This study compares the reports of 52 young adults with mothers with mental illness with reports of 64 young adults without mothers with mental illness. Young adults’ perceptions of their relationships with their mothers, as defined by self-reported levels of affection, felt obligation, role reversal, and reciprocity, were examined in association with young adults’ reports of caregiving for mothers and young adults’ self-reported psychological adjustment. For young adults who reported a mother with mental illness, the assessed aspects of the young adult-mother relationship were examined in association with young adults’ reports of personal growth.

Findings indicated that maternal mental health status (i.e., having a mother with mental illness nor not) moderates the association between felt obligation and young adults’ self-reported provision of caregiving for mothers. In general, for young adults who have a mother with mental illness, higher levels of felt obligation were associated with more caregiving for mothers. However, for young adults without mothers with mental illness there was no association between felt obligation and caregiving. Results also suggested that role reversal mediates association between having a mother with mental illness and psychological symptoms, such that having a mother with mental illness was associated with higher levels of role reversal, which in turn was associated with higher levels of psychological symptoms. Findings regarding self-reported personal growth in young adults who had mothers with mental illness indicated that none of the assessed young adult-mother relationship factors were associated with self-reported personal growth.
Findings are discussed in the context of a life course perspective that honors young adults’ current life course stage, illustrates how a family member’s mental illness can disrupt typical life course expectations, and highlights the association between disruptions to the life course and adverse psychological experiences. Implications for clinical and community practice as well as directions for future research are offered.
Dedicated to

Katie and Jessica

Two women whose experiences first taught me about maternal mental illness
ACKNOWLEDGMENTS

For me, the completion of this project serves as both a personal and professional accomplishment. I am grateful for those who have given of their time, energy, wisdom, and experience to ensure that this project could be its best. The person deserving the most thanks is undoubtedly my advisor and mentor, Dr. Catherine Stein. Dr. Stein’s encouragement, support, and guidance provided me the opportunity not only to undertake and complete this project, but to further develop my identity as a scientist. My dissertation committee members, Drs. Rob Carels, Mike Zickar, and Al DeMaris, also deserve thanks for challenging me and providing helpful suggestions, particularly with regard to statistical analyses.

I am particularly indebted to the young adults who participated in this research study. I am deeply appreciative of how personal it is to discuss mother-young adult relationships, particularly when a mother has mental illness. Special thanks to these young adults who were willing to share their perspectives.

Finally, to my family and friends- your support and encouragement have been invaluable. A special thanks to Kathleen Young, Jessica Hauser, and Erin Bonar, who have a personal understanding of what it means to complete a dissertation. Your opinions and listening ears are so important to me. To my husband, David Adler- you have been there from the beginning. Your support, kindness, and wit remind me of the importance of always taking my work seriously, but not taking myself (too) seriously.
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER I. INTRODUCTION AND LITERATURE REVIEW</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Families and Serious Mental Illness: A Life Course Perspective</td>
<td>2</td>
</tr>
<tr>
<td>Caregiving for a Family Member with Serious Mental Illness</td>
<td>5</td>
</tr>
<tr>
<td>The Perspective of Adult Children of People with Serious Mental Illness</td>
<td>9</td>
</tr>
<tr>
<td>Relationships between Mothers and Young Adult Children</td>
<td>14</td>
</tr>
<tr>
<td>When Mothers have a Serious Mental Illness: Psychological Well-being and Personal Growth</td>
<td>21</td>
</tr>
<tr>
<td>Summary</td>
<td>27</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHAPTER II. THE PRESENT STUDY</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>CHAPTER III. METHOD</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant Recruitment and Selection</td>
<td>34</td>
</tr>
<tr>
<td>Participants</td>
<td>35</td>
</tr>
<tr>
<td>Procedure</td>
<td>36</td>
</tr>
<tr>
<td>Measures</td>
<td>36</td>
</tr>
<tr>
<td>Maternal mental illness</td>
<td>36</td>
</tr>
<tr>
<td>Maternal substance abuse</td>
<td>38</td>
</tr>
<tr>
<td>Relationship reciprocity</td>
<td>38</td>
</tr>
<tr>
<td>Affection</td>
<td>38</td>
</tr>
<tr>
<td>Felt obligation</td>
<td>39</td>
</tr>
<tr>
<td>Parent-child role reversal</td>
<td>40</td>
</tr>
<tr>
<td>Current caregiving</td>
<td>40</td>
</tr>
</tbody>
</table>
APPENDIX D. MATERNAL MENTAL HEALTH STATUS ............................................ 101
APPENDIX E. PERCEPTION OF PARENTAL RECIPROCITY SCALE- MATERNAL VERSION ....................................................................................................... 102
APPENDIX F. POSITIVE AFFECT INDEX .............................................................................................................. 103
APPENDIX G. FELT OBLIGATION MEASURE ....................................................................................................... 104
APPENDIX H. PARENT-CHILD ROLE REVERSAL: RELATIONSHIP WITH PARENTS SCALE- MOTHER VERSION .............................................................................................................. 105
APPENDIX I. CURRENT CAREGIVING SCALE ....................................................................................................... 106
APPENDIX J. FUTURE CAREGIVING INTENTIONS ....................................................................................................... 107
APPENDIX K. SCHWARTZ OUTCOME SCALE- 10 ....................................................................................................... 108
APPENDIX L. STRESS RELATED PERSONAL GROWTH SCALE ....................................................................................................... 109
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Constructs and Measures Relevant to the Young Adult-Mother Relationship</td>
<td>110</td>
</tr>
<tr>
<td>2</td>
<td>Caregiving, Psychological Adjustment, and Personal Growth Constructs and Measures</td>
<td>111</td>
</tr>
<tr>
<td>3</td>
<td>Participants’ Demographic and Family Information</td>
<td>112</td>
</tr>
<tr>
<td>4</td>
<td>Young Adults’ Reports of Descriptive Information about Maternal Mental Illness</td>
<td>113</td>
</tr>
<tr>
<td>5</td>
<td>Constructs and Descriptive Statistics for Study Measures</td>
<td>114</td>
</tr>
<tr>
<td>6</td>
<td>Pearson Bivariate Correlation Matrix of Study Variables</td>
<td>115</td>
</tr>
<tr>
<td>7</td>
<td>Independent Samples t-tests: Differences on Study Measures as a Function of Maternal Mental Health Status</td>
<td>116</td>
</tr>
<tr>
<td>8</td>
<td>Pearson Bivariate Correlations among Study Variables as a Function of Maternal Mental Health Status</td>
<td>117</td>
</tr>
<tr>
<td>9</td>
<td>Hierarchical Regression Analyses Predicting Current Caregiving</td>
<td>118</td>
</tr>
<tr>
<td>10</td>
<td>Hierarchical Regression Analyses Predicting Future Caregiving Intentions</td>
<td>119</td>
</tr>
<tr>
<td>11</td>
<td>Hierarchical Regression Moderation Models Predicting Current and Future Caregiving Intentions as a Function of Maternal Mental Health Status</td>
<td>120</td>
</tr>
<tr>
<td>12</td>
<td>Indirect Effects of Maternal Mental Illness on Psychological Symptoms through Young Adult-Mother Relationship Factors</td>
<td>121</td>
</tr>
<tr>
<td>13</td>
<td>Full Hierarchical Regression Model Predicting Psychological Symptoms</td>
<td>122</td>
</tr>
<tr>
<td>14</td>
<td>Indirect Effects of Maternal Mental Illness on Psychological Well-being through Young Adult-Mother Relationship Factors</td>
<td>123</td>
</tr>
</tbody>
</table>
15 Full Hierarchical Regression Model Predicting Psychological Well-being .......... 124
16 Hierarchical Regression Predicting Personal Growth.................................. 125
<table>
<thead>
<tr>
<th>Figure</th>
<th>Hypothesized Mediation Model: The Role of Relationship Factors in the Association between Maternal Mental Illness and Psychological Adjustment</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hypothesized Mediation Model: The Role of Relationship Factors in the Association between Maternal Mental Illness and Psychological Adjustment</td>
<td>126</td>
</tr>
<tr>
<td>2</td>
<td>Mediator Model: Effect of Maternal Mental Illness on Psychological Symptoms through Relationship Factors</td>
<td>127</td>
</tr>
<tr>
<td>3</td>
<td>Mediator Model: Effect of Maternal Mental Illness on Psychological Well-being through Relationship Factors</td>
<td>128</td>
</tr>
</tbody>
</table>
CHAPTER 1. INTRODUCTION AND LITERATURE REVIEW

Approximately 5% of the adult population of the United States experiences a serious mental illness, such as schizophrenia, bipolar disorder, or major depression, in any given year (Kessler, Berglund, Zhao, Leaf, Kouzis, Bruce, Friedman et al., 1996). In the decades since the deinstitutionalization of people with serious mental illness, many advances in mental health care have been realized. However, fractures in the service delivery system lead family members to assume much responsibility for the practical care and emotional support of individuals with serious mental illness (Lefley, 1996).

Much research has indicated families are affected when one family member has a serious mental illness. For example, research suggests that well family members feel a sense of grief (Miller, Dworkin, Ward, & Barone, 1990), loss and sorrow (Marsh & Johnson, 1997), and social stigma (Hinshaw & Stier, 2008) related to their relatives’ mental illness. Moreover, family members who provide care to their loved one with mental illness can experience psychological symptoms (Noh & Turner, 1987), but also report positive experiences caring for and good relationships with their family member with serious mental illness (Szmukler, Burgess, Herman, Benson, Colusa, & Bloch, 1996). The vast majority of this family research has examined the experiences of parents (e.g., Kaufman, 1998), and to a lesser extent, well-siblings (e.g., Greenberg, Kim, & Greenley, 1997) of people with serious mental illness. Surprisingly, little empirical research has focused on understanding the caregiving or relationship experiences of young adult children of people with serious mental illness.

Demographic family research attests to the ongoing nature of relationships between adult children and their parents in the general population (Hogan, Eggebeen, & Clogg, 1993; Lye, 1996). Relationships between adult children and their mothers, in particular, tend to be
characterized by solidarity (Silverstein, Bengtson, & Lawton, 1997). Yet, little is known about relationships between adult children and their mothers with serious mental illness. In fact, most research on the young adult children of people with serious mental illness highlights these young adults’ poorer psychological adjustment relative to their peers whose parents do not have mental illness (e.g., Erlenmeyer-Kimling, Adamo, Rock, Roberts, Bassett, Squires-Wheeler, Cornblatt et al., 1997), but does not examine other aspects of their lives. Individuals’ ability to experience personal growth as a result of a stressful circumstance is well-documented (Helgeson, Reynolds, & Tomich, 2006). However, personal growth has not been systematically studied in samples of young adults who have mothers with mental illness.

The present research addresses these gaps in the literature by intentionally studying the young adult children of mothers with serious mental illness from a life course perspective. The present study compares the reports of young adults who have a mother with mental illness to those of young adults whose mothers do not have mental illness. Young adults’ perspectives on their relationship with their mothers were examined in association with their reports of psychological adjustment, current provision of caregiving for their mothers, and future caregiving intentions. In addition, for those who have a mother with mental illness, aspects of the young adult-mother relationship were examined in association with young adults’ experience of stress-related personal growth.

**Families and Serious Mental Illness: A Life Course Perspective**

Life course research has examined aspects of family life and family members’ experience when one person in the family system experiences a serious mental illness. In general, life course perspectives “[emphasize] the social creation of meanings concerning life transitions and individual (or family) development” (Bengtson & Allen, 1993, p. 471). From life course
perspectives, family members’ lives are considered interdependent (Elder, 1994; George, 2007) and individual outcomes are influenced by the family unit and family interactions (Antonucci, Jackson & Biggs, 2007). However, individuals are also considered to be active agents in shaping their environment (Elder, 1994; George, 2007).

Life course perspectives assume broader societal expectations as well as generational time within a given family unit impact development. Generational time is the social roles within families, such as parent, sibling, or child, and the expectations associated with each role (Price, McKenry, & Murphy, 2000). Tied to social roles is the concept of age-linked stages within the course of life, such as childhood, adolescence, young adulthood, adulthood, middle- and old-age (Neugarten & Moore, 1968; Neugarten, Moore, & Lowe, 1965). Role transitions refer to the normative, expectable changes that occur within any given stage of life. Within a family, each family member’s role transitions and trajectories, or expectable transitions from one life stage to another, influence the other family members (Cook, Cohler, Pickett, & Beeler, 1997; Kaufman & Uhlenberg, 1998). In short, life course perspectives posit that patterns of family interaction and adjustment, as well as individual behaviors and adjustment, are influenced by the interactive nature of broader societal norms and unique context of a given family.

