PERCEPTIONS OF FAMILY INVOLVEMENT AND QUALITY OF LIFE AMONG OLDER AFRICAN AMERICANS WITH MENTAL DISORDERS

by

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ABSTRACT

This study used secondary data from the National Survey of American Life (NSAL) to examine factors that impact general happiness and life satisfaction. The sample consisted of 168 African Americans aged 55 to 74 with at least one lifetime mental disorder. The conceptual model consisted of 13 independent variables. Perceived control was included as a mediating variable. The dependent variables were life satisfaction and general happiness.

In bivariate analyses, 8 of 13 variables were significantly related to life satisfaction and general happiness. One-way analysis of variance (ANOVA) found statistically significant differences between education on general happiness $[F(3, 163)=2.78, p=.04]$. In the two-way ANOVAs, gender and education emerged as significant for general happiness alone. There was a statistically significant main effect for gender $[F(1,164)=5.02, p=.03]$ but not marital status. When controlling for gender, the main effect for education $[F(3, 159)=2.77, p=.04]$ was statistically significant. Additionally, there was a significant main effect for education $F(3, 160)=3.21, p=.03$] but not marital status. Overall, older African American males with lifetime mental disorders with less than a high school education reported more general happiness.

In the regression models, depressive symptoms were the strongest predictor of higher life satisfaction and general happiness scores. Higher life satisfaction was associated with fewer depressive symptoms and higher importance of religion scores. Moreover, higher general happiness scores were significant with higher perceived income adequacy and fewer depressive symptoms. In the general linear model, statistically significant multivariates were gender, physical health, depressive symptoms, and positive family interaction.
Univariately, general happiness scores were significantly associated with self-rated physical health, depressive symptoms, frequency of family contact, negative family interaction, and education. Life satisfaction scores were significant with self-rated physical health, depressive symptoms, and negative family interaction. Overall, the univariate models explained 13% (adjusted R squared) of variance in life satisfaction scores and 21% (adjusted R squared) of variance in general happiness scores. Perceived control fully mediated the relationship between the predictors of family involvement and general happiness. In conclusion, the findings suggest a combination of variables impact general happiness and life satisfaction among older African Americans with lifetime mental disorders.
DEDICATION

This dissertation is dedicated to my parents (deceased) and older siblings. As the youngest child, my siblings encouraged and supported my opportunities to pursue higher education. In particular, I celebrate the memories of my siblings who passed away before attending my final graduation ceremony.
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>$a$</td>
<td>Cronbach’s index of internal consistency</td>
</tr>
<tr>
<td>$df$</td>
<td>Degrees of freedom: number of values free to vary after certain restrictions have been placed on the data</td>
</tr>
<tr>
<td>$F$</td>
<td>Fisher’s $F$ ratio: A ratio of two variances</td>
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<tr>
<td>$M$</td>
<td>Mean: the sum of a set of measurements divided by the number of measurements in the set</td>
</tr>
<tr>
<td>$p$</td>
<td>Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value</td>
</tr>
<tr>
<td>$r$</td>
<td>Pearson product-moment correlation</td>
</tr>
<tr>
<td>$t$</td>
<td>Computed value of $t$ test</td>
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ACKNOWLEDGMENTS

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CHAPTER 1
INTRODUCTION

The indicators of quality of life (QOL) and successful aging are intertwined. The term *quality of life*, also known as subjective well-being, has been defined as a personal assessment of positive and negative features of one’s life (Diener, 2000; 1984). Typically, QOL involves evaluating one’s whole life (e.g. general happiness or life satisfaction) or specific areas (e.g. health). Research suggests better QOL is associated with higher socioeconomic status, good health, more physical activity, greater family support, and better mental health (Diener, 1984; Jones, Rapport, Hanks, Lichtenberg, & Telmet, 2003; Pinquart & Sörensen, 2000). Likewise, researchers assert that successful aging involves avoidance of disease and disability, engagement with life, high cognitive and physical functioning, and positive spirituality (Rowe & Kahn, 1997; Crowther, Parker, Achenbaum, Larimore & Koenig, 2002). Taken all together, QOL in later life is very sensitive to maintaining good physical and mental health.

In later life, symptoms of mental disorders can interfere with well-being in older adults (Center for Mental Health Services, 2004). Mental disorders are defined as “health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof) associated with distress and/or impaired functioning” (USDHHS, 1999, p. 5). Currently, it is estimated that 7 million older adults in the United States have a mental disorder, but this number is expected to increase to 15 million by the year 2030 (Jeste et al, 1999). Untreated mental disorders in the elderly can lead to elevated risk of physical and cognitive decline, suicide, homelessness, higher medical expenses, lower QOL, declines in social networks, and
institutional placement (Center for Mental Health Services, 2004; USDHHS, 1999). Hence, mental disorders have been identified as one of the five most costly health conditions in the United States (Soni, 2007). Older African Americans are particularly vulnerable to mental disorders due to high risk factors such as lower socioeconomic status and poverty (Center for Mental Health Services, 2004). Although social support can act as a protective factor (Cohen & Willis, 1985), few studies have examined the relationship between family involvement and QOL in elderly African Americans with mental disorders.

**The Purpose of the Study**

The purpose of this study is to improve the state of knowledge about perceptions of family involvement and quality of life among older African Americans with mental disorders. Historically, research suggests that older African Americans benefit from large, supportive social networks (Dilworth-Anderson, Williams, & Gibson, 2002; Taylor, Chatters, & Jackson, 1997). In recent years, community-dwelling older African Americans tend to live in poverty, live alone, experience disparities in health, and have fewer supportive family members (Neighbors, et al., 2007; National Research Council, 2004; Hunter, 1997; Taylor, Chatters, & Jackson, 1997). Lower QOL in older adults has been linked to factors such as lower socioeconomic status, poorer health, and poorer social support (Pinquart & Sörensen, 2000). Though African American elders with mental disorders are likely to be in these high risk subgroups, few studies have been conducted with this population.

Past research suggest that family involvement is another important element in how older adults evaluate the QOL of their lives. Bishop, Martin, and Poon (2006) examined the relationship between socioeconomic status, social support, and health impairment on life satisfaction. They found that socioeconomic status and social support indirectly affects life
satisfaction through physical health impairment. Furthermore, they concluded that certain features of social support such as network, type, and quality are critical to assessment of life satisfaction. Similar conclusions have been documented by other researchers (Pinquart & Sörensen, 2000; Pearlin, Menaghan, Lieberman, & Mullan, 1981).

Newsom and Schulz (1998) examined the relationship between negative reaction to care and care recipient’s mental health. The sample consisted of spouses 65 and older who were caring for a physically disabled spouse. Many of the recipients of care reported emotional strain (40%), unwanted care (50%), and not receiving some types of help (28%). The strongest predictors of negative reaction to care were younger age, greater health impairment, lower perceived control, higher fatalism, and lower self-esteem. Perceived control moderated the relationship between overhelping and helping distress (outcome variable). Furthermore, at one year follow up, the researchers found that greater helping distress was associated with depression. Other researchers have highlighted the need for more research regarding the impact of amount, type, and quality of help on QOL in older adults (Brown, 2007; Lincoln, Chatters, & Taylor, 2003; Newsom, Rook, Nishishiba, Sorkin, & Mahan, 2005; Mavandadi, Rook, & Newsom, 2007).

Because the onset of mental disorders often occur in early adulthood, individuals with mental disorders can face difficulty throughout the lifespan in establishing and maintaining education, employment, housing, and social relations (Lefley, 1996). Therefore, early life onset of a mental disorder can have potential negative repercussions in later life (Center for Mental Health Services, 2004; USDHHS, 1999). Research suggests that cross-cultural differences exist in the conceptualization of mental illness (Bae & Kung, 2000; Guarnaccia & Para, 1996; Johnson, 2000; Kung, 2001). Though family members can be important resources, research
findings suggest that the nature of family support can facilitate and impede assessments of QOL. Given increased attention to caregiving and positive and negative outcomes for caregivers and care recipients (Newsom & Schulz, 1998; Center for Mental Health Services, 2004; USDHHS, 2001; 1999), greater understanding is needed of the perceptions of family involvement by African American elders with mental disorders.

Generally, the research on family caregiving, QOL, and older adults excludes the perceptions of older adults with mental disorders, especially minority elders (Folsom et al., 2009; Neighbors et al., 2007). Most research studies on QOL among the elderly emphasize issues regarding family caregivers, European Americans, young and middle aged adults, and adults without cognitive impairments (Becker & Diamond, 2006; Chatters, 1988; Diener, 1984; Pinquart & Sörensen, 2000). Though population projections indicate minority elders will exceed elders from the majority group (Federal Interagency Forum on Aging-Related Statistics, 2008), elderly African Americans with mental disorders remain an understudied population.

**Rationale for Focusing on African American Elders**

This study has several reasons for solely focusing on African American elders with mental disorders. Rao and Rao (1983) asserted that “failure to study the black aged population as a separate group as well as the differences and similarities between different subgroups based on socioeconomic and demographic characteristics may lead us to ignore the heterogeneous nature of the group” (p. 37). This assertion suggests the need to avoid assumptions that older African Americans are a homogeneous group. Additionally, strong links exist between minority status and lower socioeconomic status, health disparities, and lower QOL (Center for Mental Health Services, 2004; National Research Council, 2004; USDHHS, 1999). The social networks of African American elders with mental disorders are likely to be smaller than African Americans
in general. Ultimately, the goal is to inform the development of culturally appropriate services and interventions for African Americans with mental disorders (Berkman, Gardner, Zodikoff, and Harootyan, 2005; Federal Interagency Forum on Aging-Related Statistics, 2008).

Therefore, the aim of this study is to examine the perceptions of family involvement and quality of life by older African Americans with mental disorders. Specifically, this study assesses the predictors of family involvement and their impact on overall quality of life. Another aim of the study is to test whether perceived control mediates the relationship between the predictors of family involvement and the quality of life measure. These aims will be addressed using secondary data analysis from the National Survey of American Life (NSAL). The NSAL dataset is a nationally representative sample of factors related to mental disorders among racial and ethnic minorities. Additionally, the dataset includes a sufficient sample size of older African Americans with mental disorders.

**Research Questions and Hypotheses**

Older African Americans as well as other minority elders face a higher risk of chronic illnesses which can affect their quality of life. These health conditions have been linked to race, ethnicity, gender, socioeconomic status, and physical and mental health in later life (Neighbors, et al., 2007; National Research Council, 2004). Considering these risk factors, community-dwelling older African Americans with mental disorders are likely to receive support primarily from family members. Research to date has largely focused on the relationship between perceived family involvement and personal well-being in samples of mostly young or middle-age adults with mental disorders (Williams & Mfoafo-M’Carthy, 2006; Rosenfarb, Bellack, & Aziz, 2006; Lincoln, Chatters, & Taylor, 2003) or older adults in general (Cox & Dooley, 1996). Few studies have examined the influence of perceived family networks on how older African
Americans with mental disorders evaluate the quality of their lives (Brown, 2007; Fiori, Antonucci, & Cortina, 2006). Therefore, greater understanding is needed regarding the belief about family involvement on how older African Americans with mental disorders perceive the quality of their lives.

This study will explore three primary research questions:

**QUESTION #1:** What is the relationship between perceived family involvement (frequency of family support, frequency of family contact, positive family interaction, and negative family interaction) and how older African Americans with mental disorders perceive their general happiness?

*HYPOTHESIS:* Older African Americans with mental disorders who report less frequent family support, fewer family contacts, less positive family interaction, and greater negative family interaction will report lower general happiness.

**QUESTION #2:** What is the relationship between perceived family involvement (frequency of family support, frequency of family contact, positive family interaction, and negative family interaction) and how older African Americans with mental disorders perceive their life satisfaction?

*HYPOTHESIS:* Older African Americans with mental disorders who report less frequent family support, fewer family contacts, less positive interaction, and greater negative interaction will report lower life satisfaction.

**QUESTION #3:** Does perceived control *mediate* the relationship between the predictors of perceived family involvement and how older African Americans with mental disorders perceive their general happiness?
**HYPOTHESIS**: Perceived control will mediate the relationship between the predictors of perceived family involvement and general happiness among older African Americans with mental disorders.

**Significance of the Study**

This study will enhance research regarding older African Americans with mental disorders and their family members in several ways. First, the perspectives of minority elders with mental disorders are seldom included in the caregiving and mental illness literature (Ford, Bullard, Taylor, Neighbors, & Jackson, 2007). Increasingly, federal programs and mental health advocates have begun advocating for community integration of individuals with mental illness (Center for Mental Health Services, 2004). To achieve full community integration, greater attention is needed to understanding the needs and unmet needs of minority elders living with mental disorders. Therefore, the findings from this study will fill a gap in the current mental health literature.

Second, the sample consists of older African Americans who have mental disorders. A paucity of research studies exist about the experiences of older African Americans, especially those individuals diagnosed with mental disorders. The *Mental Health: Culture, Race, Ethnicity: Supplement to Mental Health Report of the Surgeon General* acknowledges the potential barriers minorities face in accessing mental health services (USDHHS, 2001). As a result of delays in seeking mental health treatment, older African Americans can be at-risk for a decrease in the quality of their life. Subsequently, the findings of this study can contribute to improved knowledge about mental health service delivery to aging African Americans and their family members.
Third, the data were obtained from a large, nationally representative sample. The NSAL was designed to address a gap in the research literature regarding the prevalence and impact of mental health disorders among racial and ethnic groups in the U.S. (Jackson, et al., 2004a). In most research studies about older adults with mental disorders, the sample includes few, if any, minority elders. However, the NSAL dataset contains a sufficient sample size of older African Americans to address the research questions outlined in this study. Therefore, the size of the sample will improve the ability to detect significant differences and to generalize the findings.

**Implications for Social Work and Other Helping Professions**

The needs of older African Americans with mental disorders and their family members can present a challenge for social workers and other helping professionals. Foremost, social workers are the largest providers of mental health services to individuals and families. As such, they are strategically positioned to influence development of research, practice, and policy related to older African Americans with mental disorders and their family members. To accomplish this task, social workers, along with other helping professionals, will need a broad knowledge base to meet the needs of a diverse aging population and their family.

Some researchers have identified competencies needed by social workers to improve the well-being of older African Americans as well as other older adults. According to Berkman, Gardner, Zodikoff, and Harootyan (2005), the domain of knowledge needed by social workers should cover eight areas: (1) knowledge about health and the emerging health care world, (2) practice skills in health and aging, (3) cultural competence, (4) clinical case management, (5) intergenerational family practice, (6) advocacy and empowerment skills, (7) research and evidence-based practice, and (8) skills for ethical practice. Hence, social workers and others can
provide leadership in improving health-related outcomes for older African Americans with mental disorders and their family members.

**Brief Summary of each Chapter**

In summary, this research explores how older African Americans with mental disorders evaluate the influence of family involvement on their quality of life. Chapter 2 includes a review of the pertinent literature pertaining to the independent and dependent variable of interest in this study. Chapter 3 consists of the methodology section. It contains detailed information regarding the NSAL dataset, definitions of independent and dependent variables as well as measurement instruments, and data analysis procedures. Chapter 4 provides information about the results of the data analysis. Finally, Chapter 5 contains a discussion of the findings and major conclusions from this study.
Chapter 2  
REVIEW OF LITERATURE  

Demographic changes in elderly population

The population of older adults in the U.S. is increasing. In 1990, older adults who were 65 and older represented 4% of the total population. In 2008, there were approximately 13% or 1 out of 8 persons or 39 million adults identifying as 65 or over. By the year 2030, projections indicate that there will be 92 million adults 60 and older. Non-Hispanic whites comprise the largest group of older adults. However, the fastest growth is occurring in racial and ethnic elders. In 2008, minority elders in the U.S. represented approximately 20% of older adults 65 and older. The primary groups include African American (8.3%), Hispanic (6.8%), Asian/Pacific Islander (3.4%), and American Indian or Native Alaskan (less than 1%). Projections indicate that minority elders will increase from 16% in 2000 to 24% in 2020. By the year 2050, the numbers are expected to increase to 11% for African Americans and 20% for Hispanics. In terms of gender, the number of older women exceeds the number of older men. Subsequently, QOL in older adults can vary based on factors such as gender, race and ethnicity, income, and education (Administration on Aging, 2010).

