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Psychological and Social Variables Impacting Young Adults Caring for Severely Mentally Ill Mothers

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PSYCHOLOGICAL AND SOCIAL VARIABLES IMPACTING YOUNG ADULTS
CARING FOR SEVERELY MENTALLY ILL MOTHERS

by

Courtney Gale Deloney

A dissertation submitted to the Graduate College
in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
Counselor Education and Counseling Psychology
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June 2015

Doctoral Committee:

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Douglas V. Davidson, Ph.D.
This dissertation study examined the psychological and social functioning of young adults who care for their severely mentally ill mothers; in doing so this study examined the independent variables coping style, perceived stress, quality of life, and resilience. The dependent variables considered were race, socioeconomic status, support group participation, and living in the same household as one’s mother. Young adulthood was examined as a distinct period of human development. The policy of deinstitutionalization led many families to become caregivers for their severely mentally ill relatives. While some knowledge on this exists, little is known about the experiences of young adult caregivers—particularly those who care for their mothers.

Eighty-four participants completed online questionnaires. Regression and canonical correlation were used to analyze the data for four research questions. The questions were non-directional and sought to understand the relationship between a single dependent variable and several independent/predictor variables. White participants were overrepresented in the obtained sample (N=73), as were females (N=71), and members of support groups (N=80), especially online support groups (N=78).
This dissertation study found that young adult caregivers experience inordinately high levels of perceived stress and a reduction in their quality of life. Emotion-focused coping strategies, including support group participation, reduce perceived stress and increase quality of life. In contrast, problem-focused and maladaptive coping strategies increase perceived stress and reduce quality of life. The young adult caregivers report very low resilience compared to other age groups, but resilience is the biggest predictor of quality of life. These results have strong practical applications. As evidenced by their heavy use of online support groups, the current generation of young adults puts great stock in Internet social networking. Perhaps more psychoeducational resources for young adults should be located online. Considered broadly, these results advance the idea that family-centered support services improve outcomes for family caregivers; and that emphasis should be placed on emotion-focused rather than problem-solving strategies. Finally, more attention should be paid to helping young adult caregivers increase their resilience. The experiences of young adults who care for their severely mentally ill mothers is an area rich for further study.
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Courtney Gale Deloney
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CHAPTER I

INTRODUCTION

Statement of the Problem

Deinstitutionalization is the name of the policy whereby the severely mentally ill are expelled from large, state-run institutions and relocated to the community. The policy is the result of a confluence of historical events that led to a change in thinking about treatment for the mentally ill. These events include: the return home of traumatized veterans from World War II; the advent of the first anti-psychotic medication; public accounts of poor conditions in the institutions; and changes in government funding (Davis, Fulginiti, Kriegel, & Brekke, 2012). Policymakers came to believe that the severely mentally ill were best maintained in their local communities.

While deinstitutionalization did in fact end an era of mistreatment of the mentally ill (Accordino, Porter, & Morse, 2001) problems arise when the ill person continues to need daily care. It has been shown that family members are most likely to take up this charge and assume responsibility for the ongoing care of their loved-one (see Kemp 2007, p. 22). Families thus become informal caregivers defined as providing care for no money or reward (Hjortsberg & Persson, 2010). Family members might help with a range of caregiving activities such as those that are hands-on (e.g., getting in and out of bed, toileting); tasks related to living in the community (e.g., transportation,
making appointments); or might simply provide much needed companionship (Dellman-Jenkins, Blankemeyer, & Pinkard, 2000).

It has been written that scholarly interest in caregiving began in the mid-1960s when researchers began to examine the “myth of the abandoned elderly” (as cited by Scharlach, 2008, p. 17). Contrary to abandoning their elderly relatives, researchers discovered that a great many families had rearranged their lives in order to provide care. Since then most family caregiving research has focused on the experiences of middle-aged (and older) adults who care for elderly dementia patients. This has led to another area of research expounding on the difficult and burdensome nature of caregiving (e.g., Lahaie, Earle, & Heymann, 2012; Moorman & Macdonald, 2012).

Ironically, the burdens of caregiving may be best highlighted by the limited research that exists on young adults caring for severely mentally ill parents. Young adults are believed to be deeply affected by caring for a mentally ill parent (e.g., Arnett, 2001). Furthermore, there is evidence that when the parent is a mother, the experience becomes all the more tumultuous (e.g., Abraham & Stein, 2010).

Prevalence data shows that young adults provide an enormous amount of informal care (e.g., Levine, Hunt, Halper, Hart, Lautz, & Gould, 2005) and it is time that their experiences are better understood. Young adulthood is a time of great transition for most individuals in our society (Arnett, 1998). It is a developmental period characterized by a desire to accept oneself and make independent decisions. On the other hand, young adulthood is also characterized by ‘felt obligation’ which is a psychological need to stay connected with and contribute positively to one’s family
(Abraham and Stein, 2010). These are competing goals which can negatively impact quality of life and require the initiation of various coping strategies. On the whole, both longitudinal and cross-sectional family research has shown that, for young adult children, a closer bond with parents is associated with better well-being (Boutelle, Eisenberg, Gregory, & Neumark-Sztainer, 2009; Roberts & Bengtston, 1996; van Wei, Ter Bogt, & Raaijmakers, 2002).

Deinstitutionalization has made it necessary for many young adults to become informal caregivers for their severely mentally ill parents. As we know from the family caregiving literature the experience of caregiving can be burdensome. Just as we better understand the experiences of older adult caregivers through the extensive research on this population, it is time that we better understand the experiences of young adult caregivers. To that end, this dissertation study examined the experiences of young adult children who care for their severely mentally ill mothers.

The remaining sections of this chapter present the purpose of the study, research questions, and definition of terms. As detailed in the chapter summary, these sections relay the foundation of the study.

**Purpose of the Study**

This study examined the psychological and social functioning of young adults who care for their severely mentally ill mothers; in doing so this study examined the young adult child’s coping styles, perceived stress, quality of life, and resilience. Other factors considered were their race, socioeconomic status, support group participation,
and living in the same household as their mother. Furthermore, young adulthood was examined as a distinct period of human development. Data from this study will be integrated into the small body of existing knowledge related to young adults as caregivers.

Research Questions

This dissertation study examines the following questions:

1) Is there a relationship between coping style; living in the same household; support group participation; socioeconomic status (SES); and race/ethnicity such that these variables influence perceived stress?

2) Is there a relationship between perceived stress; living in the same household; support group participation; SES; and race/ethnicity such that these variables influence coping style?

3) Is there a relationship between perceived stress; resilience; coping style; living in the same household; support group participation; SES; and race/ethnicity such that these variables influence quality of life?

4) Is there a relationship between coping style; perceived stress; living in the same household; support group participation; SES; and race/ethnicity such that these variables influence resilience?

Definition of Terms

Severe Mental Illness

Severe mental illness (SMI) was defined as it is by the American Psychological Association (APA, 2009). The APA declares that severe mental illnesses are those
mental disorders that carry diagnoses, such as schizophrenia, [psychosis], bipolar disorder, and major depression; that are relatively persistent (e.g., lasting at least one year); and that result in comparatively severe impairment in major areas of functioning, such as cognitive capabilities; disruption of normal developmental processes, especially in late adolescence; vocational capacity and social relationships (p.5).

Individuals with a primary diagnosis of substance use would be excluded from this definition.

Young Adult

Young adult was defined as 18-30 years old. First because the age of consent in most American states is 18 (Adult, n.d.). Second because the range is broad enough to encompass all of one’s 20s.

Mother

The term mother was strictly defined as a woman who has conceived rather than adopted a child and whose genes are therefore transmitted to the child (Biological parent, n.d.).
Caregiving

Caregiving was defined both by the extent of care provided and the types of care provided. This definition follows from research conducted by authors Dellmann-Jenkins, Blankemeyer, and Pinkard (2000). The extent of care is: daily support or contact; weekly support or contact; and occasional support or contact. (These are in lieu of no contact which is the antithesis of caregiving.) The types of care are: personal care (e.g., bathing, dressing, toileting, etc.); transportation; household chores; coordinating appointments, medications, etc.; handling legal and financial matters; and companionship or emotional support.

Informal Caregivers

Informal caregivers are those who provide the care listed above without pay or reward (Hjortsberg & Persson, 2010).

Coping

Coping was defined as it is by researchers Lazarus and Folkman (1984). They define coping as an individual’s ever-changing cognitive and behavioral efforts to manage specific internal and/or external demands that are judged to be distressing or exceeding the individual’s resources. Embedded in this definition are three key points: 1) coping is a process; 2) coping is contextual; and 3) coping is independent of outcomes (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986).
Resilience

Resilience was defined as is it is by researchers Connor and Davidson (2003). They define resilience as a set of “personal qualities that enable one to thrive in the face of adversity” (p.76). Resilience is further a “multidimensional characteristic that varies with context, time, age, gender, and cultural origin, as well as within an individual subjected to different life circumstances” (p.76).

Quality of Life

Quality of life was defined as it is by the World Health Organization (The WHOQOL, 1997). It is an individual’s perception of their position in life in the context of the culture and value systems in which they live. One also considers their goals, expectations, standards and concerns. Quality of life is affected broadly and complexly by the person’s physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment (see Appendix A).

Chapter Summary

In addition to describing the underlying premise and basic constructs of the current dissertation study, this chapter affirmed in brief that the past continues to influence the present for families with severely mentally ill relatives. Deinstitutionalization has led many families to take on the role of caregiver. Some of the youngest family members too have been greatly impacted by this historical event. While
we have some knowledge of the caregiving experience, very little is known about the experiences of young adults who care for their severely mentally ill mothers. The current dissertation study sought to better understand their unique caregiving experiences.
CHAPTER II

REVIEW OF LITERATURE

While the experiences of family caregivers have been emphasized in prior literature, research on the unique experiences of young adult caregivers remains quite limited. The purpose of this review is to understand the context within which young adults provide care by examining separately the concepts of young adulthood and caregiving. Thus, this chapter is divided into the following sections: aspects of young adulthood, aspects of caregiving, and chapter summary.

Aspects of Young Adulthood

This sub-section is divided into the following three sections: adult development, young adults with mentally ill parents, and resilience in young adulthood. These sections underscore the main idea that young adulthood is a period of development characterized by significant personal change.

Adult Development

Theories about psychological development across the lifespan (infancy to old age) have traditionally been understood with the use of stage models like those presented by Freud and Erikson. Other theories include models with layers of context like that presented in Bronfenbrenner’s Ecological Systems Theory. Newer theories
seem to differ greatly from these; instead of presenting models, newer theories focus on a single point in the trajectory of development. A few such theories look exclusively at adulthood. They seek not only to define American adulthood but to make meaning of it.

Developmental psychologist Dr. Jeffrey Jensen Arnett is a leader in the area of emerging adulthood. In a 2001 descriptive study Arnett hypothesized that those aged 30-55 would endorse a view of adulthood that is less individualistic than the view held by those aged 13-29. To the contrary he found that older adults share with younger adults the idea that adulthood means becoming significantly more independent. These results implicate a conception of adulthood that transcends age within the majority American culture. For Americans, becoming an adult means “‘learning to stand alone’ as a self-sufficient individual” (p. 141).

Arnett’s study also supports previous findings that role transitions (e.g., marriage, having children, etc.) are not the most important criteria for considering oneself an adult. Instead, the most strongly endorsed criteria was: accepting responsibility for oneself (90%); deciding on personal beliefs and values independently of parents or other influences (80%); and establishing a relationship with parents as an equal adult (75%; see table on page 137).

However, individuation was not the only defining factor in the participant’s conception of the transition to adulthood. Norm compliance and family capacities (i.e., one’s ability to fulfill gendered family responsibilities) also ranked quite high among
participants of all ages. These perspectives involve accountability to and consideration for others. Individuation then is balanced by concern for one’s family and community.

In a previous study Arnett acknowledged that research on young adulthood is limited in its definition of majority American culture. He laments that:

“With respect to American society, the focus...will be on American majority culture, i.e. the largely White and broadly middle-class majority of American society that sets most of the norms and standards and holds most of the positions of political, economic, and intellectual power. It is recognized that American society also includes other cultures...[h]owever, little information is available at this point on views of the transition to adulthood among American minority cultures” (1998, p. 296).

Arnett goes on to compare modern American adulthood with conceptions of adulthood in non-Western societies and other historical time periods. He concludes that modern American adulthood is unique in its failure to enforce strict gender roles and in the low priority placed on traditional adult roles.

Researcher M. J. Shanahan (2000) comes to similar conclusions about young adulthood. He too has observed increasing variability in the routes to adulthood. Shanahan extols how the loosening of traditional values has allowed individuals to exercise more autonomy in the construction of their life stories; in doing so, he speaks of the “new individualization” (p. 670). Shanahan goes on to cite evidence that:

“[t]rends in the transition to adulthood are also differentiated by changing economic
circumstances and historical events" (p. 672). He concludes with a discussion of how social stratification limits many individuals’ chances to pursue goals.

In sum, this research helps confirm that the transition to adulthood in our society is exceedingly meaningful. Young adulthood is recognized as a time of immense personal growth. Yet there is also an inherent contradiction that comes into view: emerging adults are compelled, on one hand, to become independent and, on the other hand, to be moral and to keep a foothold in their families. This dissertation study examined adult development in the face of having a severely mentally ill parent.

Young Adults with Mentally Ill Parents

A moderate amount of research exists on young adults with mentally ill parents. Historically these studies tend to fall into one of two categories. The first category is that which adopts a deficit-view of young adults with mentally ill parents. In such studies the researcher has emphasized the young adults’ pathology rather than the various ways that the person has grown from their experiences with the ill parent. For example, a group of authors conducted a longitudinal study whereby they tracked the children of parents with schizophrenia and affective illness (e.g., Erlenmeyer-Kimling, Adamo, Rock, Roberts, Bassett, Squires-Wheeler, Comblatt, et al., 1997). These authors also tracked a control group of children. They found that the children of mentally ill parents tended to replicate their parents’ respective illnesses when they themselves became adults. These illnesses were found to a much greater extent than in the control group of children. Such research has contributed to our understanding of risk factors in this population.
(e.g., Bonde, Dehlholm-Lambertsen, Nielsen, & Justesen, 1997). However, it leaves a void in our understanding of whether or not these young adults can thrive in the face of their adversity.

The second category of research related to this group examines the retrospective experiences of young adults with mentally ill parents. Such research helps us understand the lives of children who grew up in an assumedly chaotic household. An example of this is research conducted by Dunn (1993). Dunn interviewed 9 adults (age 21-40) who were raised by psychotic mothers. Five themes emerged: abuse and neglect; isolation; guilt and loyalty; grievances about mental health services; and reliance on social supports. Research in this area helps illuminate the needs of children of mentally ill parents (e.g., Polkki, Ervast & Huupponen, 2004). Further, it helps us understand how we can support adults who have lived through this experience (e.g., Williams, 1998). Nevertheless, we are left with a void in our knowledge of how these young adults cope with their parents’ illness today.

To reiterate, the studies described above represent the type of research that has historically been conducted on young adults with mentally ill parents. While these works have expanded our knowledge, they are limited in scope and leave large gaps in our understanding of the topic area. Newer research has paid more attention to the young adults’ stage of development. This same research has also considered the current, ongoing relationship between the ill parent and the young adult child versus the former, childhood relationship. This newer research introduces a novel construct, ‘felt obligation,’ which was derived by Dr. Catherine H. Stein (1992) and is defined as a set of
actions and behaviors adult children feel duty-bound to perform for their parents across the parents’ lifespan.

In 2010, Stein and her colleague Dr. Kristen M. Abraham conducted a study where they compared the experiences of two groups of young adults: those with mentally ill parents and those without mentally ill (non-distressed) parents. They found that, for both genders, young adults feel more obligated toward their mothers than their fathers. This was true whether the mothers were mentally ill or not. They further found little difference in the ‘felt obligation’ toward mentally ill parents than toward non-distressed parents. In other words, having a mentally ill parent did not enhance the young adults’ feelings of obligation.

Abraham and Stein’s (2010) research also revealed that having a mother with an SMI leads to more loneliness, more mental health symptoms, and poorer general well-being. On the other hand, the psychological adjustment of young adults with mentally ill fathers was comparable to that of young adults with non-distressed parents. This set of findings highlights two key points: the weaker bond between fathers and their children, and the unique challenges of having a mentally ill mother.

‘Felt obligation’ is understood to be a causal mechanism in that the construct explains why adult children maintain relationships with their parents despite longings to become more independent. Along with obligation, previously identified causal mechanisms include: “feelings of intimacy or attachment; the principle of reciprocity; ... and altruism” (Klaus, 2009). As the felt obligation literature itself has demonstrated, adult children tend to provide care to their parents, particularly their mothers,
regardless of the circumstances. This dissertation study has examined not why but what is the impact of caregiving on young adult children, looking specifically at the young adult’s psychological and social functioning.

Next we will review the construct of resilience. Resilience is an important construct for understanding an individual’s psychological and social functioning in the face of potentially adverse circumstances.

Resilience in Young Adulthood

Research into the concept of resilience has grown substantially as researchers have sought to comprehend what it means to be well. Within the resilience literature, significant attention has been paid to childhood and adolescence (see Reich, Zautra, & Hall, 2010, p. 243). There are also bodies of research on resilience in older adulthood and on adults as a homogenous group, without acknowledgement of their developmental stage. A great deal less is known about resilience in young adulthood. This period is now being recognized as an important area of study since “[a]vailable resilience resources must go through a developmental process alongside the individual’s development” (p. 244); as the individual develops and becomes more mature, so too does their ability to thrive in the face of hardships.

Two longitudinal research studies support this assertion. One such study, the Kauai Longitudinal Study, began in 1955 and followed 698 babies born in the province that year. It is one of the earliest studies to include a focus on resilience. The children were followed from birth to age 40. Almost one-third of the children were deemed high-
risk due to socioeconomic and genetic factors. Of these individuals, the researchers observed that about one-third “developed into competent, caring young adults” despite hardships (Reich et al., 2010, p. 245).

In a separate evaluation with the same sub-group, participants were assessed at the beginning of emerging adulthood (age 18) and after the transition to young adulthood (age 32). The researchers found that “core resources” developed in childhood were associated with resilient outcomes in adulthood (see p. 246). To that end, they also found a direct path between resilience in adolescence and resilience in young adulthood. Finally they found that the transition to adulthood was a turning point during which some resilient adults began to experience mental distress and some non-resilient adults rebounded.

Another longitudinal study, Project Competence, showed similar results. In the late 1970s, researchers recruited 205 Minneapolis school children who were between the ages of 8 and 12 (e.g., Masten, Burt, Roisman, Obradović, Long, & Tellegen, 2004). They evaluated these students 7, 10, and 20 years later. Like the previous researchers, they found that individuals who exhibited resilient qualities in adolescence went on to exhibit comparable resilience in emerging adulthood. They found too that some individuals changed radically, transitioning from low to high resilience qualities.