Smith and Greenberg (2008) argue for using a life course perspective when researching families of people with serious mental illness because it acknowledges how “the lives of [family members] are linked across time” and “emphasizes the resiliency of individuals and their capacity to grow” (p. 2). Using a life course perspective to guide their inquiry, Smith and Greenberg examined the quality of relationships between people with schizophrenia and well-siblings. In their study of 141 well-siblings, the authors found that well-siblings’ reports of relationship quality with their sibling with mental illness were related growing up in a more
WHEN MOM HAS A SERIOUS MENTAL ILLNESS

does his activity lead to symptoms and loss of ability to function. In addition, poorer relationship quality was related to
well-siblings feeling fearful of their brother or sister with schizophrenia, well-siblings’
perception that their brother or sister did not have control over symptoms, and previous violence
toward the well-sibling by their brother or sister with schizophrenia. These results indicate how
family history and can play a role in the current quality of relationships between people with
serious mental illness and their family members. In addition, from a life course perspective, this
research demonstrates that family members of people with serious mental illness experience
personal gains, and that such gains are associated with family relationships.

Stein and Wemmerus (2001) also use a life course perspective to examine relationships
between people with serious mental illness and their family members. Using a qualitative
methodology, Stein and Wemmerus interviewed six people with serious mental illness, 12 of
their parents, and four well-siblings. Findings highlight how all family members experienced a
sense of loss associated with one family member having mental illness. Moreover, this sense of
loss was commonly felt in response to the person with mental illness being “off track” or “off
time” in terms of “normal life” social role accomplishments. For example, one mother with
mental illness described the difficulty in being unable to parent her two children adequately. Her
story highlights the sense of loss associated with an inability to fulfill her social role as a mother.
Similarly, family members expressed a sense of loss when the family member with mental
illness was unable to reach age-normative milestones such as completing education, maintaining
employment, and living independently. These findings suggest the personal well-being of family
members is tied, at least in part, to the social role accomplishments of the family member with
mental illness. Additionally, these families’ struggles underscore the ways that larger societal expectations play a role in how family members make sense of their experiences.

**Caregiving for a Family Member with Serious Mental Illness**

The literature on caregiving by family members for those with serious mental illness has primarily focused on caregiver burden. Reviews of recent caregiver burden literature indicate that relatives of people with serious mental illness express concern about their family member’s psychiatric symptoms (Ohaeri, 2003), and that higher levels of caregiver burden negatively impacted relatives’ mental health and overall quality of life (Schulze & Rossler, 2005). However, feelings of fulfillment, hopefulness, and satisfaction were also reported by those providing care for family members with serious mental illness (Ohaeri, 2003). In a review of earlier literature, Lefley (1996) also acknowledges feelings of both burden and reward in family members who provide care for their relatives with serious mental illness. These reviews are important because they provide awareness of the positive and negative impact of caregiving on family members. Other research has examined caregiving in the context of the relationships between people with serious mental illness and their family members.

Cook and colleagues (1997) argue for using a life course perspective when studying caregiving for people with serious mental illness. They note that individual family members’ role transitions and life trajectories may impact the provision of caregiving for people with serious mental illness, family members’ relationships, and each family member’s adjustment. Some studies have used elements of a life course perspective to examine caregiving for people with serious mental illness. However, the research in this vein is dominated by studies of well-siblings and parents of people with serious mental illness. Unfortunately, little is known about how adult children view their responsibilities regarding caregiving for their parents with mental
illness. A review of research on well-siblings’ provision of caregiving to their siblings with serious mental illness highlights aspects of family relationships that may be particularly relevant to the study of caregiving by adult children of people with serious mental illness.

Although not explicitly framed in a life course perspective, Jewell and Stein (2002) examined caregiving for people with serious mental illness in the context of family relationships. In a sample of 111 well-siblings, Jewell and Stein quantitatively examined how different aspects of family relationships predict caregiving toward a sibling with a serious mental illness. Results indicated aspects of the sibling relationship were collectively the best predictor of both current caregiving and future caregiving intentions. In fact, 37 percent of the total variance in current caregiving was predicted by the following aspects of the sibling relationship: the perceived need of the sibling with mental illness, affection toward the sibling with mental illness, and the level of perceived reciprocity in the relationship with the sibling with mental illness. These findings demonstrate that aspects of the sibling relationship, specifically those representing connectedness and mutual exchange in the relationship, meaningfully predict caregiving. Research is needed to understand if these qualities of connectedness and mutual exchange in adult child-parent relationships may also predict caregiving for parents with serious mental illness.

Findings from a study by Smith, Greenberg, and Selzer (2007) indicated that in addition to connectedness and mutual exchange, family members’ life course stage and historical aspects of family relationships also impact well-siblings’ provision of caregiving for people with serious mental illness. In their study of 137 well-siblings, results indicated intentions to provide future instrumental support to a sibling with serious mental illness was significantly predicted by several variables, including the well-sibling being married, the onset of the sibling’s mental illness while “growing up,” a higher degree of reciprocity in the sibling-sibling relationship,
greater personal gains as a result of having a sibling with mental illness, and living geographically closer to the sibling with mental illness. Intentions to provide future emotional support were predicted by the well-sibling being female, greater affection and greater reciprocity in the sibling-sibling relationship, a sense of personal gains from coping with the sibling’s mental illness, and living geographically closer to the sibling with mental illness. Similar results were also found by Greenberg, Seltzer, Orsmond and Krauss (1999) in a previous study of 61 well-siblings. Overall, these findings highlight how closeness and mutual exchange in the sibling relationship predict future caregiving intentions. In addition, these findings indicate the importance of appreciating the life course stages of family members when examining caregiving intentions in family members of people with serious mental illness. Research on the young adult children of people with serious mental illness that acknowledges the context of family members’ life course stages as well as historical aspects of family relationships may be helpful in understanding young adults’ intentions to care for parents.

In another caregiving study, Horwitz, Reinhard, and Howell-White (1996) examined the extent to which relationships between people with serious mental illness and their family members were mutually supportive. Sixty-six people with serious mental illness and at least one family member (a sibling and/or parent) were interviewed regarding their provision of care provided to one another. Results indicated the provision of support by the family member with serious mental illness significantly predicted 16% of the variance in support provided by the well family member above and beyond other factors, including gender and symptoms of person with serious mental illness, current living arrangements, the social role of the family member, and the number of other relatives in the sample. Along with previously reviewed studies (i.e., Jewell & Stein, 2002; Smith et al., 2007) these findings point to the ability of people with serious mental
illness to have reciprocal relationships with family members, and indicate importance of
examining the nature of exchange between people with serious mental illness and their family
members when considering caregiving. The extent to which adult children’s relationships with
parents with serious mental illness are characterized by reciprocity is unknown. Research is
needed to understand the level of reciprocity in this relationship and whether mutual exchange
may be associated with current caregiving and future caregiving intentions of adult children of
people with serious mental illness.

Overall, a life course framework shows promise in expanding research on caregiving for
people with serious mental illness, particularly in terms of examining caregiving in the context
and history of family relationships. However, adult children as caregivers of their parents with
serious mental illness have yet to be systematically examined. Some research has suggested
young adults do provide care for their parents with serious mental illness. For example, one
study indicated young adult children of people with serious mental illness report at some time in
their lives they provided care for their parent, took over homemaking activities, and gave up
work, student activities, or free time because of having a parent with serious mental illness
(Caton, Cournos, Felix, & Wyatt, 1998). Yet, the extent of the caregiving provided by these
young adults, their current provision of caregiving, and their intentions to care for their parents
with mental illness in the future were not examined. In addition, some research on caregiving for
people with serious mental illness has included samples of young adult children in addition to
samples of parents, siblings, and other relatives (e.g., Karp & Tanarugsachock, 2000; Moller,
Gudde, Folden, & Linaker, 2009; Tarricone, Leese, Szmukler, Bassi, & Berardi, 2006;
Zauszniewski, Bekhet, & Suresky, 2008). However, these studies do not examine caregiving
specifically provided by young adult children.
The absence of research on young adult children caregivers of parents with serious mental illness is quite surprising, given that people with mental illness may be at least as likely as people without serious mental illness to have children (Nicholson, Biebel, Hinden, Henry, & Stier, 2001). Scholars have noted the likelihood of well-siblings providing support for their relative with mental illness (Hatfield & Lefley, 2005; Reinhard & Horwitz, 1995), particularly once their parents are elderly or deceased (Horwitz, 1993). It also seems likely that young adults whose parents have serious mental illness would bear the responsibility for caregiving for their parents in the future, if not presently. Moreover, some have noted that children of women with serious mental illness “may be important social actors along with [other family members] available for practical assistance and support” (Cook et al., 1997, p. 429) because women with serious mental illness may be more likely than men to have children prior to the onset of their illness (Seltzer, Greenberg, Krauss, & Hong, 1997). Although the young adult children of people with serious mental illness are relatively absent from life course and caregiving research on serious mental illness, other research has examined the experiences of adult children of people with serious mental illness.

The Perspective of Adult Children of People with Serious Mental Illness

Most research on the young adult children of people with serious mental illness has focused on understanding these young adults’ personal perspectives and the unique challenges they face as a result of having a parent with serious mental illness. Caton et al (1998) interviewed 39 young adults whose parents experienced serious mental illness. Interviews focused on young adults’ experiences as children. Descriptive results indicated that 69% of participants recalled feeling embarrassed or frightened by their parents behavior as children. Moreover, 34% of participants reported their parent was verbally abusive. However, despite
these negative experiences 28% of participants indicated that their parent with serious mental illness was the most nurturing adult during their childhood and adolescence. Only grandparents were more commonly reported as the most significant nurturing adult (39% of participants reported this). With regard to young adults’ current relationships, 72% of participants indicated they “got along well or moderately well” with the person who played the role of the most significant adult in their childhood and that this individual currently provided them with both instrumental and emotional support. In addition, 39% of offspring were currently residing with their parent with serious mental illness. These findings indicate that even though children face difficulties due to parental mental illness, they may maintain connected to their parents with serious mental illness and may have close relationships with them in adulthood.

In a qualitative study, Dunn (1993) interviewed nine adult children whose mothers experienced psychosis about their experiences growing up. The themes identified in adult children’s retrospective accounts primarily reflected the serious challenges faced by children when their mothers experience psychosis. These adults recalled instances of having to act as a parent to their mother or younger siblings, to provide caregiving, and at times provide financial support. Perhaps most interestingly, themes of loyalty and guilt and social support illustrated the paradoxical experience of having a mother with a serious mental illness. Participants described feeling a loyalty to their mother, despite their frustrating and challenging experiences with her. One young adult who was a college student noted that he returns home each summer to be with his mother, because he believes it is what is best for her. Dunn (1993) notes that the theme of loyalty to mothers was often accompanied by a sense of guilt about separating from the family to lead one’s own life. In addition, all participants noted the importance of having a supportive adult to whom they could turn on a regular basis. Interestingly, five of nine adults described “a
special, if inconsistent, loving relationship with [their mother]” (p. 184). Unfortunately, Dunn (1993) did not further describe the relationship between these children and their mothers. However, these findings underscore the importance of close relationships for children of people with serious mental illness. Moreover, these findings highlight the complex nature of young adults’ experiences when their mother has a serious mental illness and suggest that despite the struggles they faced, a warm and ongoing connection between children and their mothers with serious mental illness is possible.

Williams (1998) described the group process and emergent themes of a therapy group for four adult women who had been raised by mothers with mental illness. Williams identified retrospective themes similar to those identified by Dunn (1993). For example, the women in Williams’s group noted the challenges of acting as a parent for their mothers and other siblings. However, Williams also identified current challenges faced by these women, rather than only retrospective accounts. Participants’ current challenges included ongoing experiences of social isolation, difficulties forming relationships with other women, and a hatred of themselves and their mothers. Williams noted these ongoing challenges were present despite the outward appearance of “well-dressed, well-groomed women, [with] functional work lives,” and observed the importance these women placed on portraying a “competent image…despite their internal distress” (p. 79). Williams described these women’s presentation as a coping strategy that reflects their resilience, but also indicates the ongoing nature of their struggle.