Definition of Terms

Quality of Life (QOL)

The term quality of life has been used to describe a broad perspective of how individuals rate their lives. Quality of life is often used interchangeably with the term subjective well-being because both terms capture personal perceptions (Diener, 2000; 1984). Furthermore, personal
assessments of quality of life commonly involve assessing general and specific life domains such as satisfaction, general happiness, work, family, or marriage. Researchers assert that evaluations of quality of life involve three components. According to Argyle (1996), quality of life consists of joy, life satisfaction, and the lack of negative affect. However, Campbell (1981) indicated the major elements of quality of life include affect, satisfaction, and strain. Argyle and Campbell’s definitions share their inclusion of affect and satisfaction. But, Campbell introduces the concept of strain to refer to “a feeling of being burdened, hemmed in, worried, pressured” (p. 34). Based on this information, QOL encompasses a range of features that contribute to its definition. In this study, QOL is broadly defined as an older adult’s subjective assessment of his or her life.

**Family Involvement**

It is widely known that social support can be a protective factor against adverse circumstances, especially for older adults with mental disorders (Berkman, Gardner, Zodikoff, & Harootyan, 2005; Cohen & Wills, 1985). Social support has been defined as “access to and use of individuals, groups, or organizations in dealing with life’s vicissitudes” (Pearlin, Menaghan, Lieberman, & Mullan, 1981, p. 340). Categories of social support can include instrumental, emotional, esteem, informational, and tangible support (Cohen & Wills, 1985; Lincoln, 2000). Often, research regarding social support is limited to positive experiences with little attention to negative interactions (Lincoln, 2000). Thus, Townsend, Biegel, Ishler, Weider, and Rini (2006) coined the term “family involvement” to refer to “aspects of family interactions with the client and client’s treatment that are not traditionally studied under the umbrella of support” (p. 474). Specifically, family involvement allows for broader conceptualization of social exchanges within the context of having a relative with mental illness. Therefore, this study employed the definition of family involvement developed by Townsend et al. (2006) .
Perceived Control

Older adults with mental disorders often struggle with issues of dependency and loss of autonomy. To date, lower perceptions of control have been linked to poorer health, chronic disease, physical or mental disorders, older age, higher religiosity, more depressive symptoms, being African American, and limitations in activities (Jang, Haley, Small, & Mortimer, 2002; Scheiman & Turner, 1998; Shaw & Krause, 2001). Hence, some researchers argue that greater understanding is needed of variables, such as perceived control, on evaluations of QOL in adults with mental disorders (Barry, 1997; Zissi & Barry, 2006).

Perceived control is considered as a psychological resource—“personality characteristics that people draw upon to help them withstand threats posed by events and objects in their environment” (Pearlin & Schooler, 1978, p. 5). As such, perceived control refers to “the extent to which one regards one’s life-chances as being under one’s own control in contrast to being fatalistically ruled” (Pearlin & Schooler, 1978, p. 5). Given this definition, more than 30 terms have been used interchangeably to refer to perceived control (Skinner, 1996). For example, a few terms often cited in the literature include mastery, sense of control, locus of control, efficacy, and autonomy (Skinner, 1996; Seeman & Psychosocial Working Group, 1999). However, this study used the term perceived control as defined by Pearlin and Schooler (1978).

Lifetime Mental Disorders

An estimated 54 million adults 18 years and older in the United States have mental disorders (USDHHS, 1999). A mental disorder is defined as “health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof) associated with distress and/or impaired functioning” (USDHHS, 1999, p. 5). Among the ten
leading disabling conditions in the world, four include mental disorders such as depression and substance use (WHO, 2001).

Moreover, lifetime prevalence of mental disorders refers to “the proportion of respondents who had ever had a mental disorder at the time of the interview” (http://www.nimh.nih.gov/health/topics/statistics/ncsr-study/questions-and-answers-about-the-national-comorbidity-survey-replication-ncsr-study.shtml#q3, 2010). One nationally representative study found that the lifetime prevalence of mental disorders in older African Americans is 23% (Ford et al., 2007). For the purpose of this research, lifetime mental disorders were defined as a combined variable of 13 disorders: panic disorder, agoraphobia without panic disorder, social phobia, generalized anxiety disorder, posttraumatic stress disorder, major depressive episode, dysthymia, hypomania, lifetime bipolar subthreshold, alcohol abuse, alcohol dependence, drug abuse, and drug dependence. Though multiple disorders are included in this definition, there is no assumption that quality of life does not vary across mental disorders (Katschnig, Freeman, & Sartorius, 2006).

**Indicators of QOL**

Generally, indicators of QOL can be divided into two categories: subjective indicators and objective indicators. *Objective indicators* refer to tangible events that describe one’s “external life conditions” (Lehman, Rachuba, & Postrado, 1995, p. 157). Subsequently, objective measures of QOL often reflect actual occurrences rather than what individuals perceive is taking place. For example, the most common objective indicators are income, housing, employment, and education. On the other hand, *subjective indicators* refer to “individual appraisal of external life conditions” (Lehman, Rachuba, & Postrado, 1995, p. 157). Appraisals of subjective experiences tend to be abstract and based on perceptions. Therefore, there is an increased
likelihood that subjective indicators can be influenced by extraneous factors such as feelings and mood (Diener, 1984). Examples of subjective indicators include life satisfaction, general happiness, subjective physical health, and perceived adequacy of income.

Frank and Withey (1976) argue the common practice of organizing QOL into two distinct categories is “neither clear nor very useful” (p. 5). They assert that the concepts within the dichotomous categories can be used interchangeably to measure one or the other type of indicator. Therefore, the researchers suggest a different approach might be more beneficial to the scientific community. According to Frank and Withey (1976), a concept should be evaluated based on three criteria. First, it is important to establish group consensus on the merits of a phenomenon. For instance, what actually constitutes a house and its quality can vary from person to person. Second, consideration must be taken for how multiple observers might perceive a concept or an event differently. For example, a teacher and pupil are likely to differ in their approach to grading an essay. Third, evaluations should also account for the likelihood of multiple observers reacting consistently to a phenomenon. So, implementation of these criteria might have practical benefits for understanding methodological issues associated with QOL.

Overall, the research community widely uses objective and subjective indicators to study QOL. Additionally, the list of QOL indicators can be endless. However, little research has focused on evaluating current practices of distinguishing between objective and subjective indicators. Some researchers have expressed concern regarding the utility of categorizing QOL indicators (Frank & Withey, 1976). Future research might consider examining this issue.
Methodological Issues Related to Measuring QOL

Several methodological issues exist regarding QOL. One major problem related to QOL is a lack of consensus regarding how to define the construct. Katschnig (2006) stated “the concept of QoL, is not yet defined in a uniform way, lacks clarity and even creates confusion” (p.4). Furthermore, Ripley (2003) reiterated that “definitional diversity [is] one of the key problems of QoL research” (p. 29). According to Phillips (2006), “at first sight, quality of life is a simple, straightforward concept” (p. 1) but thoughts diverge when taking into consideration micro, macro, ideological, and ontological viewpoints. Nevertheless, researchers generally agree that QOL is a multidimensional construct (Diener, 1984; 1999).

Another issue pertains to limited use of theoretical frameworks in QOL research. Diener (1984) recommended that future QOL research should identify and apply theoretical frameworks, clarify definitions of theoretical components, and evaluate the effect of existing theories on QOL. In reference to adults with mental disorders, researchers often cite the underdevelopment of theoretical frameworks to address QOL with this population (Barry, 1997; Hunt, 1997; Lehman, 1988; Zissi & Barry, 2006). When traditional theoretical frameworks are used, there has been criticism that these models do not specify self-perceived basic expectations, disregard the dynamic interplay of variables, assume basic needs are the same for everyone, and assume typical societal roles (Angermeyer & Kilian, 2006). Thus, Barry (1997) argued that “a coherent theoretical framework is necessary to guide research development in this area, both in terms of methodology and in facilitating the use of quality of life measures as effective tools in service planning and evaluation” (p. 32).

Given the need for application of theoretical frameworks in QOL research, evaluations of QOL mostly rely on self-reports. Though self-reports are critical to assessments of QOL, their
use is not without controversy (Diener, 1984; Jang, Haley, Small, & Mortimer, 2002; Katschnig, 2006). For instance, self-evaluation of QOL can vary based on time, mood, and the time range of an event. Self-reports among persons with mental disorders can also be challenging due to changing affect, hallucinations and delusions, and disturbances in reality (Katschnig, 2006). So, severity of symptoms can factor into the validity of self reports which is most evident among adults experiencing symptoms of depression. Researchers have attributed this problem to “the overlap of the concepts of ‘well-being’ and ‘satisfaction’ with depression,… the negative influence of depressed mood on the perception of oneself and the environment, and… the overlap of items between QoL instruments and psychopathological depression rating scales” (Katschnig, Krautgartner, Schrank, & Angermeyer, 2006, p. 130). So, contextual factors can impact the validity of self-reports.

To address this issue, one study compared the validity of self-reports to non-self-reports on QOL measures. In a seminal study, Sandvik, Diener, and Seidlitz (1993) describe self-reports as “the single most common form of well-being assessment” (p. 318). Aside from establishing face validity, these researchers report that self-reports are prone to socially desirable responses and limited construct validity. They introduce five alternatives to increase the validity of self-reports: written interview, daily mood assessment, external informants, memory measures, and forced choice measures. To test their idea, the researchers evaluated 136 college students on QOL using self-reports and non-self-report assessments. They found that “the traditional self-report measures of SWB demonstrated high convergent validity by their agreement with alternative SWB measures and their relations with theoretically related constructs.” (p. 337) Furthermore, these researchers concluded that these findings are sensitive to context, mood, and other factors that might explain QOL. Therefore, researchers recommend the use of
multidimensional scales, consulting family or friends, and health care professionals when assessing QOL, especially when depressive symptoms are evident (Corrigan & Buican, 1995; Katschnig, Krautgartner, Schrank, & Angermeyer, 2006).

Although QOL is accepted as a multidimensional construct, single items are often used to assess the concept. For example, life satisfaction is most frequently assessed with the Life Satisfaction Index. Other single-item measures include the Affect-Balance Scale, Rosenberg’s Self-Esteem Scale, or global measures of happiness or life satisfaction (Pinquart & Sörensen, 2001). Some criticisms of single item scales include problems such as decreased range of variance, inability to assess internal consistency, difficulty evaluating scale reliability, and most responses accumulating in higher categories (Diener, 1984; McNeil, Stones, & Kozma, 1986). However, support for single reports relates to cost effectiveness, time constraints, feasibility, and minimization of fatigue in older adults (Diener, 1984; Tran, Wright, & Chatters, 1991; Utsey, Payne, Jackson, & Jones, 2002).

Additionally, other methodological concerns associated with QOL pertain to research designs. QOL as a construct has been described as “multidimensional and multidetermined” (Caron, Mercier, Diaz, & Martin, 2005, p. 211). Therefore, the preferred method of measurement is with multidimensional scales that involve multivariate analyses (Argyle, 1996; Caron, Mercier, Diaz, & Martin, 2005; Diener, 1984). Although several multidimensional scales exist to assess domains of quality of life, few scales have been normed using members of racial and ethnic minorities (Becker & Diamond, 2006). Other researchers have expressed similar concerns (Pinikahana, Happell, Hope, & Keks, 2002). Furthermore, many QOL research studies use cross-sectional data, samples of convenience, small sample sizes, and participants who are young, urban, cognitively intact, English speaking, and not reflecting diverse backgrounds. To
date, a paucity of research studies exist that employ experimental, quasi-experimental, and longitudinal designs. Greater understanding is needed of factors that can mediate and moderate QOL (Adelman, 1994; Chatters, 1988; Diener, 1984; Katschnig, Krautgartner, Schrank, & Angermeyer, 2006; McNeil, Stones, & Kozma, 1986; Pinquart & Sörensen, 2001; Rao & Rao, 1983). Thus, improvements in methodological design issues are needed to foster development of high QOL research which can benefit practice, research, and policy.

In summary, future research should address current problems related to methodological design. Foremost, researchers conducting QOL research should clearly define what is meant by QOL. The lack of a standard definition also can pose problems for meta-analysis as well as impede practical use of QOL tools in community-based settings (Pinquart & Sörensen, 2000, 2001; Frank & Withey, 1976). Numerous theories exist regarding QOL, but many QOL studies are not theory-based.

Additionally, self-report is the primary means of evaluating QOL. Given other extraneous factors that can influence self-reports, more research is needed to understand the impact of self-reports combined with collaborations from other sources. Additionally, overreliance on single items has impeded greater empirical evaluation of multidimensional scales that are needed to advance the field of QOL research. To improve the state of QOL research, more quantitative as well as qualitative and mixed methods designs are needed. Longitudinal and experimental designs are almost nonexistent in QOL research.

**Research on the Correlates of QOL**

Generally, QOL researchers agree that QOL is not linked to one variable but multiple factors (Diener, 1984; Diener & Ryan, 2009; Frank & Withey, 1976; Katschnig, 2006; Lehman, Rachuba, & Postrado; Ripley, 2003). To address this issue, Diener (1984) summarized the major
correlates that can influence QOL. Overall, he found that higher QOL has been associated with reporting higher income; being White, employed, married, socially engaged, and physically active; and having higher self-esteem and better health. Further, Diener reported that mixed findings were associated with age, gender, education, and religiosity. In another study, higher life satisfaction was linked to higher income, being married, and engaging in more volunteer activity (Ellis, 1991). However, the results of one meta-analysis showed a very small effect size for the association between marital status and subjective well-being. The research study also found that older married adults reported lower subjective well-being, compared to younger married adults (Haring-Hidore, Stock, Okun, & Witter, 1985).

In a nationally representative sample, researchers examined the impact of socioeconomic status (SES), health, and social relationships on racial and ethnic differences in life satisfaction (Barger, Donoho, & Wayment, 2009). They found that Whites reported higher life satisfaction than Blacks and Hispanics. Higher life satisfaction was associated with being employed, not disabled, married, and having higher self-rated health, higher emotional support, and greater social integration. After controlling for SES and health variables, QOL differences between Blacks and Whites were reduced, whereas the difference between Whites and Hispanics disappeared. However, Ellis (1991) found no significant racial differences in life satisfaction.

Religion and spirituality have also been associated with QOL. In a meta-analysis, Ellis (1991) examined the relationship between religious involvement (denominational ties, social integration, divine relations, and existential certainty) and subjective well-being. He found that higher QOL was associated with individuals who held more solid religious beliefs. Specifically, higher life satisfaction was positively related to identification as liberal, nontraditional, and Protestant. The results also indicated that church attendance and private devotion indirectly
influenced QOL. He also found that religious involvement acted as a protective factor against adverse life events. In reference to spirituality, Sawatzky, Ratner, and Chiu (2005) used a meta-analysis (n=51) to investigate the relationship between spirituality and QOL. The findings revealed a moderate effect size for the relationship between spirituality and QOL. They also found support for spirituality and QOL as distinct concepts.

**Personality Factors**

Moreover, personality is suggested as a major determinant of how individuals evaluate their well-being. Extroversion and neuroticism are the two most common personality features examined in the research literature (Diener, Oishi, & Lucas, 2003; Diener & Ryan, 2009; Steel, Schmidt, Shultz, 2008). Extroversion has been described as “sociable, optimistic, outgoing, energetic, expressive, active, assertive, and exciting,” whereas features of neuroticism have been characterized as “anxious, easily upset, and moody or depressed” (Steel, Schmidt, & Shultz, 2008, p. 139). Moreover, Steel, Schmidt, and Shultz (2008) completed a meta-analysis to investigate the impact of personality factors on QOL measures. They found that extraversion and neuroticism explained 19% and 29%, respectively, of the variance in QOL. Previous studies have found estimates of 4% (extraversion) and 5% (neuroticism) (DeNeve & Cooper, 1998, as cited in Steel, Schmidt, & Shultz, 2008). Additionally, they found that neuroticism and extraversion, respectively, were the two strongest predictors of subjective well-being. Consistent with other researchers, Steel, Schmidt, and Schultz found that neuroticism correlated highly with negative affect whereas extraversion correlated highly with positive affect (Lincoln, 2000).