All in all, these longitudinal studies indicate that resilience in adolescence promotes resilience in young adulthood. Also, more relevant to the current dissertation study, young adulthood presents opportunities for growth. Having a mentally ill mother can be the impetus for great personal growth.
An additional study worth noting is one which investigated the relationship of resilience in young adults to personality traits, coping styles, and psychiatric symptoms. Researchers Campbell-Sills, Cohan, and Stein (2006) sought to identify which coping and personality styles lead to increased resilience for individuals who have suffered childhood abuse and are at risk for later psychiatric symptoms. Participants were 132 undergraduates from San Diego State University. They were mostly White (60.6%) and female (72%) with a mean age of 18.87 years. The researchers found resilience to be inversely related to neuroticism and positively related to extraversion and conscientiousness.

A task-oriented coping style was found to moderate the relationship with conscientiousness. The authors suggest that: “The hard-working style of conscientious individuals may lend itself well to this style of coping, allowing them to move beyond stressors effectively and experience a resulting sense of self-efficacy” (p. 594). The moderating effect of this variable was even more pronounced for ethnic minorities. An emotion-focused coping style, on the other hand, was associated with low resilience. Finally, resilience moderated the relationship between reports of childhood emotional abuse and current psychiatric symptoms such that participants reporting abuse also endorsed more psychiatric symptoms, but only if they scored low on resilience.

Aside from its focus on young adults, this study is relevant to the current dissertation study in its examination of resilience and coping styles. These variables were shown both to influence each other and to moderate other variables. Further, this study illuminates the relationship between coping styles and psychological well-being.
Task-oriented coping seemed to be more effective for these individuals than emotion-focused coping. Yet despite many similarities to the current dissertation study, there are many more differences. The 2006 study investigated the participants’ adult functioning following a childhood of parental abuse. The current dissertation study investigated the participants’ present-day, ongoing caregiving relationships with their ill mothers. Lastly, the 2006 study looked only at psychological well-being while the current dissertation study took a broader look at well-being. These unique differences help confirm that the current study has made a significant contribution to the literature.

**Section Summary**

Young adulthood is a period of human development fraught with tremendous change and personal growth. The young adult is faced with the competing demands of individuation and connection to family, both of which must be satisfied in order to feel like a competent adult. While young adults feel compelled to help their mothers whether they are ill or not, they experience a higher level of distress when their mothers are in fact ill. Thus despite the intrinsic rewards of fulfilling a duty (i.e. felt obligation) there can be a loss of personal well-being. Thankfully, there is hope that this challenge will bring about greater resilience.

**Aspects of Caregiving**

This sub-section is divided into the following six sections: resilience and caregiving; cognitive appraisal, coping, and caregiving; quality of life and caregiving;
socioeconomic status and caregiving; race/ethnicity and caregiving; and support groups and caregiving. These sections elucidate how caregiving is influenced by various psychological and social factors. These factors influence how caregiving is carried out as well as how caregiving influences the caregivers themselves.

Resilience and Caregiving

As was stated above, resilience is a burgeoning area of research. There is now an entire body of literature related to resilience in families (e.g., Coon, 2012; Walsh, 2002) and resilience in caregiving (e.g., Resnick, Gwyther & Roberto, 2011; Gaugler, Kane & Newcomer, 2007; Harmell, Chattillion, Roepke, & Mausbach, 2011). In spite of that, much less is known about the specific situation of caring for a mentally ill family member. This is unfortunate since individuals with mental illness are now more likely to live in the community than in an institution (e.g., Lefley, 1996; Kemp, 2007). Quite often mentally ill individuals require the caregiving efforts of their families to live safely in the community (i.e., avoid homelessness, remain psychiatrically stable, avoid victimization, etc.)

It has been noted that family members may provide care whether or not the ill relative resides in their household (e.g., Zendjidjian, Richieri, Adida, Limousin, Gaubert, Parola, et al., 2012). This involvement can be costly however as caregivers may endure considerable stress and burden. The caregivers’ health and quality of life may be compromised and the functioning of the family may be weakened (as cited by Zendjidjian et al., 2012). In their 2010 article “Resilience in Family Members of Persons
with Serious Mental Illness,” the authors report that only 3 studies had been published on the topic. Two are most relevant to the current dissertation study.

In one study, the researchers collected data on family resources, perceptions, and overall adaptation from 111 family members of adults admitted to a psychiatric hospital (e.g., Enns, Reddon, & McDonald, 1999). They found that family caregivers scored on par with the general population on many areas of support and family functioning. Still, family caregivers reported significantly less spiritual support and esteem than the general population. Between the two groups, family caregivers were most likely to procure social support and the support of immediate family members. Family caregivers also scored higher on measures of affective expression, communication, and perceived control.

The second study of note was conducted by Marsh and her colleagues (1996). They conducted a national survey to investigate the development of resilience among family members of people with mental illness. The 131 family members were asked to identify strengths within themselves, their family, and their mentally ill relative. The strengths being considered were those developed in relation to their family member’s mental illness. Respondents strongly endorsed personal resilience (99%), followed by family resilience (88%), and resilience in the ill relative (76%).

These studies show that caring for a mentally ill relative can bring about positive change. However, because they are so general in scope, they fail to tell us whether resilience is gained from the specific circumstance of caring for a mentally ill mother. In 1996, Mannion showed that caring for spouse is a qualitatively different experience
than caring for other types of loved-ones. The current dissertation study has added a great deal to this topic area in its focus on mentally ill mothers.

Cognitive Appraisal, Coping, and Caregiving

Vast bodies of literature have been written on the subjects of both cognitive appraisal and coping. The following review, however, looks exclusively at research that combines these areas. It has been observed that: “[t]he process of coping also involves continuously appraising and reappraising different facets of the environment as well as the consequences of responding to it in various ways” (Lazarus & Folkman, 1984, p. 246). The current dissertation study evaluated cognitive appraisal and coping in the experience of caring for a severely mentally ill mother.

Author B.H. Gottlieb (1997) co-edited a book with a chapter entitled “Changes in Coping with Chronic Stress: The Role of Caregivers’ Appraisals of Coping Self-Efficacy”. This chapter reviews various studies, including Gottlieb’s own, and concludes that five principal goals motivate caregivers’ appraisals of their self-efficacy in coping: 1) a problem-solving /instrumental goal; 2) the maintenance of self-esteem; 3) the regulation of emotional and physiological arousal; 4) the development of greater self-understanding; and 5) the preservation of harmonious relations with their relative (p. 253). Gottleib asserts that these goals are not hierarchical. How these goals are prioritized will depend on the unique characteristics of the chronic stressor, as well as on variations among individuals.
Folkman and her colleagues (1986) investigated the correlation between cognitive appraisal, coping processes, and their short-term outcomes within stressful events. The researchers used an ‘intra-individual’ approach to compare participants against themselves across time. They found that differences in coping are a function of people’s judgments about what is at stake [primary appraisal] and perceived options for coping [secondary appraisal]. They also found that coping is remarkably different in encounters appraised as changeable or unchangeable. In changeable encounters, individuals utilized coping strategies that kept them focused on the situation (i.e., confrontation, problem-solving, etc.) In unchangeable encounters, individuals employed strategies of self-protection (i.e., distancing, escape-avoidance). They found lastly that the appraisal of an encounter as changeable is associated with the perception of a more satisfactory outcome. This indicates that if one believes that they can positively impact a situation through their behavior, the more satisfied they are.

These studies inform us that there are few differences between acute and chronic stressors; both require appraisal and the initiation of coping responses. This dissertation examined the chronic stressor of having a severely mentally ill mother. Still, within the lives of most severely mentally ill persons are episodes of acute stress (i.e., hospitalizations, decompensation, medication side effects, etc.) not to mention the acute stressors that occur in the caregivers’ own lives. Hence, for the purpose of this dissertation study it is important to understand both kinds of stressors. This dissertation evaluated how much stress young adults perceive and how they cope with these stressors.
Quality of Life and Caregiving

The caregiving literature has firmly established that caregiving is a burdensome task. This is true across the spectrum of illness from physical illness (e.g., Lim & Zebrack, 2004) to neurological disorders (e.g., Russo & Vitaliano, 1995) to severe mental illness (e.g., Stueve, Vine & Struening, 1997). Authors Dillehay and Sandys define burden as “a psychological state produced by the combination of physical work, emotional pressure, social restrictions, and economic demands” that arise from caring for an ill relative (1990, p. 263). Burden is strongly associated with a reduction in quality of life (see Caqueo-Urízar, 2009).

In reference to quality of life, the literature is not nearly as expansive on some of the aforementioned topics as is the burden literature. In particular, the literature that examines quality of life in severe mental illness has focused almost exclusively on the disease of schizophrenia (see Holloway & Carson, 2002). Schizophrenia has been called the “quintessential” severe mental illness (p. 176). Less attention has been paid to other diagnostic categories. The mothers who are the subject of the current dissertation study are presumed to have a variety of mental health diagnoses given that inclusion for this aspect was broad.

Accordingly, the current dissertation study offers a significant contribution in its analysis of the quality of life of their caregivers.

In 2009, a group of authors synthesized the literature on caring for relatives with schizophrenia (Caqueo-Urízar, Gutiérrez-Maldonado & Miranda-Castillo). They looked at 37 studies in the US and around the world. Quality of life (QOL) was found to be very
negatively impacted by caregiving. There were negative effects to the caregiver’s physical health, work life, family life, and economic status. They found too that ethnic minority caregivers had the worst QOL.

In 2012, author Xavier Zendjidjian and his colleagues examined quality of life among French caregivers who’s loved-ones have affective disorders (i.e. Major Depressive Disorder and Bipolar Disorder). [This study includes, but distinguishes between, related and non-related caregivers.] They compared these results to caregivers whose loved-ones have schizophrenia and to the general population. They also examined the impact of sociodemographic and clinical factors to the caregiver’s quality of life.

Author Zendjidjian and his colleagues (2012) determined that caregivers of individuals with affective disorders have a lower QOL than gender and age matched controls. Caregivers reported impairment along multiple domains of QOL but the most severe impairments were in psychological function. Caregivers experienced dysfunction in their typical life roles due to emotional distress. The authors found no significant differences in QOL between caregivers of individuals with Major Depressive Disorder and those with Bipolar Disorder. Caregivers of individuals with affective disorders reported higher QOL than caregivers of individuals with schizophrenia.

Further, the researchers found that living under the same roof and having a family relationship with the ill person was associated with poorer QOL. On the other hand, clinical characteristics such as illness duration and symptomology were not significantly associated with QOL. The finding that household residence rather than
illness severity has the greatest impact on the caregiver’s experience contradicts previous research. A final finding was that women reported lower QOL than men caring for loved-ones with affective disorders.

These results offer evidence that a caregivers’ quality of life is influenced by many factors including the caregiver’s gender, their race/ethnicity, and residing with the ill person. Quality of life then is contextual and must be evaluated in the light of other variables.

Socioeconomic Status and Caregiving

Caring for a mentally ill relative is an experience influenced by a plethora of factors. From the studies reviewed above, we understand that caregiving is influenced by factors like gender and race/ethnicity. The caregiving literature however offers much less understanding of the influence of socioeconomic status (SES). SES is generally defined as the combination of one’s education, income, and occupation (e.g., Krieger, Rowley, Herman, Avery & Phillips, 1993).

Many studies though have operationalized SES such that different or a minimal number of these elements is considered; this makes comparing SES between caregiving studies quite challenging. The current dissertation study used SES as a predictor variable-rather than as a control variable- to investigate its impact on the study’s other variables. It was important therefore to review studies whose findings related to SES are robust enough to draw some noteworthy conclusions.
Researcher Nancy J. Karlin and her colleagues (2012) investigated the similarities and differences between Hispanic and non-Hispanic White (nHW) informal caregivers of individuals with Alzheimer’s disease. After some initial testing, comparisons were only made on those caregivers reporting high burden scores on the Zarit Burden Inventory. Hispanic caregivers reported lower levels of burden than the other group (M=20.9, SD=9.24, Hispanic; M=28.0, SD=4.23, nHW), but these results were not statistically significant. On the other hand, Hispanic caregivers reported their care recipient’s illness as being more severe than did the nHW group (M=9.23, SD=3.50, Hispanic; M=7.17, SD=1.81, nHW) but these results again were not statistically significant.

Though lacking in statistical significance, these results are quite meaningful given the rather stark differences in SES between the two groups. Hispanic caregivers and their care recipients both had achieved less education than the nHW caregivers and their care recipients. Hispanics also reported less income from savings, pensions, investments, and social security. Where Hispanics reported a greater income than the nHW group was in income from the government. All in all, the Hispanic caregivers had less personal wealth and a generally lower SES than the non-Hispanic White group.

A final measure found these Hispanic caregivers to be more negatively impacted by caregiving than their non-Hispanic White counterparts. That is, to a greater extent than the other group, these Hispanic caregivers reported that caregiving interferes with accomplishing life goals. These results again were lacking in statistical significance (M=4.64, SD=1.80, Hispanic; M=3.47, SD=2.12, nHW). These outcomes related to Hispanic caregivers leave one wondering: Why do these distinctions exist when Hispanic
caregivers report caregiving to be a less burdensome task than do non-Hispanic Whites? The researchers leave this question unanswered but recommend further investigation.

In the year 2000, author Eric D. Johnson interviewed 180 families of people with severe mental illness representing diverse socioeconomic and ethnic groups. He operationalized SES as occupational status. That is, white collar professions represent upper class while blue collar jobs represent lower class. Upper middle class White families were drawn from support groups. In contrast, upper middle class minority families were difficult to locate and are underrepresented in the study. Lower middle class families of all races/ethnicities were the easiest to locate and are overrepresented in the study. Lower class families were difficult to both locate and engage. Hispanic families of all SES levels were difficult to engage. Those who were interviewed complained about the lack of bicultural mental health services. Upper middle class families were most inclined to invest in private psychiatric care before turning to public resources once their funds were depleted. Poorer families resorted directly to public resources and were the least likely to report the ill family member as a financial burden.

Johnson found that stigma is experienced differently by poorer and wealthier families. Families in the middle class wealth bracket and above were often embarrassed that their ill relative was not functioning to the standards of their peer group. Families below this bracket were more nonplussed by their ill relative, viewing the illness as one more problem to be dealt with. For this group, stigma is related to their powerlessness in interacting with community systems (i.e., criminal justice, welfare, mental health, etc.)
These studies show that SES influences how families respond to the task of caregiving. There are distinct differences in how the tasks are perceived and how families administer help. The current dissertation study adds to the literature on this topic by exploring the relationship between SES and caregiving for a cross-section of young adults.

Race/Ethnicity and Caregiving

There is growing attention to the differential needs of minority families who care for relatives with SMIs. Researchers are beginning to recognize that culture impacts attitudes toward mental health services (Gonzalez, Alegria, Prihoda, Copeland, & Zeber, 2011); interpretations of mental illness (Milstein, Guarnaccia, & Midlarsky, 1994); levels of family involvement (Snowden, 2007); and how families make meaning of their experiences (Tessler & Gamache, 2000; Lefley, 1998). The current dissertation study advances knowledge about the role of culture in being a young adult with a severely mentally ill mother. The following review examines studies which juxtapose the caregiving experiences of two or more ethnic groups, with an eye toward understanding differences in perceived stress, coping, quality of life, and resilience.

In their 1996 study, authors Guarnaccia and Parra interviewed 90 families with severely mentally ill relatives. Of these, 45 families were Hispanic-American, 29 were African-American, and 16 were European American. They found that African-Americans and Hispanics turned to other family members for advice more readily than did European-Americans. European-Americans most often sought the advice of a
professional. The authors reasoned that this is because European-Americans tend to attribute mental illness to medical causes while the other groups make wider attributions to other sources.

All families saw disruption to the family routine as problematic but European-Americans reported the greatest negative effects on their physical and mental health; this despite minority families having had more direct contact with their ill relative. All three ethnic groups reported having an equal level of involvement in decisions about hospitalizations. Nevertheless, law enforcement was most likely to be involved with the ill relatives of African-American and European-American families. Regarding prognosis, Hispanics and African-Americans expressed a stronger belief that their ill relative would be cured than did European-Americans. Minority families were likely to endorse the healing powers of God.

In her 2005 study, author Winnie Mak extended previous research on caregiving by examining how macro and micro factors affect the caregivers of adults with SMI. Macro factors were sociocultural (i.e., caregivers’ age and SES); interpersonal (i.e., caregivers’ relationship to the ill person); structural (i.e., being enrolled in a government funded healthcare program); and clinical (i.e., acuteness of relative’s symptoms). Micro factors were defined as everyday caregiving encounters. Mak surveyed 213 Whites, 171 Blacks, and 44 Latinos. She found that more than any other macro and micro factor, ethnicity had the greatest influence on the way caregivers perceived their relationship with the ill person. Latinos worried more about the ill person; Blacks perceived a greater sense of personal growth; and Latinos and Whites felt high levels of instrumental and
social support from the ill person. In a study cited by Mak, instrumental and social support included help with household chores, shopping, and companionship (Greenberg, Greenley, & Benedict, 1994).

These results accentuate the importance of culture in interpreting the caregiving experience. Culture affects every aspect of the experience for those who give care and probably also for those who receive it. In examining how young adults are impacted by their severely mentally ill mothers, the current dissertation study adds to the literature on culture and caregiving.

Support Groups and Caregiving

It has been written that: “The experience of illness is a profoundly social one. Suffering elicits intense emotions and hence the desire to talk to others” (Davison, Pennebaker & Dickerson, 2000, p205). Support groups provide this outlet; they are networks of likeminded people helping each other face similar challenges. The following review looks at the efficacy of support groups for family members of individuals with SMI in providing the benefits that they claim anecdotally.

Authors Mannion and Meisel (1996) investigated the differences between individuals who choose to participate in support groups and those who do not. They interviewed 225 people, inquiring about demographic information and the psychiatric history of their ill relative. Interviewees were also asked about coping strategies, burden, grief, self-efficacy, mastery and social support. Data was analyzed with logistic regression. Mannion and Meisel found that support group participants were most likely
to be educated and to be a parent versus a sibling, spouse, or adult child. Also, the ill relative was higher functioning with a longer history of mental illness. The authors could not make any definitive statements about race/ethnicity. Previous research has found that most support group members tend to be White (Biegel, Shafran, & Johnsen, 2004).

Further, Mannion and Meisel (1996) could not make any definitive statements about gender or income since males and non-middle class family members were underrepresented. The authors note on page 49 that: “...family volunteers for surveys and psychoeducation studies tend to be predominantly female and middle-class”. Other research too shows that women are more likely than men to be informal caregivers and provide a larger body of care than do men (e.g., Millier & Cafasso).