In qualitative study, Kinsella, Anderson, and Anderson (1996) interviewed 10 siblings and 10 offspring of people with serious mental illness about their upbringing. Consistent with previous research, results indicated that as children, these adults had various needs that went unmet, including the need for emotional support and validation. Perhaps the most interesting
finding is that all 20 participants reported they developed positive personal qualities or strength because of having a family member with a mental illness. Participants reported feeling they developed independence, self-reliance, empathy, resiliency, assertiveness, and creative problem-solving despite the challenges they faced. These findings clearly underscore the potential for personal growth as a result of challenges faced by young adults whose parents have a serious mental illness, and illustrate both the strengths and struggles of these individuals.

Importantly, Kinsella and colleagues (1996) note that the participants in their study who were younger at the time of onset of their family members’ mental illness reported more difficulties. In addition, the authors note the importance of examining the unique struggles of adult children of people with serious mental illness independent from the struggles faced by well-siblings of people with serious mental illness. Thus, the developmental stage of individuals and the nature of the parent-adult child relationship are important contexts in which to consider the perspective of adult children of people with serious mental illness.

In their book, *Troubled Journey*, Marsh and Dickens (1997) compiled qualitative material from national surveys, a book, interviews, support groups, and research projects to gain an understanding of the experience of adults who had a sibling or a parent with a serious mental illness. Findings suggest that siblings and children of people with serious mental illness express concerns about caregiving for their family member with mental illness. Moreover, these individuals often indicated that caregiving was a consistent part of their childhood, as they describe experiences of role reversal, where they assumed parental responsibilities at the expense of their own needs. Not surprisingly, these individuals also reported a sense of grief, loss, and sorrow as they frequently coped with the challenges of their family members’ symptoms, the responsibility of caregiving, and a lack of personal social and emotional support. Participants
indicated that as young adults they demonstrated difficulty separating from their families and pursuing normative developmental tasks like moving away to attend college. However, these individuals also expressed a sense of pride in their ability to be self-resilient, to help their families, and to maintain strong family bonds despite the challenges of the mental illness. Moreover, they expressed pride in their ability to experience personal growth and their families’ ability to grow. Like other studies, these findings highlight the complexity of experiences of young adults with parents with serious mental illness.

In summary, qualitative research on adults whose parents have a serious mental illness has resulted in rich descriptions of personal challenges and struggles as well strength and resilience. Overall, themes of concern about caregiving for a parent with mental illness, experiencing parental role reversal, the importance of social support, and the feeling that one has gained something from the experience of having a parent with mental illness were common. Although the existing body of qualitative literature on adult children who have parents with serious mental illness has revealed many important insights about these adults’ experiences, the research is limited in several aspects. First, these studies reflect the viewpoints of very few individuals and thus their generalizability to the population of young adults whose parents have serious mental illness is unknown. In addition, in some studies researchers provided descriptions of general themes that emerged in their work, but did not indicate the number of participants who endorsed particular themes. Moreover, some of these studies combine adult children and adult siblings of people with serious mental illness, thus making it difficult to recognize the unique experiences of adult children of people with serious mental illness. Other studies relied on unique methods of data collection, for example themes emerging in group therapy or a compilation of qualitative material from various sources, but did not use systematic,
methodologically rigorous data collection and analysis. Finally, the existing research on young adult children of people with serious mental illness does not provide information regarding how their caregiving or relationship experiences are similar to or different from their peers whose parents do not have mental illness. Empirical research with larger samples is needed to better understand the experiences of adult children of people with serious mental illness and how these experiences compare to those of peers who do not have parents with serious mental illness.

Despite these limitations, the value of this body of qualitative literature should not be understated. The themes identified in this work provide a foundation on which to build future research studies about young adult children of people with serious mental illness. Adult children’s current developmental stage and adult child-parent relationship emerged as important contextual factors that need further examination. This research also described the personal growth experiences of adult children of people with serious mental illness and empirical research on this construct is needed.

**Relationships between Mothers and Young Adult Children**

From a life course perspective, a broader context of normative parent-young adult relationships is needed in which to situate the experiences of young adults’ relationships with their parents with serious mental illness. Demographic research indicates that although the amount of time fathers spend caring for their children has increased in recent decades, mothers still spend far more time caring for their children than do fathers (Ishii-Kuntz & Coltrane, 1992). Given this, it is not surprising that several studies indicate young adults have closer, more affectionate, more intimate, and more comfortable relationships with their mothers than their fathers (e.g., LeCroy, 1988; Miller & Lane, 1991; Miller & Subblefield, 1993). As such, young adults’ relationships with their mothers appear to have a uniquely relational quality to them.
In addition, young adults’ relationships with their parents are developmentally different compared to younger children’s relationships with their parents. Youniss (1980) describes structural changes in the parent-child relationship during adolescence, where parents hold less “unilateral authority” and the relationship becomes more symmetrical and collaborative. Although Arnett (2006) advocates for the term “emerging adulthood” to describe the life course stage of 18- to 25-year-olds, he too, describes this phase of life as one in which children become “near equals” with their parents. Thus, the nature of exchange in the relationship between parents and children becomes more reciprocal. Theorists agree that the relationship between young adults and their parents is characterized both individuation and connectedness (Arnett, 2006; Youniss & Smollar, 1985). In terms of individuation, adolescents have less contact with their parents than do younger children and they have private lives separate from their families. Yet, young adults also “maintain definite connections with their parents,” which are illustrated by mutual respect, mutual expectations, and mutual communication (Youniss & Smollar, 1985, p. 78-79). In fact, longitudinal and cross-sectional research has generally found that closer bonds with parents are associated with better psychological well-being for young adults (Boutelle, Eisenberg, Gregory, & Neumark-Sztainer, 2009; Roberts & Bengtson, 1996; van Wel, ter Bogt, & Raaijmakers, 2002). Although Youniss and Smollar (1985) suggest the developmental shift to a more symmetrical and mutual relationship are observed in young adults’ relationships with both parents, not surprisingly, they noted the young adult-mother relationship, in particular, is characterized by mutual exchange.

Using Youniss’s theory of parent-adolescent relationships, Wintre, Yaffe, and Crowley (1995) established a measure of perceived mutual communication reciprocity and demonstrated the developmental trajectory for this construct. Young adults aged 19-25 (n = 311)
demonstrated greater perceived mutuality in their relationships with their parents than did middle adolescents (15- to 16-year-olds; \( n = 549 \)) or late adolescents (17- to 18- year olds; \( n = 457 \)), indicating support for Youniss’s theory. In addition, although a within-subjects statistical test was not conducted, in the sample of young adults, the mean score of perceived mutual communication reciprocity with mothers \((M = 55.70, SD = 15.47)\) was higher than the mean score of perceived mutual communication reciprocity with fathers \((M = 47.01, SD = 17.20)\), lending further credence to Youniss’s theory regarding the emotional closeness of mother-young adult relationships.

Felt obligation is another construct that characterizes the young adult-parent relationship and has been described as “[the] ‘glue’ that connects generations” (Stein, 1992, p. 525). Felt obligation reflects a relational approach to adult-parent relationships, and is defined by as series of practical “negotiated commitments” that are applied across time within a family context (Stein, 1992). As a construct, felt obligation encompasses several aspects of obligation that adults feel toward their parents, including maintaining appropriate levels of contact, avoiding interpersonal conflict, engaging in personal sharing, providing assistance, and maintaining an appropriate level of self-sufficiency (Stein, 1992). Similar to Youniss’s theory, this multifaceted construct emphasizes both connectedness and separateness aspects of adult child-parent relationships. Felt obligation also encompasses common aspects of caregiving. However, unlike the construct of caregiving which is defined by specific behavioral actions that one has performed, felt obligation reflects the cognitive and emotional experience of what one feels he or she “needs to or should” do for parents. Felt obligation is also similar to the concept of affection in that both are relationally-based conceptualizations of how adult children maintain connected to their parents. However, felt obligation and affection differ in that affection reflects the general
fondness in the adult child-parent relationship, while felt obligation is the cognitive and emotional experience feeling compelled to perform certain behaviors for parents.

Not surprisingly, several quantitative studies have demonstrated that felt obligation is higher toward mothers than fathers (Freeberg & Stein, 1996; Stein, 1992; Stein, Wemmerus, Ward, Gaines, Freeberg, & Jewell, 1998). In addition, an intergenerational study indicated that young adults’ feelings of obligation were higher toward their middle-aged parents than middle-aged parents’ feelings of obligation were toward their elderly parents (Stein et al., 1998). Stein et al. suggest that young adults have not yet had time to discharge their feelings of obligation toward their parents, whereas middle-aged adults have had more time to perform these behaviors, thus reducing their feelings of obligation. Collectively, the findings from these studies on felt obligation highlight the developmental nature of the felt obligation construct and its sensitivity to contextual nuances in young adult-parent relationships.

The Stein et al (1998) study also examined the association between felt obligation and caregiving in the young adult and middle-aged samples. After accounting for the significant effect of affection, higher levels of felt obligation significantly predicted more caregiving for parents in both samples. Thus, connectedness relationship constructs of affection and felt obligation served to motivate young adults and middle-aged adults to provide care for their parents. Interestingly, this study is one of very few that examines young adults’ provision of caregiving to parents. Research on caregiving has typically focused on middle-aged adults’ provision of care for their aging parents (Shifren, 2009). Only recently have researchers considered young adults as potential caregivers for aging relatives (see Dellmann-Jenkins & Blankenmyer, 2009, for a discussion; Dellmann-Jenkins & Brittain, 2003; Levine, Hunt, Halper, Hart, Lautz, & Gould, 2005). However, the absence of research on caregiving for parents in
normative samples of young adults is striking, and perhaps indicates young adults’ provision of caregiving for parents is not a normative aspect of the young adult-parent relationship. Yet, to gain an appreciation of parental caregiving provided by young adults of people with mental illness, it is necessary to understand the caregiving experiences of young adults with non-distressed parents.

In summary, research has indicated the importance of considering the context of developmental stage of young adulthood when examining the normative parent-young adult relationship. Research on mutual reciprocity and felt obligation indicate the normative parent-young adult relationship is characterized by both connectedness and separateness. Research has also demonstrated the important role of mothers in the lives of young adults and has illustrated the close, affectionate nature of this relationship. Like felt obligation, affection represents the connectedness between young adult children and their mothers. Table 1 displays descriptions and measures used to assess these relational constructs.

Young adults’ relationships with their mothers may also be important when mothers have a serious mental illness. Researchers have argued for the intentional consideration of mothering rather than parenting among people with serious mental illness. Oyserman and colleagues (2000) suggest the later onset of schizophrenia in women compared to men (Angermeyer & Kuhn, 1988) may provide some women with serious mental illness with greater opportunities than men to become parents prior to the onset of mental illness. Moreover, at least one study indicated that women with serious mental illness are twice as likely to be parents than men with serious mental illness (Nicholson, Nason, Calabresi, & Yando, 1999). The unique aspects of the mother-young adult relationship coupled with the likelihood that women with serious mental
illness are mothers, underscores the importance of understanding the experiences of young adults whose mothers have serious mental illness.

Affection, mutual reciprocity, and felt obligation are well-established as normative aspects of the young adult-mother relationship. However, these relationship constructs need to be examined in young adults’ relationships with their mothers with serious mental illness. In addition, as previously discussed, providing care to parents emerged as a common theme in the retrospective reports of adult children of people with serious mental illness (Dunn, 1993; Kinsella et al., 1996; Marsh & Dickens, 1997; Williams, 1998). Children’s provision of instrumental and emotional care to parents is an aspect of both caregiving and role reversal. In the parent-child relationship, caregiving is defined by behaviors that children (at any age) perform for their parents and has most often been studied in samples of middle aged individuals who are caring for aging parents (Shifren, 2009). As discussed previously, systematic research on parental caregiving performed by young adult children with and without parents with mental illness is needed. In contrast to caregiving, role reversal is a developmentally inappropriate shift in family roles characterized by a one-sided nature of exchange where children or adolescents assume the role parenting their parents (Jurkovic, 1997; See Aldridge & Becker, 2003, for a discussion on the distinction between caregiving and role reversal).

The qualitative research reviewed above suggests that role reversal is a relevant concept for children of people with serious mental illness. One empirical investigation (Alexander, 2003) examined role reversal in a sample of 832 young adults and found paternal mental illness was associated with role reversal for young adult sons but not daughters. The same study found maternal mental illness was not associated with role reversal for sons or daughters. However, this study did not specify the number of young adults who actually reported parents with mental
illness and thus the generalizability of the findings are unknown. In general, systematic empirical research on role reversal in young adult children of people with mental illness is lacking.