Furthermore, other personality traits that are suggested to impact how individuals assess their QOL include self-esteem, internality (“a tendency to attribute outcomes to oneself rather than to external causes”), perceived control, intelligence, and optimism (Diener, 1984, p. 559).
Generally, the literature suggests that personality factors such as higher self-esteem, greater perceived control, greater extroversion, and lower neuroticism is associated with better QOL (Diener, 1984; Diener, Oishi, & Lucas, 2003; McNeil, Stones, & Kozma, 1985).

Overall, numerous factors have been associated with QOL. However, income, health, and personality seem to consistently be major variables that can influence how individuals assess their QOL. Mixed findings exist in regard to other variables that might explain QOL. Further, research is needed to understand how different variables interact or moderate QOL (Diener, 1984). More research is needed with larger samples with more diverse participants from different backgrounds. In addition to this, qualitative studies are needed to explore the meaning behind the quantitative data. Qualitative studies can also help to identify other variables that might contribute to similarities and differences in QOL.

**Research on QOL in Older Adults**

In terms of elderly samples, Pinquart and Sörensen (2000) completed a meta-analysis about the correlates of QOL in older adults. Specifically, they examined the relationship between socioeconomic status, social network, and competence and subjective well-being (life satisfaction, happiness, self-esteem). The researchers found that older adults with higher socioeconomic status, greater involvement with social networks, and higher competency reported better life satisfaction, higher self-esteem, and greater happiness. Income was the strongest predictor of QOL across all three outcome variables.

Additionally, Pinquart and Sörensen (2000) found that elderly participants tended to associate the quality of social contacts rather than the quantity of social contacts with better QOL. The quantity of contacts with friend networks reflected higher QOL than the quantity of contacts with biological/legal relatives. They also found some evidence that older adults value
the quality of the relationship with their adult children more than their friendship network. The impact of different types of competence (activities of daily living, instrumental and leisure activities, and cognitive skills) on QOL was not significant. Older men’s higher QOL was related to higher SES, whereas older women’s better QOL was linked to social network. Quality and quantity of social contacts was more important for older respondents than young old respondents. These researchers recommended that future research examine the effect of factors such as ethnicity, marital status, and gender differences on QOL.

In another meta-analysis, Pinquart and Sörensen (2001) examined the impact of factors that have been linked to gender differences in older adults and QOL. The outcome variables of interest in the 300 included studies were life satisfaction, happiness, self-esteem, loneliness, subjective health, and subjective age. Overall, the researchers found small gender differences (less than 1%) in QOL. Further analysis revealed that older women experienced lower life satisfaction, lower happiness, lower self-esteem, lower everyday competence, more loneliness, lower educational attainment, lower income, and lower subjective health than older men. However, older women reported a lower subjective age than elderly men. In reference to marital status, older married men reported higher QOL compared to married and non-married groups. The researchers also found that greater gender differences in QOL were found in males in higher age groups. They suggested the small gender differences might be due to sampling bias, females benefiting from protective and risk factors, and the coping styles of older women.

Moreover, QOL in older adults has also been associated with other variables as well. One study examined the effect of background, psychological, and social variables on gender differences in positive well-being (Waddell & Jacobs-Lawson, 2010). They found that older males who reported being married, higher self-rated health, and fewer depressive symptoms
experienced more significant positive well-being. Age, education, income, importance of religion, social interaction, and volunteer work was not related to positive well-being in males. However, greater positive well-being in older females was significantly associated with better self-rated health, fewer depressive symptoms, higher importance of religion, and greater volunteer activity. Additionally, higher positive well-being in older females was negatively related to increasing age. In a longitudinal study design, researchers found at the bivariate level that older adults with more physical activities, more social activities, more engagement in religious activities, and larger social support networks reported higher life satisfaction, greater happiness, and fewer depressive symptoms. After controlling for covariates, the findings revealed that the number of productive activities was no longer significant from Wave 1 to Wave 2 (Baker, Cahalin, Gerst, & Burr, 2005). In addition to these variables, personality can affect how older adults rate the QOL of their lives.

Kahn, Hessling, and Russell (2003) examined the relationship between negative affectivity and social support, health, and psychological well-being in an elderly sample. The sample included 100 older adults who attended three community centers in a southwestern city. They found that high negative affectivity in this sample was associated with perceptions of lower support, poorer health, and poorer well-being. Negative affectivity was also a stronger predictor of depression than life satisfaction and loneliness. A strong relationship existed between social support and the measures of psychological well-being, before and after controlling for negative affectivity. They found that negative affectivity did not explain the relationship between health and social support.

Taken together, much is known about the relationship between income, health, social contacts, and personality on QOL in older adults. However, experimental and longitudinal
designs are needed to increase understanding about mechanisms, processes, and causal relationships and how these and other factors may influence QOL. For the most part, researchers use cross-sectional data to suggest what might be occurring. Many of these studies are limited in scope and cannot be generalized to broader society. For example, the reviewed studies include samples that primarily reflect the experiences of older White, cognitively intact, English-speaking respondents. Limited information is provided regarding QOL in older adults who might not volunteer to participate in research studies. Furthermore, recruitment at traditional agencies serving older adults might exclude elders who are not affiliated with these organizations.

**Research on QOL of Older African Americans**

The demographic profile of African Americans, 65 and older, reflects progress as well as areas of challenge. To date, older African Americans are the largest group of minority elders in the U.S. Most African Americans reside in southern states or large urban areas (CensusScope, 2010). In terms of education, more than 60% of older African Americans had completed high school in 2008, compared to 9% in 1970. Generally, older African Americans are less likely to attain a bachelor degree or higher (12%) than the elderly in general (21%). Given the low levels of educational attainment, the median personal income of older African American males ($19,161) and females ($12,499) is lower than the national average (AOA, 2010; Federal Interagency Forum on Aging-Related Statistics, 2008). The subgroups of older adults with the highest risk of poverty are “women, African American, people living alone, very old people, those living in rural areas, or those with a combination of these characteristics” (Center for Mental Health Services, 2004, p. 5). Estimates suggest the rate of poverty for older African
Americans (23%) is higher than older Hispanics (19%) and non-Hispanic Whites (7%) (AOA, 2010; Federal Interagency Forum on Aging-Related Statistics, 2008).

Furthermore, the high rate of poverty among older African Americans is evident in other areas as well. In 2005, the net worth of older African Americans ($37,800) was six times less than older Whites ($226,900). The huge discrepancy in net worth can seriously limit the ability of older African Americans to improve their well-being. In terms of life expectancy, older African Americans live fewer years than older Whites, but after age 85 this observation reverses in favor of older African American males. So, older African American females might outlive older African males but they also face greater economic hardship. On average, African American elders tend to report their self-rated health as good or excellent. Yet, they are overrepresented in the primary leading causes of death--heart disease and cancer--and major chronic conditions such as hypertension and diabetes. Therefore, the contextual experiences of older African Americans are critical to understanding variables related to QOL in this population (AOA, 2010; Federal Interagency Forum on Aging-Related Statistics).

**Socio-demographic Variables**

A number of demographic variables have been linked to variations in QOL in older African Americans. Some research suggests that the three strongest predictors of QOL in older African Americans are income, health, and religion (Chatters, 1988; Levin, Chatters, & Taylor, 1995; Rao & Rao, 1983; Wilkerson, 2004). Chatters (1988) concluded that when designing studies of QOL in African American elders, “formal religious behavior may be at least as important a correlate of well-being as health and thus should be routinely included in structural models of well-being.” (p. S160)
Interestingly, lower SES has been linked to higher QOL, compared to higher SES. In an urban sample, researchers found that older African Americans who reported lower income, lower subjective health, and having less than 12 years of education reported better QOL (Wilkerson, 2004). Differences in QOL have also been found based on timing of a problematic event. Murray and Peacock (1996) found that African American elders, 55 and older, who experienced a problem in the past month experienced lower life satisfaction, compared to those who did not. In addition, the researchers found that having a higher number of neighbors predicted better life satisfaction for this subgroup. Other research findings suggest that African American elders who are younger, widowed or separated, experience higher stress, and report lower health satisfaction, and experience lower happiness and well-being (Chatters, 1988). Another study found that the “never married” who reported greater personal distress was associated with lower psychological well-being (Keith, 1997).

**Gender**

Some research suggests that gender differences exist in QOL among African American elders. According to Coke and Twaiwe (1995), older African American males with greater frequency of church attendance and higher annual income (explained variance=12%) report higher life satisfaction. However, greater life satisfaction among older African American females was not related to actual income, but more frequent church attendance and higher self-rated religiosity (explained variance =34%). Coke and Twaiwe (1995) concluded that the gender differences are likely due to older African American males’ access to greater employment opportunities versus more religious activities for females.

In a higher SES sample, one researcher found that older African American females scored significantly higher on environmental mastery, positive relations with others, and self-
acceptance than older African American males (Frazier, Mintz, & Mobley, 2005). Although older African American females tend to have increased risk of health related disability, research suggests they report similar health satisfaction as males (Chatters, 1988). In a southern sample, higher life satisfaction for male African American elders was related to having more grandchildren, higher income, younger age, talking to children once a week or more, having fewer sons, and better health. In contrast, the strongest predictor in higher life satisfaction for older African American females was seeing siblings once week or more and visiting people less often (Rao & Rao, 1983).

**Coping resources**

Another major variable associated with QOL is health and physical functioning (Gibson & Jackson, 1987). One study used an urban sample to examine the relationship between coping style and psychosocial predictors on subjective well-being. The researchers found that “better perceived health, less reliance on emotion-oriented coping and, to a lesser degree, actual and perceived social support, higher cognitive functioning, and education also have higher levels of subjective well-being, especially life satisfaction” (Jones, Rapport, Hanks, Lichtenberg, & Telmet, 2003, p. 12). One study found that older adults with greater negative affect reported poorer health and poorer well-being (Kahn, Hessling, & Russell, 2003). In another study, fewer depressive symptoms in older African Americans has been related to use of more control oriented strategies (e.g. I am willing to ask others to help if I need it or I pace myself so I do not get too tired) (Gitlin, Hauck, Dennis, & Schulz, 2007). These findings highlight the intersection between such QOL variables such as health, coping behaviors, and affect.
Role involvement

Mixed findings exist regarding the impact of role engagement on QOL in elderly African Americans. Coke (1992) examined the relationship between family role involvement and participation in church activities on life satisfaction of older African Americans. She found that older African American males with more roles, greater church participation, and higher self-rated religiosity reported higher life satisfaction. However, self-rated religiosity was the strongest predictor of QOL in older African American females. Other studies have found significant racial differences in the impact of roles on QOL. Adelman (1994) examined eight roles commonly held by elders: employee, spouse, parent, volunteer, homemaker, grandparent, caregiver, and student. She found that older Whites with more roles reported higher life satisfaction, less depressive symptoms, and greater self-efficacy than older African Americans. This study also found gender differences suggesting that older males with more roles experience better life satisfaction than older females.

In conclusion, this brief review of the literature highlights some important variables that might contribute to understanding of QOL in older African Americans. Most existing literature seems to focus on African Americans elders in lower socioeconomic groups. Less is known about the experiences of older African Americans from middle and upper SES. Additionally, much of the current QOL research on African American elders pertains to the connection between health and religion and QOL. Given the vast number of variables that can affect QOL, more research studies are needed regarding other factors that might explain similarities and differences in QOL among African American elders. At this time, the literature reflects a paucity of research on how to enhance QOL in this subpopulation. Few, if any, studies were identified that focus on personality and QOL in older African Americans.
Research on QOL of Older Adults with Mental Disorders

Currently, it is estimated that 7 million older adults or 20% of persons 55 and older in the United States have a mental disorder. By the year 2030, 15 million older adults in the United States are projected to have a non-dementia related mental disorder (Jeste et al., 1999). The largest categories of mental disorders present in older adults are mood disorders, anxiety disorders, and severe cognitive impairments. Less than one percent of older adults experience schizophrenia. Other mental disorders observed in the elderly include substance abuse, somatization, and an elevated risk of suicide, especially for older White males (USDHHS, 1999). Among older African Americans, the most prevalent lifetime mental disorders are alcohol abuse, posttraumatic stress disorder, and major depression (Ford, Bullard, Taylor, Neighbors, & Jackson, 2007). Symptoms of mental disorders in older adults can be complicated by comorbid health conditions, prescription medication, loss, grief, bereavement, isolation, and environmental factors (Center for Mental Health Services, 2004). QOL among older adults with mental disorders can vary based on the type of mental disorder and other contextual factors.

Most research on QOL among older adults has focused on mood and anxiety disorders. Common risk factors for development of mood and anxiety disorders in the elderly include declining health, medical illness, life stressors, chronic illness, medications, and grief (Maddux, Delrahim & Rapaport, 2003). Therefore, these authors assert that “depression in older individuals is complicated by multiple physical and health-related problems; thus, disentangling symptoms of depression and making a diagnosis can be challenging” (p. 37). Generally, the research suggests that depressive symptoms are highly correlated with QOL in adults with mental disorders (Katschnigh, Krautgartner, Schrank, & Angermeyer, 2006; Mittal et al, 2006).
Moreover, Schneier and Pantol (2006) completed a review of the literature on anxiety disorders. They examined the relationship between QOL and five anxiety disorders: panic disorders with agoraphobia, specific phobias, post-traumatic stress disorder, generalized anxiety disorder, and obsessive-compulsive disorder. Estimates indicate that 11.4% of older adults have some type of anxiety disorder (USDHHS, 1999). QOL in adults with panic disorder with agoraphobia might be limited due to “anticipatory anxiety and agoraphobic avoidance” (p. 143) in case of specific phobias, they suggested anxiety could relate to fear prior to and after a distressing event. Furthermore, decreased QOL in posttraumatic stress disorder can be associated with remembering, reliving, or circumventing a past traumatic event. Generalized anxiety disorder is highly prevalent and can lead to excessive worry that can trigger other somatic symptoms. Yet, the poorest QOL might be among adults with obsessive compulsive disorders who can face emotional, social, physical, environmental, and cognitive impairments.

One seminal study suggests a positive relationship between functional decline, depressive symptoms, and QOL (Wells et al., 1989). These researchers used baseline data from the Medical Outcomes Study (MOS) (as cited in Wells et al., 1989) to examine physical functioning and well-being in 11,242 patients who met criteria for depressive disorder or depressive symptoms. The MOS is “designed to assess processes and outcomes of care for patients with hypertension, diabetes, coronary heart disease, or depression” across health care providers (Wells et al., 1989, p. 915). The findings revealed that the functional status of patients who reported depressive symptoms was similar to patients with heart conditions. Additionally, the well-being of both groups of patients varied based on the type of provider. Patients with depressive disorders who received treatment from a mental health provider reported poorer social functioning than those treated by a medical provider. On the other hand, patients with depressive
symptoms who were treated by a medical provider experienced poorer physical functioning, greater pain, and more days in bed (Wells et al., 1989).

A few studies have examined correlates of QOL in older adults with severe mental disorders (Bankole et al., 2009; Cohen et al., 2003; Mittal et al., 2006). One study examined QOL in older adults with schizophrenia versus those without schizophrenia. The researchers found that older adults with schizophrenia reported significantly lower scores on the Quality of Life Index (QOLI) than the community comparison group. Lower QOLI scores were associated with greater functional impairment, more acute stressors, higher scores on lifetime trauma, greater financial strain, more depressive symptoms, lower scores on mini-mental exam, higher positive and negative symptoms, smaller social network, and poorer self-judgment. After controlling for other variables, 23% of the variance in QOLI was explained by depressive symptoms (Cohen et al., 2003).

In a multiracial sample of older adults with and without schizophrenia, the researchers found that higher QOL among the elderly with schizophrenia was related to experiencing fewer depressive symptoms, lower cognitive functioning, fewer acute life stressors, fewer medication side effects, lower financial strain, and higher self-rated health (Bankole et al., 2007). Other studies have found that older adults with schizophrenia report lower scores on the physical health and mental health component of the Short Form 36 Health Survey, compared to a community peer group. However, increasing age was associated with better mental health related QOL in the group with schizophrenia but not the comparison group. The researchers suggested this finding might be due to a survival cohort effect, improvements in self-management and coping skills, and reduction in group differences in life situations with increasing age (Folsom, et al., 2009).
Although symptoms of mental illness can affect cognitive functioning, some research suggests severe mental illness does not preclude one from rating QOL. Pinikahana, Happell, Hope, and Keks (2002) completed a review of the literature on factors related to QOL in adults with schizophrenia. They found that community-dwelling adults with schizophrenia are very likely to live in substandard living conditions. However, the researchers concluded that “people with schizophrenia can validly and reliably report their internal experiences and perceptions” (p. 109). Based on the findings, they asserted that clinician perceptions and patient perceptions of QOL are two distinct concepts that should be viewed as complementary. Overall, they found that affect and modified life expectation are the greatest threats to higher QOL in adults with schizophrenia. Subsequently, these researchers highlighted the critical importance of selection of instruments and informants when assessing QOL in this subgroup.