Mannion and Meisel found no difference in diagnosis or number of hospitalizations in the ill relatives of support group members versus non-members. Support group members though reported a broader range of coping strategies and less subjective burden than non-members. Finally, support group members reported smaller social networks than non-members.

Writing for the International Journal of Nursing Studies, authors Chien and Norman (2009) compared a cross-national array of research studies looking to determine how and why support groups are effective for family caregivers of people with psychotic disorders. After reviewing 25 studies from 1985 to 2007, they concluded that support groups help members by enhancing coping skills and providing social support. The authors found too that support groups are useful in improving short-term
family health needs. There is less support for claims that these groups satisfy family’s psychosocial needs over the long-term.

The evidence to affirm the benefits of face-to-face support groups is far more conclusive than that for online support groups. In their 2003 article entitled “Health Related Virtual Communities and Electronic Support Groups: Systematic Review of the Effects of Online Peer to Peer Interactions” a group of authors reviewed prior research on online support groups. The authors failed to find strong evidence for the psychosocial benefits of online support groups. The authors note that only 6 of the 45 studies they evaluated had unmodified peer-to-peer groups devoid of therapeutic interventions or educational components. They found that these 6 studies had “less than optimum research designs with few participants” and no conclusions could be drawn from them (Eysenbach, Powell, Englesakis, Rizo & Stern, 2003, p3). The authors found no evidence that online support groups are harmful.

When considered as a whole, support groups are at a minimum not harmful and at most, quite helpful. They can promote resilience and improved well-being. And while online support groups have good word-of-mouth, there is limited research support for their efficacy. The current dissertation study sought to understand the impact of support groups, including online support groups, for young adult caregivers.

**Section Summary**

Caregivers provide help to another person in need. The help they provide impacts, and is impacted by, numerous psychological and social forces. While the stress
of caregiving can reduce the caregiver’s quality of life, it can also increase their resilience. The individual’s perception of stress is influenced greatly by their socioeconomic status and race/ethnicity. Support group participation is further influenced by the caregiver’s socioeconomic status and race/ethnicity. Caregiving is a difficult and important task with complex influences.

Chapter Summary

The previous sections of this review provide an overview of the literature related to the separate concepts of young adulthood and caregiving. Efforts were taken to report as much overlapping research as possible. That there was little overlap speaks to the paucity of literature that exists on young adult caregivers. Though more research is needed, existing literature suggests the following eight conclusions:

1) Females are most likely to become informal caregivers;
2) Mothers are more likely than fathers to be care recipients;
3) Having a relative with an SMI is a challenging experience for informal caregivers;
4) Young adulthood is a developmental period marked by conflicting needs: the need to be independent and the need to be close to one’s family;
5) Having a mother with an SMI leads to poorer general well-being;
6) The stresses or benefits of caregiving are influenced by a combination of many factors: coping style, perceived stress, quality of life, SES, race/ethnicity, support group participation, and resilience;
7) Women are overrepresented in survey research related to families; and
8) Women are more distressed by caregiving than are men.
The present study aimed to extend the existing base of knowledge revealed through this review by further examining the impact of SES, race/ethnicity, living in the same household, and support group participation on the psychological and social well-being of young adults who provide care to their severely mentally ill mothers. Young adults provide a significant amount of care and it is important that we know more about their experiences.
CHAPTER III

METHODOLOGY

The purpose of this chapter is to review the demographic characteristics of the sample, report the psychometric properties of the instruments, and describe the research methodology.

This dissertation study has examined the impact of several psychological and social variables (i.e., SES, living in the same household, support group participation, and race/ethnicity) on perceived stress, coping style, resilience, and quality of life among young adults caring for severely mentally ill mothers. The study was exploratory in nature. Exploratory research is conducted when data on a particular topic is very limited. Exploratory research is more concerned with discovering relationships than confirming hypotheses (Collis & Hussey, 2009). To that end the research questions below fail to imply a direction for the final outcome. Non-directionality allows the researcher to acknowledge that a difference exists without stating the direction of the difference.

Research Questions

1) Is there a relationship between coping style; living in the same household; support group participation; socioeconomic status (SES); and race/ethnicity such that these variables influence perceived stress?

2) Is there a relationship between perceived stress; living in the same household; support group participation; SES; and race/ethnicity such that these variables influence coping style?
3) Is there a relationship between perceived stress; resilience; coping style; living in the same household; support group participation; SES; and race/ethnicity such that these variables influence quality of life?

4) Is there a relationship between coping style; perceived stress; living in the same household; support group participation; SES; and race/ethnicity such that these variables influence resilience?

Participants

The final sample for this study consisted of 84 participants (see Table 1). There were 73 females (86.9%) and 11 males (13.10%). Participants ranged in age from 18-30 (mean 23.34, SD 3.71). The majority of the sample identified as White (84.52%, n=71), four as African-American (4.76%), four as Asian (4.76%), and four as Multiracial (4.76%). One person identified as Pacific Islander (1.19%).

Participants reported that they interact with their ill mother most frequently face-to-face (51.19%, n=43); via telephone (46.43%, n=39); and via Web (1.19%, n=1). One participant reported no interaction with their ill mother (1.19%). By definition, this final participant is not a caregiver. However, their data will be retained for the following reasons: 1) they have self-identified as a caregiver; 2) lack of contact was not listed as an exclusionary factor; and 3) they report support group participation which implies that their ill mother has an impact on their current well-being. It is quite possible that this individual provides indirect care for their ill mother which leads the person to see themselves as a caregiver.

The majority of the sample reported that they belong to a support group (95.24%, n=80). Of these, 73 individuals belong to an online support group (86.9%); two belong to a face-to-face support group (2.38%); and five belong to support groups both
online and face-to-face (5.95%). Just four participants do not belong to a support group (4.76%).

Nearly two-third of the sample do not live in the same household as their ill mother (65.48%, n=55). The other portion do reside with their ill mother (34.52%, n=29).

On Barratt’s Simplified Measure of Social Status (see Appendix F), participants reported a total social status mean score of 43.37 and a standard deviation of 12.73. This is a high middle income.

Measures

The measures used in this study include a demographic questionnaire developed for the study (Appendix E); the Barratt Simplified Measure of Social Status (BSMSS; Barratt, 2006; Appendix F); the Brief COPE (Carver, 1997; Appendix G); the Perceived Stress Scale (PSS; Cohen, Kamarck & Mermelstein, 1983; Appendix H); the World Health Organization’s Quality of Life Assessment- Short Form (The WHOQOL-BREF; 1996, Appendix I); and the Connor Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003; Appendix J). The estimated time of completion for the online questionnaires was 30 minutes.
Table 1

Demographics for Sample of Young Adult Caregivers

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<tr>
<td>Gender</td>
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</tr>
<tr>
<td>Male</td>
<td>11</td>
<td>13.10</td>
</tr>
<tr>
<td>Female</td>
<td>73</td>
<td>86.90</td>
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<td>Race/Ethnicity</td>
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<tr>
<td>White</td>
<td>71</td>
<td>84.52</td>
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<tr>
<td>African-American</td>
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<td>4.76</td>
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<tr>
<td>Asian</td>
<td>4</td>
<td>4.76</td>
</tr>
<tr>
<td>Multiracial</td>
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<td>4.76</td>
</tr>
<tr>
<td>Pacific Islander</td>
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<td>1.19</td>
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<tr>
<td>Most frequent contact</td>
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</tr>
<tr>
<td>Face-to-face</td>
<td>43</td>
<td>51.19</td>
</tr>
<tr>
<td>Telephone</td>
<td>39</td>
<td>46.43</td>
</tr>
<tr>
<td>Internet</td>
<td>1</td>
<td>1.19</td>
</tr>
<tr>
<td>No contact</td>
<td>1</td>
<td>1.19</td>
</tr>
<tr>
<td>Support group participation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet</td>
<td>73</td>
<td>86.90</td>
</tr>
<tr>
<td>Face-to-face</td>
<td>2</td>
<td>2.38</td>
</tr>
<tr>
<td>Both</td>
<td>5</td>
<td>5.95</td>
</tr>
<tr>
<td>None</td>
<td>4</td>
<td>4.76</td>
</tr>
<tr>
<td>Household Residence</td>
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<td></td>
</tr>
<tr>
<td>Same household</td>
<td>29</td>
<td>34.52</td>
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<tr>
<td>Different household</td>
<td>55</td>
<td>65.48</td>
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</tbody>
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Demographic Questionnaire

Participants were asked to complete a 17-item demographic questionnaire to obtain information regarding their age, gender, ethnic background, residency status (and that of their ill mother’s), state of residency (and that of their ill mother’s), and other questions related to their mother’s health status (see Appendix E). These
questions served to provide a basic description of the sample and to certify that the participants met criteria for the study.

Barratt’s Simplified Measure of Social Status

Socioeconomic status (SES) was determined using Barratt’s Simplified Measure of Social Status (Barratt, 2006; Appendix F). The BSMSS was developed based on Hollingshead’s Two Factor Index of Social Position. It updates Hollingshead’s measure in two ways. First, it updates the list of occupations to increase relevance to modern-day. Second, it recognizes how social status is passed down through generations by combining the status of one’s parents with one’s own status.

Hollingshead’s approach to educational attainment was maintained in the BSMSS; as was his weighting of educational attainment to occupational prestige in a ratio of 3:5. The educational attainment score may range from 3 to 21 based on level of school completed. The occupational prestige score may range from 5 and 45 based on the prestige rating of the occupation. The total score is the sum of the education and occupation scores, with scores ranging between 8 and 66.

Barratt emphasizes that his measure only estimates SES; it does not produce an absolute result. Scores on the BSMSS can be interpreted as follows: low (8-27), middle (28-47), and high (48-66). Higher scores indicate higher socioeconomic status.

Psychometric data is not available for Barratt’s Simplified Measure of Social Status (Barratt, 2006).
Brief Cope Rating Scale

The current study measured coping with Carver’s Brief COPE instrument (Appendix G). This measure combines knowledge from Lazarus and Folkman’s (1984) model of coping with knowledge from Carver and Scheier’s (1981, 1990) model of behavioral self-regulation. The instrument consists of 28 self-report items which measure 14 subscales. These subscales correspond to 14 conceptually different coping responses, which are: self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioral disengagement, venting, positive reframing, planning, humor, acceptance, religion, and self-blame.

These subscales can be grouped into 3 different coping styles: emotion-focused, problem-focused, and dysfunctional. Emotion-focused coping is typified by items such as: “I’ve been getting emotional support from others”. Problem-focused coping is typified by items such as: “I’ve been trying to come up with a strategy about what to do”. Maladaptive coping is typified by items such as: “I've been using alcohol or other drugs to help me get through it”. Volunteers read a short description then rate how frequently they use a given coping response from 1 =“I haven’t been doing this at all” to 4 =“I’ve been doing this a lot”.

It was researchers Folkman and Lazarus who delineated the emotion-focused and problem-focused coping styles adopted by Carver in his Brief COPE instrument. In their 1980 article, Folkman and Lazarus expound on the coping styles writing:

Finally, by treating coping as a defense system whose purpose is to reduce tension and restore equilibrium, attention is focused on tension
reduction rather than problem-solving. Although maintaining emotional equilibrium is an important function of coping so is problem solving. A comprehensive definition of coping needs to include both emotion-regulating and problem-solving functions (p.221; italics original to text).

Carver maintained these coping styles but further delineated a maladaptive coping style, characterized by retreat behaviors and substance abuse. These behaviors had, at one point, been subsumed under emotion-focused coping.

Researchers Cooper, Katona, and Livingston (2008) reported the psychometric properties of the Brief COPE instrument. They tested 125 caregivers of individuals with dementia and then retested them 1 and 2 years later. They found high internal consistency for the emotion-focused, problem-focused, and maladaptive styles (alpha=0.72, 0.84, 0.75). In the current study, Cronbach’s alphas are: emotion-focused coping scale, .55; problem-focused coping scale .77; and maladaptive coping scale .77. This excludes items 27 and 28 which were not part of the final analysis as will be discussed in chapter 4.

Cooper (2008) also examined the Brief COPE’s test-retest reliability. Across one year, in instances where the caregivers’ burden score did not change significantly, the score for coping style was consistent (r=0.58, r=0.72, r=0.68; p<0.001). Change in burden score over 2 years correlated with change on the problem-focused and dysfunctional states (r=0.33, r=0.32; p<0.01) but not with change on the emotion-focused coping style.
Another set of researchers sought to understand the factor structure and construct validity of the Brief COPE (Amoyal, Mason, Gould, Corry, Mahfouz, Barkey, & Fauerbach, 2011). Data was collected from a sample of major burn injury patients admitted to Johns Hopkins Bayview Medical Center Burn Unit. Patients completed this measure at discharge (n=349) and at 6 months (n=171), 12 months (n=150), and 24 months (n=105) post-discharge. Patients were also asked to take the Davidson Trauma Scale (DTS), the Satisfaction with Appearance Scale (SWAP), and the Short Form 12 Health Survey (SF-12). Exploratory factor analysis found seven factors accounting for 51% of total variance in coping. Five of the factors are consistent with Carver’s original assignments (humor, religion, emotional support, venting, and acceptance); the other two factors represent approach and avoidant coping. Construct validity of the Brief COPE scales was demonstrated through statistically significant correlations with each of the other measures.

Perceived Stress Scale

The Perceived Stress Scale is a 10-item self-report instrument (PSS-10) designed to assess the degree to which life events are appraised as stressful (Appendix H). The PSS is based on Lazarus’ (1990) cognitive-relational theory of stress. It assesses an individual’s perceived stress based on the idea that the risk of health problems increases when individuals perceive stressful events as demanding or threatening. The questions gauge respondents’ feelings, thoughts, and frequency in the past month. Respondents are asked to rate each item on a five-point Likert scale, ranging from 0=“Never” to 4=
“Often”. Sample items include: (3)” How often have you felt nervous and stressed?”

Higher scores indicate higher levels of perceived stress.

Researchers Roberti, Harrington, and Storch (2006) reported the psychometric properties of the PSS-10 instrument. They queried 281 college students at 3 public universities. They report Cronbach’s alpha reliability coefficients as .89 for the 10 item total score; .85 for the 6 item Perceived Helplessness factor; and .82 for the 4 item Perceived Self-Efficacy factor. They found high convergent validity with the State-Trait Anxiety Inventory-Trait Version. Cronbach’s alpha for the current study is 0.84.

Researcher Roberti and his colleagues also examined convergent validity for the PSS. They found low to moderate convergent validity with the Chance and Powerful Others subscales of the Multidimensional Health Locus of Control Inventory. They found an absence of relationship with variables on the PSS-10 and variables in the following the other measures: Sensation Seeking Scale, Form V; the Santa Clara Strength of religious Faith Questionnaire-Short Form; and the Overt Aggression subscale of the Adult Aggression Scale.

World Health Organization’s Quality of Life Assessment—Short Form

The WHOQOL-BREF is a 26-item version of the WHOQOL-100 assessment (Appendix I). Its psychometric properties were analyzed using cross-sectional data obtained from adults across 23 countries (n=11,830). Sick and well respondents were sampled from the general population, as well as from hospital, rehabilitation and primary care settings, serving patients with physical and mental disorders (Skevington,
Lofty & O’Connell, 2004). Like the long form, the short form uses a 5-point Likert, interval scale to assess intensity, capacity, frequency, and perception. Higher scores indicate higher quality of life. The six domains of the WHOQOL-100 were reorganized into four domains with the WHOQOL-BREF: Physical Health, Psychological, Social Relations, and Environment (see Appendix A).

The response choices are different for nearly every item on the WHO-QOL BREF (see Appendix I). It is helpful though to know which items belong to which domain. Domain 1 is physical health and includes items: 3, 4, 10, 15, 16, 17, and 18. Domain 2 is psychological health and includes: 5, 6, 7, 11, 19, and 26. Domain 3 is social relationships and includes: 20, 21, and 22. Domain 4 is environment and includes: 8, 9, 12, 13, 14, 23, 24, and 25.

Empirical evidence showed that features from the independence and spiritually domains were associated with the physical and psychological domains respectively, and that a 4-factor solution fits the data better in both ill and well populations. For the total sample, measures of internal consistency using Cronbach’s were acceptable (>0.7) for Domains 1, 2, and 4, i.e., physical health 0.82, psychological 0.81, environment 0.80, but marginal for social relationships 0.68. Construct validity was assessed by measuring domains against each other. Correlations were strong (p<0.0001), ranging from 0.46 (physical with social) to 0.67 (physical with psychological). In the current study, Cronbach’s alphas are: psychological health, -.180; social health, .777, and environmental health, .427. (The alpha for the physical health domain is under review.)
The alpha for psychological health excludes item 26 which was not part of the final analysis as will be discussed in chapter 4.

There is no other validity data available for this version of the WHOQOL-BREF.

Connor-Davidson Resilience Scale—Short Form

The Connor-Davidson Resilience Scale (CD-RISC) short form is a 10-item self-report measure used to evaluate an individual’s overall ability to thrive in the face of difficult life events (see Appendix J). The short form of the CD-RISC is unidimensional in that it assesses the one latent factor of resilience that reflects the ability to tolerate experiences such as change, personal problems, illness, pressure, failure, and painful feelings (Campbell-Sills & Stein, 2007, p1026). It has been shown to correlate very highly (r=.92) with scores on the original multidimensional instrument. The measure demonstrated good reliability (.85) and construct validity by moderating the relationship between childhood maltreatment and current psychiatric symptoms. Cronbach’s alpha for the current study is 0.88.

The CD-RISC uses a 5-point Likert scale ranging from “Not true at all” to “True nearly all of the time”. It is typified by such items as: “Coping with stress strengthens”. (The exact items and response choices cannot be provided as the Connor-Davidson Resilience Scale is proprietary.) Higher scores indicate higher levels of resilience. The 10-item CD-RISC distinguishes individuals who are functioning well after adversity from those who are not (Campbell-Sills & Stein, 2007).
Procedures

Participants had to meet several eligibility requirements in order to be included in the study. First, they had to be between the ages of 18 and 30. They also had to have a living, biological mother to whom they provide informal care of any kind. It was not necessary for the participants to confirm a particular diagnosis but they instead had to stipulate that their mothers have trouble with their thinking and/or behavior; have difficulty with life’s ordinary demands and routines; and that their mothers do not abuse substances. Finally, both the participant and their mother had to have permanent United States residency. There were no exclusions based on gender, race/ethnicity, socioeconomic status, religion, or ability status. Participants who completed the study and provided a valid email address were entered into a drawing where four individuals would be randomly chosen to receive a $50 Amazon.com gift card.

