explored.

Using a social cognitive perspective, having high-perceived social support may increase self-esteem, confidence, and security, according to Lakey and Cohen (2000). Therefore, the relationship between social support and mental health has been explored more extensively than the relationship with physical health. This relationship between perceived social support and depression is particularly strong, suggesting that people who lack social support are at particular risk of depression. This may be due to

the detrimental effect of dealing with issues by oneself, since support often alleviates the impact of stressors, including those surrounding chronic health issues (Berkman, 2001; Cohen, 2004; Kaplan, Cassel, & Gore, 1997).

Relationship with SRH. There has been research exploring the relationship between actual social support and SRH, but there has not been as much of a focus on exploring the relationship between anticipated social support and SRH in older adults. This study recognizes the importance of perceived social support in its relation to SRH and supplements previous research. The small body of research that has explored this area of study has found that the relationship between perceived and SRH is consistent with the literature on social support and general health. Those with lower perceived assistance in the form of social support report lower levels of SRH (Cornwell & Waite, 2009; Zunzunegui et al., 2001).

Purpose of Study

Previous studies primarily focused on only one indicator of SRH, rather than both depressive symptoms and social support, and no studies have explored perceived social support as an indicator with older adults. This study explores components of development that have not previously been explored together. The following research questions were used to explore such relationships:

1. Are there significant differences in older adults' SRH scores when examined by such demographic factors as age, education level, and marital status?
2. Are depressive symptoms and anticipated social support correlated with SRH, as research suggests? If so, is one factor (depressive symptoms or perceived social support) more strongly correlated with SRH?

3. If depressive symptoms and perceived social support are correlated with SRH, how much do they explain SRH after controlling for demographic factors?

CHAPTER 3

METHODOLOGY

Data

This study utilized cross-sectional data from the third and final wave (2001) of the longitudinal Aging, Status, and Sense of Control study by Mirowsky and Ross. The study was funded by United States Department of Health and Human Services, National Institutes of Health, and National Institute on Aging. Data for the study were retrieved from the Inter-University Consortium for Political and Social Research online database. The initial study (1995) sampled 2,592 households in the United States through telephone interviews conducted by the Survey Research Laboratory of the University of Illinois (Mirowsky & Ross, 2008). Interviews were done using Lund and Wright's (1994) prescreen random-digit-dialing method to contact the households. The person in the household with the most recent birthday was chosen as the participant in the study and up to 10 call-backs were made to contact the participant to complete the survey. Interview questions for the original study were on mental health, health behaviors, sense of control, and demographics. All data collected were self-reported.

The dataset used in this study is closed. All data were collected following the investigators' necessary informed consent processes. All data were de-identified with no trace to original participants in the study. This dataset oversampled older adults during the initial study (42% age 60-95 years). As a result of attrition, the third sample (2001) used in this study decreased to 1,444 participants.

Sample

Only data from participants aged 60 and older were used in this study, resulting in a sample size of 577 participants. Descriptive statistics for the sample are displayed in Table 1. Most (93%) of participants were White. About half (47%) of the participants fell into the middle-old age category, meaning they were 70-79 years of age, with an overall sample mean age of 74 years. Twenty-eight percent of participants were young-old (60-69 years) and the remaining 25% were old-old (80 years and older). A little over half (53%) were married; about one-third (33%) were widowed. About half (52%) of the participants had an educational attainment level of high school, GED, or below. The remaining 48% had some college or higher. The mean income was \$74,577. Gender was not collected during this wave.

Measures

Independent variables. Perceived social support was measured by four items on a rating scale of 1-4 (1= Strongly Agree, 4=Strongly Disagree). Two items measured emotional support by the prompts, 1) “I have someone I can turn to for support” and 2) “I have someone I can really talk to.” Two additional items measured instrumental support: 1) “I have someone who would help me out with things” and 2) “I have someone who would help if I were sick.” Previous studies show the correlation between both types of support (emotional and instrumental) is .65 (Shaw & Janvic, 2004) and .67 (Ross & Mirowsky, 2002). The four measures were added together to create an overall perceived social support scale with a range of scores of 4-16, so that lower scale scores denoted higher levels of perceived social support. In this study, the internal reliability for this scale was .86.