In summary, older adults with mental disorders face increased risk of lower QOL. Primarily, clinical symptoms coupled with depressive symptoms and poor health can impede QOL in this population. Generally, most QOL research focuses on populations with some form of mood disorder. There is a need to increase understanding of QOL across all groups of mental disorders that occur in the elderly. Larger, representative, and more diverse samples are needed to increase understanding of QOL in older adults with mental disorders. Furthermore, rigorous testing of measurement instruments that can be used with this subgroup is warranted. At this time, it is not clear what might or might not contribute to improvements in QOL among elders with mental disorders.
Research on Family Involvement and QOL

Most community dwelling adults tend to rely on family members for support (Administration on Aging, 2001). Reasons often cited for family involvement include preference of the older adult, societal emphasis on community-based care, inadequate funding, and development of community-based services such as housing, inpatient service restrictions by managed care providers, and a sense of family obligation (Berkman, Gardner, Zodikoff, & Harootyan, 2005; Cook, Cohler, Pickett & Beeler, 1997; Doornbos, 2002; Dyck, Short & Vatiliano, 1999; Lefley, 1996; Tessler & Gamache, 2000). Assistance provided by family members can range from emotional support to helping them meet their basic needs for food, clothing, and shelter (Tessler & Gamache, 2000). However, researchers have documented that caregiving for an older adult with mental illness is stressful and can have positive and negative consequences for the caregiver and the care recipient (Administration on Aging, 2001; Lefley, 1996; Tessler & Gamache, 2000; USDHHS, 1999). Largely, the effect of family involvement on the QOL of the recipient of care has been neglected (Brown, 2007; Newsom & Schulz, 1998). Research suggests caregiving exchanges can be categorized into two categories: positive and negative. Positive caregiving exchanges encompass “emotional support, companionship, instrumental support, and informational support” (Newsom, Rook, Nishishiba, Sorkin, & Mahan, 2005, p. P306). In contrast, negative social exchanges refer to “insensitive or critical behavior, rejection or neglect by others, failure by others to provide tangible support in time of need, and unwanted or unsound advice provided by others” (Newsom, Rook, Nishishiba, Sorkin, & Mahan, 2005, p. P306).

Several studies have examined the relationship between caregiving exchanges, health, and other factors. Gibson and Jackson (1987) examined the relationship between physical...
functioning and informal support in 734 community-dwelling African Americans, 65 and older. Older African Americans who reported having more helpers, more visits with members of their social support network, and more help experienced the lowest risk of poor physical functioning. Conversely, older African Americans who received greater emotional support from their social support networks also exhibited a higher likelihood of poor physical functioning.

In another study, Newsom, Rook, Nishishiba, Sorkin, and Mahan (2005) examined the link between negative exchanges, appraisal, and psychological health in an elderly sample. They found that older adults who reported appraising positive exchanges as satisfying experienced greater well-being and lower psychological distress. Among those who reported negative exchanges, the most distressing element of care was exposure to anger or criticism. But, positive exchanges that involved companionship had the strongest association with higher well-being and less distress. These findings are consistent with other studies that have found that warmth, praise, and relationship quality contribute to higher life satisfaction in adult children with schizophrenia (Greenberg, Knudsen, & Aschbrenner, 2006). In a national sample, Newsom and Schulz (1996) examined the relationship between functional impairment, social support, and QOL among adults 65 and older. They found that higher physical impairment was associated with fewer family contacts, fewer friendship contacts, and less perceived support (i.e. belonging and tangible support). Additionally, perceived support (belonging, appraisal, and tangible support) was the most significant predictor of higher life satisfaction and fewer depressive symptoms.

In recent years, increased attention has focused on the relationship between negative family exchanges, social support, and QOL. One study found that after controlling for demographic variables, negative interaction was positively associated with reporting at least one mood or anxiety disorder. Participants who reported more disorders were at greater risk of more
frequent negative interactions (Lincoln, et al., 2010). Furthermore, age, gender, education, and marital status have been associated with negative interaction. Older African Americans who are more extroverted and less neurotic report fewer negative interactions, compared to younger age groups. These researchers found that older African American females report higher levels of neuroticism, more telephone contact, and more emotional support than males. In terms of education, older African Americans with more education reported greater negative interactions with family and friends. Unmarried older African Americans and those who do not have children report more negative interactions with family and friends compared to counterparts (Lincoln, Taylor, & Chatters, 2003). Moreover, some research suggests that racial and ethnic differences exist in how adults with mental disorders perceive negative family interactions (Rosenfarb, Bellack, & Aziz, 2006; Weisman, Rosales, Kymalainen, & Armesto, 2006).

As a whole, family involvement with older adults is positive (Lincoln, Taylor, & Chatters, 2003). Nevertheless, some research suggests that negative interactions do occur and are more prevalent in subgroups. Based on these findings, it seems that groups most at risk of lower QOL are also at increased risk of negative family interaction. Cultural norms related to family relations might prevent some older adults from disclosing negative behaviors by family members. Even more so, the well-being of family members is also of concern when older adults exhibit negative affectivity that is not warranted. Lincoln (2000) noted that “social workers tend to romanticize or idealize the role of supportive networks….social workers need to assess the quality of interactions, in addition to the number of available supportive resources” (p. 242). Other researchers have expressed similar concerns (Bishop, Martin, & Poon, 2006; Pinquart & Sörensen, 2000). Therefore, more research is needed to understand the relationship between
QOL, social support, negative interaction, and positive interaction between older adults and their family members.

Theoretical Frameworks

Diener (1984) summarized five major psychological theories related to QOL: telic theories, activity theories, top-down and bottom-up theories, associationistic theories, and judgment theories. Telic theories refer to deriving happiness from accomplishing a goal or need. In contrast, activity theories purport that happiness evolves as a result of engagement in human activity. Activity theories are behavior-based rather than goal-oriented. Furthermore, top-down theories suggest “a person enjoys pleasures because he or she is happy, not vice versa” (Diener, 1984, p. 565); bottom-down theories assume that happiness is a result of an accumulation of multiple single pleasant events. Associationistic theories link happiness to a predisposition toward happiness due to direct or indirect aspects of one’s social environment. Finally, judgment theories convey that “happiness results from a comparison between some standard and actual conditions” (Diener, 1984, p. 566). Examples of judgment theories include social comparison theory (other oriented), adaptation, and range-frequency theory (both are past oriented). Despite the existence of the aforementioned theories, QOL research is largely not theory-based.

To address this gap, Angermeyer and Kilian (2006) proposed a dynamic process model to evaluate QOL in adults with mental disorders. In this model, the researchers purport that greater understanding is needed of the dynamics that can affect how adults with mental disorders perceive their QOL. To do this, they suggest that dynamic models must account for satisfaction, sociocultural factors, and personality related variables. Additionally, two basic assumptions are associated with this dynamic process model. First, individual perceptions of QOL are a continuous, adaptive process. Second, satisfaction is not viewed as an outcome but as the
mechanism that facilitates the dynamic interplay between the variables in the adaptation model. The three primary components of the model are environment, cognitive adaptation, and person. At the environmental level, important elements consist of individual living conditions, social norms and values, and social reactions. Then, cognitive adaptation includes individual value systems, subjective needs, perceived role demands, and perceived need satisfaction. Next, input at the person level focuses on personal variables, individual abilities, and behavior. Other researchers have also suggested that adaptation is important to how adults with mental disorders evaluate QOL (Lehman, Rachuba, & Postrado, 1995).

**Chapter Summary**

As a result of this review of the literature, clear progress and gaps can be identified. Generally, the most frequent predictors of QOL in older adults are income, health, religion, and depressive symptoms. Social support, coping, and religion also seem to serve as mediating variables in understanding QOL. Less attention has focused on other variables that might mediate the relationship between predictors and QOL. The majority of QOL research has been conducted with healthy, socially active samples from European American backgrounds. Studies that include older African Americans seem to examine variables such as religion and health. While these are very important variables, future research should continue to probe into other factors such as community and macro level variables that can affect QOL. Moreover, mixed findings exist regarding gender differences in the experience of QOL. Furthermore, future studies should explore the intersection between gender, health, and income on assessments of QOL.

Principally, QOL research uses correlation, cross-sectional, and quantitative designs. Therefore, more experimental, qualitative, and mixed-method designs are needed to address the
current gaps in knowledge. Rigorous testing of instruments is warranted to assess QOL in individuals with different backgrounds, health, and mental health related conditions. Researchers should also seek to resolve the lack of a standard definition for QOL. Longitudinal studies with large samples are almost nonexistent in QOL research. Many QOL studies do not use theoretical frameworks to guide variable selection or understand their findings. Thus, future studies must make greater use of theoretical frameworks as well as expand existing knowledge about key variables in subgroups, especially elders with mental disorders.
CHAPTER 3
METHODOLOGY

This study involved secondary analysis of data from the National Survey of American Life (NSAL). The NSAL has been described as the most comprehensive, nationally representative study of mental disorders among individuals 18 and older from racial and ethnic groups (Jackson et al., 2004a). The original researchers used a multistage, complex design to conduct a survey of non-institutionalized household members. They randomly selected one household member who spoke English and met criteria based on age, race, and Hispanic and Caribbean ancestry. Data collection occurred between the years 2001 to 2003. Participants completed face-to-face interviews in their home or via telephone, when necessary. The total sample (n=6,082) included African Americans (n=3,570), Afro-Caribbeans (n=1,621), and non-Hispanic Whites (n=891). This study examined a subsample of older African Americans from the NSAL with one or more lifetime mental disorders (n=168) (Jackson et al., 2004a; Jackson, Neighbors, Nesse, & Trierweiler, 2004b).

The inclusion criteria for participation in the study included the following: self-reporting between 55 to 74 years, self-identifying race as African American, self-reporting at least one lifetime mental disorder as determined by the DSM-IV World Mental Health Composite International Diagnostic Interview (WMH-CIDI) (Jackson et al., 2004a; Jackson, Neighbors, Nesse, & Trierweiler, 2004b). Family member referred to children, grandparents, aunts, uncles, in-laws, and other marriage or blood relatives. Although older African Americans often receive assistance from fictive kin, these individuals were excluded from this study, as some research
suggests that family members are the most consistent source of support for older African Americans (Taylor, Chatters, & Jackson, 1997).

This study focused solely on older African Americans with mental disorders because QOL in this population has been understudied. Additionally, inclusion of other racial and ethnic groups warranted examination of immigration status, cultural nuances, and acculturation issues that were not feasible at the time of this study. Individuals 75 years and older were also excluded due to missing data and fewer respondents in this age group.

**Human Subjects’ Compliance**

This study complied with human subjects’ protocol through the University of Alabama’s Institutional Review Board (IRB). The original research study was also approved by the primary investigator’s IRB. Given that this study involved secondary data analysis, this research study involved no risk to the participants. The dataset was available in the public domain, therefore, personal information had been de-identified (Jackson, et al., 2004a).

**Conceptual Framework**

The conceptual framework for this study was adapted from a model developed by Townsend, Biegel, Ishler, Weider, and Rini (2006) entitled “Conceptual Framework for Studying Family Involvement with Adults with Co-Occurring Substance and Mental Disorders.” In the original model, the researchers identified two types of family involvement, family involvement with a client and family involvement with a client’s treatment. The Townsend et al. framework incorporates the perspectives of the client, the family, and the mental health system. The major components of the model include (1) social-contextual factors, (2) family member stressors, (3) family member well-being, (4) family involvement, and (5) outcomes for the client. According
to Townsend et al., the relationship between each major element in the model is interdependent and can vary based on social context and mental health system characteristics.

This study focused on the relationship between predictors of family involvement with the client, specifically older African Americans with mental disorders, and the outcome QOL (life satisfaction and general happiness). The literature suggests that higher QOL in older African Americans with mental disorders has been linked to a number of variables including psychiatric symptoms, socioeconomic status, health, control, religion, depressive symptoms, social network, functional status, and gender (Lehman, Rachuba, & Postrado, 1995; Prince, 2006; Gitlin, Hauck, Dennis, & Schulz, 2007). Furthermore, symptoms of mental disorders, losses in later life, health decline, and financial strain might increase the dependency of older African Americans with mental disorders on family members (USDHHS, 1999; Wilkerson, 2004; Krause, 1993). However, social support and coping mechanisms can act as mediating variables in the experiences of older adults with mental disorders (Pearlin & Schooler, 1978; Pearlin, Lieberman, Menaghan, & Mullan, 1981). Other mediating variables that might be overlooked in populations with mental disorders include self-esteem, perceived control, self-efficacy, and personal autonomy (Barry, 1997; Zissi & Barry, 2006).

The adapted model specifies the variables of interest in this study. Box 1 contains contextual variables that have been linked to family involvement with older adults with mental disorders. The main components of the adapted model are included in Box 1 and Box 2. The primary predictors of family involvement are suggested to directly impact the measures of QOL (life satisfaction and general happiness). Some research suggests the amount and type of family involvement can influence outcomes for older adults in caregiving situations (Newsom, 1999; Newsom & Schulz, 1998). However, the level of perceived control experienced by African
American elders with mental disorders might mediate the impact of the predictors of family involvement on the QOL variables. See Figure 1 for more details.
Figure 1. Model of Perceived Family Involvement and Quality of Life among Older African Americans with Mental Disorders

Measures

Background Contextual Variables--This study assessed several background contextual variables, gender, marital status, education, income, employment status, health status (self-reported health), depressive symptoms, and importance of religion. Gender was self-identifying as male or female. Marital status included married or cohabitating and not married. Education was defined as self-reporting responses to one of four categories: 0 to 11 years, 12 years, 13 to 15 years, or greater than or equal to 16 years. Perceived income adequacy consisted of a single item, “How difficult is it for me to meet the monthly payments on my bills?” Responses were rated on a 5-point Likert type scale, with scores ranging from 1 (not difficult at all) to 5
(extremely difficult). Higher scores on perceived income adequacy indicated greater difficulty paying monthly bills. Employment status was defined as a self-reporting as employed or unemployed.

Dependent Variable--The dependent variable consisted of two variables, general happiness and life satisfaction. To assess general happiness, respondents were asked to respond to a single question, “Taking all things together, how would I say things are these days?” Possible response scores ranged from 1 (Not happy at all) to 4 (Very happy). Then, life satisfaction was assessed as “In general, how satisfied am I with my life as a whole these days?” Response options were: 1=Very dissatisfied, 2=Somewhat dissatisfied, 3=Somewhat satisfied, or 4=Very satisfied. As noted, each dependent variable used a 4-point Likert type scale. The scores ranged from 1 to 4, with higher scores indicating higher general happiness or higher life satisfaction.

Lifetime Mental Disorder--Lifetime mental disorder refers to the rate of prevalence of a mental disorder during the life course (USDHHS, 1999). This study used an aggregate definition of lifetime mental disorder due to too few cases for an adequate sample of a single mental disorder. The 13 variables included were: panic disorder, agoraphobia without panic disorder, social phobia, generalized anxiety disorder, posttraumatic stress disorder, major depressive episode, dysthymia, hypomania, lifetime bipolar subthreshold, alcohol abuse, alcohol dependence, drug abuse, and drug dependence.

Health Status--Self-reported health was used to assess health status. Other researchers have used similar measures to examine health status (Newsom, Rook, Nishishiba, Sorkin, & Mahan, 2005; Newsom & Schulz, 1996). The question asked of respondents was “How would I
rate my overall physical health at the present time?” Scale scores ranged from 1 (Poor) to 5 (Excellent), with higher scores indicating better self-reported health.