What empirical research has demonstrated is that young adult children who cope with other stressful circumstances, like parental alcoholism (Chase, Deming, & Wells, 1998; Carroll & Robinson, 2000; Kelley et al., 2007) and parental divorce (Jurkovic, Thirkield, & Morrell, 2001), demonstrate higher levels of role reversal than their peers with non-distressed parents. Although role reversal is not assumed to be universally dysfunctional, clinicians and theorists agree that role reversal becomes problematic when “there is a lack of acknowledgement and reciprocity between adults and children in terms of the nurturance exchanged, or when expectations, emotional or logistical, exceed the child’s abilities, damage well-being, and ignore the child’s developmentally appropriate needs” (Chase, 1999, p. 6). Additionally, empirical research in non-clinical young adult samples suggests that experiencing higher levels of role reversal as a child or adolescent is associated with shame (Wells & Jones, 2000), self-defeating personality traits (Jones & Wells, 1996), and more psychological symptoms (Hooper & Wallace, 2010) in young adult children. However, one study conducted in a non-clinical sample of young women indicated that having more collective family risk factors (including parental substance abuse, parental mental illness, and witnessing domestic violence) were associated with more role reversal, although more role reversal was associated with less psychological maladjustment (Fitzgerald, Schneider, Salstrom, Zinzow, Jackson, & Fossel, 2008). Yet, the specific association of maternal mental illness with role reversal and young adults’ adjustment was not examined.
Systematic empirical study of historical role reversal in young adult-mother relationships is needed, particularly in association with maternal mental illness and young adults’ psychological adjustment. In addition, the extent to which young adults’ historical experience of role reversal may facilitate or impede young adults’ current caregiving for mothers with or without mental illness is unknown.

When Mothers have a Serious Mental Illness: Psychological Well-being and Personal Growth

Epidemiological studies have documented that the young adult children of people with serious mental illness are more likely than the general population to be diagnosed with a psychiatric illness themselves (Erlenmeyer-Kimling et al., 1997; Ingraham, Kugelmass, Frenkel, Nathan, & Mirsky, 1995; Parnas, Cannon, Jacobsen, Schulsinger, Schulsinger, & Mednick, 1993). George (2007) has called for research that examines pathways by which offspring of people with mental illness develop psychiatric difficulties themselves. However, researchers have rarely looked beyond psychiatric symptoms to examine additional aspects of these young adults’ lives or to assess pathways by which young adults’ with parents with mental illness come to experience symptoms. In one study that is an exception to the general rule, Mowbray and colleagues interviewed 157 mothers with serious mental illness regarding the functioning of their young adult children and aspects of their relationships with their adult children (Mowbray, Bybee, Oyserman, MacFarlane, & Bowersox, 2006). Not surprisingly, given the results of epidemiological research, approximately one-third of the young adults experienced psychological problems and about one-third had not completed high school. Yet, on the other hand, more than 80 percent of young adult children were reportedly currently employed or in post-secondary education or training. Moreover, 75 percent of mothers reported feeling
somewhat, very, or completely satisfied in their relationship with their adult child, and more than half of mothers reported daily contact with their adult child. These findings illustrate the challenges experienced by adults whose mothers experience mental illness, but also highlight the possibility that young adult children of people with serious mental illness can function well in society. In addition, these findings underscore the closeness in the relationship between adult children and their mothers with mental illness, at least from mothers’ perspectives. However, the importance of this relationship from the young adults’ perspective is unknown.

Mowbray and Mowbray (2006) conducted interviews with a sub-sample of young adults whose mothers with serious mental illness participated in the larger longitudinal study that was reviewed above (i.e., Mowbray et al., 2006). Interviews \((n = 54)\) or questionnaires \((n = 7)\) were conducted with these young adults to better understand various factors that impacted their current psychosocial adjustment. Results indicated that better parenting from both parents during childhood was related to better psychosocial outcomes in adulthood. Additionally, perceived social support from grandparents, best friends, and mothers during childhood was also related to better psychosocial outcomes. Perceived maternal social support, in particular, was related to greater satisfaction with life. These findings demonstrate the possibility that supportive relationships, especially with mothers, may mitigate the negative psychosocial outcomes commonly found in young adults whose mothers have serious mental illness.

Other researchers have studied social relationships of college students who self-identify as having a parent with a serious mental illness. It is possible that since they are recruited from colleges, the young adults in these studies may be higher functioning than young adults with parents with mental illness in other research studies. Yet, the findings of these studies are similar to those found in studies of young adults with greater variation in functioning. For example, in a
sample of young adult undergraduate and graduate students, Williams and Corrigan (1992) found that young adults who identified as having a parent with serious mental illness \((n = 21)\) reported lower self-esteem, higher levels of trait anxiety, higher levels of social avoidance, and smaller social support networks compared with those identified as having parents without mental illness or alcoholism \((n = 22)\). However, results also indicated that after controlling for the current number of people in and satisfaction with one’s social support network the differences between the groups on measures of depression and trait anxiety were diminished, although not eliminated. This suggests that social support mediated the effect of having a parent with mental illness, such that greater social support was related to less depression and anxiety. These results indicate the importance of personal relationships in the lives of young adults whose parents experience serious mental illness, as personal relationships may serve to mitigate negative psychosocial outcomes for this population.

Abraham and Stein (2010) broadened the concepts in Williams and Corrigan’s study by considering young adults’ psychosocial adjustment as a function of gender of the parent with serious mental illness and the relationship between young adults and their parents with serious mental illness. Specifically, in a sample of undergraduates Abraham and Stein examined the associations between maternal and paternal mental illness, young adults’ feelings of felt obligation toward their parents, and young adults’ psychosocial adjustment. Results indicated that young adults with a mother with serious mental illness \((n = 33)\) reported significantly more psychological symptoms and loneliness than young adults who had fathers with a serious mental illness \((n = 20)\) or non-distressed parents (i.e., did not have serious mental illness; \(n = 41)\). Interestingly, young adults who reported paternal mental illness did not differ on these measures from those young adults who reported non-distressed parents. Although these findings are
limited by a small sample size, they suggest that having a mother with a serious mental illness yields more negative psychosocial outcomes than having a father with a serious mental illness. Abraham and Stein suggest that having a mother with serious mental illness may be a particularly disruptive life course event, given the important role that mothers play in the lives of young adults.

Abraham and Stein’s (2010) results also indicated that the level of felt obligation toward mothers with mental illness was not significantly different than the level of felt obligation toward mothers with non-distressed parents, suggesting that young adults whose mothers have mental illness feel a normative level of obligation toward their mothers. In addition, in the sample of young adults with mothers with serious mental illness, higher levels of felt obligation to mothers were generally related to higher levels of psychological well-being, but were unrelated to young adults’ levels of loneliness and psychological symptoms. Notably, in the sample of young adults with non-distressed parents, there was no statistically significant correlation between felt obligation and well-being. Although causality cannot be inferred from this cross-sectional study, this finding suggests that a closer interpersonal relationship between young adults and their mothers who have mental illness may be psychologically beneficial for these young adults. It is unclear if young adults will consistently demonstrate better psychological well-being if they are closer to their mothers. Research is needed to understand whether connectedness aspects of the young-adult parent relationship may mediate the association between maternal mental illness and young adults’ psychological adjustment.

In summary, research has suggested that although young adults with parents with serious mental illness face greater risk of psychiatric illness, having close or supportive relationships may mitigate the negative impact of having a parent with serious mental illness on young adults’
well-being (Williams & Corrigan, 1992) and that having connected relationships with mothers with serious mental illness may be beneficial (Abraham & Stein, 2010; Mowbray & Mowbray, 2006). Additional research has suggested that reciprocity of support does occur between people with serious mental illness and their family members (Horwitz et al., 1996). Yet, qualitative research has suggested that as children, young adults may have experienced role reversal (Marsh & Dickens, 1997), which is known to be related to psychological difficulties in adulthood (Hooper & Wallace, 2010). Given the risk of psychiatric disorders in the population of young adults’ whose parents have serious mental illness, an examination of the association between role reversal and psychological adjustment is well-warranted. Research is also needed to better understand whether the connectedness and the nature of exchange in the young adult-mother relationship play a role in the association between maternal mental illness and young adults’ current psychosocial adjustment.

In addition to examining psychosocial outcomes of young adults’ whose mothers experience serious mental illness, the potential for personal growth in this population should be considered. Qualitative research has suggested that although they endure significant challenges, young adults whose parents experience serious mental illness demonstrate resiliency and growth (Kinsella et al., 1996; Marsh & Dickens, 1997; Williams, 1998). In addition, research has documented the experience of personal growth in family members of people with serious mental illness (Chen & Greenberg, 2004; Smith et al., 2007). Several theorists have suggested that individuals who undergo traumatic or stressful life experiences have the propensity to experience growth as a result of such events (for a review, see Tedeschi & Calhoun, 2004), however this construct has not been quantitatively examined in a sample of young adults whose mothers experience serious mental illness.
Stress-related personal growth, or posttraumatic growth, has been researched in various samples, including young adults who have experienced various losses (Stein, Abraham, Bonar, McAuliffe, Fogo, Faigin, et al., 2009), adults with medical illnesses (Pargament, Smith, Koenig, & Perez, 1998), and young adults who experienced September 11 or personally traumatic events (Woike & Matic, 2004). A recent meta-analytic study of correlates of stress-related growth found that stress-related growth is positively associated with overall positive psychological well-being and less depression (Helgeson et al., 2006). However, the same meta-analysis also demonstrated that stress-related growth was associated with greater global distress and more intrusive or avoidant thoughts about the stressor (Helgeson et al., 2006). Thus, although the exact relationships between stress-related growth and psychological outcomes are unclear, stress-related growth as a construct is unique and warrants exploration as an outcome beyond traditional outcome measures of psychological symptoms and overall psychological well-being. Tedeschi and Calhoun (2004) note, “The widespread assumptions that traumas often result in [psychological] disorder should not be replaced with expectations that growth is an inevitable result. Instead, we are finding that continuing personal distress and growth often coexist” (p. 2).

Some theorists have suggested that stress-related growth is an outcome of a process of meaning making coping (e.g., Park & Fenster, 2004) or readjustments to a violation of just world beliefs (e.g., McMillen, 1999; Tedeschi & Calhoun, 1995), yet others have considered the possibility that particular aspects of supportive relationships, such as increased communication and proximity, can promote stress-related growth (McMillen, 2004). Results of one study of young adults coping with stressors do suggest that coping through “seeking social support and emotional venting” predicts stress-related growth (Park & Fenster, 2004, p. 208). Given that young adults whose mothers experience serious mental illness seem to benefit from socially
supportive relationships, it is important to gain an understanding of whether different aspects of their relationships with their mothers may predict stress-related growth. Additionally, an examination of stress-related growth in young adults whose mothers experience serious mental illness is important from a life course perspective, as life course perspectives deliberately emphasize the association between family relationships and individual outcomes and highlight the potential for personal growth in addition to personal difficulties (Smith & Greenberg, 2008).

Summary

A life course perspective has broadened research on families of people with serious mental illness by acknowledging the interdependence of family members, their shared common history, the life stage of each family member, as well as broader social norms. Caregiving, in particular, has emerged as common topic in the family literature on people with serious mental illness because ineffective services systems often result in families providing care for people with serious mental illness (Lefley, 1996). Research using aspects of a life course perspective has demonstrated that well-siblings’ current caregiving for their sibling with serious mental illness is influenced by current and historical aspects of the sibling-sibling relationship (Jewell & Stein, 2002; Smith et al., 1997). In addition, caregiving research has highlighted that people with serious mental illness do have reciprocal relationships with family members and that greater mutual exchange and closeness is related to well-relatives’ provision of care (Jewell & Stein, 2002; Horwitz et al., 1996; Smith et al., 2007).

Although some research on family members as caregivers for people with serious mental illness has included responses from adult children of people with serious mental illness, no research studies to date have intentionally sampled young adult children of people with serious mental illness as potential caregivers of their parents. As such, little is known about young
adults’ provision of care for parents with mental illness. Similarly, little is known about young adults’ caregiving for non-distressed parents. Basic research comparing young adults’ provision of caregiving to parents with and without mental illness is needed.