The student researcher’s school, Western Michigan University (WMU), was the physical location of the research and no other physical locations were accessed. The study’s survey was located online and most of the recruitment efforts took place online. Participants were recruited from all over the United States.

This study relied on purposive sampling methods. A primary recruitment method was Facebook. According to a 2013 study by Pew Research Center’s Internet & American Life Project, a full 71% of all Internet users use Facebook. Of these, 84% are age 18-29 and 79% are age 30-49. They note some differences in use by race/ethnicity, gender, income, education, and urban/rural location. Still, usage by each of these respective groups is relatively heavy. (The current study does not represent Facebook’s diversity.)
Facebook offers countless online support groups. These were tapped as a means to recruit participants (Appendix B). Facebook advertisements were also purchased. Potential participants could click on these and be led to the survey site. The ads read simply: “Are you 18-30 years old? Have a mother with mental health issues? Be entered to win $50.” Recruitment methods involving online social networking or electronic media proved to be the most successful recruitment strategies for this study.

Another method of recruitment was university listservs. Approximately 200 university department heads across the country were sent an email asking for their help in dispersing information about the study (Appendix C). The student researcher is unsure how many complied with this request.

Additional recruitment took place via Craigslist (Appendix B). Craigslist is a no-cost, classified advertisement service and is currently the 11th most popular Internet site in the United States (as cited by Ramo, Hall & Prochaska, 2010). Craigslist allows its users to place one advertisement in one geographic location for one full week. Information describing the current study was placed in the ‘volunteer opportunities’ section of Craigslist and targeted a major metropolitan location each week. The student researcher placed ads in areas with the greatest population of minority residents. These areas include: southern Texas; Brooklyn, New York; and Washington, D.C.

Also, university counseling center directors and National Alliance on Mental Illness (NAMI) leaders were mailed a set of basic informational fliers (Appendix D). They were asked to post these across their respective workplaces. The student researcher received calls from several NAMI leaders reporting that none of their group participants
fit the age criteria for the study as most were middle-aged or older. For this reason, and because direct mail became cost-prohibitive, this recruitment method was abandoned in favor of the electronic methods. The student researcher is unsure how many counseling center directors posted the fliers as a result of the mailings.

A final recruitment method was to ask the leaders of various non-profit organizations across the country to share information about the proposed study with their members. Two large non-profit groups, NAMI and the National Eating Disorder Association, added recruitment information about the current study to their national websites (Appendix B).

It is important to note that many of the recruitment materials (i.e., Facebook postings, recruitment flyer, listserv emails, etc.) use the phrase ‘chronic nervios’ to denote severe mental illness. ‘Chronic nervios’ is an idiomatic expression used by persons of Latin American descent and its addition to the proposed study’s materials was meant to increase familiarity and reduce stigma among participants with Latin American backgrounds. Author Janis H. Jenkins (1988) observed that: “…the concept of nervios (nerves) serves as a culturally meaningful illness category for a wide range of conditions, including schizophrenic disorders diagnosed according to psychiatric criteria” (p301). [See Jenkins for a complete examination of the concept of nervios.] The inclusion of the word chronic distinguishes this form of nervios from another culture-bound syndrome called ‘ataques de nervios’ or nervous attack.

Approval to conduct this study was obtained from the Human Subjects Institutional Review Board (HSIRB) at Western Michigan University (Appendix N).
Permission to use the measures described later in this chapter was obtained from the publishers where required (see Appendices K and L). The survey was created with a software program called Secure Survey, a program licensed by WMU and available for use by its faculty, staff, and students. The survey was entered into the program by Ms. Julie Scott, the WMU staff member who maintains the software for the school. Ms. Scott is listed as a co-principal investigator of the current study and was the study’s webmaster. She maintained the survey’s website over the course of the study.

Prior to beginning the survey all participants were given the opportunity to review a consent document which explained the purpose of the study, reiterated requirements for participation, and offered a basic description of how their responses will be kept confidential (see Appendix M). The consent document further indicated that participants would be asked for their email address upon completion of the survey as a means to be entered into a drawing to thank them for their participation. They were informed simply that their email address will remain separate from their data.

The consent document also reminded participants that their involvement is voluntary and that they can withdraw at any time but that they would not be entered into the lottery drawing. They were further informed that the survey should take about 30 minutes to finish.

Participants who elected to take the survey responded to questions on the previously described measures. For the first two measures (i.e., the Demographic Questionnaire and BSMSS) participants were asked to consider their current life circumstances. For the final four measures (i.e., the Brief COPE, PSS, WHOQOL-BREF,
and CD-RISC) participants were asked to consider the last 12 months of their lives. A
time span of 12 months was chosen because it represents the minimum length of time
required for a diagnosis of severe mental illness. However, it is important to reiterate
that participants were not asked to show proof of a diagnosis; the study relied on their
self-report and ultimately their veracity in responding to the elimination questions in
the demographic section of the survey.
CHAPTER IV

RESULTS

The purpose of Chapter Four is to present the research findings for this study. Preliminary analyses and descriptive statistics are reported first, followed by results of the statistical analyses for the four research questions.

Preliminary Analyses

This section presents the preliminary analyses for the current study. Prior to the main analyses, all variables were examined to check for outliers and to assess for normality and the assumptions of regression.

When data collection first began, all participants were rewarded with a $10 Amazon.com gift card. The student researcher was compelled to change this because, after just a few days of data collection, it became clear that participants were providing false data only to receive the $10 reward. About 30 sets of data were received, but only about five submissions were considered legitimate. None of this data was retained.

Given that so few participants self-identified as being from a racial group other than White, this category was dichotomized as White and non-White.

Given that the overwhelming majority of participants belong to a support group, this category was dichotomized as support group participation and non-support group participation.
The Brief COPE instrument contains 28 survey items. However, due to an unfortunate oversight, only the first 26 items were included in the survey taken by the study’s participants. The two missing items read as follows: (27) “I’ve been praying or meditating” and (28) “I’ve been making fun of the situation” (see Appendix G). These items belong to the emotion-focused coping subscale. To make up for the two missing items, participants’ emotion-focused subscale scores were weighted to match the intended weight of this subscale in the total measure.

The variable psychological health (i.e., QOL Psychological) was removed from all hypothesis testing analyses due to psychometric concerns including poor internal consistency (alpha) and poor correlations with Overall QOL and The Perceived Stress Scale.

**Descriptive Statistics**

This section presents the means and standard deviations from each measure. They are also presented in Table 2. These values provide context for understanding the inferential statistics. These values also contribute to the knowledge base on the experiences of young adults who care for severely mentally ill mothers.

The current study assessed participants on each of the Brief COPE’s subscales: emotion-focused coping, problem-focused coping, and maladaptive coping. For each item on the Brief COPE, participants could choose any one of the following responses: 1 = “I haven't been doing this at all”; 2 = “I've been doing this a little bit”; 3 = “I've been doing this a medium amount”; or 4 = “I've been doing this a lot”.

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The sample endorsed emotion-focused coping with a mean score of 2.24 and a standard deviation of 0.42. The sample endorsed problem-focused coping with a mean score of 2.38 and a standard deviation of 0.67. The sample endorsed maladaptive coping with a mean score of 2.03 and a standard deviation of 0.53. To the extent that the means for all of the coping subscales are between 2 and 2.5, with standard deviations near .50, it can be surmised that participants endorse low to moderate use of each of the assessed coping strategies.

For each item on the Perceived Stress Scale, participants can choose any one of the following responses: 0="Never"; 1="Almost Never"; 2="Sometimes"; 3="Fairly Often"; or 4="Very Often". The sample endorsed a mean perceived stress score of 36.95 and a standard deviation of 7.38. By taking the quotient of the mean and the number of items on the scale (i.e., 3.70), it is revealed that the sample endorsed responses nearest to “Very Often”. This indicates a high level of perceived stress.

The Connor-Davidson Resilience Scale uses a 5-point Likert scale ranging from “Not true at all” to “True nearly all of the time”. As has been stated, it is typified by such items as: “Coping with stress strengthens” but the exact items and response choices cannot be provided because the CD-RISC is proprietary. Participants endorsed a mean resilience score of 24.51 and a standard deviation of 6.88. By taking the quotient of the mean and the number of items on the scale (i.e., 2.45), it is revealed that the sample endorsed responses between ‘Sometimes’ and ‘Often’. This indicates a moderate level of resilience.
The current study assessed five of the WHO-QOL BREF’s subscales: overall quality of life, physical health, psychological health, social relationships, and environment. Overall quality of life is measured with one question: “How would you rate your quality of life?” Participants endorsed an overall quality of life mean score of 61.61 and a standard deviation of 22.11.

They endorsed a physical health mean score of 50.12 and a standard deviation of 11.37. Participants endorsed a psychological health mean score of 46.61 and a standard deviation of 11.01. They endorsed a social relationship mean score of 54.27 and a standard deviation of 12.61. Participants endorsed an environment mean score of 53.28 and a standard deviation of 12.61.

All quality of life scores are measured on a scale from 0-100, with 0 being the lowest possible quality of life, and 100 being the highest possible quality of life. By this measure, it is revealed that the current sample has endorsed a moderate amount of quality of life for the physical, social, and environmental domains, and a somewhat low amount of quality of life for the psychological health domain. Also, the sample endorsed a higher overall quality of life than they endorsed for any of the individual domains physical health, psychological health, social relationships, or environment.
### Table 2

Means and Standard Deviations for Sample of young Adult Caregivers

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th># of items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Brief COPE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotion-focused</td>
<td>2.24</td>
<td>0.42</td>
<td>12</td>
</tr>
<tr>
<td>Problem-focused</td>
<td>2.39</td>
<td>0.67</td>
<td>6</td>
</tr>
<tr>
<td>Maladaptive</td>
<td>2.03</td>
<td>0.53</td>
<td>10</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>36.95</td>
<td>7.38</td>
<td>10</td>
</tr>
<tr>
<td>Resilience</td>
<td>24.51</td>
<td>6.88</td>
<td>10</td>
</tr>
<tr>
<td><strong>Quality of Life</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall QOL</td>
<td>61.61</td>
<td>22.11</td>
<td>1</td>
</tr>
<tr>
<td>Physical health</td>
<td>50.12</td>
<td>11.37</td>
<td>7</td>
</tr>
<tr>
<td>Social relationships</td>
<td>54.27</td>
<td>12.61</td>
<td>3</td>
</tr>
<tr>
<td>Environment</td>
<td>53.28</td>
<td>12.61</td>
<td>8</td>
</tr>
</tbody>
</table>

Note: Scores on the Brief COPE can range from 0 to 84. Scores on the Perceived Stress Scale can range from 0 to 40. Scores on the Resilience Scale can range from 0 to 40. Score on the Quality of Life scale can range from 0 to 100.
### Table 3

**Intercorrelations for Measured Variables**

<table>
<thead>
<tr>
<th>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>
<th>11</th>
<th>12</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maladaptive Coping</td>
<td>_</td>
<td>.25*</td>
<td>.32**</td>
<td>.46**</td>
<td>-.35**</td>
<td>-.35**</td>
<td>-.08</td>
<td>-.45**</td>
<td>-.06</td>
<td>-.00</td>
<td>.12</td>
<td>.02</td>
<td>.01</td>
</tr>
<tr>
<td>2. Problem-focused Coping</td>
<td>_</td>
<td>.57**</td>
<td>.13*</td>
<td>.01</td>
<td>-.08</td>
<td>.14</td>
<td>.08</td>
<td>.08</td>
<td>-.01</td>
<td>-.05</td>
<td>-.02</td>
<td>.09</td>
<td></td>
</tr>
<tr>
<td>3. Emotion-focused Coping</td>
<td>_</td>
<td>-.02</td>
<td>.14</td>
<td>.06</td>
<td>.24*</td>
<td>.11</td>
<td>-.04</td>
<td>-.10</td>
<td>.02</td>
<td>-.08</td>
<td>.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Perceived Stress</td>
<td>_</td>
<td>-.62**</td>
<td>-.56**</td>
<td>-.27**</td>
<td>-.43**</td>
<td>-.12</td>
<td>-.17</td>
<td>.03</td>
<td>-.14</td>
<td>-.27*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Resilience</td>
<td>_</td>
<td>.59**</td>
<td>.43**</td>
<td>.50**</td>
<td>.24*</td>
<td>.11</td>
<td>.13</td>
<td>.13</td>
<td>.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Overall QOL</td>
<td>_</td>
<td>.47**</td>
<td>.62**</td>
<td>.38**</td>
<td>.24*</td>
<td>.14</td>
<td>.24*</td>
<td>.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>7. Physical QOL</td>
<td>_</td>
<td>.42**</td>
<td>.46**</td>
<td>.08</td>
<td>.09</td>
<td>.08*</td>
<td>.13</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>8. Social QOL</td>
<td>_</td>
<td>.25*</td>
<td>.03</td>
<td>.10</td>
<td>.04</td>
<td>.11</td>
<td></td>
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</tr>
<tr>
<td>9. Environment QOL</td>
<td>_</td>
<td>.31**</td>
<td>.22*</td>
<td>.31**</td>
<td>.24*</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>10. Occupation-Social Status</td>
<td>_</td>
<td>.63**</td>
<td>.74**</td>
<td>-.03</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Education-Social Status</td>
<td>_</td>
<td>.99**</td>
<td>.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Total-Social Status</td>
<td>_</td>
<td>-.02</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Support Group Participation</td>
<td>_</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**p < .01  *p < .05**
Examination of Research Questions

This section presents the analyses for each of the four research questions. These are the main analyses for the current study.

Research Question One

Is there a relationship between coping style; living in the same household; support group participation; socioeconomic status (SES); and race/ethnicity such that these variables influence perceived stress? A total of one statistical analysis, a multiple regression, was carried out for research question one (see Table 4).

The overall regression model was significant at $F_7= 6.82, p<.001$. The variables explain 39% of the variance in perceived stress ($R^2 = .39$). The results identified support group participation as a significant negative predictor of perceived stress ($\beta = -.29; p<.001$), maladaptive coping styles as a positive predictor ($\beta = .53; p<.001$), and emotion-focused coping styles as a negative predictor ($\beta = -.31; p=.01$).

These results indicate that for young adults with severely mentally ill mothers, support group participation leads to lower stress. As all but four of the participants are members of support groups, there is reason to believe that individuals who are not members of support groups are more stressed. These results further indicate that a maladaptive coping style, typified by behaviors such as self-blame, disengagement, and substance abuse, leads to increased stress. Also, an emotion-focused coping style, typified by the use of emotional support, positive reframing, and humor, leads to lower stress.
Table 4

Regression Analyses Predicting Effects of Variables on Perceived Stress

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same Household as Mother</td>
<td>.38</td>
<td>1.41</td>
<td>.03</td>
</tr>
<tr>
<td>Support Group Participation</td>
<td>-9.90</td>
<td>3.14</td>
<td>-.29***</td>
</tr>
<tr>
<td>White</td>
<td>1.71</td>
<td>1.91</td>
<td>.08</td>
</tr>
<tr>
<td>Total SES</td>
<td>-.10</td>
<td>.05</td>
<td>-.16*</td>
</tr>
<tr>
<td>Maladaptive Coping</td>
<td>7.40</td>
<td>1.35</td>
<td>.53***</td>
</tr>
<tr>
<td>Problem-Focused Coping</td>
<td>2.30</td>
<td>1.23</td>
<td>.20*</td>
</tr>
<tr>
<td>Emotion-Focused Coping</td>
<td>-5.40</td>
<td>2.01</td>
<td>-.31***</td>
</tr>
</tbody>
</table>

Note: *p < .10, **p<.05, ***p<.01.

Research Question Two

Is there a relationship between perceived stress; living in the same household; support group participation; SES; and race/ethnicity such that these variables influence coping style?

A total of four statistical analyses were carried out for research question two (see Tables 5, 6, 7, and 8). A multiple regression analysis was conducted for each of the three coping styles: maladaptive, problem-focused, and emotion-focused coping; also, a canonical correlation analysis was conducted using all of the coping styles as outcome/criterion variables.
The overall regression model for maladaptive coping was significant at $F_5 = 5.63, p < .001$. The variables explain 27% of the variance in maladaptive coping ($R^2 = .27$). The results identified perceived stress as a significant positive predictor of maladaptive coping ($\beta = .52; p < .001$). This result indicates that higher perceived stress leads to higher maladaptive coping.

The overall model for problem-focused coping was not significant at $F_5 = .81, p = .55$. This means that the full combination of variables fail to predict problem-focused coping.

The overall model for emotion-focused coping was not significant at $F_5 = .88, p = .50$. This means that the full combination of variables fail to predict emotion-focused coping.

A canonical correlation analysis was conducted using the 3 coping subscales (i.e., problem-focused, emotion-focused, and maladaptive) as outcome/criterion variables of the 5 predictor variables (i.e., perceived stress, living in the same household, support group participation, SES, and race/ethnicity) to examine the multivariate shared relationship between variable sets. The analysis yielded three functions with squared canonical correlations ($R_{c}^2$) of .33, .05, and .01 for each successive function. As a whole, the full model across all functions was statistically significant using the Wilk’s $\lambda = .63$ criteria, $F(15,210.2) = 2.56, p < .002$. By reason of Wilk’s representing the variance unexplained by the model, $1 - \lambda$ yields the full model effect size in an $r^2$ metric (Sherry & Henson, 2005). Therefore, the $r^2$ effect size for the set of three canonical functions was
.37 (1-.63=.37), which indicates that the full model explained 37% of the variance shared between the two variable sets.

Functions were interpreted or not using the rule of thumb that an observed $R_c^2$ of .10 or more, explaining at least 10% of the variance for the function, is practically meaningful. Looking at the functions individually, function 1 was the only function that was noteworthy, explaining 33% of the variance for this function. The two other functions explained less than 10% of the variance after the removal of the prior functions, (i.e., 5% and 1% respectively), and were not interpreted.

Canonical variates were interpreted or not using another rule of thumb that a loading of .3 or more on the canonical variate is practically meaningful. Looking at Function 1, perceived stress contributes most strongly to the predictive canonical variate. It has a loading of .89 on its canonical variate. Maladaptive coping and problem-focused coping contribute most strongly on the outcome/criterion canonical variate. They have loadings of .88 and .31 on the canonical variate respectively. This means that as these participants experience increased stress, they are more likely to engage in maladaptive and problem-focused coping.
### Table 5

*Regression Analyses Predicting Effects of Variables on Maladaptive Coping*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same Household as Mother</td>
<td>-.01</td>
<td>.11</td>
<td>-.01</td>
</tr>
<tr>
<td>Support Group Participation</td>
<td>.34</td>
<td>.25</td>
<td>.14</td>
</tr>
<tr>
<td>White</td>
<td>-.23</td>
<td>.14</td>
<td>-.16</td>
</tr>
<tr>
<td>Total SES</td>
<td>.00</td>
<td>.00</td>
<td>.07</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>.04</td>
<td>.01</td>
<td>.52***</td>
</tr>
</tbody>
</table>

*Note.* *p < .10, **p<.05, ***p<.01.