Depressive Symptoms--The Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) was used to assess depressive symptoms. Twelve items from the original 20 item CES-D scale was used. Respondents were asked to report how often in the past week they felt depressed, lonely, sad, or restless, among others. The following ratings applied: 0=Rarely or None of the Time, 1=Some or a Little of the Time, 2=Occasionally or a Moderate Amount of the Time, or 3=Most or All of the Time. Chronbach’s alpha for this measure was shown to be satisfactory in the present sample (α=.81).

The CES-D scale has been widely used in research studies involving older adults to assess symptoms of depression which occurred during the last week (Newsom & Schulz, 1998; Fiori, Antonucci, & Cortina, 2006). Typically, the original 20-item CES-D has been used with a cutoff score of 16. However, this research study involved a 12-item version of the CES-D with a cutoff score of 12. The assigned cutoff score is adjusted for use with the abbreviated version of the original scale (Fiori, Antonucci, & Cortina, 2006). The four positive items in the scale (e.g. “I felt that I was just as good as other people” and “I felt hopeful about the future”) were reverse coded before calculating the total score. Thus, the scale scores range from 0 to 36, with scores equal to or greater than 12 indicating higher depressive symptoms.

Importance of Religion--Research suggests that quality of life in older African Americans has been directly or indirectly linked to different aspects of religiousness (Coke, 1992; Coke & Twaite, 1995; Crowther, Parker, Achenbaum, Larimore, & Koenig, 2002; Levin, Chatters, & Taylor, 1995). However, the symptoms of mental disorders coupled with health status might limit the ability of older African Americans with mental disorders from participating in some
religious activities. Therefore, this research examined the importance of religion in the lives of older African Americans with mental disorders. Participants were asked to respond to the question, “How important is religion in your life?” A single item 4-point Likert-type scale was used to measure importance of religion with scores ranging from 1 (Not important at all) to 4 (Very important). Participants with higher scores considered religion as more important in their life.

**Primary Predictors of Perceptions of Family Involvement**

This study included four primary predictors of perceptions of family involvement. Each predictor was mutually exclusive. The amount of family involvement consisted of two variables: frequency of family support and frequency of family contact. In addition, type of family involvement included two variables: positive family interaction and negative family interaction.

*Frequency of Family Support*—Participants were asked to respond to the question, “How often do people in my family (children, grandparents, aunts, uncles, in-laws and so on) help me out?” Ratings included: 1=Never, 2=Not too often, 3=Fairly often, and 4=Very often. The range of scale scores was from 1 to 4, with higher scores indicating participants perceived a high frequency of support from family.

*Frequency of Family Contact*—Participants were asked to respond to “How often do I see, write, or talk on the telephone with my family or relatives who do not live with me?” A 7-item Likert type scale consisted of the following responses: 1=Never; 2=Hardly ever; 3=A few times a year; 4=At least once a month 5=A few times a month (2 to 3 times); 6=At least once a week (1 to 3 times); and 7=Nearly every day (4 or more times a week). Higher scores suggested a higher frequency of family contact.
**Positive Family Interaction**--The questions used to examine positive family interaction were: “How often do my family members make me feel loved and cared for?”, “How often do my family members listen to me talk about my private problems and concerns?”, and “How often do my family members express interest and concern in my well-being?” Chronbach’s alpha for this measure was shown to be satisfactory in the present sample (α=.80).

**Negative Family Interaction**--Three questions were used to assess negative family interaction. They were: “How often do my family members make too many demands on me?”, “How often do my family members criticize me and things I do?”, and “How often do family members try to take advantage of me?” Chronbach’s alpha for this measure was shown to be satisfactory in the present sample (α=.79).

Individual summation scores from the 4-point Likert type scale were created for positive family interaction and negative family interaction. The rating scales were: 1=Never, 2=Not too often, 3=Fairly often, and 4=Very often. Scores ranged from 3 to 12, with higher scores indicating higher negative family interaction or higher positive family interaction.

**Mediator**

**Perceived Control**--The mediator, perceived control, was defined as “the extent to which one regards one’s life-chances as being under one’s own control in contrast to being fatalistically ruled” (Pearlin & Schooler, 1978, p. 5). A widely used measure of perceived control is Pearlin’s Mastery Scale (Pearlin & Schooler, 1978; Skinner, 1996). The measure consisted of 7 items rated on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). Scores included on Pearlin’s Mastery Scale ranged from 7 (low perceived control) to 28 (high perceived control). Five negative worded items were reverse coded to reflect consistency in scoring responses. Sample items included “There is really no way I can solve some of the problems I
have.” and “What happens to me in the future mostly depends on me.” Chronbach’s alpha for the scale in this sample was (α=.64) slightly below the recommended .7. However, scales with fewer than ten items are likely to show a lower alpha level (Pallant, 2005).
CHAPTER 4

RESULTS

Predictive Analytics SoftWare (PASW 17) was used to analyze data with descriptive statistics, \( t \) tests, Pearson correlations, analysis of variance, and multivariate analyses. An alpha level of .05 was used to interpret all statistical tests.

Sample Characteristics

Sample characteristics are presented in Table 1. There were more females (58.9%) than males (41.1%) in the sample (N=168). These older African Americans ranged in age from 55 to 74 years. Approximately seventy-five percent of the participants were not married, compared to one-quarter who were married/cohabitating. Almost half of the sample did not complete high school (46.4%). Nearly one-third completed high school (29.8%). More than twenty percent of the sample had 13 or more years of education. As for employment status, almost two-thirds of the participants were unemployed (61.3%). One-third self-identified as being employed.

Approximately one-third of the sample reported it was “not difficult at all” to pay his or her monthly bills. A combined total of 45% of the sample indicated it was “slightly difficult” or “somewhat difficult” to meet monthly expenses. Almost one-quarter of participants reported paying monthly bills was “very difficult” or “extremely difficult”. One-third of the sample reported being in “fair” health, followed by “good” (30.4%) and very good (19.6%). Fewer than five percent of participants self-reported “excellent” health. More than ten percent described their health as “poor”. The majority of respondents identified religion as “very important” (83.3%) in their life.
Table 1

Sample Demographic Characteristics (N=168)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>69</td>
<td>41.1</td>
</tr>
<tr>
<td>Female</td>
<td>99</td>
<td>58.9</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/Cohabitating</td>
<td>45</td>
<td>26.8</td>
</tr>
<tr>
<td>Not Married</td>
<td>123</td>
<td>73.2</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 to 11 Years</td>
<td>78</td>
<td>46.4</td>
</tr>
<tr>
<td>12 Years</td>
<td>50</td>
<td>29.8</td>
</tr>
<tr>
<td>13-15 Years</td>
<td>17</td>
<td>10.1</td>
</tr>
<tr>
<td>≥ to 16 Years</td>
<td>23</td>
<td>13.7</td>
</tr>
<tr>
<td><strong>Employment Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>55</td>
<td>32.7</td>
</tr>
<tr>
<td>Unemployed</td>
<td>113</td>
<td>67.3</td>
</tr>
<tr>
<td><strong>Income Adequacy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Difficult at All</td>
<td>50</td>
<td>29.8</td>
</tr>
<tr>
<td>Slightly Difficult</td>
<td>36</td>
<td>21.4</td>
</tr>
<tr>
<td>Somewhat Difficult</td>
<td>41</td>
<td>24.4</td>
</tr>
<tr>
<td>Very Difficult</td>
<td>23</td>
<td>13.7</td>
</tr>
<tr>
<td>Extremely Difficult</td>
<td>16</td>
<td>9.5</td>
</tr>
<tr>
<td><strong>Self-reported Health</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>19</td>
<td>11.3</td>
</tr>
<tr>
<td>Fair</td>
<td>57</td>
<td>33.9</td>
</tr>
<tr>
<td>Good</td>
<td>51</td>
<td>30.4</td>
</tr>
<tr>
<td>Very Good</td>
<td>33</td>
<td>19.6</td>
</tr>
<tr>
<td>Excellent</td>
<td>8</td>
<td>4.8</td>
</tr>
<tr>
<td><strong>Importance of Religion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Important at All</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td>Not too Important</td>
<td>9</td>
<td>5.4</td>
</tr>
<tr>
<td>Fairly Important</td>
<td>16</td>
<td>9.5</td>
</tr>
<tr>
<td>Very Important</td>
<td>140</td>
<td>83.3</td>
</tr>
</tbody>
</table>

Analysis of the background variables revealed no significant differences in general happiness and life satisfaction for gender, marital status, employment status, income adequacy, self-reported health, and importance of religion. Overall, higher life satisfaction and general
happiness were associated with being male, not married, having 13 to 15 years of education, moderate difficulty paying monthly bills, higher importance of religion in life, better self-reported physical health, fewer depressive symptoms, receiving family support fairly often, having family contact almost once a week, reasonably high positive family interaction, and lower negative family interaction.

Table 2
Descriptive Statistics--Continuous and Outcome Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Predictors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income adequacy</td>
<td>2.52</td>
<td>1.31</td>
<td>1 to 5</td>
<td>0.40</td>
</tr>
<tr>
<td>Self-reported health</td>
<td>2.73</td>
<td>1.05</td>
<td>1 to 5</td>
<td>0.22</td>
</tr>
<tr>
<td>Importance of religion</td>
<td>3.76</td>
<td>0.60</td>
<td>1 to 4</td>
<td>-2.69</td>
</tr>
<tr>
<td>Depressive symptoms</td>
<td>8.90</td>
<td>6.92</td>
<td>1 to 36</td>
<td>0.77</td>
</tr>
<tr>
<td>Frequency family support</td>
<td>2.59</td>
<td>1.13</td>
<td>1 to 4</td>
<td>-0.04</td>
</tr>
<tr>
<td>Frequency family contact</td>
<td>5.94</td>
<td>1.45</td>
<td>1 to 7</td>
<td>-1.60</td>
</tr>
<tr>
<td>Positive family interaction</td>
<td>9.44</td>
<td>2.55</td>
<td>3 to 12</td>
<td>-0.96</td>
</tr>
<tr>
<td>Negative family interaction</td>
<td>5.22</td>
<td>2.30</td>
<td>3 to 12</td>
<td>1.10</td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>3.04</td>
<td>0.85</td>
<td>1 to 4</td>
<td>-0.71</td>
</tr>
<tr>
<td>General happiness</td>
<td>3.06</td>
<td>0.71</td>
<td>1 to 4</td>
<td>-0.29</td>
</tr>
</tbody>
</table>

Furthermore, Table 2 depicts descriptive statistics associated with each continuous predictor and outcome variable.

**Independent Samples t-test**

Six independent sample t-tests were conducted to compare life satisfaction and general happiness scores for gender, employment status, and marital status. The results revealed no
significant differences on life satisfaction between older African American males ($M=3.08$, $SD=.85$) and females ($M=3.00$, $SD=.86$; $t(166)=.65$, $p=.52$) with lifetime mental disorders. The magnitude of the differences in means was very small ($\eta^2=.003$). Additionally, there was not a significant effect for gender on general happiness for older African males ($M=3.18$, $SD=.71$) and females ($M=2.98$, $SD=.70$; $t(165)=1.77$, $p=.078$) with lifetime mental disorders. The effect size ($\eta^2=.019$) revealed a very small magnitude of the differences in means.

In further analysis, no significant differences emerged on mean life satisfaction scores between employed older African Americans with mental disorders ($M=3.09$, $SD=.78$) compared to those who were unemployed ($M=3.01$, $SD=.89$; $t(166)=.58$, $p=.56$). Additionally, mean general happiness scores for employed older African Americans with mental disorders ($M=3.00$, $SD=.64$) did not differ significantly from unemployed individuals ($M=3.09$, $SD=.74$; $t(165)=-.76$, $p=.06$).

Additionally, the results revealed no significant differences in life satisfaction and general happiness scores for marital status groups. Individuals who were married/cohabitating reported greater mean life satisfaction scores ($M=3.11$, $SD=.83$ vs. $M=3.01$, $SD=.86$; $t(166)=.69$, $p=.49$) and general happiness scores ($M=3.11$, $SD=.68$ vs. $M=3.04$, $SD=.72$; $t(165)=.57$, $p=.57$) compared to older African Americans with mental disorders who were not married.

**One-way Analysis of Variance**

Two one-way between groups analyses of variance (ANOVA) were conducted to explore the effect of education on life satisfaction and general happiness. The education variable consisted of four categories (Group 1: 0 to 11 years; Group 2: 12 years; Group 3: 13 to 15 years; Group 4: greater than or equal to 16 years). ANOVA assumptions of homogeneity of variances were met for life satisfaction but not for general happiness. According to the Welch Robust Test
of Equality of Means ($p=.04$), the homogeneity of variances assumption was violated for the effect of educational group differences on general happiness. The results revealed no statistically significant differences across educational groups for life satisfaction [$F(3, 164)=.53, p=.66$]. See Figure 2 and 3 for details.

<table>
<thead>
<tr>
<th>Education</th>
<th>Descriptive statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-11 years</td>
<td>$m=3.06, sd=.93$ n=78</td>
</tr>
<tr>
<td>12 years</td>
<td>$m=2.96, sd=.78$ n=50</td>
</tr>
<tr>
<td>13-15 years</td>
<td>$m=3.24, sd=.83$ n=17</td>
</tr>
<tr>
<td>Greater than/equal 16 years</td>
<td>$m=2.96, sd=.77$ n=23</td>
</tr>
<tr>
<td>Total</td>
<td>$m=3.04, sd=.85$ N=168</td>
</tr>
</tbody>
</table>

*Figure 2* Group Means of Education Groups on Life Satisfaction
However, the findings showed statistically significant differences between educational groups on general happiness \[ F(3, 163) = 2.78, p = .04 \]. A calculation of eta squared showed a marginal medium effect size of .05 (Cohen, 1988). Post hoc comparisons using Tukey HSD indicated there were marginally significant differences between Group 1 \( (M=3.16, SD=.74) \) and Group 2 \( (M=2.86, SD=.73) \). Thus, older African Americans with lifetime mental disorders with less than a high school education reported modestly more general happiness than those who completed high school. Group 3 \( (M=3.29, SD=.59) \) and Group 4 \( (M=2.95, SD=.49) \) did not differ significantly from Group 1 and Group 2. Refer to Figures 4 and 5 for more details.
<table>
<thead>
<tr>
<th>Education</th>
<th>Descriptive statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-11 years</td>
<td>$m=3.06, sd=.93$</td>
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<tr>
<td></td>
<td>$n=78$</td>
</tr>
<tr>
<td>12 years</td>
<td>$m=2.96, sd=.78$</td>
</tr>
<tr>
<td></td>
<td>$n=50$</td>
</tr>
<tr>
<td>13-15 years</td>
<td>$m=3.24, sd=.83$</td>
</tr>
<tr>
<td></td>
<td>$n=17$</td>
</tr>
<tr>
<td>Greater than/equal 16 years</td>
<td>$m=2.96, sd=.77$</td>
</tr>
<tr>
<td></td>
<td>$n=23$</td>
</tr>
<tr>
<td>Total</td>
<td>$m=3.04, sd=.85$</td>
</tr>
<tr>
<td></td>
<td>$N=168$</td>
</tr>
</tbody>
</table>

**Figure 4** Group Means of Education Groups on General Happiness

![Graph showing means of education groups on general happiness](image)

**Figure 5** One-way ANOVA—Means Plots of Education Groups on General Happiness
Two-way ANOVAs—Life Satisfaction

A combined total of twelve two-way between-groups ANOVAs were conducted for life satisfaction and general happiness. The independent variables examined were gender, marital status, education, and employment. The major assumptions associated with ANOVAs such as level of measurement, random sampling, independence of observations, normality, and homogeneity of variance was examined. Homogeneity of variance was met for life satisfaction and general happiness. The participants were not drawn from a random sample. The scores for the both dependent variables were negatively skewed. See Figures 6 and 7 for details.