Research has illustrated the complex nature of the experiences of young adult children of people with serious mental illness. Although there is some heterogeneity in psychosocial outcomes (Caton et al., 1998; Mowbray & Mowbray, 2006), in general young adult children of people with serious mental illness are at greater risk of psychiatric illness than samples of young adults whose parents are non-distressed (e.g., Erlenmeyer-Kimling et al., 1997). However, qualitative research suggests that despite the significant challenges faced by children of people with serious mental illness, such as the experience of parent-child role reversal, they report personal growth experiences (e.g., Kinsella et al., 1996). Although much research exists on the potential for individuals to experience positive growth through challenging or traumatic circumstances (Helgeson et al., 2006), no quantitative research has assessed personal growth in young adult children of people with serious mental illness. In addition, limited research suggests that aspects of social relationships, including relationships with mothers, may serve to mitigate negative psychosocial outcomes for these young adults (Abraham & Stein, 2010; Mowbray & Mowbray, 2006; Williams & Corrigan, 1992). More research is needed to understand the association between connectedness in the mother-young adult relationship and young adults’ psychosocial adjustment when mothers have mental illness.

Researchers have argued that young adults’ relationships with mothers, rather than parents, with serious mental illness, may be particularly relevant (e.g., Oyserman et al., 2000). Limited research on relationships between young adults and their mothers with serious mental illness has suggested that young adults demonstrate normative levels of felt obligation toward
their mothers (Abraham & Stein, 2010) and that they feel close to their mothers (Dunn, 1993). Comparatively, much research has been conducted on the normative young adult-mother relationship and describes it as close, affectionate and characterized by mutual exchange (e.g., Youniss & Smollar, 1985).

Overall, research on young adult children of people with serious mental illness is limited in that it has not recognized these young adults as potential caregivers for their parents with serious mental illness and has not considered their potential for personal growth as a result of their challenging circumstances. Moreover, the present research on this population has not examined aspects of these young adults’ relationships with their parents as possible predictors of young adults’ psychological well-being or personal growth.
CHAPTER II. THE PRESENT STUDY

The present study uses a life course perspective to broaden the current literature on young adults whose mothers experience serious mental illness. A life course perspective provides the opportunity to understand these young adults in the context of their social role as an adult child of a mother with serious mental illness while also appreciating these young adults within the context of their current stage of life and the accompanying normative role transitions and parent-child relationships that are common to young adulthood. As such, the present study compares the reports of young adult children who have mothers with mental illness with reports from young adult children whose mothers do not have mental illness.

A life course perspective acknowledges the impact that shared history and family relationships can have on current psychological adjustment and the provision of care for mothers. A life course perspective also recognizes the potential for personal growth in difficult circumstances. Using a broad life course framework, there were three overarching goals to the present study.

The first goal of the present study was to examine the extent to which current and historical aspects of the young adult-mother relationship, specifically the level of connectedness and the nature of exchange in the relationship, are associated with young adults’ self-reported provision of current care for their mothers and their intentions to provide care for their mothers in the future. Research in samples of well-siblings of people with serious mental illness has indicated that nature of exchange and connectedness variables are associated with current caregiving and intentions to provide future caregiving for a sibling with mental illness. It was expected that for young adults who have a mother with mental illness, the perceived nature of exchange and connectedness in the relationship would account for variance in reported
caregiving. There is little prior research on young adult children providing care to non-distressed parents, although one study demonstrated connectedness aspects of the relationship are associated with young adults’ current provision of caregiving for mothers. As such, it was expected that higher levels of connectedness would be associated with reports of current caregiving and intentions to provide future care. Due to a lack of prior research on parental caregiving by young adult children, there were no other specific hypotheses made. Instead, the associations between aspects of the young adult-mother relationship and young adults’ provision of caregiving in the young adults whose mothers do not have mental illness served as a comparison to the associations between relationship aspects and caregiving in the young adults whose mothers do have mental illness.

The second goal of the present study was to assess the extent to which perceived nature of exchange and connectedness aspects of the young adult-mother relationship play a role in the association between having a mother with mental illness and psychological adjustment difficulties. Despite considerable research documenting the psychological adjustment difficulties of children of people with mental illness and research in non-distressed samples that better young adult-parent relationships are associated with better psychological adjustment in young adults, few studies have examined how aspects of the young-adult parent relationship serve as a mechanism for mitigating psychological adjustment difficulties. Mediation models are a popular way to assess whether a proposed third “intervening” variable can account for the relationship between an independent and dependent variable (Preacher & Hayes, 2008). The present study tested the hypothesis that the association between maternal mental health and psychological adjustment would be significantly attenuated after accounting for affection, felt obligation, role reversal, and reciprocity in the young adult-mother relationship. Figure 1 displays the
hypothesized mediation model for the present study. The top portion (1a) of the figure illustrates the direct effect of maternal mental illness on psychological adjustment. The middle portion (1b) of the figure illustrates the hypothesized total indirect (i.e., mediation) effect of all aspects of the perceived young adult-mother relationship. The bottom portion of the figure (1c) illustrates the hypothesized indirect effects of the four aspects of the relationship (i.e., multiple mediators). In general, it was hypothesized that the total indirect effect of relationship factors would account for the relationship between having a mother with mental illness and poorer psychological adjustment. Hypotheses about specific indirect effects of the four aspects of the relationship were based on prior research. There is no prior research comparing young adults’ levels of affection, role reversal, or reciprocity in relationships with mothers as a function of whether or not mothers have a mental illness. In one study, levels of felt obligation toward mothers were similar among young adults with and without mothers with mental illness. Other research has indicated that people with mental illness can have family relationships characterized by reciprocity and affection. Given these findings of prior studies, no specific hypotheses were made regarding the mediation effects of felt obligation, affection, or reciprocity. Several qualitative studies have found young adults with parents with mental illness experience role reversal. Other research has documented that the experience of role reversal is associated with adverse psychological experiences for young adults. Based on these prior findings, it was hypothesized that there would be a significant indirect (i.e., mediation) effect for role reversal on the relationship between having a mother with mental illness and poorer psychological adjustment, such that having a mother with mental illness would be associated with higher levels of role reversal, which in turn would be associated with poorer psychological adjustment.
The third goal of the present study was to examine whether the perceived connectedness or nature of exchange aspects of the young adult-mother relationship are associated with self-reported personal growth for the young adults who have a mother with mental illness. As there is no prior research directly related to the association between aspects of the young adult-mother relationship and personal growth when mothers have mental illness, there were no specific hypotheses made regarding how the nature of exchange and connectedness may be associated with personal growth. Rather, based on theory and research regarding personal growth in stressful circumstances and social support it was expected that variance in self-reported personal growth would be accounted for by the collective aspects of the young adult-mother relationship, such that overall higher quality of the young adult-mother relationship (e.g., characterized by any or all of the following: more affection, felt obligation, reciprocity, less role reversal) would be associated with higher levels of personal growth.

Table 2 displays descriptions of the caregiving, psychological adjustment, and personal growth constructs and the measures of these constructs used as dependent variables in the present study.
CHAPTER III. METHOD

Participant Recruitment and Selection

Young adults with mothers with mental illness were recruited from Midwestern public and private colleges and universities. Initially, psychology department chairpersons (and at one university an administrator in the office of institutional research) at 10 public and private colleges and universities were contacted via email to inquire about recruiting participants from their psychology courses or the university at large. Four colleges or universities agreed to participate. The research was approved by the Human Subjects Review Board at Bowling Green State University and by institutional review boards at other colleges and universities, if required at the particular institution. Young adults were then recruited through Psychology Department subject pools, instructor emails, and at one university, through an email to all 14,184 undergraduate students enrolled at the university. The study announcement (Appendix A) specified that young adults between the ages of 18 and 30 who have a mother who has been diagnosed with a serious mental illness (specifically schizophrenia, bipolar disorder, or major depression) were invited to participate in an online survey.

Young adults without a mother with mental illness were recruited via the psychology subject pool or instructor emails from two of the 10 colleges and universities (one public, one private) that were contacted regarding recruitment for young adults with mothers with mental illness. The study announcement (Appendix B) invited participation in an online survey from young adults between the ages of 18 and 30 who did not have a mother with mental illness.

All participants were offered the opportunity to be entered in a raffle to win one of four $50 visa check cards and partial course credit (if offered by their psychology course) and for their participation in this online survey research study.
A total of 211 young adults meeting the recruitment criteria responded to the online survey. Of these, a total of 92 respondents reported having a father with mental illness ($n = 10$), a substance abuse problem ($n = 65$), or both mental illness and substance abuse ($n = 17$). These respondents reporting paternal mental illness and/or substance abuse were excluded from the present study as previous research (Williams & Corrigan, 1992) has indicated young adults’ psychological adjustment differs as a function of whether they have one or two parents with mental illness or an alcohol problem. Similarly, three respondents who reported having deceased fathers were excluded from the present study because prior research (Stein et al., 1998) has suggested adults’ levels of felt obligation toward parents is influenced by whether or not one parent is deceased. A total of 116 young adults who met the inclusionary criteria for the study participated in the research.

**Participants**

Approximately half of the 116 young adult participants in the present study reported a mother with serious mental illness ($n = 52; 45\%$) and half of the participants reported a mother without mental illness ($n = 64; 55\%$). Most participants were female ($n = 94; 81\%$), Caucasian ($n = 106; 91\%$), and had never been married ($n = 110; 95\%$). Participants reported a mean age of 19.79 years ($SD = 2.37$) and about half were college freshman ($n = 62; 53\%$). Over half ($n = 61; 53\%$) of participants reported living more than 70 miles away from their mothers. Sixty percent ($n = 70$) of participants reported having married parents and 40% ($n = 46$) reported divorced or separated parents. Most participants ($n = 94; 81\%$) reported no maternal substance abuse; however, 22 participants (19%) reported a mother with a substance abuse problem. Table 3 displays participants’ demographic information. Participants who reported a mother with mental illness were more likely to be male [$\chi^2 (1, N = 116) = 5.99, p < .05$], have
divorced/separated parents \( \chi^2 (1, N = 116) = 10.23, p = .001 \), report maternal substance abuse \( \chi^2 (1, N = 116) = 8.54, p = .01 \), and were marginally more likely to be persons of color \( \chi^2 (1, N = 116) = 2.80, p = .09 \) than their counterparts who reported mothers without mental illness.

**Procedure**

A World Wide Web link directed participants to a website containing a brief description of the study and informed consent information. After indicating their informed consent, participants completed an online questionnaire. Collecting survey data via the web reduces the response time, lowers cost, increases the accuracy of data entry, and allows more flexibility of survey format than mail surveys (Granello & Wheaton, 2004). Additionally, the web is a particularly desirable method of data collection when the sample is “discrete and knowledgeable” and has access to the internet, such as a sample of college students (Granello & Wheaton, 2004).

The online questionnaire included self-report questions about participants’ demographic information (Appendix C) and self-report measures of felt obligation, perception of parental reciprocity, parental role reversal, current caregiving, future caregiving intentions, psychological symptoms, and global psychological well-being. For all young adults, the questionnaire contained items regarding whether their parents had difficulties with mental health and substance use. For those who reported a mother with mental illness, the questionnaire contained additional questions regarding aspects of their mothers’ mental illness as well as a self-report measure of stress-related personal growth.

**Measures**

**Maternal mental illness.** Maternal mental illness was assessed by the single-item question: “Has your mother been diagnosed with a mental illness?” This method of assessing
When mom has a serious mental illness was adapted from a single-item method of assessing parental alcoholism (Cuijpers & Smit, 2001) and has been used in a prior study to assess parental mental illness (Abraham & Stein, 2010). If participants responded yes to this question, they were prompted to answer several additional questions regarding their mothers’ mental illness (see Appendix D). Questions to elicit additional information regarding maternal mental illness were adapted from Alexander (2003). Table 4 contains descriptive information regarding maternal mental illness within the group of 52 participants who reported a mother mental illness. The most commonly reported maternal psychiatric diagnoses were depression ($n = 28; 54\%$) and bipolar disorder ($n = 18; 35\%$). About half of participants were uncertain who had diagnosed their mother with a mental illness ($n = 27; 52\%$), and 37% ($n = 19$) reported a mental health professional and 12% ($n = 6$) reported a family doctor had made the diagnosis. Thirty (58%) participants reported their mother was diagnosed with a mental illness after they were born, eight (15%) indicated their mother was diagnosed before their birth, and 14 (27%) were uncertain when their mother had been diagnosed. The 30 participants who indicated they were alive at the time of their mothers’ diagnosis reported being a mean age of 10.5 years old ($SD = 5.44$) when their mothers were diagnosed with a mental illness. Most participants ($n = 44; 85\%$) indicated their mothers had been prescribed medications for their mental illness. Fifteen percent ($n = 8$) of young adults reported their mothers had attempted suicide. About half (53%; $n = 28$) of those who reported their mothers had a mental illness indicated their mothers had not been hospitalized for mental health reasons, 38% ($n = 20$) reported their mothers had between one and five psychiatric hospitalizations, and 4% ($n = 2$) reported their mothers had more than five psychiatric hospitalizations. The mean number of maternal psychiatric hospitalizations was 1.10 ($SD = \ldots$)
The number of maternal psychiatric hospitalizations was used as a proxy variable to represent the severity of maternal mental illness.