### Table 6

*Regression Analyses Predicting Effects of Variables on Problem-Focused Coping*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
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</thead>
<tbody>
<tr>
<td>Same Household as Mother</td>
<td>-.06</td>
<td>.15</td>
<td>-.04</td>
</tr>
<tr>
<td>Support Group Participation</td>
<td>.37</td>
<td>.36</td>
<td>.12</td>
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<tr>
<td>White</td>
<td>-.23</td>
<td>.21</td>
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<td>-.01</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>.02</td>
<td>.01</td>
<td>.17</td>
</tr>
</tbody>
</table>

*Note.* *p < .10, **p<.05, ***p<.01.
Table 7

*Regression Analyses Predicting Effects of Variables on Emotion-Focused Coping*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same Household as Mother</td>
<td>-.09</td>
<td>.10</td>
<td>-.11</td>
</tr>
<tr>
<td>Support Group Participation</td>
<td>-.07</td>
<td>.23</td>
<td>-.04</td>
</tr>
<tr>
<td>White</td>
<td>-.23</td>
<td>.13</td>
<td>-.20*</td>
</tr>
<tr>
<td>Total SES</td>
<td>.00</td>
<td>.00</td>
<td>-.11</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>.00</td>
<td>.00</td>
<td>-.02</td>
</tr>
</tbody>
</table>

*Note.* *p < .10, **p < .05, ***p < .01.
Table 8

Canonical Solutions for Coping Styles

<table>
<thead>
<tr>
<th>Variable</th>
<th>Function 1</th>
<th></th>
<th></th>
<th>Function 2</th>
<th></th>
<th></th>
<th>Function 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coef.</td>
<td>$r_s$</td>
<td>$r_s^2$</td>
<td>Coef.</td>
<td>$r_s$</td>
<td>$r_s^2$</td>
<td>Coef.</td>
<td>$r_s$</td>
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<tr>
<td>Maladaptive Coping</td>
<td>.971</td>
<td>.883</td>
<td>77.96</td>
<td>-.097</td>
<td>-.398</td>
<td>15.84</td>
<td>-.416</td>
<td>-.250</td>
</tr>
<tr>
<td>Problem Focused Coping</td>
<td>.390</td>
<td>.305</td>
<td>9.30</td>
<td>.142</td>
<td>-.477</td>
<td>22.75</td>
<td>1.152</td>
<td>.824</td>
</tr>
<tr>
<td>Emotion Focused Coping</td>
<td>-.579</td>
<td>-.040</td>
<td>.16</td>
<td>-1.04</td>
<td>-.990</td>
<td>98.01</td>
<td>-.388</td>
<td>.136</td>
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<tr>
<td>Same Household</td>
<td>.062</td>
<td>.132</td>
<td>1.74</td>
<td>.456</td>
<td>.442</td>
<td>19.54</td>
<td>-.048</td>
<td>-.122</td>
</tr>
<tr>
<td>Support Group Participation</td>
<td>.355</td>
<td>.085</td>
<td>.72</td>
<td>.185</td>
<td>.062</td>
<td>.38</td>
<td>.958</td>
<td>.992</td>
</tr>
<tr>
<td>Race</td>
<td>-.160</td>
<td>-.135</td>
<td>1.82</td>
<td>.859</td>
<td>.732</td>
<td>53.58</td>
<td>-.058</td>
<td>-.159</td>
</tr>
<tr>
<td>Total SES</td>
<td>.220</td>
<td>.105</td>
<td>1.10</td>
<td>.474</td>
<td>.334</td>
<td>11.16</td>
<td>.010</td>
<td>.012</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>1.03</td>
<td>.892</td>
<td>79.57</td>
<td>-.010</td>
<td>-.006</td>
<td>.00</td>
<td>-.094</td>
<td>.362</td>
</tr>
</tbody>
</table>

Note. Structure coefficients ($r_s$) greater than .30 are underlined. Communality coefficients ($h^2$) greater than 30% are underlined. Coef = standardized canonical function coefficient; $r_s$ = structure coefficient; $r_s^2$ = squared structure coefficient; $h^2$ = communality coefficient. Values over 100 for $h^2$ may be due to rounding error.
Research Question Three

Is there a relationship between perceived stress; resilience; coping style; living in the same household; support group participation; SES; and race/ethnicity such that these variables influence quality of life? A total of five statistical analyses were carried out for research question three (see Tables 9, 10, 11, 12 and 13). A multiple regression analysis was conducted for three domains of quality of life: physical health, social relationships, and environment. [Recall that the variable psychological health (i.e., QOL Psychological) was removed from all hypothesis testing analyses due to psychometric concerns including poor internal consistency (alpha) and poor correlations with Overall QOL and The Perceived Stress Scale.] A multiple regression was also carried out for overall quality of life. A canonical correlation analysis was carried out again using only physical health, social relationships, and environment domains of quality of life as dependent variables.

The overall regression model for physical health was significant at $F_9= 2.53$, $p=.01$. The variables explain 24% of the variance in physical health ($R^2 = .24$). The results identified resilience as a significant positive predictor of physical health ($\beta = .39; p = .01$). This result indicates that as these individuals become more resilient, their physical health improves.

The overall regression model for social relationships was significant at $F_9= 4.97$, $p<.001$. The variables explain 38% of the variance in social relationships ($R^2 = .38$). The results identified resilience as a significant positive predictor of social relationships ($\beta = .29; p = .02$). Maladaptive coping was identified as a significant negative predictor of
social relationships ($\beta = -0.39; p=0.002$). These results indicate that as the individual’s resilience increases, so too does the health of their social relationships. Also, that as maladaptive coping increases, the health of the individual’s social relationships decreases.

The overall regression model for environment was significant at $F_9=2.69, p=.01$. The variables explain 25% of the variance in environment ($R^2 = 0.25$). The results identified support group participation as a significant positive predictor ($\beta = 0.25; p=0.03$), total socioeconomic status as a significant positive predictor ($\beta = 0.27; p=0.01$), and resilience as a significant positive predictor ($\beta = 0.27; p=0.05$). These results indicate that as support group participation, SES, and resilience increase so too does the health of the individual’s environment. Environment is characterized by such things as financial resources, living space, and leisure activities.

The overall regression model for overall quality of life is significant at $F_9=6.63, p<0.001$. The variables explains 45% of the variance ($R^2 = 0.45$). The results identified resilience as a significant positive predictor of overall quality of life ($\beta = 0.38; p<0.001$). Two other predictors approach statistical significance: socioeconomic status ($\beta = 0.16; p=0.08$) and perceived stress ($\beta = -0.22; p=0.08$). They would be positive and negative predictors of overall quality of life, respectively. These results indicate that as resilience increases so too does the individual’s overall quality of life. Socioeconomic status comes close to making a contribution such that an increase in SES leads to higher overall quality of life. Perceived stress also comes close to making a contribution such that an increase in perceived stress leads to lower overall quality of life.
A canonical correlation analysis was conducted using three of the four quality of life domains (i.e., environment, social relationships, and physical health) as outcome/criterion variables of the nine predictor variables (i.e., perceived stress, resilience, problem-focused coping style, emotion-focused coping style, maladaptive coping style, living in the same household, support group participation, SES, and race/ethnicity) to examine the multivariate shared relationship between variable sets. The analysis yielded three functions with squared canonical correlations ($R^2_c$) of .40, .25, and .11 for each successive function.

As a whole, the full model across all functions was statistically significant using the Wilk’s $\lambda = .40$ criteria, $F(27,210.92)=2.86$, $p<.001$. Given that Wilk’s represents the variance unexplained by the model, $1 - \lambda$ yields the full model effect size in an $r^2$ metric (Sherry & Henson, 2005). Consequently, the $r^2$ effect size for the set of three canonical functions was $.60$ ($1 - .40=.60$), which indicates that the full model explained 60% of the variance shared between the two variable sets.

Looking at the functions individually, all three are noteworthy as each explains over 10% of the variance for their respective functions. The observed $R^2_c$ for function 1 is .40, indicating that it explains 40% of the variance for function 1. The observed $R^2_c$ for function 2 is .25, indicating that it explains 25% of the variance for function 2. The observed $R^2_c$ for function 3 is .10, indicating that it explains 10% of the variance for function 3.

The three functions can also be examined together as a group. When considered in this way, it is observed that each of the three functions provides distinctly
different information about quality of life. Social relationship health contributes most strongly to outcome/criterion Function 1, with additional strong contribution from physical health. Environment health contributes most strongly to outcome/criterion Function 2. Physical health contributes most strongly to outcome/criterion Function 3. These findings are noteworthy because they indicate that different aspects of quality of life are influenced by different predictors.

Looking at Function 1, perceived stress, resilience and maladaptive coping, contribute most strongly to the first predictive canonical variate. They have loadings of .70, -.85 and .62 on the first canonical variate respectively. Emotion-focused coping approaches statistical significance with a loading of -.28 on its canonical variate.

Physical health and social relationships contribute most strongly on the first outcome/criterion canonical variate. They have loadings of -.66, and -.95 on the first canonical variate respectively. This means that as perceived stress and maladaptive coping increase, and resilience decreases, participants experience a decrease in their physical health and social relationships.

Looking at Function 2, several variables make a significant contribution to the second predictive canonical variate. Living in the same household has a loading of .50; support group participation a loading of .42; being a White person a loading of -.31; socioeconomic status a loading of .62; and emotion-focused coping a loading of -.31.

Environment is the only contributor on the second outcome/criterion canonical variate and has a loading of .91. This means that as these participants continue to live in the same household as their mothers, maintain support group participation, have a
higher SES, be non-White, and decrease their use of emotion-focused coping, they will experience greater environmental health.

Looking at Function 3, two variables make a significant contribution to the third predictive canonical variate. Maladaptive coping has a loading of .74 and emotion-focused coping a loading of .53. Physical health and environmental health contribute on the third outcome/criterion canonical variate with loading of .74 and .30 respectively. This means that those participants who make greater use of maladaptive and emotion-focused coping styles, experience greater physical and environmental health.

Table 9

Regression Analyses Predicting Effects of Variables on Quality of Life-Physical Health

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$SE\ B$</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same Household as Mother</td>
<td>-1.92</td>
<td>2.45</td>
<td>-.08</td>
</tr>
<tr>
<td>Support Group Participation</td>
<td>3.82</td>
<td>5.82</td>
<td>.07</td>
</tr>
<tr>
<td>White</td>
<td>.40</td>
<td>3.36</td>
<td>.01</td>
</tr>
<tr>
<td>Total SES</td>
<td>.05</td>
<td>.10</td>
<td>.10</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>.00</td>
<td>.23</td>
<td>.00</td>
</tr>
<tr>
<td>Resilience</td>
<td>.64</td>
<td>.22</td>
<td>.39***</td>
</tr>
<tr>
<td>Maladaptive Coping</td>
<td>-.17</td>
<td>2.82</td>
<td>.00</td>
</tr>
<tr>
<td>Problem-Focused Coping</td>
<td>.73</td>
<td>2.20</td>
<td>.04</td>
</tr>
<tr>
<td>Emotion-Focused Coping</td>
<td>4.23</td>
<td>3.71</td>
<td>.16</td>
</tr>
</tbody>
</table>

Note. *$p < .10$, **$p < .05$, ***$p < .01$. 

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Table 10

Regression Analyses Predicting Effects of Variables on Quality of Life - Social Relationships

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same Household as Mother</td>
<td>-1.07</td>
<td>4.87</td>
<td>-.02</td>
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<tr>
<td>Support Group Participation</td>
<td>6.44</td>
<td>11.56</td>
<td>.06</td>
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<tr>
<td>White</td>
<td>1.04</td>
<td>6.67</td>
<td>.02</td>
</tr>
<tr>
<td>Total SES</td>
<td>0.04</td>
<td>0.19</td>
<td>0.02</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>-0.24</td>
<td>0.45</td>
<td>-0.07</td>
</tr>
<tr>
<td>Resilience</td>
<td>1.05</td>
<td>0.44</td>
<td>0.29**</td>
</tr>
<tr>
<td>Maladaptive Coping</td>
<td>-18.22</td>
<td>5.60</td>
<td>-0.38***</td>
</tr>
<tr>
<td>Problem-Focused Coping</td>
<td>4.18</td>
<td>4.35</td>
<td>0.11</td>
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<tr>
<td>Emotion-Focused Coping</td>
<td>7.53</td>
<td>7.37</td>
<td>0.13</td>
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</table>

*Note. *p < .10, **p < .05, ***p < .01.*
Table 11

*Regression Analyses Predicting Effects of Variables on Quality of Life-Environment*

<table>
<thead>
<tr>
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<th>$SE_B$</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
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<td>Same Household as Mother</td>
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<td>2.70</td>
<td>.17*</td>
</tr>
<tr>
<td>Support Group Participation</td>
<td>14.61</td>
<td>6.41</td>
<td>.25**</td>
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<tr>
<td>White</td>
<td>-2.73</td>
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<td>-.08</td>
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<tr>
<td>Total SES</td>
<td>.27</td>
<td>.11</td>
<td>.27**</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>.26</td>
<td>.25</td>
<td>.15</td>
</tr>
<tr>
<td>Resilience</td>
<td>.49</td>
<td>.25</td>
<td>.27**</td>
</tr>
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<td>-.05</td>
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<tr>
<td>Problem-Focused Coping</td>
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<td>.11</td>
</tr>
<tr>
<td>Emotion-Focused Coping</td>
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*Note.* *p* < .10, **p**<.05, ***p**<.01.
Table 12

*Regression Analyses Predicting Effects of Variables on Quality of Life-Overall*

<table>
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<th>Variable</th>
<th>$B$</th>
<th>SE $B$</th>
<th>$\beta$</th>
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</thead>
<tbody>
<tr>
<td>Same Household as Mother</td>
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<td>4.06</td>
<td>.10</td>
</tr>
<tr>
<td>Support Group Participation</td>
<td>3.46</td>
<td>9.63</td>
<td>.03</td>
</tr>
<tr>
<td>White</td>
<td>.93</td>
<td>5.56</td>
<td>.02</td>
</tr>
<tr>
<td>Total SES</td>
<td>.28</td>
<td>.16</td>
<td>.16*</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>-.66</td>
<td>.38</td>
<td>-.22*</td>
</tr>
<tr>
<td>Resilience</td>
<td>1.21</td>
<td>.37</td>
<td>.38***</td>
</tr>
<tr>
<td>Maladaptive Coping</td>
<td>-5.58</td>
<td>4.66</td>
<td>-.13</td>
</tr>
<tr>
<td>Problem-Focused Coping</td>
<td>-2.60</td>
<td>3.62</td>
<td>-.08</td>
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<tr>
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<td>5.88</td>
<td>6.14</td>
<td>.11</td>
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*Note.* $p < .10$, **$p < .05$, ***$p < .01$. 


### Table 13

*Canonical Solutions for Quality of Life*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Function 1</th>
<th>Function 2</th>
<th>Function 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coef.</td>
<td>$r_s$</td>
<td>$r_s^2(%)$</td>
</tr>
<tr>
<td>Physical Health</td>
<td>-.364</td>
<td>-.660</td>
<td>43.56</td>
</tr>
<tr>
<td>Social Relationships</td>
<td>-.828</td>
<td>-.953</td>
<td>90.82</td>
</tr>
<tr>
<td>Environment</td>
<td>.105</td>
<td>-.275</td>
<td>7.56</td>
</tr>
<tr>
<td>Same Household</td>
<td>.101</td>
<td>.213</td>
<td>4.54</td>
</tr>
<tr>
<td>Support Group</td>
<td>-.072</td>
<td>-.180</td>
<td>3.24</td>
</tr>
<tr>
<td>Race</td>
<td>-.040</td>
<td>.056</td>
<td>.31</td>
</tr>
<tr>
<td>Total SES</td>
<td>-.011</td>
<td>-.050</td>
<td>.25</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>.116</td>
<td>.700</td>
<td>49.00</td>
</tr>
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<td>Resilience</td>
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<td>-.853</td>
<td>72.76</td>
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</table>
Table 13—Continued

*Canonical Solutions for Quality of Life*

<table>
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<th>Variable</th>
<th>Function 1</th>
<th></th>
<th>Function 2</th>
<th></th>
<th>Function 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coef.</td>
<td>r_s</td>
<td>r_s^2(%)</td>
<td>Coef.</td>
<td>r_s^2(%)</td>
<td>Coef.</td>
</tr>
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<td>.624</td>
<td>38.94</td>
<td>-.102</td>
<td>-.040</td>
<td>.16</td>
</tr>
<tr>
<td>Problem Focused Coping</td>
<td>-.152</td>
<td>-.175</td>
<td>3.06</td>
<td>.198</td>
<td>.053</td>
<td>.28</td>
</tr>
<tr>
<td>Emotion Focused Coping</td>
<td>-.272</td>
<td>-.282</td>
<td>7.95</td>
<td>-.356</td>
<td>-.311</td>
<td>.967</td>
</tr>
</tbody>
</table>

*Note.* Structure coefficients (r_s) greater than .30 are underlined. Communality coefficients (h^2) greater than 30% are underlined. Coef = standardized canonical function coefficient; r_s = structure coefficient; r_s^2 = squared structure coefficient; h^2 = communality coefficient. Values over 100 for h^2 may be due to rounding error.
Research Question Four

Is there a relationship between coping style; perceived stress; living in the same household; support group participation; SES; and race/ethnicity such that these variables influence resilience? A total of one statistical analysis, a multiple regression, was carried out for research question four. The overall regression model for resilience was significant at $F_8= 7.11, p<.001$. The variables explain 43% of the variance in resilience ($R^2 = .43$). The results identified perceived stress as a negative predictor of resilience ($\beta = -.52; p<.001$). These results indicate that for these individuals, an increase in perceived stress leads to a decrease in resilience.

Table 14

*Regression Analyses Predicting Effects of Variables on Resilience*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$SE\ B$</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same Household as Mother</td>
<td>-.50</td>
<td>1.27</td>
<td>-.04</td>
</tr>
<tr>
<td>Support Group Participation</td>
<td>-.80</td>
<td>3.02</td>
<td>-.03</td>
</tr>
<tr>
<td>White</td>
<td>-1.49</td>
<td>1.73</td>
<td>-.08</td>
</tr>
<tr>
<td>Total SES</td>
<td>.03</td>
<td>.05</td>
<td>.06</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>-.49</td>
<td>.10</td>
<td>-.53***</td>
</tr>
<tr>
<td>Maladaptive Coping</td>
<td>-2.31</td>
<td>1.44</td>
<td>-.18</td>
</tr>
<tr>
<td>Problem-Focused Coping</td>
<td>.15</td>
<td>1.13</td>
<td>.02</td>
</tr>
<tr>
<td>Emotion-Focused Coping</td>
<td>2.71</td>
<td>1.90</td>
<td>.17</td>
</tr>
</tbody>
</table>

Note. * $p < .10$, ** $p < .05$, *** $p < .01$. 