![Histogram of Scores on Life Satisfaction](image)

*Figure 6* Histogram of Scores on Life Satisfaction
Figure 7  Histogram of Scores on General Happiness

Gender X Marital Status: A 2 (Gender: male vs. female) X 2 (Marital Status: married/cohabitating vs. not married) ANOVA was completed to examine the impact of gender and marital status on life satisfaction. There was not a statistically significant main effect for gender \[F(1,165)=1.28, \ p=.26\] or marital status \[F(1, 165)=.42, \ p=.52\] on life satisfaction scores. The interaction was not significant \[F(1,165)=2.10, \ p=.15\]. See Figures 8 and 9.
<table>
<thead>
<tr>
<th>Gender</th>
<th>Marital Status</th>
<th>Mean (m)</th>
<th>Standard Deviation (sd)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Married/cohabiting</td>
<td>3.29</td>
<td>.81</td>
<td>24</td>
</tr>
<tr>
<td>Male</td>
<td>Not Married</td>
<td>2.98</td>
<td>.87</td>
<td>45</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td>2.90</td>
<td>.83</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.03</td>
<td>.87</td>
<td>78</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>3.11</td>
<td>.83</td>
<td>45</td>
</tr>
</tbody>
</table>

Figure 8 Group Means of Gender X Marital Status on Life Satisfaction

Estimated Marginal Means of LIFE SATISFACTION

Figure 9 Plot of Marginal Means of Gender X Marital Status on Life Satisfaction
Gender X Education: A 2 (Gender: male vs. female) X 4 (Education: 0 to 11 years vs. 12 years vs. 13 to 15 years vs. Greater than or equal to 16 years) ANOVA was completed to examine the impact of gender and education on life satisfaction. The results revealed no statistically significant main effect for gender \( F(1,161)=.04, p=.85 \) or education \( F(3, 161)=.51, p=.68 \) on life satisfaction scores. The interaction effect \( F(3, 161)=.39, p=.76 \) was not significant. See Figures 10 and 11.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Education</th>
<th>Mean (m)</th>
<th>Standard Deviation (sd)</th>
<th>Sample Size (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>0-11 years</td>
<td>3.13</td>
<td>.97</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>12 years</td>
<td>3.05</td>
<td>.83</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>13-15 years</td>
<td>3.30</td>
<td>.67</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>≥ 16 years</td>
<td>2.78</td>
<td>.67</td>
<td>9</td>
</tr>
<tr>
<td>Female</td>
<td>0-11 years</td>
<td>3.02</td>
<td>.91</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>12 years</td>
<td>2.90</td>
<td>.76</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>13-15 years</td>
<td>3.14</td>
<td>1.07</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>≥ 16 years</td>
<td>3.07</td>
<td>.83</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>0-11 years</td>
<td>3.06</td>
<td>.93</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>12 years</td>
<td>2.96</td>
<td>.78</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>13-15 years</td>
<td>3.23</td>
<td>.83</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>≥ 16 years</td>
<td>2.96</td>
<td>.77</td>
<td>23</td>
</tr>
</tbody>
</table>

Figure 10 Group Means of Gender X Education on Life Satisfaction
Gender X Employment: A two-way between groups analysis of variance was conducted to examine the effect of gender and employment on life satisfaction. Participants were divided into three groups based on employment status (Group 1: Employment; Group 2: Unemployment; Group 3: Not in Labor Force). There was not a statistically significant main effect for gender \( F(1, 165)=.66, p=.42 \) or employment \( F(2, 165)=.43, p=.51 \) of the variance in life satisfaction scores. Additionally, the results of the interaction \( F(2, 165)=.43, p=.51 \) were not statistically significant. See Figures 12 and 13.
<table>
<thead>
<tr>
<th>Gender</th>
<th>Employment Status</th>
<th>Employed</th>
<th>Unemployed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>$m=3.21$, $sd=.72$</td>
<td>$m=3.02$, $sd=.92$</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>$m=3.00$, $sd=.82$</td>
<td>$m=3.00$, $sd=.88$</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$m=3.09$, $sd=.78$</td>
<td>$m=3.01$, $sd=.89$</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 12*  Group Means of Gender X Employment on Life Satisfaction

*Figure 13*  Plot of Marginal Means of Gender X Employment on Life Satisfaction

*Marital Status X Education:* A 2 (Marital Status: Married/Cohabitating vs. Not Married) X 4 (Education: 0 to 11 years vs. 12 years vs. 13 to 15 years vs. Greater than or equal to 16 years) ANOVA was completed to examine the impact of marital status and education on life satisfaction. There was not a statistically significant main effect for marital status $[F(1,158)=.26, p=.78]$ or education $[F(3, 158)=.79, p=.50]$ on life satisfaction scores. The interaction effect $[F(3, 158)=.99, p=.42]$ was not significant. See Figures 14 and 15.
<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Education</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-11 years</td>
<td>12</td>
<td>13-15</td>
<td>≥ 16</td>
</tr>
<tr>
<td>Married/cohabitating</td>
<td>m=3.06, sd=.94</td>
<td>m=3.23, sd=.60</td>
<td>m=3.43, sd=.79</td>
<td>m=2.71, sd=.95</td>
</tr>
<tr>
<td></td>
<td>n=18</td>
<td>n=13</td>
<td>n=7</td>
<td>n=45</td>
</tr>
<tr>
<td>Not married</td>
<td>m=3.07, sd=.94</td>
<td>m=2.86, sd=.82</td>
<td>m=3.10, sd=.88</td>
<td>m=3.06, sd=.68</td>
</tr>
<tr>
<td></td>
<td>n=60</td>
<td>n=37</td>
<td>n=10</td>
<td>n=16</td>
</tr>
<tr>
<td>Total</td>
<td>m=3.06, sd=.93</td>
<td>m=2.96, sd=.78</td>
<td>m=3.24, sd=.83</td>
<td>m=2.96, sd=.77</td>
</tr>
<tr>
<td></td>
<td>n=78</td>
<td>n=50</td>
<td>n=17</td>
<td>n=23</td>
</tr>
</tbody>
</table>

*Figure 14* Group Means of Marital Status X Education on Life Satisfaction

**Estimated Marginal Means of LIFE SATISFACTION**

*Figure 15* Plot of Marginal Means of Marital Status X Education on Life Satisfaction
Marital Status X Employment: A 2 (Marital Status: Married/Cohabitating vs. Not Married) X 2 (Employment: Employed vs. Unemployed) ANOVA was completed to examine the impact of marital status and employment on life satisfaction. The homogeneity of variance assumption was violated. There was not a statistically significant main effect for marital status \([F(1, 163)=.48, \ p=.62]\) or employment \([F(1, 163)=.41, \ p=.52]\) on life satisfaction scores. The interaction effect \([F(1, 163)=.16, \ p=.85]\) was not significant. See Figures 16 and 17.

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Employment Status</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Employed</td>
<td>Unemployed</td>
<td></td>
</tr>
<tr>
<td>Married/cohabitating</td>
<td>(m=3.11, \ sd=.99)</td>
<td>(m=3.12, \ sd=.71)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(n=19)</td>
<td>(n=26)</td>
<td></td>
</tr>
<tr>
<td>Not Married</td>
<td>(m=3.08, \ sd=.65)</td>
<td>(m=2.98, \ sd=.94)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(n=36)</td>
<td>(n=87)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>(m=3.09, \ sd=.78)</td>
<td>(m=3.01, \ sd=.89)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(N=55)</td>
<td>(N=113)</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 16* Group Means of Marital Status X Employment on Life Satisfaction
Figure 17  Plot of Marginal Means of Marital Status X Employment on Life Satisfaction

Employment X Education: A 2 (Employment status: Employed vs. Unemployed) X 4 (Education: 0 to 11 years vs. 12 years vs. 13 to 15 years vs. Greater than or equal to 16 years) ANOVA was completed to examine the impact of employment status and education on life satisfaction. The main effect for employment status $[F(1,160)=.13, p=.72]$ and education $[F(3, 160)=.43, p=.73]$ on life satisfaction scores was not statistically significant. The interaction effect $[F(3, 160)=.08, p=.97]$ was not significant. See Figures 18 & 19.
<table>
<thead>
<tr>
<th>Employment Status</th>
<th>0-11 years</th>
<th>12 years</th>
<th>13-15 years</th>
<th>≥ 16 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>$m=3.15, \ sd=.88$ $n=20$</td>
<td>$m=3.00, \ sd=3.00$ $n=12$</td>
<td>$m=3.30, \ sd=.67$ $n=10$</td>
<td>$m=2.92, \ sd=.76$ $n=13$</td>
</tr>
<tr>
<td>Unemployed</td>
<td>$m=2.57, \ sd=.95$ $n=58$</td>
<td>$m=2.95, \ sd=.80$ $n=38$</td>
<td>$m=3.14, \ sd=1.06$ $n=7$</td>
<td>$m=3.00, \ sd=.82$ $n=10$</td>
</tr>
<tr>
<td>Total</td>
<td>$m=3.06, \ sd=.93$ $N=78$</td>
<td>$m=2.96, \ sd=.78$ $N=50$</td>
<td>$m=3.24, \ sd=.83$ $N=17$</td>
<td>$m=2.96, \ sd=.77$ $N=23$</td>
</tr>
</tbody>
</table>

*Figure 18* Group Means of Employment X Education on Life Satisfaction

---

**Estimated Marginal Means of LIFE SATISFACTION**

![Graph showing estimated marginal means of life satisfaction](image)

*Figure 19* Plot of Marginal Means of Employment X Education on Life Satisfaction
Two-way ANOVAs--General Happiness

*Gender X Marital Status:* A 2 (Gender: male vs. female) X 2 (Marital Status: married/cohabiting vs. not married) ANOVA was completed to examine the impact of gender and marital status on general happiness. There was a statistically significant main effect for gender [$F(1,164)=5.02$, $p=.03$], suggesting that older African American males ($m=3.18$, $sd=.71$) with mental disorders experienced more general happiness in comparison to females ($m=2.98$, $sd=.70$). Yet, the magnitude of the effect size was small (partial eta squared=.03). No statistically significant difference emerged for marital status [$F(2, 164)=.12$, $p=.73$] on general happiness scores. Also, the interaction effect [$F(1, 164)=2.59$, $p=.11$] was not significant. See Figures 20 and 21.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Marital Status</th>
<th>Married/cohabiting</th>
<th>Not Married</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>$m=3.33$, $sd=.64$</td>
<td>$m=3.09$, $sd=.74$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n=24</td>
<td>n=44</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>$m=2.86$, $sd=.65$</td>
<td>$m=3.01$, $sd=.71$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n=21</td>
<td>n=78</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$m=3.11$, $sd=.68$</td>
<td>$m=3.04$, $sd=.72$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N=45</td>
<td>N=122</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 20* Group Means of Gender X Marital Status on General Happiness
Gender X Education: A 2 (Gender: male vs. female) X 4 (Education: 0 to 11 years vs. 12 years vs. 13 to 15 years vs. Greater than or equal to 16 years) ANOVA was completed to examine the impact of gender and education on general happiness. There was a statistically significant main effect for education \( F(3, 160)=2.79, \ p=.04 \) on general happiness. The associated effect size showed a marginal medium effect (partial eta squared=.05). Post hoc comparisons using Tukey HSD indicated marginally significant differences between participants with less than a high school education \( (M=3.17, SD=.75) \) and those who completed high school \( (M=2.86, SD=.73) \). The results suggest that older African Americans with lifetime mental disorders who have less than a high school education are happier than those who completed high
school. However, there was no statistically significant main effect for gender \([F(1,160)=.56, p=.46]\). The interaction effect \([F(3, 160)=.54, p=.66]\) was not significant. See Figures 22 and 23.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Education</th>
<th>0-11 years</th>
<th>12 years</th>
<th>13-15 years</th>
<th>≥ 16 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>(m=3.33, sd=.71)</td>
<td>(m=3.00, sd=.86)</td>
<td>(m=3.30, sd=.48)</td>
<td>(m=2.88, sd=.35)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(n=30)</td>
<td>(n=20)</td>
<td>(n=10)</td>
<td>(n=8)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>(m=3.06, sd=.76)</td>
<td>(m=2.77, sd=.63)</td>
<td>(m=3.29, sd=.76)</td>
<td>(m=3.00, sd=.55)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(n=48)</td>
<td>(n=30)</td>
<td>(n=7)</td>
<td>(n=14)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>(m=3.17, sd=.75)</td>
<td>(m=2.86, sd=.73)</td>
<td>(m=3.29, sd=.59)</td>
<td>(m=2.95, sd=.49)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(N=78)</td>
<td>(N=50)</td>
<td>(N=17)</td>
<td>(N=22)</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 22* Group Means of Gender X Education on General Happiness

*Figure 23* Plot of Marginal Means on Gender X Education on General Happiness
Gender X Employment: A two-way between groups analysis of variance was conducted to examine the effect of gender and employment on general happiness. Participants were divided into two groups based on employment status (Group 1: Employed vs. Group 2: Unemployed). The main effect for gender \( F(1, 164)=3.60, p=.06 \) achieved marginal statistical significance. However, the main effect for employment \( F(1, 164)=.53, p=.47 \) on general happiness scores was not statistically significant. Additionally, the results of the interaction \( F(1, 164)=.35, p=.55 \) were not statistically significant. See Figures 24 and 25.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Employment Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Employed</td>
</tr>
<tr>
<td>Male</td>
<td>m=3.17, sd=.56</td>
</tr>
<tr>
<td></td>
<td>n=24</td>
</tr>
<tr>
<td>Female</td>
<td>m=2.87, sd=2.87</td>
</tr>
<tr>
<td></td>
<td>n=31</td>
</tr>
<tr>
<td>Total</td>
<td>m=3.00, sd=.64</td>
</tr>
<tr>
<td></td>
<td>N=55</td>
</tr>
</tbody>
</table>

Figure 24  Group Means of Gender X Employment on General Happiness
Figure 25  Plot of Marginal Means of Gender X Employment on General Happiness

Marital Status X Education: A 2 (Marital Status: Married/Cohabitating vs. Not Married) X 4 (Education: 0 to 11 years vs. 12 years vs. 13 to 15 years vs. Greater than or equal to 16 years) ANOVA was completed to examine the impact of marital status and education on general happiness. The assumption of homogeneity of variance was met. The main effect for education \([F(3, 160)=3.21, p=.03]\) on general happiness was statistically significant. There was a medium effect size (partial eta squared=.06). Post hoc comparisons using the Tukey HSD revealed marginally significant differences between participants who did not complete high school \((M=3.17, SD=.75)\) and high school graduates \((M=2.86, SD=.73)\). There was not a statistically significant main effect for marital status \([F(1,160)=.02, p=.89]\). Moreover, the interaction effect \([F(3, 160)=.92, p=.44]\) did not achieve statistical significance. See Figures 26 and 27.
Table 26: Group Means of Marital Status X Education on General Happiness

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>0-11 years</th>
<th>12 years</th>
<th>13-15 years</th>
<th>≥ 16 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married or cohabitating</td>
<td>m=3.33, sd=.69</td>
<td>m=2.85, sd=.69</td>
<td>m=3.43, sd=.53</td>
<td>m=2.71, sd=.49</td>
</tr>
<tr>
<td></td>
<td>N=18</td>
<td>n=13</td>
<td>N=7</td>
<td>N=7</td>
</tr>
<tr>
<td>Not Married</td>
<td>m=3.13, sd=.76</td>
<td>m=3.00, sd=.75</td>
<td>m=3.20, sd=.63</td>
<td>m=3.00, sd=.46</td>
</tr>
<tr>
<td></td>
<td>N=60</td>
<td>N=37</td>
<td>N=10</td>
<td>N=15</td>
</tr>
<tr>
<td>Total</td>
<td>m=3.17, sd=.75</td>
<td>m=2.86, sd=.73</td>
<td>m=3.29, sd=.59</td>
<td>m=2.95, sd=.49</td>
</tr>
<tr>
<td></td>
<td>N=78</td>
<td>N=50</td>
<td>N=17</td>
<td>N=22</td>
</tr>
</tbody>
</table>

Figure 26: Group Means of Marital Status X Education on General Happiness

Figure 27: Plot of Marginal Means of Marital Status X Education on General Happiness

Marital Status X Employment: A 2 (Marital Status: married/Cohabiting vs. not married) X 2 (Employment status: Employed vs. Unemployed) ANOVA was completed to examine the
impact of marital status and employment on general happiness. There was not a statistically significant main effect for marital status \([F(1, 164) = .41, p = .52]\) or employment \([F(1, 164) = .60, p = .44]\) on general happiness. The interaction effect \([F(1, 164) = .00, p = 1.00]\) was not significant. See Figure 28 and 29.