**Maternal substance abuse.** Maternal substance use was assessed by two questions: 1) has your mother ever had a problem with drinking? 2) has your mother ever had a problem with drugs? If young adults answered “yes” to either or both questions, substance abuse was assumed. This method of ascertaining maternal substance abuse was adapted from a widely used single-item measure used to assess parental alcoholism from young adults’ reports (Cuijpers & Smit, 2001). Cuijpers and Smit found that a single-item question to assess parental alcoholism yielded results comparable to longer methods of assessing parental alcoholism from young adults’ reports.

**Relationship reciprocity.** The mother subscale (MOPRS) of Wintre et al.’s (1995) Perception of Parental Reciprocity Scale (POPRS) was used to assess young adults’ perceived communication reciprocity in their relationships with their mothers (Appendix E). The MOPRS is a 17-item self-report measure on which participants rate their extent of agreement from 0 (Strongly Disagree) to 5 (Strongly Agree). Research in samples of college students demonstrates excellent internal consistency for the MOPRS, ranging from $\alpha = .91$ (Wintre et al., 1995) to $\alpha = .93$ (Renk, Donnelly, Klein, Oliveros, & Baksh, 2008). Convergent validity for the MOPRS is evidenced by its relationships with measures of attachment and attitudes toward authority. Support for discriminate validity of the MOPRS is evidenced by a lack of relationship with a measure of self-esteem (Wintre et al., 1995). In the present study, $\alpha = .94$.

**Affection.** Young adults’ affection for their mothers was assessed by a modified version of the Positive Affect Index (Bengtson & Schrader, 1982; Appendix F). The original measure contains 10 items which participants rate on a scale ranging from 1 (Not at All) to 6 (Extremely).
Five items tap the extent to which young adults feel understanding, trust, respect, fairness, and affection toward their mother and five items tap the extent to which the young adults perceives their mothers to feel these emotions toward them. In the present study, only the five items tapping young adults’ feelings toward their mother were used, as it is young adults’ feelings of affection, rather than reciprocal feelings of affection, that were the construct of interest. Prior research has used a similarly modified version of the Positive Affect Index when it is one person’s feelings that are of interest (Amato, 1994). Bengtson and Schrader’s report on the original Positive Affect Index indicated good internal consistency (α = .92) in a sample of 100 adult – parent dyads and adequate test-retest reliability (r = .89) in a sample of 68 college students. Subsequent research confirmed the internal consistency of the original measure in a sample of adults who have siblings with serious mental illness (α = .92; Smith, & Greenberg, 2008). In the present study, the internal reliability consistency for the five-item Positive Affect Index was good (α = .93).

**Felt obligation.** Young adults’ obligation toward their mothers was assessed by the Felt Obligation Measure (FOM; Stein, 1992; Appendix G). This 34-item self-report measure assesses both the interconnectedness and separateness characteristics of adult children’s relationships with their parents. Participants indicated the frequency on a scale from 1 (Rarely) to 5 (Very Often) with which they feel they “need to” or “should” act in certain ways toward their mother. The FOM is comprised of five dimensions: 1) maintaining appropriate levels of contact, 2) avoiding interpersonal conflict, 3) engaging in personal sharing, 4) providing assistance, and 5) maintaining an appropriate level of self-sufficiency. In this study, the overall mean of all items was used to reflect overall felt obligation. Previous research in a young adult sample demonstrated excellent internal reliability the total FOM toward mothers (α = .94; Freeberg &
Stein, 1996). Convergent validity for the FOM is demonstrated by its relationships to measures of filial responsibility, affection toward and frequency of contact with parents (Stein, 1992). Discriminate validity for the FOM is evidenced by a lack of significant relationships with social desirability (Stein, 1992). Internal reliability in the present study was good ($\alpha = .95$).

**Parent-child role reversal.** The extent to which young adults perceive role reversal in their childhood relationship with their mothers was assessed by the mother version of the Relationship with Parents Scale (RPSM; Alexander, 2003; Appendix H). Participants responded to each of 21-items on this self-report scale by indicating their level of agreement on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree). RPSM items tap young adults’ retrospective accounts of their mothers using guilt to elicit nurturing from them, demanding their attention or company, as well their perception of their mothers’ competence as a parent. Validity for the RPSM was established by its relationship to a measure of family cohesion, such that higher cohesiveness among all family members was related to lower role reversal, and alignment with the mother against the father was associated with more mother-child role reversal. Alexander reports adequate test-retest reliability ($r = .82$ for men; $r = .88$ for women) and good internal consistency for this measure ($\alpha = .86$) in a sample of 990 young adults. Exceptional internal consistency ($\alpha = .93$) was demonstrated in the present study.

**Current caregiving.** The current level of care participants provide to their mothers was assessed with Jewell’s (1999) Current Caregiving Scale (CCS; Appendix I). This 10-item measure requires participants to indicate the frequency with which they have assisted their family member with serious mental illness with various tasks in the past year. Responses are indicated on a scale from 1 (None) to 4 (Frequently). The CCS contains items from Horwitz and colleagues (Horwitz, 1993; Horwitz, Tessler, Fisher, & Gamache, 1992) used to assess emotional
support, and assistance with basic needs and symptom management. Additionally, the CCS includes two items designed to assess perceived helping in areas of coordinating supportive services and family contact. Acceptable internal reliability for this measure has been reported ($\alpha = .87$, Jewell, 1999; $\alpha = .95$, Jewell & Stein, 2002) in studies of adults with a sibling with serious mental illness. In the present study, one item was modified for the subsample of young adults who did not report mothers with serious mental illness so that it reflected content that was not reflective of mental health issues. Appendix I contains this modification. In the present study, the internal reliability for this measure was adequate (full sample $\alpha = .86$; SMI mom subsample $\alpha = .87$; non-SMI mom subsample $\alpha = .85$).

**Future caregiving intentions.** Participants’ intentions to provide care to their mothers in the future were assessed with the Intention to Caregive Scale (ICS; Jewell & Stein, 2002; Appendix J). This 5-item measure was designed to assess participants’ expectations or intentions that they will be providing care for their family member with serious mental illness in the future. Items are rated on a 5-point Likert-type scale. In the present study, items were scored such that 1 = *Strongly Disagree* and 5 = *Strongly Agree*. Additionally, participants were instructed to indicate their responses based on their intention to provide future care to their mothers (rather than their expectation that they will provide care). This linguistic modification was made to Jewell and Stein’s instructions to emphasize deliberate willingness to provide care. In addition, for those participants who reported a mother without mental illness, one item was modified as not to reflect mental health-related concepts (see Appendix J). In Stein and Jewell’s original study, the ICS demonstrated good internal reliability ($\alpha = .82$) as well as a moderate correlation with the Current Caregiving Scale. Similarly, in the present study internal reliability was good (full sample $\alpha = .87$; SMI mom subsample $\alpha = .85$; non-SMI mom subsample $\alpha = .86$).
Psychological symptoms. Participants’ psychological symptoms were assessed by the Brief Symptom Inventory (BSI; Derogatis, 1993; Derogatis & Melisaratos, 1983). The BSI is a 53-item self-report measure that requires participants to rate the extent to which they were distressed by each symptom in the past week on a Likert-type scale ranging from 0 (not at all) to 4 (extremely). The BSI is comprised of nine primary symptom dimensions (i.e., somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychotism) and three global symptoms indices (i.e., General Severity Index, Positive Symptom Distress Index, and Positive Symptom Total). The General Severity Index (GSI) is considered the “best single indicator of current distress levels” as it accounts for the number and intensity of symptoms reported (Derogatis & Melisaratos, 1983, p. 597). The GSI was used as the measure of psychological symptoms in the present study.

In a sample of 1002 psychiatric outpatients the internal reliability coefficients for the nine primary symptom dimensions ranged from $\alpha = .71$ to $\alpha = .85$, indicating adequate internal reliability. In a sample of 60 non-patients, test-retest reliability coefficients for the nine primary symptom dimensions ranged from $r = .68$ to $r = .91$; and the test-retest reliability coefficients for the General Severity Index, Positive Symptom Distress Index, and Positive Symptom Total were $r = .90$, $r = .87$, $r = .80$, respectively. Primary symptom dimensions are highly correlated with the Symptom Checklist-90, the longer version of the BSI (Derogatis, 1993; Derogatis, & Melisaratos, 1983). The internal reliability coefficient for the mean of all 53 items in the present study was $\alpha = .97$.

Psychological well-being. Participants’ level of global psychological well-being was assessed by the 10-item Schwartz Outcomes Scale (SOS-10; Blais, Lenderking, Baer, deLorell, Peets, Leahy, & Burns, 1999; Appendix K), a single dimension measure of broad psychological
health. The SOS-10 instructs participants to respond to each item based on how they have been feeling in the past week. Response options range from 0 (Never) to 6 (Nearly all of the time). In a sample of 112 individuals receiving inpatient or outpatient psychiatric services, convergent validity for the measure was demonstrated by strong negative relationships with various measures of psychiatric symptoms and strong positive relationships with measures of general well-being, positive affect, and self-esteem (Blais, et al. 1999). Further research indicates convergent validity for the SOS-10 as it is associated with interpersonal well-being (Haggerty, Blake, Naraine, Siefert, & Blais, 2010). In addition, the internal consistency of the scale was exceptional ($\alpha > .90$) in three independent samples (i.e., psychiatric inpatients, psychiatric outpatients, nonpatients; Blais, et al. 1999). Comparably, in the present study, the internal reliability coefficient was $\alpha = .93$.

**Stress-related growth.** Young adults who reported a mother with mental illness responded to an abbreviated version of Park, Cohen, and Murch’s (1996) Stress Related Growth Scale (SRGS; Pargament, Koenig, & Perez, 2000; Appendix L), a 15-item measure that assess the experience of personal growth as a result of a stressful circumstance. Participants indicated how much on a scale from 0 (Not at all) to 2 (A great deal) they have learned to think and behave differently as a result of having a mother with mental illness. Convergent validity for the full version of this measure was established by relationships with measures of intrinsic religiousness, satisfaction with social support, positive reinterpretation and acceptance coping styles, and positive affectivity (Park et al., 1996). Discriminate validity was established by a lack of relationships between the SRGS and a measure of social desirability (Park et al., 1996). Adequate internal consistency for the abbreviated measure ($\alpha = .90$) was demonstrated in a study of 111 young adults who had experienced a personal loss (Stein et al., 2009). Within the
subsample of young adults who reported a mother with mental illness in the present study, the internal reliability coefficient was $\alpha = .92$. 


CHAPTER IV. RESULTS

Preliminary Analyses

Prior to assessing the main research questions, descriptive statistics of study measures, correlations among the study variables, and mean differences on study measures in each of the family types were examined. Table 5 contains means, standard deviations, and ranges for study measures. The following dichotomous variables were dummy-coded for these preliminary and all subsequent analyses: maternal illness (presence of maternal mental illness = 1; absence of mental illness = 0), maternal substance abuse (presence of substance abuse = 1; absence of substance abuse = 0), participant gender (female = 1; male = 0), and parents’ marital status (married = 1; divorced/separated = 0). Table 6 displays the correlation matrix of Pearson bivariate correlations of study variables in the full sample. Age, gender, parents’ marital status and maternal mental health status were each significantly correlated with many of the study variables, thus necessitating the inclusion of these variables as covariates in the hypothesized models.

Independent samples t-tests were used to assess the mean differences on study variables between the two family types. Levene’s test was used to assess the homogeneity of variance between the two subsamples. If the homogeneity of variance assumption was not met, then degrees of freedom adjusted for the lack of homogeneity of variance were used to assess the statistical significance of the mean difference.

Results of independent samples t-tests, including the mean and standard deviation of each subsample’s responses on each measure are displayed in Table 7. In terms of measures of the young adult-mother relationship, findings indicated that young adults with mothers with mental illness reported lower levels of felt obligation and affection toward their mothers and lower
levels of reciprocity in their relationship with their mothers as compared to those young adults without mothers with mental illness. With regard to caregiving, young adults’ reports of provision of current care for mothers did not differ as a function of whether or not their mothers had a mental illness. However, young adults with a mother with mental illness reported lower levels of intentions to provide future care for their mothers as compared to those who have mothers without mental illness. Results indicated levels of psychological adjustment also differed as a function of the presence or absence of maternal mental illness. Young adults with mothers with mental illness reported more psychological symptoms and lower levels of overall psychological well-being as compared to young adults without mothers with mental illness.