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CHAPTER V

DISCUSSION

This chapter is a discussion of the findings and implications from the current study. Following the introduction of this chapter is an analysis of the results from each research question. The sections thereafter are implications, including directions for future research and practice, limitations, and conclusions.

The purpose of this study was to examine the psychological and social functioning of young adults who care for their severely mentally ill mothers; in doing so, this study examined the young adult child’s coping styles, perceived stress, quality of life, and resilience. Other factors considered were race, socioeconomic status, support group participation, and living in the same household as their mother. Furthermore, young adulthood was examined as a distinct period of human development.

There is a paucity of research on young adult caregivers, including those who care for severely mentally ill loved ones. In that respect, the current study makes a strong contribution to the caregiving literature as no previous research has examined the aforementioned variables in connection with one another. A key objective of this study was to increase our knowledge of those factors that are most impactful for young adult caregivers. The results of this study should be considered when developing resources for young adult caregivers.

Research question one examined which factors influence perceived stress. According to the regression analysis, support group participation and an emotion-
focused coping style lead to lower perceived stress. It was further found that a maladaptive coping style leads to higher perceived stress. These findings are consistent with previous research on perceived stress.

In testing the psychometric properties of the 10-item Perceived Stress Scale researchers Roberti, Harrington, and Storch (2006) sampled 285 undergraduates from three different public universities. A full 225 of the participants were female. The participant mean age was 23.8 years (SD 7.9). There were no violations of normality or homogeneity despite the gender imbalance. The male participants reported a PSS-10 score of 17.4 (SD 6.1) and the females a score of 18.4 (SD 6.5). By taking the quotient of the mean and the number of items on the scale, we find that the item-level average scores are 1.74 and 1.84, respectively. These scores correspond most closely with “Sometimes,” indicating a moderate level of perceived stress.

Contrast this with the PSS scores of the current sample. The current sample was slightly younger with a mean age of 23.34. They reported a mean PSS score of 36.69, with an item-level average score of 3.70. This corresponds to “Very Often” or a high level of perceived stress. Thus, the young adult caregivers in the current study are much more stressed than the young adults of the normative sample.

Research by Cohen and Janicki-Deverts (2012) indicates that, compared to other age groups, young adults experience higher levels of perceived stress. Cohen and his colleague assessed perceived stress (and other indicators of psychological health) in three population-wide national surveys. The surveys were administered in 1983, 2006, and 2009. In each of these years, young adults reported the highest levels of perceived
stress. Moreover, the researchers discovered that with increasing age comes a decrease in perceived stress. To connect all the findings for perceived stress: young adults are more stressed than the general population, experiencing the most stress of all age groups, but they are much less stressed than the current sample of young adult caregivers. As will be discussed later, this is logical given the current sample’s caregiving demands and developmental tasks.

The majority of individuals who participated in this study are members of support groups; and most of these are online support groups. This is believed to be a function of two key points. First, a great deal of recruitment took place online. Facebook in particular was used heavily as a means to reach the broadest number of young adults. Consequently, those who responded to the advertisements were likely to participate in social networking on a regular basis.

Second, the study’s participants perceive stress to a significant enough degree that they have enacted coping responses. A primary coping response for the participants was to seek the support of others having the same experience. In her 2012 article, researcher Ruth Chu-Lien Chao examined perceived stress among college students. She notes that: “For students to manage their perceived stress, positive social support is as essential as good soil is to plants...In the face of stress, students naturally seek support from families and friends and execute their coping to maintain well-being” (p.5).

Support groups are effective tools for reducing stress because they increase “social closeness” and reduce feelings of isolation (Barak, Boniel-Nissim & Suler, 2008, p.
Support group participants experience a sense of relief when they are able to share bad feelings and be listened to by people who understand them. Support groups offer emotional support which may be lacking elsewhere.

It follows then that emotion-focused coping was found to be correlated with a reduction in perceived stress for these young adult caregivers. Emotional support, versus instrumental support (i.e. the proffering of real-world assistance) or informational support (i.e., the proffering of relevant facts), is the primary resource offered by support groups. A dualism becomes evident here: the young adult caregivers seek what is helpful and are helped by what they receive.

Some researchers have emphasized the positive effects of problem-focused coping and the negative effects of emotion-focused coping on psychological outcomes, especially when the threat can be overcome through the use of effective problem-solving techniques (Zeidner & Endler, 1996). There is growing recognition of the usefulness of emotion-focused coping when “the source of stress is unclear, when there is a lack of knowledge about stress modification, or when the person can do little to eliminate stress” (as cited by Zeidner & Endler, 1996, p. 514). As regards the young adult caregivers in the current study, they face the chronic stressor of having a severely mentally ill mother. This is a problem that does not lend itself readily to being solved.

The usefulness of emotion-focused coping for these caregivers underscores that problem-focused and emotion-focused coping strategies must be judged in the context of the situation. On the other hand, a maladaptive coping style seems inherently linked to problematic outcomes. It follows then that a maladaptive coping style, typified by
such behaviors as substance abuse, disengagement, and self-blame, is correlated with an increase in perceived stress for these young adult caregivers. Health researchers recognize that stress works in concert with other mechanisms to affect health. Stress can contribute to psychological distress and physiological arousal and individuals may use maladaptive behaviors to mitigate unpleasant feelings (Umberson, Crosnoe, & Reczek, 2010). The maladaptive behaviors, in turn, contribute to problems in other areas, including those that are medical, psychological, and social. Far from reducing stress, the end result is a net increase in stress.

Research question two examined which factors influence coping style. According to the regression analysis, higher perceived stress leads to higher maladaptive coping. Regression analyses for the dependent variables emotion-focused coping and problem-focused coping were not significant. The canonical correlation analysis found that as participants experience an increase in perceived stress, they are more likely to engage in maladaptive and problem-focused coping.

These results fit with those described above and add additional information. For these young adult caregivers, the most salient factor—indeed the only factor—predicting coping style is level of perceived stress. This is logical as the two factors are strongly connected in the general research literature (e.g., Soderstrom, Dolbier, Lieferman, & Steinhardt, 2000; Hampel & Petermann, 2006). The current sample of caregivers endorses an emotion-focused coping style; however, examining data on the coping strategies of other caregivers, a problem-focused coping style is both desirable (e.g., Gignac & Gottlieb, 1997) and more strongly associated with positive outcomes (Tschanz,
et al., 2013). What is unique about the coping strategies of young adult caregivers with severely mentally ill mothers? This is a fundamental question of the study.

Severe mental illness is a chronic disorder with few easy remedies. Caregivers face the challenge of providing care for an indeterminate amount of time. They also face acute stressors associated with the illness, as well as those stressors in the caregiver’s own daily life. Compound this with the challenges of young adulthood. Developmentally appropriate tasks include: pursuing higher education; seeking a mate; career development; and creating an identity separate from one’s family. To the extent that the SMI has a varied but expected course, and the developmental tasks involve seeing the world in a new way, the young adult caregiver faces challenges that are both routine and novel.

While other groups of caregivers have adopted a problem-focused coping style, it is reasonable that these young adult caregivers have adopted coping strategies characterized by emotional support (i.e., support group participation and an emotion-focused coping style). These strategies arguably allow for greater coping flexibility. They allow the young adult caregiver to be helped without focusing on any one problem. Furthermore, it can be argued that young adults lack the tools to effectively solve problems. This is discussed more below.

To the extent that stress represents those demands appraised to exceed the individual’s current coping resources (e.g., Contrada & Baum, 2011, Chapter 1), it makes sense that these young adult caregivers engage in less adaptive forms of coping when they experience an increase in perceived stress. This general idea is consistent with
previous research. To engage in problem-solving strategies when few solutions are available can lead to psychological distress. “When the pursuit of a goal is extremely difficult and goal attainment becomes altogether unlikely, an amplified focus on goal-relevant information is no longer an adaptive way of self-regulation” (e.g., Schwager & Rothermund, 2014). If one considers that for these caregivers coping and stress lie together on a continuum, then maladaptive coping is the strategy of last resort.

The relationship between increased stress and less adaptive forms of coping also makes sense when you consider that young adults have underdeveloped coping skills compared to middle-aged and older adults. There is mounting evidence that as we age, we interpret events as less stressful and develop more efficient coping strategies (Cohen & Janicki-Deverts, 2012). These young adult caregivers may not yet recognize the ineffectiveness of problem-focused and maladaptive coping strategies. Moreover, young adults are less established in the world. Compared to middle-aged and older adults, young adults often lack the financial, social, psychological, etc., resources required to either solve problems or avoid maladaptive coping strategies. One could argue that this lack of resources is a strong reason why young adults interpret events as more stressful compared to other age groups. This may be another significant feature of their developmental stage.

Research question three examined which factors influence quality of life. A total of four regression analyses were carried out. According to these analyses, an increase in resilience leads to improvements in the domains for physical health, social relationships, and overall quality of life. It was further found that as support group participation,
socioeconomic status, and resilience increase, so too does the health of their environment. Lastly, as participants engage in more maladaptive coping, the quality of their social relationships decrease. These findings are consistent with previous research on quality of life.

Findings from the canonical correlation analysis for research question three are somewhat less consistent with previous research on quality of life. The first canonical function found that as perceived stress and maladaptive coping increase, and resilience decreases, participants experience a decrease in their physical health and social relationships. The second canonical function found that as participants continue to live in the same household as their mothers, maintain support group participation, have a higher SES, be non-White, and decrease their use of emotion-focused coping, they will experience greater environmental health. The final canonical function found that those participants who make greater use of maladaptive and emotion-focused coping, experience greater physical and environmental health.

Referring back to the significant findings from the regression analyses, the caregivers in the current study have developed greater fortitude from the pressure of having a severely mentally ill mother. The resilience that they have achieved has improved their overall quality of life, as well as their quality of life in the physical, social, and environmental domains. This is reasonable as it has been shown that good personal resilience aids in recovery from stressful events (e.g., Steinhardt & Dolbier, 2008); and recovery from stressful events improves quality of life (see Kwok, Wong & Lee, 2014). This progression seems to be true for the young adult caregivers in the current study.
In testing the psychometric properties of the 10-item version of the Connor-Davidson Resilience Scale (CD-RISC), researchers Campbell-Sills and Stein (2007) queried a scale development sample of undergraduates from San Diego State University. Most of the 1,743 participants were women (74.4%) and the mean age of the sample was 18.8 years \((SD = 2.2)\). The sample reported a mean CD-RISC score of 27.21 \((SD = 5.84)\). By taking the quotient of the mean and the number of items on the scale, we achieve an item-level score of 2.72, indicating that they endorsed a moderate level of resilience.

These scores are then compared against the CD-RISC scores of the current sample. The current sample was older with a mean age of 23.34. They reported a mean CD-RISC score of 24.51 \((SD = 6.88)\). By taking the quotient of the mean and the number of items on the scale, we achieve an item-level score of 2.45, indicating that this sample also endorsed a moderate, albeit lower, level of resilience.

Research with older adults suggests that they maintain higher levels of resilience than do young adults. Author Jeste and his colleagues (2013) investigated successful aging in 1,006 community-dwelling (i.e., non-institutionalized) adults age 50-99. Their ability to live without round-the-clock care is understood to be an indication of their good functioning. The researchers found that, for those persons who agreed that they have aged successfully, higher resilience and lower depression accounted for as much of the variance as good physical health. Furthermore, the age cohorts reported the following scores on the Connor-Davidson Resilience Scale: those age 50-59 a mean score of 31.4 \((SD = 6.4)\); age 60-69 a mean score of 32.1 \((SD = 6.2)\); age 70-79 a mean score of 30.8 \((SD = 7.0)\); age 80-89 a mean score of 30.8 \((SD = 5.9)\); and age 90-99 a mean score of
31.1 (SD 6.3). While the authors found no significant differences in resilience between the cohorts, the scores reported by each cohort are higher than the score reported by the scale development sample above. Thus the sample of older adults had higher resilience than the scale development sample of young adults. One could take the leap then to say that, as a person ages, their resilience increases. To connect all the findings for resilience: the current sample of young adults has less resilience than the scale development sample of young adults, and less resilience still than the sample of older adults. Moreover, there is some indication that young adults have less resilience than older adults in general.

It is important to note that although the current sample reported lower resilience than the scale development sample of similar age, their score was not strikingly lower, and both scores were in the moderate range. This indicates first the wear brought on by the chronic stress of caring for a severely mentally ill mother. This also indicates that these caregivers have developed strengths in the face of their hardships.

Returning again to the original discussion, the strong relationship between resilience and quality of life for the current sample of caregivers is logical when you consider the role of resilience in improving well-being. To illustrate, researchers Steinhardt and Dolbier (2008) examined the effectiveness of a brief intervention designed to improve resilience. They chose college students (i.e., young adults) as their subjects because, as observed in the current study, they tend to experience high levels of perceived stress. The students were randomly assigned to either an intervention
group or a wait-list control group. The resilience intervention was entitled Transforming Lives Through Resilience Education and included 4 two-hour classroom sessions: (1) Transforming Stress Into Resilience, (2) Taking Responsibility, (3) Focusing on Empowering Interpretations, and (4) Creating Meaningful Connections. Psychoeducation was provided on problem-focused, emotion-focused, and maladaptive coping styles. Students were encouraged to use emotion-focused coping strategies for short-term problems and problem-focused coping strategies for long-term problems.

At the end of just four weeks, the researchers found the intervention group to have higher resilience scores, more effective coping strategies, higher scores on protective factors (i.e., positive affect, self-esteem, self-leadership), and lower scores on symptomology (i.e., depressive symptoms, negative affect, perceived stress) than the control group. They further found that the intervention group reported lower physical illness scores, while the control group reported slightly higher scores on the measure. This study affirms the link between resilience and quality of life for the young adult caregivers in the current study.

Regression analyses for question three also show that, for these young adult caregivers, the environment domain of quality of life is improved by increases in support group participation, socioeconomic status, and resilience. This is reasonable first because the environment domain consists of such factors as financial resources; freedom, physical safety and security; and participation in and opportunities for recreation /leisure activities (see Appendix A). This is further reasonable considering the demographic characteristics of the young adult caregivers in the current study. Their
strong presence in support groups has already been described. It is noteworthy here too
that the current sample endorsed a social status mean score of 43.37 (SD 12.37),
representing a high middle income. This was somewhat surprising as individuals from
higher SES groups are underrepresented in research (e.g., VanGeest, Johnson & Welch,
2007; Page, Bartels & Seawright, 2013). These findings thus extend the literature for
socioeconomic status.

There is a strong correlation between high socioeconomic status and health (see
Gallo & Matthews, 2003). It has been written that: “Over the life course, members of
high socioeconomic status groups develop greater resistance to disease because they
enjoy better medical care, nutrition, and comfortable and safe living conditions in their
neighborhoods” (e.g., Resnick, Gwyther & Roberto, 2011, p. 5). Researcher Nancy E.
Adler and her colleagues
(1994) take this one step further and provide evidence for a graduated correlation
between SES and health such that, at all levels, as SES increases so too does health. This
may seem intuitive but this degree of relationship is rarely considered because SES is
often maintained as a control variable. This is relevant to the current study because
while these caregivers are not of the highest SES, they are high enough to enjoy the
benefits of wealth and prestige.

Having discussed the relationship between resilience and improved quality of
life, it is now important to understand the current sample’s quality of life scores in
comparison to those of other samples. In testing the psychometric properties of the
WHO-QOL BREF, the researchers used data that they had already collected from their
testing of the original 100-item WHO-QOL (see The WHOQOL Group, 1998; also Skevington Lofty, & O’Connell, 2004). The researchers on the original WHO-QOL queried 11,830 individuals from 23 different countries. The normative sample includes both sick and well respondents obtained from the general population, as well as from various health care settings serving physical and mental health needs. In reporting the mean domain scores obtained for the WHO-BREF, the researchers compared the differences between age cohorts and genders (see Table 7, Skevington Lofty, & O’Connell, 2004, p. 309). Among their findings they discovered that mean domain scores decrease with age, with the greatest change found in physical health. This indicates that quality of life lessens with age.

Most relevant to the current study are the mean domain scores for cohorts aged 12-20 and 21-30. The age 12-20 cohort reported the following scores: a mean score of 62.40 (SD 11.60) on the physical health domain; a mean score of 59.60 (SD 12.40) on the social health domain; and a mean score of 57.60 (SD 9.60) on the environmental health domain. The age 21-30 cohort reported the following scores: a mean score of 60.00 (SD 11.60) on the physical health domain; a mean score of 58.00 (SD 13.60) on the social health domain; and a mean score of 54.80 (SD 10.40) on the environmental health domain. Overall quality of life mean scores were not reported. These scores indicate a moderate to high level of quality of life for the normative sample.

Please note that these domain scores differ from how they are reported in the 2004 document. Per the scoring instructions for the WHO-QOL BREF, the means and standard deviations were multiplied by 4 (i.e., transformed) to make them comparable
to the scores used for the WHO-QOL 100 (The WHOQOL Group, 1996). The scores were also transformed to be made comparable to the scores reported in the current study.

The current sample reported the following mean domain scores on the WHO QOL BREF: a mean score of 50.12 (SD 11.37) on the physical health domain; a mean score of 54.27 (SD 12.61) on the social health domain; and a mean score of 53.28 (SD 12.61) on the environmental health domain. All in all, the current sample endorsed a moderate amount of quality of life for the reported domains. Furthermore, the scores for the current sample are lower than those of the 12-20 and 21-30 age cohorts reported above. A review of Table 7 (Skevington Lofty, & O’Connell, 2004, p. 309) will also confirm that these scores are lower than those reported by any of the age cohorts in the normative sample. This indicates that, although quality of life seems to decrease over time, the current sample of young adult caregivers has a lower quality of life than all of the age cohorts, including those in their own age bracket.

Nevertheless, it can be argued that the scores reported by the current sample are not strikingly lower than those of the normative sample. The scores for the current sample are still in the moderate range. This suggests that while there has been some reduction in their quality of life related to their caregiving duties, they maintain a reasonably strong quality of life.

Regarding the last finding from the regression analysis, it stands to reason that, for these young adult caregivers, a maladaptive coping style is associated with a decrease in the social domain of quality of life. As is noted above, a maladaptive coping style contributes to negative outcomes. To illustrate, a 1990 study comparing problem
drinkers to non-problem drinkers found that problem drinkers were more likely to use coping styles characterized as avoidant. They were less likely than their counterparts to use “approach mechanisms such as positive reappraisal and seeking social support” (e.g., Wills & Hirky, 1996, p 288). An earlier study examined the relationship between life stress, expectancies, and avoidant coping. The researchers discovered that the use of alcohol and drugs as a coping mechanism predicted low social support and high life stress (e.g., Wills & Hirky, 1996). The current study is consistent with these findings but for a new population.