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Employment Status</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Employed</td>
<td>Unemployed</td>
<td></td>
</tr>
<tr>
<td>Married/cohabitating</td>
<td>(m = 3.05, sd = .62)</td>
<td>(m = 3.15, sd = .73)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(n = 19)</td>
<td>(n = 26)</td>
<td></td>
</tr>
<tr>
<td>Not married</td>
<td>(m = 3.03, sd = .65)</td>
<td>(m = 3.07, sd = .75)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(n = 36)</td>
<td>(n = 86)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>(m = 3.00, sd = .64)</td>
<td>(m = 3.09, sd = .74)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(N = 55)</td>
<td>(N = 112)</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 28* Group Means of Marital Status X Employment on General Happiness

![Estimated Marginal Means of GENERAL HAPPINESS](image_url)

*Figure 29* Plot of Marginal Means of Marital Status X Employment on General Happiness
Employment X Education: A 2 (Employment status: Employed vs. Unemployed) X 4 (Education: 0 to 11 years vs. 12 years vs. 13 to 15 years vs. Greater than or equal to 16 years). ANOVA was completed to examine the impact of employment status and education on general happiness. Homogeneity of variance assumption not met. The results revealed no statistically significant main effect for employment status \( F(1,160)=.81, p=.37 \) or education \( F(3, 160)=2.37, p=.07 \) on general happiness. The interaction effect \( F(3, 160)=.14, p=.94 \) was not significant. Refer to Figures 30 and 31.

<table>
<thead>
<tr>
<th>Employment Status</th>
<th>Education</th>
<th>0-11 years</th>
<th>12 years</th>
<th>13-15 years</th>
<th>≥ 16 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td></td>
<td>( m=3.10, sd=.72 )</td>
<td>( m=2.75, sd=.62 )</td>
<td>( m=3.30, sd=.48 )</td>
<td>( m=2.85, sd=.55 )</td>
</tr>
<tr>
<td></td>
<td></td>
<td>( n=20 )</td>
<td>( n=12 )</td>
<td>( n=10 )</td>
<td>( n=13 )</td>
</tr>
<tr>
<td>Unemployed</td>
<td></td>
<td>( m=3.19, sd=.76 )</td>
<td>( m=3.00, sd=.76 )</td>
<td>( m=3.29, sd=.76 )</td>
<td>( m=3.11, sd=.33 )</td>
</tr>
<tr>
<td></td>
<td></td>
<td>( n=58 )</td>
<td>( n=38 )</td>
<td>( n=7 )</td>
<td>( n=9 )</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>( m=3.17, sd=3.17 )</td>
<td>( m=2.86, sd=.73 )</td>
<td>( m=3.29, sd=.59 )</td>
<td>( m=2.95, sd=.49 )</td>
</tr>
<tr>
<td></td>
<td></td>
<td>( N=78 )</td>
<td>( N=50 )</td>
<td>( N=17 )</td>
<td>( N=22 )</td>
</tr>
</tbody>
</table>

Figure 30 Group Means of Employment X Education on General Happiness
Table 3 shows the Pearson product moment correlation coefficients examined between each independent variable and life satisfaction and general happiness. Three variables (perceived income adequacy, self-rated physical health, and depressive symptoms) had significant correlations with both dependent variables. The significant correlation coefficients ranged from $r = .18$ to $r = -.41$. As noted, the correlations between the covariates and the dependent variables were small. Life satisfaction had a significant negative relationship with perceived income adequacy ($r = -.20, p < .05$) and depressive symptoms ($r = -.31, p < .01$). There was also a significant positive relationship between life satisfaction and self-rated physical health ($r = .20, p < .01$), the importance of religion ($r = .18, p < .05$), and frequency of family contact ($r = .21, p < .01$). On the other hand, a significant negative correlation existed between general happiness and
perceived income adequacy \( (r = -0.33, p < 0.01) \), depressive symptoms \( (r = -0.41, p < 0.01) \), and negative family interaction \( (r = -0.21, p < 0.01) \). Three variables, self-rated physical health \( (r = 0.26, p < 0.01) \), frequency of family support \( (r = 0.19, p < 0.05) \), and positive family interaction \( (r = 0.23, p < 0.01) \), had a significant positive association with general happiness.
### Table 3

**Intercorrelations Among Covariates and Life Satisfaction and General Happiness**

<table>
<thead>
<tr>
<th>Measure/Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
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<tbody>
<tr>
<td>Life Satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. General Happiness</td>
<td>.63**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Income Adequacy</td>
<td>-.20*</td>
<td>-.33**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Physical Health</td>
<td>.20**</td>
<td>.26**</td>
<td>-.26**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Depressive SYMPs</td>
<td>-.31**</td>
<td>-.41**</td>
<td>.35**</td>
<td>-.36**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. IMP of Religion</td>
<td>.18*</td>
<td>.05</td>
<td>.06</td>
<td>-.15*</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Freq FM Support</td>
<td>.12</td>
<td>.19*</td>
<td>-.26**</td>
<td>.17*</td>
<td>-.17*</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Freq FM Contact</td>
<td>.21**</td>
<td>.10</td>
<td>-.17*</td>
<td>.05</td>
<td>-.17*</td>
<td>.17*</td>
<td>.29**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. POS FM Interaction</td>
<td>.06</td>
<td>.23**</td>
<td>-.20*</td>
<td>.08</td>
<td>-.23**</td>
<td>.05</td>
<td>.46**</td>
<td>.39**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. NEG FM Interaction</td>
<td>-.03</td>
<td>-.21**</td>
<td>.14</td>
<td>-.10</td>
<td>.20*</td>
<td>.13</td>
<td>-.08</td>
<td>.06</td>
<td>-.22**</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05. **p<.01
Multivariate Multiple Regression—Life Satisfaction

A standard multiple regression was conducted using life satisfaction as the dependent variable (DV) and perceived income adequacy, physical health rating, importance of religion, depressive symptoms, negative family interaction, positive family interaction, frequency of family support, and frequency of family contact as the independent variables (IV). Assumptions associated with multiple regression such as multicollinearity, normality, linearity, outliers, and homoscedasticity were checked. Multicollinearity was not observed. There was a weak to moderate correlation between the predictor variables and life satisfaction. The DV had the strongest association with positive family interaction and frequency of family support \((r=.46, p<.01)\), with greater positive family interaction associated with greater frequency of family support. Cohen (1988) suggests the strength of this correlation is moderate. A review of the Normal Probability Plots (Figure 32) indicates that the life satisfaction scores residuals were reasonably normally distributed. However, further examination of the Scatterplot labeled Figure 33 revealed the presence of a few outliers and some negative skewness. There were no major violations of linearity or homoscedasticity.
Figure 32  Normal P-Plot of Regression Standardized Residual on Life Satisfaction

Figure 33  Scatterplot of Life Satisfaction
Table 4 shows the unstandardized regression coefficients (B) and intercept, the standardized regression coefficients ($\beta$), the semipartial correlations (sr²), $R^2$, and adjusted $R^2$. $R$ for regression significantly different from zero, $F(8,147)=3.92$, $p<.001$, with $R^2$ at .18. The adjusted $R^2$ value of .13 indicates that greater than ten percent of the variability in life satisfaction scores is predicted by perceived income adequacy, physical health rating, importance of religion, depressive symptoms, negative family interaction, positive family interaction, frequency of family support, and frequency of family contact. The confidence limits for importance of religion were .046 to .481 and those for depressive symptoms were -.050 and -.008.

The shared variability observed between the eight IVs was .04. Overall, 18% (13% adjusted) of the variance in life satisfaction scores was predicted by the combined IV scores. The size and direction of the relationship suggests that greater life satisfaction exist among older African Americans with lifetime mental disorders who report higher scores on importance of religion and fewer depressive symptoms. Upon further examination of these two IVs, the results of the squared semipartial correlations suggest that the number of depressive symptoms has more impact on life satisfaction scores. Perceived income adequacy, self-rated physical health, negative family interaction, positive family interaction, frequency of family support, and frequency of family contact did not contribute significantly to the regression.
Table 4

Standard Multiple Regression of Predictors of Life Satisfaction

<table>
<thead>
<tr>
<th>Variable</th>
<th>Means</th>
<th>SD</th>
<th>B</th>
<th>B</th>
<th>SE</th>
<th>p-value</th>
<th>sr²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income Adequacy</td>
<td>2.52</td>
<td>1.31</td>
<td>-0.05</td>
<td>-0.08</td>
<td>0.05</td>
<td>0.36</td>
<td>0.00</td>
</tr>
<tr>
<td>IMP of Religion*</td>
<td>3.76</td>
<td>0.60</td>
<td>0.27</td>
<td>0.19</td>
<td>0.11</td>
<td>0.02</td>
<td>0.03</td>
</tr>
<tr>
<td>Physical Health</td>
<td>2.73</td>
<td>1.05</td>
<td>0.10</td>
<td>0.12</td>
<td>0.07</td>
<td>0.15</td>
<td>0.01</td>
</tr>
<tr>
<td>Depressive Symptoms*</td>
<td>8.89</td>
<td>6.92</td>
<td>-0.03</td>
<td>-0.24</td>
<td>0.01</td>
<td>0.01</td>
<td>0.04</td>
</tr>
<tr>
<td>FM Support</td>
<td>2.59</td>
<td>1.13</td>
<td>0.03</td>
<td>0.03</td>
<td>0.07</td>
<td>0.69</td>
<td>0.00</td>
</tr>
<tr>
<td>FM Contact</td>
<td>5.94</td>
<td>1.45</td>
<td>0.09</td>
<td>0.15</td>
<td>0.05</td>
<td>0.08</td>
<td>0.02</td>
</tr>
<tr>
<td>POS FM Interaction</td>
<td>9.44</td>
<td>2.55</td>
<td>-0.03</td>
<td>-0.10</td>
<td>0.03</td>
<td>0.25</td>
<td>0.01</td>
</tr>
<tr>
<td>NEG FM Interaction</td>
<td>5.22</td>
<td>2.30</td>
<td>-0.01</td>
<td>0.03</td>
<td>0.03</td>
<td>0.82</td>
<td>0.00</td>
</tr>
</tbody>
</table>

*p< .05  
R=.42  
R²=.18  
Adjusted R²=.13

Intercept=1.95

Multivariate Multiple Regression—General Happiness

Another standard multiple regression was conducted to examine the impact of perceived income adequacy, physical health rating, importance of religion, depressive symptoms, negative family interaction, positive family interaction, frequency of family support, and frequency of family contact on general happiness scores. The assumptions associated with multiple regression were checked. Multicollinearity was not observed. The bivariate relationship between the predictors and the DV were weak to moderate. As depicted in the intercorrelation table, the strongest association was observed between positive family interaction and frequency of family support (r=.46, p<.01), with greater frequency of family support associated with more positive
family interaction. The strength of the relationship has a medium magnitude (Cohen, 1988). A review of the Normal Probability Plot and the Scatterplot suggest violations of the assumptions of normality, outliers, and linearity. Additionally, general happiness scores were negatively skewed. Refer to Figures 34 and 35.

![Normal P-P Plot of Regression Standardized Residual](image)

*Figure 34* Normal P-P Plot of Regression Standardized Residual on General Happiness
A review of Table 5 shows the unstandardized regression coefficients (B) and intercept, the standardized regression coefficients (β), the semipartial correlations (sr²), $R^2$, and adjusted $R^2$. $R$ for regression is significantly different from zero, $F(8,147)=6.18$, $p<.001$, with $R^2$ at .25. The adjusted $R^2$ value of .21 indicates that slightly more than 20% of the variability in general happiness scores is predicted by perceived income adequacy, physical health rating, importance of religion, depressive symptoms, negative family interaction, positive family interaction, frequency of family support, and frequency of family contact. For the two regression coefficients that differed significantly from zero, 95% confidence limits were calculated. The confidence limits for perceived income adequacy were -.182 to -.012, and those for depressive symptoms were -.045 and -.012.

The shared variability observed between the eight IVs was -.04. Overall, 25% (21% adjusted) of the variance in general happiness scores was predicted by the combined IV scores.
The size and direction of the relationship suggests that more general happiness exist among older African Americans with lifetime mental disorders who report greater perceived income adequacy and fewer depressive symptoms. Upon further examination of these two IVs, the results of the squared semipartial correlations suggest that the number of depressive symptoms has the most impact on general happiness scores. Importance of religion, physical health rating, negative family interaction, positive family interaction, frequency of family support, and frequency of family contact did not contribute significantly to the regression.

Table 5

*Standard Multiple Regression of Predictors of General Happiness*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>B</th>
<th>B</th>
<th>SE</th>
<th>p-value</th>
<th>sr²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income Adequacy*</td>
<td>2.52</td>
<td>1.31</td>
<td>-0.10</td>
<td>-0.18</td>
<td>0.04</td>
<td>0.03</td>
<td>0.03</td>
</tr>
<tr>
<td>IMP of Religion</td>
<td>3.76</td>
<td>0.60</td>
<td>0.12</td>
<td>0.10</td>
<td>0.09</td>
<td>0.17</td>
<td>0.01</td>
</tr>
<tr>
<td>Physical Health</td>
<td>2.73</td>
<td>1.05</td>
<td>0.07</td>
<td>0.10</td>
<td>0.05</td>
<td>0.19</td>
<td>0.01</td>
</tr>
<tr>
<td>Depressive Symptoms*</td>
<td>8.89</td>
<td>6.92</td>
<td>-0.03</td>
<td>-0.28</td>
<td>0.01</td>
<td>0.00</td>
<td>0.06</td>
</tr>
<tr>
<td>FM Support</td>
<td>2.59</td>
<td>1.13</td>
<td>0.02</td>
<td>0.04</td>
<td>0.05</td>
<td>0.67</td>
<td>0.00</td>
</tr>
<tr>
<td>FM Contact</td>
<td>5.94</td>
<td>1.45</td>
<td>-0.02</td>
<td>-0.04</td>
<td>0.04</td>
<td>0.63</td>
<td>0.00</td>
</tr>
<tr>
<td>POS FM Interaction</td>
<td>9.44</td>
<td>2.55</td>
<td>0.03j</td>
<td>0.09</td>
<td>0.03</td>
<td>0.33</td>
<td>0.00</td>
</tr>
<tr>
<td>NEG FM Interaction</td>
<td>5.22</td>
<td>2.30</td>
<td>-0.03</td>
<td>-0.11</td>
<td>0.02</td>
<td>0.15</td>
<td>0.01</td>
</tr>
</tbody>
</table>

*p< .05

\[ R = 0.50 \quad R^2 = 0.25 \quad \text{Adjusted } R^2 = 0.21 \]

Intercept=2.92
General Linear Model

The significant variables from the t-test, ANOVA, covariate, and multiple regression procedures were inserted into a general linear model (GLM). Due to the sample size, these systematic analyses were followed to identify the independent variables most important to the final analyses (Tabachnick & Fidell, 2007). The independent variables were: perceived income adequacy, importance of religion, physical health rating, depressive symptoms, negative family interaction, positive family interaction, frequency of family support, and frequency of family contact. Preliminary examination of the assumptions of GLM revealed no major violations.

In the multivariate model, the differences for educational groups on the combined dependent variables: $F(6,268)=2.54, p=.02$; Wilk’s Lambda=.90; partial eta squared=.05, were significant. In terms of gender, the combined dependent variables: $F(2, 134)=.74, p=.48$; Wilk’s Lambda=.99; partial eta squared=.01, were not significant. Other statistically significant variables in the multivariate model were: self-rated physical health $F(2, 134)=3.01, p=.05$; Wilk’s Lambda=.96; partial eta squared=.04, depressive symptoms $F(2, 134)=9.68, p<.001$; Wilk’s Lambda=.87; partial eta squared=.13, and positive family interaction $F(2, 134)=5.33, p<.001$; Wilk’s Lambda=.93; partial eta squared=.07.

In the univariate analyses, general happiness scores were statistically significant with self-rated physical health $F(1, 135)=5.49, p=.02$; partial eta squared=.04, depressive symptoms $F(1, 135)=19.21, p<.001$; partial eta squared=.13, and education $F(1, 135)=5.24, p<.01$; partial eta squared=.03. In regard to life satisfaction scores, statistically significant univariates were self-rated physical health $F(1, 135)=3.94, p=.05$; partial eta squared=.03 and depressive symptoms $F(1, 135)=9.07, p<.001$; partial eta squared=.06. Three variables in the univariate model achieved marginal significance, importance of religion in life $F(1, 135)=3.52, p=.06$;
partial eta squared = .03, frequency of family contact \( F(1, 135)=3.20, p=.08 \); partial eta squared = .02, and positive family interaction \( F(1, 135)=3.65, p=.06 \); partial eta squared = .03.