Depressive symptoms was measured using a shortened version of the Center for Epidemiological Studies Depression (CESD) Scale. The 7-item scale (CESDm) correlates .92 with the full-length version of the CESD (Ross & Mirowsky, 2002). The CESDm asked participants how often on an 8-point rating scale (0-7 days) in the past week they experienced physical and emotional feelings that are related to depressive symptoms. These physical and emotional feelings were: trouble getting to or staying asleep, everything is an effort, cannot keep going, trouble keeping focused, feeling sad, feeling lonely, and could not shake the blues. The seven items were added together to create an overall depressive symptoms scale with scores ranging from 0 to 49, with lower scores denoting less or no depressive symptoms and higher scores denoting more depressive symptoms. In the study, the internal consistency for the depressive symptoms scale was .77.

Dependent variable. SRH was assessed by one question, “In general, would you say your health is...”, allowing for a response on a rating scale of 1-5 (1=Very good, 5= Very poor), with lower scores denoting better health. The single question method of measuring subjective health is used often and has been found to be a helpful and accurate measure in assessing actual health and in recognizing health issues (Eriksson, Unden, & Elofsson, 2000; Maddox & Douglas, 1973).

Covariates. Income was not looked at in this study, because the income variable in the dataset was coded in a way that those other than the primary investigators could not interpret it for further analysis. Additionally, research suggests using educational attainment rather than income as a measure of lifetime socioeconomic status, since many older adults are retired or are receiving fixed-

incomes or pensions (Bjelland et al., 2008). Thus this study focused on education level. Education level was determined by asking “What is the highest grade or year of school you have completed?” The continuous variable ranged from 0 years to 20 years of education; however, it was treated as a dichotomous variable in this study: (1) high school, GED or below, and (2) some college or higher.

Age was measured by subtracting year of birth from year of interview. It was then recoded as a categorical variable with young old (60-69 years of age), middle-old (70-79 years of age), and old-old (80 years of age and older).

Marital status was originally measured as a categorical variable with six categories: married, living with someone as married, widowed, divorced, separated, and never married. The variable was recoded into three categories by similar characteristics of marital status to create more equal group sizes. The marital status categories in this study were married, single, and widowed. The original categories of divorced and separated were included in the single category and living with someone as married was included in the married category.

Table 1
Mean, Standard Deviation, and Range for Demographic, Independent, and Dependent Variables

Variable	N	%	Mean	SD	Observed Range	Theoretical Range
Education						
High school, GED, or below	297	51				
College degree or higher	277	48				
Age						
Young-Old (60-69)	163	28				
Middle-Old (70-79)	272	47				
Old-Old (80 and older)	142	24				

Marital Status					
Married	308	53			
Single	78	13			
Widowed	190	33			
Depressive Symptoms	560		6.54	8.6	0-49
Social Support	568		7.15	1.78	4-13
SRH	574		2.23	.98	1-5

Data Analysis

Data analysis consisted of preliminary analyses including frequencies and descriptive statistics to compute the percentages—as well as the variability, means, and standard deviations—of all variables. Additional preliminary analyses included a t-test and one-way analyses of variance, and bivariate correlations. An independent samples t-test was conducted on education and SRH to determine if there were significant differences in the mean SRH scores between the two education groups. Analyses of variance were then conducted to examine SRH differences by age and marital status. Bivariate correlations between SRH, depressive symptoms, and social support were conducted as preliminary analyses to determine if the dependent and independent variables were related before a multiple linear regression analysis was conducted to determine prediction of SRH.

The primary analysis in this study consisted of a multiple linear regression analysis to answer research question three by determining how much depressive symptoms and social support predict SRH after controlling for age, education level, and marital status. Demographic variables were entered into the first regression model to uncover how much they explained SRH scores. The independent variables of depressive symptoms and social support were then entered into a second model to

determine how much they explained SRH after adjusting for demographic factors. The significance of each variable in explaining SRH was then examined. All data analyses excluded missing data listwise, where applicable.

CHAPTER 4

FINDINGS

Preliminary Analyses

Research question one—identifying significant differences in older adults' SRH scores by demographic variables—was explored using a t-test and one-way analyses of variance (ANOVA). Education was significantly associated with the dependent and independent variables. An independent samples t-test was conducted on education level to test for a significant SRH mean score difference between those with a high school or below level education and those with some college or higher. As seen in Table 2, the t-test was significant, $t(569) = 4.61$, $p=.000$, indicating that those with high school, GED, or below have significantly poorer SRH ratings ($M=2.41$, $SD=.99$) than those with some college or higher ($M=2.04$, $SD=.93$).