Given that the overall level of nearly all study variables differed as a function of maternal mental health status, Pearson bivariate correlations among the study variables were conducted separately in each subsample (Table 8). In the subsample of young adults with a mother with mental illness, results indicated some aspects of the young adult-mother relationship were related to current caregiving and future caregiving intentions. Specifically, higher levels of felt obligation were correlated with higher levels of current caregiving ($r = .52, p < .01$) and future caregiving intentions ($r = .53, p < .01$). A higher degree of reciprocity was also associated with a more current caregiving ($r = .38, p < .01$) and future caregiving intentions ($r = .38, p < .01$). A higher degree of affection was associated with more future caregiving intentions ($r = .38, p < .01$), as well. Role reversal was not significantly correlated with either current caregiving or future caregiving intentions. Some aspects of the young adult-mother relationship were also significantly correlated with young adults’ psychological adjustment in the subsample of young adults who have mothers with mental illness. Higher levels of role reversal were associated with more psychological symptoms ($r = .53, p < .01$), and higher levels of affection were correlated
with higher levels of psychological well-being ($r = .32, p < .01$). Neither felt obligation nor reciprocity was significantly correlated with psychological adjustment. In terms of stress-related personal growth, none of the assessed aspects of the young adult-mother relationship were correlated with personal growth. However, having a mother with a substance abuse problem was associated with less stress-related personal growth ($r = -.34, p < .05$).

Results from Pearson bivariate correlations in the subsample of young adults without mothers with mental illness indicated that aspects of the young adult-mother relationship were significantly correlated with caregiving. Specifically, higher levels of affection, felt obligation, and role reversal were all significantly correlated with more future caregiving intentions ($r = .25, p < .05$; $r = .25, p < .05$; $r = .26, p < .05$; respectively). Only higher levels of role reversal were correlated with more current caregiving ($r = .38, p < .01$). In terms of psychological adjustment, a higher degree of role reversal was significantly correlated with more psychological symptoms ($r = .30, p < .05$). No other aspects of the young adult-mother relationship were significantly correlated with psychological symptoms or overall psychological well-being.

**Caregiving Analyses**

Two hierarchical regression analyses in each subsample were conducted to assess the amount of variance in current caregiving and intentions to provide future caregiving accounted for by young adults’ reports of connectedness (i.e., felt obligation, affection) and the nature of exchange (i.e., role reversal, reciprocity) in the young adult-mother relationship. It was expected that both connectedness and nature of exchange aspects of the young adult-mother relationship would be significantly associated with reports of current caregiving and future caregiving intentions. The two regression analyses were initially conducted separately in each subsample (i.e., those with mothers with mental illness and those with mothers without mental illness) in
order independently assess the relative contributions of connectedness and relational exchange in caregiving within each of the two subsamples of young adults. For the regression analyses in the subsample of young adults with moms with mental illness, the first step of the equation contained young adults’ demographic variables of age and gender. Family circumstance variables of maternal substance abuse status, parental marital status, and the number of mothers’ psychiatric hospitalizations were entered in the second step. Scores on affection and felt obligation, representing the connectedness in the young adult-mother relationship, and scores on reciprocity and role reversal, representing the nature of exchange in the relationship, were entered in the third step of the equation. Criterion variables were young adults’ reports of current provision of caregiving for their mothers and reports of intentions to provide future care for their mothers. The order of entry of the variables into the hierarchical regression analyses were identical in the subsample of young adults without mothers with mental illness except that the number of psychiatric hospitalizations variable was not entered because it was not applicable to this subsample.

In the subsample of young adults with mothers with mental illness, the overall model predicting current caregiving was significant, $F(9, 40) = 3.06, p < .01, R^2 = .41, \text{Adj.} R^2 = .27$. Higher levels of felt obligation ($\beta = .45, p < .01$) and higher levels of role reversal ($\beta = .29, p < .05$) were associated with more current caregiving. As hypothesized, the connectedness and nature of exchange aspects of the young-adult mother relationship accounted for a significant amount of variance ($\Delta R^2 = .32, p < .01$; see Table 9). Similar results were found for the model predicting intentions to provide future care to mothers with mental illness. The overall model was significant, $F(9, 40) = 2.49, p < .05, R^2 = .36, \text{Adj.} R^2 = .21$ (Table 10). Collectively, the nature of exchange and connectedness variables accounted for a significant amount of variance.
in future caregiving intentions ($\Delta R^2 = .19, p < .05$). However, felt obligation, an indicator of connectedness in the young adult-mother relationship, was the only significant predictor of future caregiving intentions ($\beta = .46, p < .01$). Higher levels of felt obligation were associated with more intentions to provide future care.

In the subsample of young adults without mothers with mental illness, neither the overall model predicting current caregiving [$F (8, 55) = 1.84, p > .05$; Table 9] nor the overall model predicting intentions to provide future care [$F (8, 55) = 1.47, p > .05$; Table 10] was significant. However, felt obligation, an indicator of connectedness in the young adult-mother relationship, was the only significant predictor of future caregiving intentions ($\beta = .46, p < .01$). Higher levels of felt obligation were associated with more intentions to provide future care.

Although not initially hypothesized, the results indicated felt obligation was a significant predictor of both current caregiving and intentions to provide future caregiving in the subsample of young adults with moms with mental illness, but not in the subsample of young adults whose mothers do not have mental illness. Thus, it appears that maternal mental health status moderates the association between felt obligation and caregiving. However, maternal mental health status as a moderator was not statistically assessed as the regression models predicting caregiving were initially conducted separately in the two subsamples. To statistically assess whether maternal mental health status was a moderator of felt obligation and caregiving, two additional hierarchical regression analyses were conducted with the responses from all participants within the same model. Current caregiving scores and future caregiving scores were the criterion variables used in the separate hierarchical regression analyses. Potential covariates were entered in the first step of the equation, specifically age, gender, maternal substance abuse status, parental marital status, affection, role reversal, and reciprocity. In the second step of the equation, maternal mental health status and felt obligation were entered. In the third step, the interaction term (i.e., maternal mental health status x felt obligation) was entered to test the moderation effect (Aiken & West, 1991).
The moderation model predicting current caregiving scores is displayed in Table 11. The full model was significant \([F (10, 105) = 4.34, p < .001, R^2 = .29, \text{Adj.}R^2 = .23]\). There was a significant effect for the covariate role reversal \((\beta = .31, p < .01)\), such that higher levels of role reversal were associated with higher levels of current caregiving. There was a significant main effect for maternal mental illness, such that having a mother with mental illness was associated with lower levels of current caregiving \((\beta = -.85, p < .05)\). In terms of the moderation analysis, the third step of the equation was significant \((\beta = .82, p < .05)\), indicating that the interaction between maternal mental health status and felt obligation accounted for a significant amount of variance \((\Delta R^2 = .03, p < .05)\) in current caregiving scores, above and beyond the covariates and the main effects of maternal mental illness and felt obligation. This suggests that the relationship between felt obligation and current caregiving scores is moderated by maternal mental health status such that when mothers have a mental illness young adults’ higher felt obligation scores are associated with significantly higher scores on current caregiving, whereas when mothers do not have a mental illness there was no significant association between young adults’ felt obligation scores and current caregiving scores. The full model predicting future caregiving intention scores was significant, \([F (10, 105) = 4.18, p < .001, R^2 = .29, \text{Adj.}R^2 = .22]\) (Table 11). The main effect for maternal mental illness was marginally significant \((\beta = -.83, p = .056)\), where having a mother with mental illness was associated with lower levels of future caregiving intentions. In terms of the moderation analysis, the third step of the model (i.e., maternal mental illness x felt obligation interaction term) did not account for a significant amount of variance in future caregiving scores \((\Delta R^2 = .02, p > .05)\), indicating no moderation effect for maternal mental health status on the association between felt obligation scores and future caregiving intention scores.
Psychological Adjustment Analyses

Bootstrapping methods were used to test the hypothesis that aspects of the young-adult mother relationship mediate the association between having a mother with mental illness and psychological adjustment. Bootstrapping is a nonparametric method that can be used to derive confidence intervals and an estimate of indirect effects by repeatedly sampling with replacement from the original sample. Methodologists (Preacher & Hayes, 2008; Hayes, 2009) consider bootstrapping superior to Sobel’s estimated standard error method (1982, 1986) and Baron and Kenny’s (1986) causal steps approach for testing mediation because it has higher power (Fritz & MacKinnon, 2007) to detect mediated effects and has acceptable control over Type I error (MacKinnon, Lockwood, & Williams, 2004). Bootstrapping also does not assume normality of the sampling distribution as does the Sobel method (Hayes, 2009), and it does not require large samples to test mediation as does the causal steps model (Fritz & MacKinnon, 2007).

Multiple mediation models are an extension of a simple mediation model. In simple mediation models, one mediator is proposed to account for the relationship between an independent and dependent variable. Multiple mediation models allow for the simultaneous testing of multiple indirect effects and the total indirect effect that may account for the relationship between an independent and dependent variable (Preacher & Hayes, 2008). Like in simple mediator models, bootstrapping methods are appropriate for use in multiple mediator models (Shrout & Bolger, 2002). The bootstrapping sampling process is used to construct confidence intervals for the estimate of the path of each indirect effect. Bias-corrected and accelerated (BCa) confidence intervals adjust for the skew of non-normal distributions (Efron & Tibshirani, 1993) and have been demonstrated reduce Type I error rates without compromising power relative to other types of confidence intervals (Briggs, 2006). An indirect effect is
considered significant if the confidence interval does not contain zero, as this demonstrates the
estimate of the indirect effect is significantly different from zero (Preacher & Hayes, 2008).

Preacher and Hayes’s (2008) macro for the Statistical Package for the Social Sciences
(SPSS) was used to conduct the bootstrap multiple mediation analyses. Per Preacher and
Hayes’s recommendation, 1,000 bootstrap samples were used to estimate the total indirect (i.e.,
mediation) effect of all relationship factors (i.e., affection, role reversal, felt obligation,
reciprocity) and the specific indirect (i.e., mediation) effect of each individual relationship factor
of maternal mental illness on psychological adjustment as well as BCa confidence intervals for
the indirect effects. The following demographic and family context variables were entered as
covariates to control for their effects: gender, age, parents’ marital status, maternal substance
abuse status. Two meditational analyses were conducted, one analysis with participants’
psychological symptoms (i.e., scores on BSI-GSI) as the dependent measure and one analysis
with participants’ overall psychological well-being (i.e., scores on SOS-10) as the dependent
measure.

The test of the mediation model examining the indirect effect of maternal mental illness
on psychological symptoms through aspects of the young adult-mother relationship is displayed
in Table 12 and Figure 2. The total indirect effect of all relationship factors was significant, 95%
BCa CI [.0227, .4059], indicating that collectively the relationship factors mediated the
association between having a mother with mental illness and psychological symptoms. Of the
four individual young adult-parent relationship factors, only the indirect effect for role reversal
was significant 95% BCa CI [.0361, .3320], indicating role reversal mediates the relationship
between maternal mental illness and psychological symptoms. As hypothesized, having a
mother with mental illness is associated with higher levels of role reversal, which in turn, is
associated with higher levels of psychological symptoms. The full multiple regression model predicting psychological symptoms is displayed in Table 13.

The mediator model testing the indirect effect of maternal mental illness on psychological well-being through young adult-mother relationship factors was not significant, as the total indirect effect for the relationship factors was not significant 95% BCa CI [-.3429, .1822] and the specific indirect effects of the four individual relationship factors were not significant (Table 14 and Figure 3). Thus, none of the assessed aspects of the young adult-mother relationship mediated the association between maternal mental illness and overall psychological well-being. The full multiple regression model predicting overall psychological well-being was significant $F(9, 106) = 3.09, p < .01, R^2 = .21, \text{Adj.} R^2 = .14; \text{Table 15}$. In the full model, only the covariates of participant age $t(115) = -2.02, p < .05$ and parents’ marital status $t(115) = 2.40, p < .05$ were significant predictors of global psychological well-being such that being younger and having married parents was associated with higher levels of psychological well-being.