Referring back to the canonical correlation analyses, the findings from the first canonical function require little further discussion. The results are highly consistent with the results discussed above.

The findings from the second and third canonical functions however warrant closer scrutiny. There is a unique interaction between the variables in Function 2. Environmental health is impacted positively by a decrease in emotion-focused coping. Up to this point, an emotion-focused coping style has been beneficial to these young adult caregivers. The reversal here may be due to the predictor variable with the highest value: socioeconomic status.

An emotion-focused coping style may be less necessary when the participant has a higher socioeconomic status and is better able to affect change within their environment. Similarly, living with their mother might call for greater use of instrumental support akin to a problem-focused coping style. It is interesting that problem-focused coping was not found to be significant; perhaps because support
group participation remains significant here. Being non-White might be relevant to the extent that racial/ethnic minorities tend to have a more communal way of being (e.g., Cohen & Casper, 2002). Living with their ill parent improves their well-being.

This finding for household residence opposes recent findings from author Zendjidjian and his colleagues (2012) suggesting that living in the same household as the ill person, rather than the severity of their illness, has the greatest impact on the caregiver’s quality of life. The key difference between the two studies may again be due to the contributing factor of race/ethnicity.

Canonical Function 3 is logical in every respect except for the strong contribution that maladaptive coping makes. The presence of this variable here contradicts everything that has been previously stated about the impact of maladaptive coping. Maladaptive coping styles include the use of behaviors like substance abuse and avoidance of the situation. This researcher estimates that, in this particular set of circumstances, the use of these behaviors, especially avoidance, helps promote greater physical and environmental health. There may be times when escape is the healthiest option.

Research question four examined which factors influence resilience. From the regression analysis we learn that an increase in perceived stress leads to a decrease in resilience for the current sample of young adult caregivers. This finding is consistent with previous research on caregivers and young adults.

Author Laura L. Carstensen and her colleagues (2000) explored the frequency, intensity, complexity, and consistency of day-to-day emotional experience across the
adult lifespan. The authors surveyed 184 people, age 18 to 94, asking them to report their emotions over a one week period. They discovered that older adults age 65-94 are more emotionally stable than their younger counterparts age 18-34 and 35-64. Not only do older adults have longer lasting periods of positive emotion, they report less frequent, less enduring negative emotions. The youngest cohort age 18-34 was the least emotionally stable. If emotional stability is a stand-in for resilience, then older adults are more resilient in the face of day-to-day stressors than are young adults.

Authors Wilks and Croom (2008) examined the impact of social support on the perceived stress and resilience of Alzheimer’s caregivers. They surveyed 229 caregivers finding that perceived stress influenced and accounted for most of the variability in resilience. More specifically, an increase in the caregiver’s perceived stress led to a decrease in their resilience. Social support had a positive impact on their resilience.

In comparing the current sample’s resilience scores to those of other samples, we find that the current sample reports lower levels of resilience than all others, except those samples experiencing post-traumatic stress disorder. This makes sense in light of the observed negative relationship between perceived stress and resilience. It further makes sense when you recall the high levels of perceived stress reported by these young adult caregivers.

The results for the 10-item Connor-Davidson Resilience Scale were reported above. However, the results of the original 25-item Connor-Davidson Resilience Scale are useful here. Authors Connor and Davidson (2003) tested the psychometric properties of the 25-item CD-RISC. They drew subjects from six groups: Group 1) the
general population (n=577); Group 2) primary care outpatients (n=139); Group 3) psychiatric outpatients in private practice (n= 43); Group 4) subjects in a study of generalized anxiety disorder (n=25); and two groups of subjects in clinical trials of post-traumatic stress disorder (Group 5, n=22; Group 6, n=22). Some demographic data was missing but Groups 1-5 reported a mean age of 43.8. The samples reported mean CD-RISC scores of 80.49 (SD 12.8), 71.8 (18.4), 68.0 (15.3), 62.4 (10.7), 47.8 (19.5), and 52.8 (20.4), respectively. By taking the quotient of the mean and the number of items on the scale, we can determine the average item-level score. Groups 1-4 had item-level scores of 3.22, 2.87, 2.72, and 2.50, respectively. Both PTSD groups had item-level scores of 1.91 and 2.11 respectively.

Contrast this data with the CD-RISC scores of the current sample. The current sample reported a CD-RISC score of 24.51 (SD 6.88). This translates to an item-level score of 2.45, indicating a moderate level of resilience. Groups 1-4 had higher resilience scores than this, while the two PTSD groups had lower resilience scores. PTSD is the body’s response to severe emotional trauma. That the current young adult caregivers scored higher only than this group affirms the negative relationship between perceived stress and resilience.

Connecting all the findings from the current study, it seems that higher perceived stress leads to adverse outcomes (i.e., ineffective coping strategies, lower overall quality of life, and lower resilience) for these young adult caregivers. It further seems that an increase in resilience leads to beneficial outcomes, (i.e., improved physical health, social relationships, environment and overall quality of life) for these
young adult caregivers. These are important points to remember when developing interventions for this population.

**Implications for Research and Practice**

Prior to conducting this study, the variables coping style, perceived stress, quality of life, resilience, race, SES, support group participation, and living in the same household had not been examined together for young adults who care for their severely mentally ill mothers. These variables also had not been examined together in connection with young adult development. To that end, the results obtained from this study add a great deal to the meager existing knowledge base on young adult caregivers. The obtained results have important implications for future research and practice.

First, and foremost, more supportive services should be created for families of the mentally ill. Best practices indicate that these services should "be flexible in meeting the needs of the family" and in doing so should consider the unique needs of the caregivers (Dixon et al., 2001, p. 904). Given that young adult caregivers perceive inordinately high level of stress, supportive services should be designed to identify and mitigate specific sources of stress for the individual caregiver.

There is strong evidence that family-centered support services improve outcomes for families and mental health consumers. Families have noted: enhanced morale; better knowledge of mental illness; restored feelings of empowerment; and reduced worry and displeasure over their loved ones. Documented improvements for
consumers include: reduced relapse and admission rates; increased participation in therapy; and increased adherence to medications (see Dixon et al., 2001). A chief by-product of these improvements is reduced health care costs. As a general rule, however, organizations are more concerned with immediate costs than long-term savings. It is imperative that the barriers to the implementation of family-centered support services be addressed at the policy level.

A second implication of this research is related to the findings for support group participation. Both support group participation and an emotion-focused coping style were found to decrease perceived stress for these young adult caregivers. Furthermore, a full 80 of the study’s 84 participants belong to a support group, and of these, 73 belong to an online support group. These findings for support group participation confirm that more such groups should be developed to provide relief for young adult caregivers. Moreover, these findings offer proof of the efficacy of online support groups in general.

Given the strong finding for support group participation, additional statistical analyses were conducted to check for the possibility of multicollinearity. Multicollinearity is defined as “the degree to which any variable’s effect can be predicted or accounted for by the other variables in the analysis” (Hair, Anderson, Tatham & Black, 1998, p. 24). As this phenomenon increases, the researcher’s ability to define the unique effects of each variable decreases. No multicollinearity was found for the variable support group participation; this variable makes a strong and unique contribution to the current study.
A third implication is related to the homogeneity of the obtained sample. The population studied here can aptly be considered ‘hard-to-reach’. Despite efforts to obtain a sample that represents the diversity of the national population, there was very little racial or gender diversity in the study. Also, the obtained sample was similar in its heavy use of support groups. It is quite possible, given their tendency to seek social support via support groups, that the obtained sample is far more help-seeking than the actual population of young adult caregivers; further study needs is required to understand the prevalence and personal characteristics of young adults who care for their severely mentally ill mothers.

Stigma may be another reason for the lack of representativeness in the obtained sample. A recent study investigated the impact of “stigma by association” on 23 immediate family members of persons with mental illness (i.e., van der Sanden, Stutterheim, Pryor, Kok, and Bos, 2014, p710). Following a series of semi-structured interviews, the researchers uncovered that family members experience social rejection, blame, and dismissal in the form of having their concerns cast aside. Stigma can make family members reluctant to participate in activities that require disclosure of the mental illness (Larson & Corrigan, 2008). The participants in the obtained sample may be closer to overcoming their experiences of stigma than non-participants. The participants in the obtained sample may be more willing to share their experiences of family mental illness with outsiders, as indicated by their heavy use of support groups.

A fourth implication is the idea that more information is needed about the role of family in the lives of young adult caregivers. There is reason to believe that support
groups serve as a surrogate or extended family for individuals in the obtained sample. Little information exists on the kinship networks of young adult caregivers. Historically racial/ethnic minorities have larger and more emotionally-close kinship ties than Whites (e.g., Bastida, 2001; Hall, 2007). This fact alone might be a reason why Whites are more prone to join support groups than are racial/ethnic minorities; they may be seeking social support that they lack within their family of origin.

Within nuclear families, mothers typically serve as the primary caregivers of their children. Authors DiGirolamo and Salgado de Snyder (2008) assert about Mexican culture that:

The universal role of woman as primary caregiver and reproductive agent establishes that she becomes the support and guide of the family. In Mexican society, a woman is her husband’s sexual and social partner, the mother or grandmother who cares and nurtures her children and grandchildren, socialization agent, educator, and main person responsible for transmitting the cultural and social values with which she was raised. She is responsible for the reproduction of the species, the social family system and the family’s property, as well as the health and well-being of her husband and family.

Mothers in American society maintain a similar, albeit less highly valued, role within the nuclear family (Ridgeway & Correll, 2004). Thus, young adults who care for their severely mentally ill mothers likely experience a sense of role-reversal in that they must care for their caregivers.
A fifth implication of this research is related to the findings for problem-focused and maladaptive coping style. While the ineffectiveness of these coping styles is logical in the current context, it was unexpected that they would have such a strong relationship with perceived stress for these young adult caregivers. More research is recommended to better understand this relationship when the population in question is already facing chronic stress. For instance: is the enactment of these coping styles indicative of acute stress or crisis? Is the acute stress or crisis related to the care recipient’s illness or to an event in the caregiver’s own life? Are there ways to prepare for these crises in times of peace as a means to prevent what may likely become a cycle of increased stress? On the whole, these findings indicate a need to better understand the impact of acute stress on each of the study’s variables.

A final implication of this research is related to the findings for resilience and quality of life. It was discovered that an increase in resilience leads to an increase in quality of life for these young adult caregivers. It stands to reason then that mental health professionals should do more to help these caregivers shore up their resilience. By the same token additional research with these variables would reveal the specific strengths that young adult caregivers have developed in the face of their hardships.

Limitations

A discussion of limitations begins with the unfortunate omission of 2 questions from the Brief COPE Questionnaire and the necessity of having to omit Psychological QOL from the analyses. The researcher made up for the omission of the 2 questions by
weighting the remaining items in that category (i.e., emotion-focused coping style) more heavily to account for the missing data. There was no way to compensate for the loss of Psychological QOL. It helps that in both surveys, the Brief COPE and the WHO-QOL, each coping style or domain is scored and understood apart from the whole.

Other limitations are related to the study design. The obtained sample was less than ideal because it was too small and homogenous. The ideal sample would have included about 140 people; this equates to 10 individuals per variable, as is recommended in correlational research (Hair, Anderson, Tatham & Black, 1998). Also, the obtained sample consists primarily of White, middle to upper class females. In contrast, the ideal sample would have been more diverse across gender, socioeconomic status, and race. It is recommended that future research include a larger sample in order to enhance generalizability. Likewise, a more diverse sample would be more representative of the general population.

Recruitment issues may have served to limit the sample. Substantial efforts were made to produce a sample rich with racial diversity. However, Blacks and other minority groups are historically reluctant to participate in research (Freimuth, Quinn, Thomas, Cole, Zook, & Duncan, 2001; The North American Primary Care Research Group, 2012). This is due in part to previous exploitation of these groups by researchers and government institutions. A great deal of recruitment took place online. The heavy use of social media was meant to increase the visibility of the study and improve word-of-mouth. Nevertheless, individuals of lower SES tend to have limited access to the
Internet (Rainie & Cohn, 2014). This may account for the relatively high SES of the obtained sample.

The independent variable SES was only found to influence the environmental health domain of quality of life. This singular finding is surprising given previous evidence that SES impacts the entire caregiving experience (see Bruhn & Rebach, 2014). This may be due to unknown elements of the sample or issues related to study design. This may also be due to the relatively high SES of the obtained sample. The impact of their SES on the other study variables may be obstructed.

Additional limitations are related to questions left unanswered by this research study. Such questions include: the specific extent and types of care provided by the caregivers; the caregiver’s specific stressors; the exact diagnoses and severity of illness of the care recipients; and what strengths the caregivers have developed in response to their mother’s illness. All of the limitations mentioned in this section indicate that more work is required to better understand the experiences of young adult caregivers.

Conclusion

In conclusion, the present study supports the idea that the variables coping style, perceived stress, quality of life, resilience, race, SES, support group participation, and living in the same household as their mother impact both psychological and social well-being for young adults caring for severely mentally ill mothers. There were significant findings for each of the research questions posed by this study. This fact alone speaks to the salience of these variables in the actual day-to-day lives of these
caregivers. Critical to improved outcomes are resources that take into account the
caregiver’s developmental stage. This study represents an important step toward
understanding the unique needs of young adult caregivers.
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Appendix A

Quality of Life Diagram
### World Health Organization’s Quality of Life Diagram

<table>
<thead>
<tr>
<th>Life Domain</th>
<th>Facets Incorporated within Domains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Health</td>
<td>Activities of daily living&lt;br&gt;Dependence on medicinal substances and medical aids&lt;br&gt;Energy and fatigue&lt;br&gt;Mobility&lt;br&gt;Pain and discomfort&lt;br&gt;Sleep and rest&lt;br&gt;Work capacity</td>
</tr>
<tr>
<td>Psychological Health</td>
<td>Bodily image and appearance&lt;br&gt;Negative feelings&lt;br&gt;Positive feelings&lt;br&gt;Self-esteem&lt;br&gt;Spirituality/Religion/Personal beliefs&lt;br&gt;Thinking, learning, memory and concentration</td>
</tr>
<tr>
<td>Social Relationships</td>
<td>Personal relationships&lt;br&gt;Social support&lt;br&gt;Sexual activity</td>
</tr>
<tr>
<td>Environment</td>
<td>Financial resources&lt;br&gt;Freedom, physical safety and security&lt;br&gt;Health and social care: accessibility and quality&lt;br&gt;Home environment&lt;br&gt;Opportunities for acquiring new information and new skills&lt;br&gt;Participation in and opportunities for recreation /leisure activities&lt;br&gt;Physical environment (pollution/noise/traffic/climate)&lt;br&gt;Transportation</td>
</tr>
</tbody>
</table>
Appendix B

Online Posting
APPENDIX B: Online Posting

The following announcement was posted on Craigslist and Facebook, as well as two national websites.

RESEARCH STUDY ON YOUNG ADULTS WHO CARE FOR SEVERELY MENTALLY ILL MOTHERS

Sponsored by: Western Michigan University

The study will examine how young adults handle caring for their mother’s ongoing mental health needs. Participation in the online survey will take about 30 minutes.

To participate you must:

○ Be between the ages of 18 and 30

○ Have a living, biological mother who:

- has a mental health issue (‘chronic nervios’) that causes problems with the way she thinks and/or behaves

- has a mental health issue (‘chronic nervios’) that gets in the way of life’s ordinary demands and routines

- has had this issue for at least one year

- does not abuse drugs or alcohol

○ Provide support of any kind to your mother

○ You and your mom have permanent US residency

Participants who complete the survey will receive will be entered to win one of four $50 Amazon.com electronic gift cards.

To access the study, please visit:
https://www.facebook.com/yngadult22
Appendix C

Email to Department Heads and Students
Dear Department Head or whom this may concern:

My name is Courtney Deloney, MSW, and I am a Counseling Psychology doctoral student at Western Michigan University. I am collecting data for my dissertation about young adults who care for their mother’s ongoing mental health needs. The information gathered will be critical to improving services for young adult caregivers. I would greatly appreciate it if you would forward the message below to your student body. I greatly appreciate your time and support with my data collection efforts.

________________________________________________________________________

Dear Potential Participants:

My name is Courtney Deloney, MSW, and I am a Counseling Psychology doctoral student at Western Michigan University. I am collecting data for my dissertation about young adults who care for their mother’s ongoing mental health needs.

In order to participate, you must meet ALL of the following requirements:

○ Be between the ages of 18 and 30
○ Have a living, biological mother who:
    - has a mental health issue (chronic nervios) that causes problems with the way she thinks and/or behaves
    - has a mental health issue (chronic nervios) that gets in the way of life’s ordinary demands and routines
    - has had this issue for at least one year
    - does not abuse drugs or alcohol
○ Provide support of any kind to your mother
○ You and your mom have permanent US residency

Participation involves completion of an online survey that should take approximately 30 minutes to complete. Study participation is entirely voluntary and confidential. Participants have the right to withdraw their participation at any time. Participants who complete the survey, and provide a valid email address, will be entered to win one of four $50 Amazon.com electronic gift cards.
If you are interested in participating in this study, please visit: www.facebook.com/ynadult22. This link will take you to the consent form and on-line survey.

Thank you very much for your time and assistance! If you have any questions or concerns, please contact me by email or you may contact my dissertation chair.

Respectfully,

Courtney

Principal Investigator:

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Kalamazoo, MI 49008
Courtney.g.deloney@wmich.edu

Dissertation Chair:

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Co-training director
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Kalamazoo, Michigan 49008-5226
Lonnie.duncan@wmich.edu
269-387-5100
Appendix D

Informational Recruitment Flyer
APPENDIX D: Informational Recruitment Flyer

Volunteers Needed for Research Study on Young Adults and their Mothers

Description of Project: The study will examine how young adults handle caring for their mother’s ongoing mental health needs. Participation in the online survey will take about 30 minutes.