Additional t-tests were conducted to determine if there were significant depressive symptoms and social support mean score differences between education groups. The t-test on depressive symptoms mean scores and education group was significant, $t(479) = 4.27$, $p=.000$. Those with education levels of high school or below had significantly more (worse) depressive symptoms ($M=8.03$, $SD=10.15$) than those with some college or higher ($M=4.99$, $SD=6.28$). The t-test on social support and education was also significant, $t(536) = 2.63$, $p=.009$, indicating that those with high school or below had significantly less social support ($M=7.35$, $SD=1.62$) than those with some college or higher ($M=6.95$, $SD=1.90$).

Table 2
Means and Standard Deviations by Education

	Education		<i>t</i>	<i>df</i>
	High school, GED, below	Some college, higher		
SRH	2.41 (.99)	2.04 (.93)	4.61**	468.97
Depressive Symptoms	8.03 (10.15)	4.99 (.39)	4.23**	479.06
Social Support	7.35 (1.63)	6.95 (.12)	2.63**	536.38

** $p < .01$

* $p < .05$

M (SD)

The one-way ANOVA conducted on SRH and covariates age and marital status found that there were no significant differences in mean SRH ratings by age (young-old, middle-old, old-old) or marital status (married, single, widowed). There were also no differences in mean depressive symptom scores by age group. There were, however, differences in depressive symptom and social support ratings by marital status, as well as differences in social support ratings by age, which can be seen in Tables 3 and 4. The ANOVA on mean depressive symptom score and marital status was significant, $F(2, 556) = 11.70, p = .000$. Follow-up analyses found that there were significant differences in depressive symptom ratings between those who were married ($M = 5.31, SD = 7.35$) and widowed ($M = 9.04, SD = 10.45$), as well as between those who were married and single ($5.46, SD = 7.11$), concluding that those who were married had significantly fewer depressive symptoms than those who were widowed or single. Additionally, there were significant differences in depressive symptoms between those who were single and widowed, with those who were single having fewer depressive symptoms.

An ANOVA conducted on social support and age was significant, $F(2, 565) = 6.24, p=.002$. Further analyses found that the young-old ($M=6.75, SD=1.88$) had significantly more social support than the middle-old ($M=7.26, SD= 1.73$) and old-old ($M=7.41, SD=1.78$). A second ANOVA conducted on social support and marital status was also significant, $F(2, 654) = 6.70, p=.001$. Follow-up analyses found that married individuals ($M=6.89, SD= 1.85$) had significantly more social support than single ($M=7.51, SD=1.92$) or widowed ($M=7.42, SD=1.52$) individuals.

Table 3
Means and Standard Deviations by Marital Status

	Married	Single	Widowed
SRH	2.17 (.95)	2.26 (.97)	2.31 (1.03)
Depressive Symptoms	5.31 (7.35)	5.47 (7.11)	9.04 (10.45)
Social Support	6.89 (1.85)	7.51 (1.92)	7.42 (1.52)

Table 4
Means and Standard Deviations by Age

	Young-Old	Middle-Old	Old-Old
SRH	2.14 (.89)	2.22 (.98)	2.34 (1.06)
Depressive Symptoms	6.11 (8.41)	6.37 (8.56)	7.40 (8.90)
Social Support	6.75 (1.88)	7.26 (1.73)	7.41 (1.68)

Bivariate correlation analyses were conducted to answer research question two, if the independent variables depressive symptoms and social support were significantly correlated with SRH and if one variable was more correlated than the other. Bivariate correlations can be seen in Table 5 and show that there is a strong correlation between SRH and depressive symptoms, $r(548) = .38, p= .000$. The correlation between SRH and social support was less than that of depressive symptoms, but still was significant, $r(548) = .09, p=.021$. There was an additional correlation, as expected, between depressive symptoms and perceived social support,

$r(545) = .15, p = .000$.