Overall, the univariate model explained 13\% (adjusted R squared) of the variance in life satisfaction scores and 29\% (adjusted R squared) of the variance in general happiness scores.

**Mediation Analysis**

Barron and Kenny’s (1986) four step regression analysis procedures were used to test three separate mediation models on general happiness. Life satisfaction did not meet the criteria for performing a mediation analysis. First, a regression procedure was used to examine the direct association between the predictors of family involvement (frequency of family support, positive family interaction, and negative family interaction) and the outcome variable, general happiness. Second, the predictors of family involvement (frequency of family support, positive family interaction, and negative family interaction) were regressed on the mediator (perceived control) as the outcome variable. A third regression model was run to test the relationship between the mediating variable (perceived control) and the outcome variable (general happiness). The final regression model (Table 6) assessed whether the statistical significance of the predictors of family involvement on general happiness is decreased when controlling for the mediating variable, perceived control.

| Table 6 |
|---|---|---|---|---|
| **Final Regression Model Coefficients** | \( R \) | \( R^2 \) | \( B \) | Beta | Significance |
| Model | 0.34 | 0.12 | | | |
| Frequency of family support | 0.05 | 0.08 | 0.34 |
| Positive family interaction | 0.04 | 0.12 | 0.17 |
| Negative family interaction | -0.04 | -0.14 | 0.08 |
| Perceived control | -0.03 | -0.17 | 0.03 |
The path diagram (Figure 36) depicts the statistical results of each of the mediation analyses. After controlling for perceived control, the direct effect of the predictors of family involvement--frequency of family support (r=.19, p<.001), positive family interaction (r=.23, p<.001, and negative family interaction (r=-.21, p<.001)--on general happiness was not significant. In this case, perceived control refers specifically to participants’ family involvement rather than broader control over general circumstances. The results suggest that perceived control does fully mediate the relationship between the predictors of family involvement and general happiness. Sobel’s test calculated to determine the degree of mediation for each predictor of family involvement (Danielsoper.com, 2010). The results revealed the amount of mediation were not significant for frequency of family support (Sobel=1.66), positive family interaction (Sobel=.93), or negative family interaction (Sobel=-2.18).

Figure 36 Path Diagram for Results of Mediation Model.
CHAPTER 5
DISCUSSION
This study examined how family involvement impacts perceptions of life satisfaction and general happiness among older African Americans with lifetime mental disorders. The findings varied by the type of statistical analysis performed. Overall, the strongest predictor of general happiness and life satisfaction was the number of depressive symptoms. The t-test revealed that gender, marital status, and employment were not associated with life satisfaction or general happiness scores. In the ANOVAs, gender and education were significantly associated with general happiness but not life satisfaction. The results of the regression models revealed that significant predictors were importance of religion in life, perceived income adequacy, and depressive symptoms. Multivariately, self-rated physical health, depressive symptoms, and positive family interaction were statistically significant. At the univariate level, self-rated physical health, depressive symptoms, and negative family interaction were significant for both dependent variables. Frequency of family contact was also significant for general happiness but not life satisfaction. Education but not gender emerged as significant in the multivariate analysis; univariately, education was only significant for general happiness. Perceived control fully mediated the relationship between perceived family involvement and QOL.

Hypothesis one stated that older African Americans with mental disorders who report less frequent family support, fewer family contacts, less positive family interaction, and greater negative family interaction will report lower general happiness. There were mixed findings for hypothesis number one. In the regression model, the strongest predictors of general happiness
were higher perceived income adequacy and fewer depressive symptoms. A traditional phrase simply states “money can’t buy happiness.” Some studies have found a negative relationship between socioeconomic status and measures of QOL in older adults (Pinquart & Sörensen, 2000; Wilkerson, 2004). Another study found that overall levels of happiness increase with age except in some subgroups--males, Blacks, and those with lower education (Yang, 2008). Moreover, depressive symptoms in the final regression model explained 6% of the variance in general happiness scores. Approximately 30% of this sample scored 12 or higher on depressive symptoms. This finding is consistent with other research studies that investigated the impact of depressive symptoms on older adults (Cohen et al, 2003; Skarupski, et al., 2005).

However, general happiness in the univariate analysis was significantly associated with self-rated physical health, depressive symptoms, frequency of family contact, negative family interaction, and level of education.

There were also mixed findings for the relationship between the predictors of family involvement and life satisfaction. In the regression analysis, the predictors of family involvement were not significantly associated with life satisfaction scores. Frequency of family contact was the strongest correlate among the predictors of family involvement in the bivariate analysis. However, it was not significant in the regression analysis and only achieved marginal significance in the univariate model. Perhaps the weak bivariate relationship between the predictors of family involvement and life satisfaction explains the differences in the statistical outcomes.

Univariately, negative family interaction was the only predictor of family involvement significantly related to life satisfaction. Other significant predictors with life satisfaction in the
univariate analysis were self-rated physical health, depressive symptoms, and negative family interaction. Overall, depressive symptoms was the strongest predictor of life satisfaction in this sample. These findings were consistent with past research studies on quality of life indictors in older adults with mental disorders (Bankole et al, 2007; Cohen et al, 2003; Katschnigh, Krautgartner, Schrank, & Angermeyer, 2006; Mittal, et al., 2006). Furthermore, importance of religion in life was significant in the regression analysis but became marginally significant in the univariate model. The finding on importance of religion in life is not surprising for older African Americans (Coke, 1992; Krause, 2004; Levin, Chatters, & Taylor, 1995). But, less is known about positive manifestations of religion in adults with mental disorders. The results of this study fill a gap in the current research literature.

A number of factors might explain the difference in findings across statistical procedures. First, a weak correlation existed between the predictors of family involvement and general happiness. Second, the assumptions of multiple regression are more stringent than the assumptions of the general linear model. Third, the addition of gender and education into the general linear model might have suppressed the effect of some variables for both dependent variables.

Hypothesis three was supported. Perceived control fully mediated the relationship between frequency of family support, positive family interaction, and negative interaction and general happiness. Frequency of family contact was not significant. Perceived control is important for older African Americans who can face multiple losses depending on the severity of a mental disorder. For example, they are likely to have fewer social network members, less opportunities for increasing income, poorer health, and lower education (Chatters, 1988; Hunter,
Greater control in older adults has been linked to fewer depressive symptoms in family caregiving situations (Brown, 2007).

Lower levels of education were significantly associated with more general happiness but not life satisfaction scores. This finding was true in the one-way and two-way ANOVAs and the univariate models. After controlling for gender and marital status in the two-way ANOVAs, level of education was significant. When controlling for employment status, level of education was only marginally significant. In the multivariate model, level of education but not gender was significant for the combined variables. Some researchers argue that this finding might be attributed to adapting one’s life to stressful conditions or to making social comparisons to individuals who are in worse situations (Argyle, 1996; Lehman, Rachuba, & Postrado, 1995).

Socioeconomic status and evaluations of quality of life can vary. The age of onset of a mental disorder and experiences across the life course are likely to limit the earning potentials of older African Americans with mental disorders. Symptom severity and having a mild, moderate, or severe mental disorder can also be relevant. However, factors such as poverty, discrimination, and institutional racism tend to affect the accumulation of wealth among older African Americans (National Research Council, 2004). Largely, lower socioeconomic status and reports of better quality of life have been viewed as negative, but some suggest it can reflect resilience in the face of adverse life events (Pickett, Vraniak, Cook, & Cohler, 1993; Wilkerson, 2004). More qualitative research can help to understand the dynamic interplay of lower socioeconomic status and higher general happiness in older African Americans with mental disorders.

Examination of the bivariate findings suggests traditional understandings of the quality, amount, and type of family involvement might differ in older African Americans with mental
disorders. For example, perceived control was significantly negatively correlated with frequency of family support and positive family interaction. In addition to this, receipt of more family support and greater positive family interaction was linked with lower perceived control. However, a significant positive association was found between negative family interaction and perceived control. Frequency of family contact was not significant but there was a negative relationship with perceived control. Although most participants reported high family involvement scores, self-rated physical health was positively related to family involvement whereas perception of control was inversely related to family involvement (except negative family interaction). Therefore, researchers and health care professionals should not assume that typical findings regarding caregiving exchanges apply to African American elders with mental disorders and their family members (Newsom, 1999; Newsom, Rook, Nishishiba, Sorkin, & Mahan, 2005; Newsom & Schulz, 1998; Rosenfarb, Bellack, & Aziz, 2006).

The findings regarding gender, marital status, and employment also varied by statistical analysis. The results of the t-test showed no significant differences on either variable for life satisfaction or general happiness. As previously mentioned, gender emerged as significant on general happiness but not life satisfaction in the two-way ANOVAs. Past research has found that men with mental disorders experience higher life satisfaction than women. However, a gender and age interaction exists with older women with mental disorders reporting higher life satisfaction than men (Lehman, Rachuba, & Postrado, 1995). In this study, older African American males reported more happiness than women. However, gender was not significant in the general linear model. Further examination of factors such as financial resources, role involvement, religious behaviors, and social relations might help to understand this finding (Adelman, 1994; Coke & Twaite, 1995; Pinquart & Sörensen, 2000). Additionally, African
Americans who are married or widowed report greater life satisfaction and general happiness than those who are divorced, separated, or never married (Keith, 1997). Individuals who were never married (73.2%) and unemployed (67.3%) were overrepresented in this sample but these variables were not significant.

**Limitations**

This study has several strengths. First, the data is obtained from the largest, most comprehensive study conducted to date of mental disorders in racial and ethnic groups. Second, the participants in this study are from a nationally representative sample. Third, this study is important because it focuses on older adults with mental disorders. Finally, the findings of this study can help to inform the design and development of community-based services for older African Americans with mental disorders and their family members.

However, the study has some limitations. The design of the study was restricted to variables specified in the original study. This limited the ability to control selection of variables and how variables were defined. The use of a cross-sectional design precludes any speculation of a causal relationship between the variables. Another limitation involves the use of single items such as life satisfaction and general happiness. It is widely accepted in the research community that QOL is a multidimensional construct. The findings might not generalize to older African Americans with mental disorders from different backgrounds. This sample represented mental disorders that were primarily mild or moderate. The results are not applicable to older African Americans with more severe mental disorders such as schizophrenia.

Additionally, this study did not distinguish between the age of onset, severity of symptoms, and other variables that might impact perceptions of general happiness and life satisfaction. The research design did not control for current and past occurrence of symptoms of
the lifetime mental disorder. There is no way of knowing if timing of symptoms affected participants’ responses. The original data was collected between 2001 and 2003. Nevertheless, there is no reason to believe that the passage of time affected the findings, if reported by participants today. The measure of lifetime mental disorder was operationalized as an aggregate variable. QOL might vary across mental disorders and based on severity of symptoms of mental illness. The original study used a complex sample design and complex statistical procedures. This study did not apply a complex statistical approach. Given these limitations, caution should be exercised in generalizing from these findings.

**Implications for Social Work Practice**

The factors impacting general happiness and life satisfaction in older African Americans with mental disorders are complex. Therefore, the person-in-the-environment approach is absolutely essential to understanding the dynamic interplay of variables related to these QOL indicators. Because QOL is a multidimensional construct, greater understanding is needed of the contextual environment. For example, social workers can screen for depression in usual health care settings for older African Americans, such as emergency rooms and primary care settings. Thereafter, it is important to link older African Americans who have mental disorders with culturally appropriate community resources. Social workers must be prepared to follow-up with older African Americans with mental disorders and their family members. The challenges associated with aging, co-morbid health conditions, and minority status coupled with symptoms of a mental disorder can be overwhelming. Thus, referrals to community services must include adequate support to help increase the likelihood of success in navigating service systems. Another issue is the importance of educating African American family members about how to distinguish normal aging from symptoms of depression to promote better QOL.
Implications for Social Work Research

Given increased attention to QOL as a health outcome, more research is warranted with older adults, especially minority elders with mental disorders. Although researchers have described “the upcoming crisis in geriatric mental health” (Bartels, 2003; Jeste, et al., 1999), discussion regarding the ramifications for minority elders has been limited. Therefore, basic research with larger samples is needed to improve the state of knowledge about QOL indicators in older African Americans with mental disorders. To date, very few, if any, intervention studies have been conducted relative to general happiness and life satisfaction and mental disorders. So, intervention studies along with longitudinal and theoretically based designs are needed (Diener, 1984; Diener, Lucas, & Scollon, 2006). Intervention models should take into consideration the number of depressive symptoms, income adequacy, importance of religion, and education level. To increase accuracy of QOL findings, corroboration is needed from other sources such as family members and health care professionals (Katschnig, 2006).

Moreover, heterogeneity exists in older African Americans. Thus researchers should examine factors such as socioeconomic status and service utilization that might contribute to variations in general happiness and life satisfaction among minority elders with mental disorders. According to Rao & Rao (1983), “failure to study the black aged population as a separate group as well as the differences and similarities between different subgroups based on socioeconomic and demographic characteristics may lead us to ignore the heterogeneous nature of the group” (p. 37). Therefore, this information suggests that population-based studies should precede cross-cultural comparative studies in understudied populations.
Implications for Social Work Policy

Older African Americans with mental disorders are very likely to report lower socioeconomic status. As a result, limited financial resources and lower education can affect one’s ability to access quality health care services. Particularly, older African Americans with more debilitating mental disorders might experience greater health care service needs. In later life, Medicare and Medicaid are major funding sources for health insurance coverage. The rising cost of health care and the underfunding of mental health related services are two ongoing debates. Therefore, social workers must continue to advocate for health policies that are adequately funded. Otherwise, attempts to improve QOL in older African Americans with mental disorders will be temporary fixes to a more complex problem.

Moreover, the religious behaviors of older African Americans present an opportunity for policy development as well. More than 80% of this sample identified religion as very important in their life. This suggests that greater understanding is needed of how to ethically incorporate religion into wellness programs targeting older African Americans. Furthermore, this finding provides evidence to support the importance of religion in the lives of these older African Americans with mental disorders. As a precaution, social workers should be mindful that high importance of religion might not necessarily depict the actual support provided by the religious community. More research is needed to understand the relationship between importance of religion and actual support received from organized religious groups.

Implications for Social Work Education

Social work students could benefit from increased understanding of the experiences of older adults with mental disorders. The aging population presents an opportune moment for social work educators to discuss demographic shifts in the U.S. These discussions can include
information regarding positive and negative consequences of aging. Additionally, field placement sites in agencies serving older adults can help to reinforce classroom instruction about general and specific aspects of aging. In terms of mental disorders in older adults, stigma, discrimination, and ageism are major problems. The repercussions of experiencing these phenomenon can have serious implications for how older African Americans with mental disorders utilize health services. Thus, social work students can benefit from information about barriers and facilitators to service use by this population.

Because few research studies have been conducted with this subgroup, social work educators must identify other useful sources of information. For example, researchers with the Program for Research on Black Americans at the University of Michigan have published extensively about health related issues among older African Americans. Social work educators can also address negative media depictions of adults with mental disorders and their family members. Thereby, social workers can contribute to informing the next generation of social work scholars regarding best practices with older African Americans with mental disorders.

**Conclusion**

Variations exist in perceptions of family involvement and perceptions of general happiness and life satisfaction among older African Americans with lifetime mental disorders. The type of statistical analyses performed in this study produced varying results for each dependent variable. In the final general linear model, general happiness and life satisfaction were associated with better self-rated physical health, fewer depressive symptoms, greater positive family interaction, and lower levels of education. The predictors of family involvement seemed less significant than factors such as depressive symptoms and health status. Higher perceptions of control mediated the relationship between the influence of family involvement and general
happiness. These findings have important implications for the design and development of services.

Social workers should complete a comprehensive assessment to identify contextual variables that might impact individual perceptions of general happiness and life satisfaction. When planning interventions, social workers should screen for health problems, symptoms of depression, positive family support, and level of education. Due to findings of gender differences on general happiness, older African American females and males with lifetime mental disorders might benefit from gender sensitive service programs. Overall, factors such as fewer depressive symptoms, better physical health, and lower levels of education might supersede the impact of perceptions of family involvement on general happiness and life satisfaction in older African American with lifetime mental disorders.
References