To participate you must:

- Be between the ages of 18 and 30
- Have a living, biological mother who:
  - has a mental health issue (‘chronic nervios’) that causes problems with the way she thinks and/or behaves
  - has a mental health issue (‘chronic nervios’) that gets in the way of life’s ordinary demands and routines
  - has had this issue for at least one year
  - does not abuse drugs or alcohol
- Provide support of any kind to your mother
- You and your mom have permanent US residency

Complete the survey and be entered to win a $50 Amazon.com gift card

To access the study, please visit: www.facebook.com/yngadult22

This research is being conducted by PhD student Courtney Deloney under the direction of Dr. Patrick Munley at Western Michigan University. It has been reviewed and approved by the WMU Institutional Review Board. If you have any questions you can reach Courtney at 317-363-4506 or courtney.g.deloney@wmich.edu.
Appendix E

Demographic Questionnaire
APPENDIX E: Demographic Questionnaire

Please provide the following information:

1. What is your age? _______

2. What is your gender?
   a. Male
   b. Female

3. How do you describe your race?
   a. American Indian/Native Alaskan
   b. Native Hawaiian/Pacific Islander
   c. Asian
   d. Black/African American
   e. White
   f. Two or more races

4. In what city and state do you live?

5. In what city and state does your mother live?

6. Are you a permanent resident of the United States?
   a. Yes
   b. No

7. Is your mother a permanent resident of the United States?
   a. Yes
   b. No

8. Is your mother living or deceased?
   a. Yes, she is living
   b. No, she is deceased

9. In the last 12 months, how did you most frequently interact with your mother?
   a. In-person/face-to-face
   b. Via telephone
   c. Via Internet
   d. Via regular mail
   e. No contact within the last year

10. Do you live in the same household as your mother?
    a. Yes
    b. No
11. Does your mother abuse drugs or alcohol?
   a. Yes
   b. No

12. Either online or in-person, are you a member of a family support group?
   a. Yes, online
   b. Yes, in-person
   c. Yes, both
   d. No

13. Does your mother have a mental health issue (‘chronic nervios’) that causes problems with the way she thinks and/or behaves? (For example: suspiciousness, hostility, experiences things that aren’t there, believes she has special abilities, etc.)
   a. Yes
   b. No

14. Does your mother have a mental health issue (‘chronic nervios’) that makes it hard for her to deal with life’s ordinary demands and routines? (For example: caring for herself, social functioning, employment, requires ongoing medical or therapeutic intervention, etc.)
   a. Yes
   b. No

15. Has your mother had this illness for at least one year?
   a. Yes
   b. No

16. Please consider your responses to the previous questions. Have you been referring to your biological mother?
   a. Yes
   b. No
Appendix F

The Barratt Simplified Measure of Social Status (BSMSS)
APPENDIX F: The Barratt Simplified Measure of Social Status (BSMSS)

Please choose your Mother’s, your Father’s, your Spouse/Partner’s, and your own level of school completed.

- If you grew up in a single parent home, choose only the score from your one parent.
- If you are neither married nor partnered choose only your score.
- If you are a full-time student choose only the scores for your parents.

<table>
<thead>
<tr>
<th></th>
<th>Less than 7th grade</th>
<th>Junior high/middle school (9th grade)</th>
<th>Partial high School (10th or 11th grade)</th>
<th>High school graduate</th>
<th>Partial college (at least one year)</th>
<th>College education</th>
<th>Graduate degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Father</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Spouse/Partner</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<td>6</td>
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<tr>
<td>You</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

Please choose your Mother’s, your Father’s, your Spouse/Partner’s, and your own occupation.

- If you grew up in a single parent home, choose only the score from your one parent.
- If you are neither married nor partnered choose only your score.
- If you are a full-time student choose only the scores for your parents.

<table>
<thead>
<tr>
<th></th>
<th>Day laborer, janitor, house cleaner, farm worker, food counter sales, food preparation, busboy</th>
<th>Garbage collector, short order cook, cab driver, shoe sales, assembly line workers, masons, baggage porter</th>
<th>Painter, skilled construction trade, sales clerk, truck driver, cook, sales counter general office clerk</th>
<th>Automobile mechanic, typist, locksmith, farmer, carpenter, receptionist, construction laborer, hairdresser</th>
<th>Machinist, musician, bookkeeper, secretary, insurance sales, cabinet maker, personnel specialist, welder</th>
<th>Supervisor, librarian, aircraft mechanic, artist and artisan, policeman, fire personnel, military enlisted personnel, buyer</th>
<th>Nurse, skilled technician, medical technician, counselor, manager, police and fire personnel, financial manager, physical, occupational, speech therapist</th>
<th>Mechanical, nuclear, and electrical engineer, educational administrator, veterinarian, military officer, elementary, high school and special education teacher</th>
<th>Physician, attorney, professor, chemical and aerospace engineer, judge, CEO, senior manager, public official, psychologist, pharmacist, accountant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Father</td>
<td>0</td>
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<tr>
<td>Spouse/Partner</td>
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<td>5</td>
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<tr>
<td>You</td>
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<td>6</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>
Appendix G

The Brief COPE
APPENDIX G: The Brief COPE

Please consider the last 12 months and your mother’s illness and choose how much or how frequently you do each of these things. Don’t answer on the basis of whether these things seem to be working or not- just whether or not you’re doing them. Try to rate each item separately in your mind.

1 I've been turning to work or other activities to take my mind off things.
   □ I haven’t been doing this at all
   □ I've been doing this a little bit
   □ I've been doing this a medium amount
   □ I've been doing this a lot

2 I've been concentrating my efforts on doing something about the situation I'm in.
   □ I haven't been doing this at all
   □ I've been doing this a little bit
   □ I've been doing this a medium amount
   □ I've been doing this a lot

3 I've been saying to myself "this isn't real."
   □ I haven't been doing this at all
   □ I've been doing this a little bit
   □ I've been doing this a medium amount
   □ I've been doing this a lot

4 I've been using alcohol or other drugs to make myself feel better.
   □ I haven't been doing this at all
   □ I've been doing this a little bit
   □ I've been doing this a medium amount
   □ I've been doing this a lot
5 I've been getting emotional support from others.
- I haven't been doing this at all
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

6 I've been giving up trying to deal with it.
- I haven't been doing this at all
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

7 I've been taking action to try to make the situation better.
- I haven't been doing this at all
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

8 I've been refusing to believe that it has happened.
- I haven't been doing this at all
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

9 I've been saying things to let my unpleasant feelings escape.
- I haven't been doing this at all
- I've been doing this a little bit
- I've been doing this a medium amount
I've been doing this a lot

10 I've been getting help and advice from other people.
I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

11 I've been using alcohol or other drugs to help me get through it.
I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

12 I've been trying to see it in a different light, to make it seem more positive.
I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

13 I've been criticizing myself.
I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

14 I've been trying to come up with a strategy about what to do.
I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

15 I've been getting comfort and understanding from someone.

I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

16 I've been giving up the attempt to cope.

I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

17 I've been looking for something good in what is happening.

I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

18 I've been making jokes about it.

I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

19 I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.

I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

20 I've been accepting the reality of the fact that it has happened.
I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

21 I've been expressing my negative feelings.
I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

22. I've been trying to find comfort in my religion or spiritual beliefs
I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

23 I've been trying to get advice or help from other people about what to do
I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

24 I've been learning to live with it
I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

25 I've been thinking hard about what steps to take
I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

26 I've been blaming myself for things that happened
I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

27 I've been praying or meditating
I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

28 I've been making fun of the situation.
I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot
Appendix H

The Perceived Stress Scale
APPENDIX H: The Perceived Stress Scale

Please consider the last 12 months and your mother’s illness and choose how much or how frequently you have experienced each of these things. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. Try to answer each question fairly quickly. Your first answer is usually the best.

1. How often have you been upset because of something that happened unexpectedly?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Fairly Often</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

2. How often have you felt that you were unable to control the important things in your life?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Fairly Often</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

3. How often have you felt nervous and "stressed"?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Fairly Often</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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</tbody>
</table>

4. How often have you dealt successfully with irritating life hassles?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Fairly Often</th>
<th>Very Often</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

5. How often have you felt that you were effectively coping with important changes that were occurring in your life?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Fairly Often</th>
<th>Very Often</th>
</tr>
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<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
6. How often have you felt confident about your ability to handle your personal problems?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Fairly Often</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

7. How often have you felt that things were going your way?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Fairly Often</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

8. How often have you found that you could not cope with all the things that you had to do?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Fairly Often</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

9. How often have you been able to control irritations in your life?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Fairly Often</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

10. How often have you felt that you were on top of things?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Fairly Often</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

11. How often have you been angered because of things that happened that were outside of your control?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Fairly Often</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

12. How often have you found yourself thinking about things that you have to accomplish?
13. How often have you been able to control the way you spend your time?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Fairly Often</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

14. How often have you felt difficulties were piling up so high that you could not overcome them?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Fairly Often</th>
<th>Very Often</th>
</tr>
</thead>
</table>
Appendix I

World Health Organization’s Quality of Life Assessment—Short Form
APPENDIX I: World Health Organization’s Quality of Life Assessment—Short Form

Please consider the last 12 months and your mother’s illness and choose the answer that seems most appropriate. Try to answer each question fairly quickly. Your first answer is usually the best.

<table>
<thead>
<tr>
<th></th>
<th>Very poor</th>
<th>Poor</th>
<th>Neither good nor poor</th>
<th>Good</th>
<th>Very good</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>How would you rate your quality of life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Very dissatisfied</th>
<th>Dissatisfied</th>
<th>Neither satisfied nor dissatisfied</th>
<th>Satisfied</th>
<th>Very satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>How satisfied are you with your health?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>A moderate amount</th>
<th>Very much</th>
<th>An extreme amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>To what extent do you feel that physical pain prevents you from doing what you need to do?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>How much do you need any medical treatment to function in your daily life?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>5</td>
<td>How much do you enjoy life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>To what extent do you feel your life to be meaningful?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>How well are you able to concentrate?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>How safe do you feel in your daily life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>How healthy is your physical environment?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not at all</td>
<td>A little</td>
<td>Moderately</td>
<td>Mostly</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------------------------------------------</td>
<td>------------</td>
<td>----------</td>
<td>------------</td>
<td>--------</td>
</tr>
<tr>
<td>10</td>
<td>Do you have enough energy for everyday life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>Are you able to accept your bodily appearance?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>Have you enough money to meet your needs?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>How available to you is the information that you need in your day-to-day life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>To what extent do you have the opportunity for leisure activities?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>How well are you able to get around?</td>
<td>Very poor</td>
<td>Dissatisfied</td>
<td>Neither satisfied nor dissatisfied</td>
<td>Good</td>
</tr>
<tr>
<td>Question</td>
<td>Very dissatisfied</td>
<td>Dissatisfied</td>
<td>Neither satisfied nor dissatisfied</td>
<td>Satisfied</td>
<td>Very satisfied</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>-------------------</td>
<td>--------------</td>
<td>-----------------------------------</td>
<td>-----------</td>
<td>----------------</td>
</tr>
<tr>
<td>16 How satisfied are you with your sleep?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17 How satisfied are you with your ability to perform your daily living activities?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18 How satisfied are you with your capacity for work?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19 How satisfied are you with yourself?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20 How satisfied are you with your personal relationships?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>21 How satisfied are you with your sex life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>22 How satisfied are you with the support you get from your friends?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>23 How satisfied are</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>How satisfied are you with the conditions of your living place?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How satisfied are you with your access to health services?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How satisfied are you with your transport?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How often do you have negative feelings such as blue mood, despair, anxiety, depression?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
Appendix J

Content of the Connor-Davidson Resilience Scale (CD-RISC)
APPENDIX J: Content of the Connor-Davidson Resilience Scale (CD-RISC)

<table>
<thead>
<tr>
<th>Item #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1*</td>
<td>Able to adapt to change</td>
</tr>
<tr>
<td>2</td>
<td>Close and secure relationships</td>
</tr>
<tr>
<td>3</td>
<td>Sometimes fate or God can help</td>
</tr>
<tr>
<td>4*</td>
<td>Can deal with whatever comes</td>
</tr>
<tr>
<td>5</td>
<td>Past success gives confidence for new challenge</td>
</tr>
<tr>
<td>6*</td>
<td>See the humorous side of things</td>
</tr>
<tr>
<td>7*</td>
<td>Coping with stress strengthens</td>
</tr>
<tr>
<td>8*</td>
<td>Tend to bounce back after illness or hardship</td>
</tr>
<tr>
<td>9</td>
<td>Things happen for a reason</td>
</tr>
<tr>
<td>10</td>
<td>Best effort no matter what</td>
</tr>
<tr>
<td>11*</td>
<td>You can achieve your goals</td>
</tr>
<tr>
<td>12</td>
<td>When things look hopeless, I don’t give up</td>
</tr>
<tr>
<td>13</td>
<td>Know where to turn for help</td>
</tr>
<tr>
<td>14*</td>
<td>Under pressure, focus and think clearly</td>
</tr>
<tr>
<td>15</td>
<td>Prefer to take the lead in problem solving</td>
</tr>
<tr>
<td>16*</td>
<td>Not easily discouraged by failure</td>
</tr>
<tr>
<td>17*</td>
<td>Think of self as strong person</td>
</tr>
<tr>
<td>18</td>
<td>Make unpopular or difficult decisions</td>
</tr>
<tr>
<td>19*</td>
<td>Can handle unpleasant feelings</td>
</tr>
<tr>
<td>20</td>
<td>Have to act on a hunch</td>
</tr>
<tr>
<td>21</td>
<td>Strong sense of purpose</td>
</tr>
<tr>
<td>22</td>
<td>In control of your life</td>
</tr>
<tr>
<td>23</td>
<td>I like challenges</td>
</tr>
<tr>
<td>24</td>
<td>You work to attain your goals</td>
</tr>
<tr>
<td>25</td>
<td>Pride in your achievements</td>
</tr>
</tbody>
</table>


*Items 1, 4, 6, 7, 8, 11, 14, 16, 17, and 19 comprise the CD-RISC10.*

This table represents an abridged form of the scale, and will not be used in place of the CD-RISC. The CD-RISC is copyrighted and permission has been obtained for its use.
Appendix K

Correspondence with WHO Group
Dear Ms. Deloney,

After filling out the user agreement on this page:
http://depts.washington.edu/seaqol/WHOQOL-BREF you will be free to use the WHOQOL-BREF at no cost for your study which you can download from the same page. Please be sure to fill out another user agreement should you choose to use this instrument for another study. (Please note that scoring is calibrated for the evaluation of groups as a whole, not individuals.)

Best regards,

Karen Wennerstrom, MA
Program Coordinator
University of Washington
Seattle Quality of Life Group
Department of Health Services
Appendix L

Permission for CD-RISC
Dear Courtney:

Thank you for your inquiry. We appreciate your interest in the CD-RISC, which we would be very pleased to provide for your dissertation project. A proposed agreement is enclosed. If you find it acceptable, perhaps you could sign and return it to me, as well as make arrangements for payment of the user fee. Once that is done, we can send the scale and manual right away.

With best wishes,

Jonathan Davidson
Appendix M

Consent Agreement
APPENDIX M: Consent Form

CONSENT AGREEMENT

Western Michigan University
Counselor Education and Counseling Psychology

Principal Investigator: Dr. Patrick Munley
Co-Principal Investigator: Julia Scott, Program Lead, Office of Information Technology
Student Investigator: Courtney Deloney, MSW, PhD Candidate
Institution: Western Michigan University

Title of Study: Psychological and Social Variables Impacting Young Adults Caring for Severely Mentally Ill Mothers

Introduction

You are being asked to volunteer in a research study. Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. Please take the time to read the following information carefully. Please contact the researchers if there is anything that is not clear or if you need more information.

This study will fulfill the requirements for a PhD in Counseling Psychology for the student investigator.

Purpose of the Research

Previous research has shown that caring for a sick loved-one greatly impacts the caregiver’s own life. The purpose of this study is to explore how young adults are impacted by providing care to their severely mentally ill (SMI) mothers. (Some call SMI ‘chronic nervios’). We want to know more about your coping strategies, stressors, quality of life, and personal strengths. The information you provide will increase our knowledge in these important areas.

Who Can Participate

In order to participate you must meet all requirements. You must have a living, biological mother who has a severe mental illness. This mental illness must cause problems with the way your mother thinks and/or behaves. Also, this illness must make it hard for her to deal with life’s ordinary demands and routines. Also, your mother must have had this illness for at least one
year and she must not abuse drugs or alcohol. Finally, both you and your mother must be permanent residents of the United States. There are no other exclusions. We welcome volunteers from all genders and diverse cultural backgrounds.

**Location of the Study**

This study is being conducted through Western Michigan University. However, the survey is located online.

**Time Commitment**

The survey will take about 30 minutes to complete.

**What Will I Be Asked to Do**

If you agree to participate in this study, you will be asked to answer questions about yourself and your mother in reference to the recent past. Again, we want to know more about your coping strategies, stressors, quality of life, and personal strengths.

**Reward**

Participants who fully complete the survey and provide a valid email address will be entered to win one of four Amazon.com electronic gift cards. The chances of winning are greater than or equal to 1 in 30. Prize winners will be notified on or before September 1, 2014.

**Risks and Benefits of the Study**

There are minimal risks and no direct benefits of participating in this study.

If you experience stress or anxiety as you answer the questions you may withdraw at any time. However, please be aware that you will not be entered to win the $50.

**Voluntary Nature of the Study**

Your participation in this study is strictly voluntary. You may withdraw at any time. But again please be aware that you will not be entered to win the $50.

**Confidentiality**
The records of this study will be kept confidential. Electronic data will be maintained on a secure server at Western Michigan University. Documents will be kept in a locked file and only the researchers will have access them.

Your email address will be kept separate from the answers you provide. It will only be used to send the gift card. It will not be used to identify you in any way.

In the event that this research is published, only group results will be presented.

Questions

If you have any questions now or in the future, please contact the student investigator at 317-363-4506 or courtney.g.deloney@wmich.edu. The principal investigator, Dr Patrick Munley, can be contacted at 269-387-5100. You may also contact the Chair, Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298.

This study was approved by the Western Michigan University Human Subjects Institutional Review Board (HSIRB) on December 1, 2013. The study expires one year from this date.

Yes, I CONSENT and wish to continue.

No, I DO NOT CONSENT and wish to withdraw.
Appendix M

HSIRB Approval Letter
Appendix N: Human Subjects Institutional Review Board Approval

WESTERN MICHIGAN UNIVERSITY

Date: December 16, 2013

To: Lonnie Duncan, Principal Investigator
    Julie Scott, Co-Principal Investigator
    Courtney Deloney, Student Investigator for dissertation

From: Amy Naugle, Ph.D., Chair

Re: HSIRB Project Number 13-12-01

This letter will serve as confirmation that your research project titled “Psychological and Social Variables Impacting Young Adults Caring for Severely Mentally Ill Mothers” has been approved under the exempt category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note: This research may only be conducted exactly in the form it was approved. You must seek specific board approval for any changes in this project (e.g., you must request a post approval change to enroll subjects beyond the number stated in your application under “Number of subjects you want to complete the study.”) Failure to obtain approval for changes will result in a protocol deviation. In addition, if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

Reapproval of the project is required if it extends beyond the termination date stated below.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: December 16, 2014