Table 5
Bivariate Correlations Among Variables

	Depressive Symptoms	Social Support
SRH	.37**	.09*
Depressive Symptoms		.15**

** $p < .01$

* $p < .05$

Primary Analysis

Multiple linear regression was conducted to evaluate research question three, regarding the prediction of SRH using depressive symptoms and social support after controlling for the demographic covariates, as seen in Table 6. The first regression model included only the covariates to determine which and how much these variables predicted SRH. This model was significant, ($R^2 = .04, F(5,542) = 4.66, p = .000$); however only education was a significant predictor in this model, ($p = .000$). Education was negatively related to SRH, indicating that lower levels of education predicted worse health (higher SRH).

The second equation added all independent measures as predictors to determine if depressive symptoms and social support predicted SRH after controlling for education, age, and marital status. When depressive symptoms and social support were added to the model, the model was significant in explaining variance related to SRH beyond the first model (R^2 change = .13, $F(2,540) = 41.60, p = .000$). The second regression model found both depressive symptoms ($p = .000$) and education ($p = .001$) to be significant. As seen in Table 6, education was negatively correlated with SRH, indicating that those with lower levels of education (high school or lower) have worse SRH scores. The regression also determined that those with more depressive

symptoms have worse SRH scores. Although social support was found to be correlated with SRH in the bivariate analysis, when included in a model with depressive symptoms and education, it was not significant in explaining SRH ($\beta = .023$, $p = .563$).

Table 6
Summary of Linear Regression Analysis for Variables Predicting SRH

Variable (Omitted Category)	Model 1			Model 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Marital Status (Married)						
Single	.17	.126	.06	.15	.23	.05
Widowed	-.01	.10	-.01	-.16	.09	-.08
Age (Old-Old)						
Young-Old	-.16	.12	-.07	-.17	.11	-.08
Middle-Old	-.06	.11	-.03	.06	.10	-.03
High School or Less (Some College or More)	-.37	.08	-.19**	-.26	.08	-.14**
Depressive Symptoms				.04	.01	.37**
Social Support				.01	.02	.02

** $p < .01$

* $p < .05$

CHAPTER 5

CONCLUSION

The first research question addressed whether SRH scores varied by the demographic variables education, age, and marital status. Analyses only found mean score differences by education, with those with high school, GED, or below reporting worse SRH scores than those with some college or more. Other studies have found similar results, concluding that those with lower (less than high school) educational attainment provide lower SRH scores than those with higher (college) educational attainment, which suggests they have poorer health (Franks, Gold, & Fiscella, 2003; Kawachi, Kennedy, & Glass, 1998). Using the life course perspective, it is possible that poorer health is due to the influence of lifetime impacts of education on socioeconomic status, such as stress, depression, poor health decisions, and less access to healthcare (Bjelland, et al., 2008; Pearlin, Schieman, Fazio, & Meersman, 2005).

Previous research has found that older age is also associated with worse SRH scores, noting that health declines with age (Franks, Gold, & Fiscella, 2003). However, this study found no significant differences in SRH by age. Other researchers have attributed this to individual views of health, and found these results are likely because many older adults provide high health ratings despite poor, but not declining, health (Eriksson, Unden, & Elofsson, 2000). This suggests that change in health ratings may be a better predictor of poor or worsening health than single health ratings (Idler & Kasl, 1995).

The analysis surrounding research question one also found no significant differences in SRH by marital status. Although some research has claimed that those who are married have more perceived social support than others, which has been associated with better health, community-dwelling older adults, despite their marital status, claim they have high levels of social support (Berkman, 2001; Cornwell, 2011).

Research question two explored whether the independent variables of depressive symptoms and perceived social support were correlated with SRH, and found that both were. However, the bivariate correlation analysis found that depressive symptoms had a higher correlation with SRH than perceived social support, suggesting that social support may not be as strong in predicting SRH in the regression analysis. There has been extensive research confirming that depressive symptoms are negatively correlated with SRH, especially after age 74, but there has been less research on the relationship between social support and SRH (Han, 2002; Pinquart, 2001). Some research on social support is consistent with these findings, proposing that higher levels of social support is related to better SRH (Cornwell & Waite, 2009). The research findings on the relationship between perceived social support and SRH are limited, but Lakey and Cohen (2000) suggest a positive relationship between perceived support and SRH, because of the positive benefits having support provides (such as stress reduction and companionship). The relationship between SRH and depressive symptoms may be stronger than the relationship between SRH and perceived social support, because depression is a measure of mental health and, therefore most likely has a greater influence on the concept of health than social support.

The regression analysis to answer research question three regarding predictors of SRH found that only depressive symptoms and education were significant in explaining SRH. Education had a negative relationship with SRH, indicating that lower levels of education predict worse SRH scores. As previously mentioned, the ability of education to predict SRH may be a reflection of its influence on lifetime socioeconomic status and the contribution it may make to poor health outcomes (Pearlin, Schieman, Fazio, & Meersman, 2005). The strong relationship between depressive symptoms and SRH was positive, indicating that more depressive symptoms predict worse SRH. These findings are not surprising, since depression is a measure of mental health, which plays a role in the overall measure of SRH. Many previous studies have explored the relationship between depression and objective health, whereas fewer have focused on its role as a predictor of subjective health (Han, 2002). This study confirmed that depressive symptoms do play a role in SRH prediction, adding an important contribution to the literature regarding health in older adulthood.

Based on previously mentioned research, it is somewhat surprising that perceived social support was not a predictor of SRH; however, this study adds new knowledge to SRH research, since previous studies have not explored depression and social support in the same predictive model. It is important to recognize that although perceived social support was not found to be predictive of SRH, it is correlated with depressive symptoms. It is therefore possible that lack of social support indirectly relates to SRH through depressive symptoms (Cornwell & Waite, 2009).

Limitations

It is important to note that there are methodological limitations to this study that may have influenced the results. First, the dataset used in this study was 10 years old. More recent data may yield different results, reflective of the present older adult cohort and historical time.

Secondly, the data analysis was cross-sectional rather than longitudinal, so the directions of the relationships are unknown. Since the analyses were cross-sectional, the gender variable was not available for this wave and therefore could not be explored. Previous research has found that gender differences may be important to explore, since women are more likely to perceive more support and be more depressed than men (Cornwell, 2011; Penninx, 1998). Additionally, there was no race/ethnicity variable to explore. Due to the original collection of data from primarily Whites, the study's findings cannot be generalized beyond this population.

A third limitation of this study is that the data were self-report, which has potential to influence findings, since it does not provide actual measures or evidence of depressive symptoms. Since there is still a stigma related to depression, older adults may not have been completely honest in their responses (Conner et al., 2010). Although self-report may have been an issue regarding the measurement of depressive symptoms, it is not of concern with SRH and social support, since both were intentionally subjective measures in this study. However, it is important to note that less depressed older adults may provide higher SRH and not need the same level of support as others; therefore they perceive anticipated support as high. Similarly, those

in better health may not need as much support and perceive social support differently from those who are in worse health. This may have influenced the significance of SRH scores and influenced data results.

Lastly, although the scale for social support was reliable in this and the few other studies that utilized it, the scale was developed by the primary investigators and has not been widely analyzed or used. It may be beneficial for future researchers to replicate this study utilizing objective and consistently reliable measures of all variables to determine if differences in methodology would yield different results.

Implications

Despite these limitations, this research study contributes to the growing research on older adulthood and healthy aging. This study recognized the importance and relevance of SRH in older adulthood and explored predictors of SRH scores. The study found that social support is not a significant predictor of SRH when included with depressive symptoms and education. Social support is, however, correlated with SRH and depressive symptoms, thus it is important to recognize that these relationships exist.

Due to the relationship between depression and SRH, it is furthermore important that professionals are aware of how depressive symptoms may influence SRH scores and should recognize that low SRH may be a sign of depressive symptoms. This study did not utilize a cutoff point for major depression, and found that using a continuous measure of depressive symptoms yielded a relationship with SRH. Consistent with emerging clinical suggestions, this study suggests that

healthcare practitioners screen for depressive symptoms as well as ask for a simple SRH score at each visit (Streiner, 2008).

Consistent with the biopsychosocial model, it would be beneficial for future research to further explore other psychological or social constructs that may predict SRH. It would be useful for future researchers to consider constructs that research has found to be predictors of objective health, such as volunteering, spirituality, or anxiety, to determine whether or not they are also predictors of SRH (Lum & Lightfoot, 2005; Seeman, Dubin, & Seeman, 2003). Furthermore, it may be important for future studies to explore gender, race, and socioeconomic differences of SRH ratings, since this study was unable to do so. It would also be important for research to continue to monitor the relationships between SRH and its predictors, as well as the influence of changes in SRH scores over time, to ensure a relationship persists and SRH is still relevant to examine.

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