**Personal Growth Analyses**

In the subsample of young adults who have a mother with mental illness, a hierarchical multiple regression analysis was used to explore the extent to which scores on measures of aspects of the young adult-mother relationship contribute to young adults’ scores on a measure of personal growth. In the first step of the equation, young adults’ demographic variables of age and gender were entered. Family circumstance variables of maternal substance abuse status, parental marital status, and the number of mothers’ psychiatric hospitalizations were entered in the second step. In the third step, scores on all four relationship measures were entered (i.e., affection, felt obligation, role reversal, reciprocity). Young adults’ personal growth scores were the criterion variable. The full model was not significant, $F(9, 40) = 1.56, p > .05$, indicating
that relationship scores did not significantly account for variance in young adults’ personal growth scores (Table 16).
CHAPTER V. DISCUSSION

The purpose of the present study was to broaden the current literature on the young adult children of mothers with serious mental illness. Using a life course perspective, this study examined aspects of the young adult-mother relationship in association with young adults’ self-reported current and future intentions to provide caregiving for their mothers, current psychological adjustment, and young adults’ current personal growth. To appreciate young adults with mothers with serious mental illness in the context of their social role as young adults, responses of those coping with maternal mental illness were compared to responses from young adults whose mothers did not have mental illness.

Main study findings indicate that young adults’ reports of a history of role reversal in the young-adult mother relationship was associated with reports of more current caregiving for those with and without mothers with mental illness. Reported levels of current provision of caregiving were comparable between those who had a mother with mental illness and those who did not have a mother with a mental illness. However, findings suggest that maternal mental health status moderated the association between felt obligation and current caregiving scores, such that higher levels of felt obligation were associated with reports of more current caregiving for those with mothers with mental illness but not for those without mothers with mental illness. Similar findings emerged for young adults intentions to provide future care to their mothers. In addition, a perceived history of role reversal in the young-adult mother relationship mediated the association between maternal mental illness and young adults’ psychological symptoms, but there were no significant mediators of the association between maternal mental illness and self-reported overall psychological well-being. Although young adults with mothers with mental illness reported, on average, “some” degree of stress-related personal growth, none of the
measured aspects of the young adult-mother relationship significantly accounted for variation in participants’ reports of personal growth.

**Current Caregiving and Future Caregiving Intentions**

The first goal of the present study was to examine whether the levels of perceived connectedness and the nature of exchange in the young adult-mother relationship were associated with young adults’ reports of their current provision of care for their mothers and their intentions to provide future care for their mothers. As expected, for those with mothers with mental illness, young adults’ perceptions of connectedness and nature of exchange aspects of their relationships with their mothers accounted for a significant amount of variance in reports of current caregiving. Specifically, reports of higher levels of felt obligation and higher levels of role reversal were associated with reports of more current caregiving. Similarly, variance in young adults’ reports of future caregiving intentions was significantly accounted for by the collective relationship aspects. However, only reports of felt obligation, a connectedness aspect of the young-adult mother relationship, emerged as a statistically significant predictor of future caregiving intentions. Felt obligation statistically predicted both current caregiving and future caregiving intentions, indicating that an emotional and cognitive experience of “needing to” perform various behaviors for mothers with mental illness is associated with reports of one performing more caregiving presently and intending to do so in the future. For current caregiving, more role reversal in the historical young adult-mother relationship was associated with more current caregiving, which indicates young adults who reported they provided more emotional and instrumental support for their mothers as children were more likely report providing care to their mothers at the current time. These findings are not directly comparable to previous research, as no prior work has quantitatively examined correlates of caregiving in
young adults with mothers with mental illness. However, these findings are consistent with much qualitative research on the young adult children of people with serious mental illness which has found that these young adults currently act as caregivers for their parents and also report having done so as children (Dunn, 1993; Kinsella et al., 1996; Marsh & Dickens, 1997; Williams, 1998).

In addition, the caregiving findings of the present study can be compared to prior studies that examined caregiving among well-siblings of people with serious mental illness. Findings from well-sibling studies have generally found connectedness and nature of exchange aspects of the sibling-sibling relationship are associated with well-siblings’ reports of current provision of care and future caregiving intentions (Jewell & Stein, 1999; Smith et al., 2007). The findings of the present study are consistent with these findings in that connectedness and nature of exchange variables appear to serve as motivators of caregiving for young adult with mothers with mental illness.

The full moderation regression model statistically predicting young adults’ reports of current caregiving for mothers with mental illness was significant. Young adults’ reports of role reversal were associated with reports of more current caregiving. Thus, young adults’ reports of providing higher levels of emotional and instrumental support to their mothers when they were children or adolescents were associated with young adults’ reports of providing higher levels of current care for their mothers. Although prior research has not directly examined the association between a history of role reversal and current caregiving, the finding of the present study is consistent with descriptive research which found that many young adults who report currently provide care to ageing relatives indicate they began doing so as a child or teenager (Levine et al., 2005).
In addition, findings of moderation analyses statistically predicting young adults’ reports of current caregiving indicated that for those young adults with a mother with mental illness, higher levels of felt obligation were associated with higher levels of reported current caregiving above and beyond a history of role reversal. However, for young adults without a mother with mental illness, felt obligation did not account for variation in current caregiving above and beyond the effect of role reversal. This finding was somewhat unexpected because a prior study in a non-clinical sample of young adults found that higher levels of reported felt obligation were associated with more current caregiving for parents (Stein et al., 1998). However, importantly, the magnitude of the association ($\beta = .25$) between felt obligation and current caregiving among those with mothers without mental illness in the present study was comparable to the association found between these variables ($\beta = .27$) in the Stein et al study. In the present study, the magnitude of the effect of felt obligation on current caregiving did not reach statistical significance in the subsample of 64 young adults with mothers with mental illness whereas in the Stein and colleagues study there was greater power to detect statistical significance of an effect this magnitude due to the sample size of 230 young adults. The findings of the present study, taken together with the findings of prior research, suggest felt obligation may motivate young adults without mothers with mental illness to provide caregiving, however, to a significantly lesser extent than it motivates those with mothers with mental illness to provide caregiving.

The full moderation regression model statistically predicting young adults’ reported future caregiving intentions for mothers with and without mothers with mental illness was also significant. In this model, the only statistically significant predictor of reports of future caregiving intentions was maternal mental health status. Having a mother with mental illness was associated with lower levels of intentions to provide future care. The moderation test
indicated that the magnitude of the association between felt obligation and future caregiving intentions among the two groups (those with mothers with mental illness and those without) was not significantly different. However, the findings of the initial regression analyses in the separate subsamples suggested that none of the aspects of the young adult-mother relationship were associated with young adults’ intentions to provide future caregiving to mothers without mental illness, whereas for those with mothers with mental illness higher levels of felt obligation were associated with more future caregiving intentions.

Overall, the pattern of findings indicates that for young adults who have a mother with mental illness, felt obligation is associated with reports of more caregiving and more intentions to provide future care. For those without a mother with mental illness the association between felt obligation and reports caregiving is weaker. Additionally, felt obligation toward mothers was lower among those young adults who had a mother with mental illness. The only other study to investigate felt obligation as a function of maternal mental illness found no difference in levels of felt obligation to mothers between those with and without mothers with mental illness (Abraham & Stein, 2010). This difference in findings may be a function of the smaller sample size in the Abraham and Stein study. Future research in larger samples is needed to better ascertain the level of felt obligation among the population of young adults with mothers with mental illness.

Interestingly, in the present study, young adults with a mother with mental illness responded similarly to a middle-aged sample of adult children from a prior study (Stein et al., 1998) with regard to felt obligation and caregiving. Similar to the sample of middle-aged adults in the Stein et al study, the young adults with mothers with mental illness in the present study reported lower felt obligation than a comparison group of young adults (specifically without
mental illness, in the present study). Additionally, for young adults with mothers with mental illness and middle-aged adults the strength of the association between felt obligation and caregiving was stronger than it was in comparison with a sample of young adults. In comparing middle-aged and young adults, Stein and colleagues suggest that middle-aged adults feel less obligation toward parents than young adults because by virtue of their life course stage they have opportunities to discharge their obligations to provide care to their parents whereas young adults have had far fewer opportunities. Similar reasoning may explain why young adults with mothers with mental illness report lower levels of felt obligation.

Despite their life course stage as young adults, those young adults with mothers with mental illness may generally view their obligations in ways more similar to middle-aged adults, rather than their young adult peers who do not have mothers with mental illness. The present study did not directly assess the specific tasks young adults reported previously performing for their mothers. However, findings of the present study suggest that as children and/or adolescents, these young adults experienced more role reversal than their peers without mothers with mental illness. This appears to suggest that young adults with mothers with mental illness previously cared for their mothers more than young adults without mothers with mental illness. By the time they reach young adulthood, those individuals with mothers with mental illness may feel as though they have already discharged their obligations and fulfilled their duties, relative to individuals with non-distressed mothers. And, similar to middle aged adults, these young adults with mothers with mental illness may require a higher level of felt obligation to motivate their caregiving behavior than the average young adult.

Studies of families impacted by mental illness indicate that a disruption to the typical life course occurs for not only the individual with mental illness but also for the well family.
Parents of individuals with mental illness often experience grief associated with their loved one’s mental illness (Solomon & Draine, 1996) and actively work to help their family member with mental illness attain aspects of a “normal life” (Stein & Wemmerus, 2001). This concept has been described as “off timedness” and reflects a disruption to the typical societal timetable expectations for a given social role (see Pickett, Cook, Cohler, 1994, for a brief discussion). Results of the present study indicate young adults with mothers with mental illness respond more similarly to middle-aged adults than to their peers without mothers with mental illness with regard to levels of felt obligation and the association between felt obligation and caregiving. In essence, these findings may suggest that young adults who have mothers with mental illness experience a life course disruption with regard to the normative social role expectations for young adult child. Generally, prior studies have examined the life course disruptions experienced by individuals with mental illness (Breslau, Lane, Sampson, & Kessler, 2008) or their parents’ (Pickett et al., 1994) reactions to such disruptions. Findings of one study did suggest having a mother with mental illness may be a particularly difficult life course disruption for young adult children (Abraham & Stein, 2010). Results of the present study further indicate that these young adults encounter life course disruptions associated with their mothers’ mental illness.

Although young adults with and without mothers with mental illness reported similar levels of current caregiving to their mothers, young adults with mothers with mental illness reported fewer intentions to provide future care to their mothers. Young adults with and without mothers with mental illness reported they “rarely” to “sometimes” provide care to their mothers. These similar reports of current caregiving may be a reflection of these young adults’ phase of life and their current social role as college students. Young adults with mothers with mental
illness reported more role reversal as children or adolescents. However, currently all of the participants in the present study were college students and a majority of participants reported living over 70 miles away from their mothers. The finding of similar reports of caregiving among young adults with and without mothers with mental illness may suggest the experience of being a college student is a more salient social role than the social role of caregiver, even for participants whose mothers have mental illness. In general, emerging adulthood is defined as a self-focused phase in which individuals “explore a variety of possible life directions” with regard to their careers and romantic relationships (Arnett, 2000, p. 469; Arnett, 2006). Parental relationships in young adulthood are typically characterized by mutual respect, communication reciprocity, and independence (Arnett, 2006; Wintre, et al., 1995; Youniss, 1980; Youniss & Smollar, 1985). Very little research has examined parental caregiving among young adult college students, presumably because it is not a defining feature of the young adult-parent relationship. The findings of the present study may indicate that occupying the social role of college student is a way that young adult children who have mothers with mental illness shift their focus from parental caregiving to tasks more reflective of the normative young adult phase of development.

The difference found in young adults’ reported intentions to provide future care to mothers with and without mental illness also warrants some consideration. Given that people with serious mental illness often receive instrumental and emotional assistance from family members (Lefley, 1996) and social systems (U.S. Department of Health and Human Services, 2005), it is conceivable that young adults who have mothers with mental illness may assume that other family members or the public system will aid them in caring for their mother with mental
illness, and therefore demonstrate less intent to provide future care than their counterparts whose mothers do not have mental illness.

Alternatively, young adults who have a mother with mental illness may report fewer future caregiving intentions because they wish to distance themselves from the caregiving responsibility they have already assumed. The present study’s results indicate young adults who have a mother with mental illness reported a history of more role reversal than young adults without a mother with mental illness. Prior qualitative research has also found the retrospective reports of adult children of people with mental illness contain descriptions of children caring for their parent with mental illness at the expense of their own needs (Kinsella et al., 1996; Marsh & Dickens, 1997). It may be that in the present study, young adults who have a mother with mental illness are looking to their future as an opportunity to focus on living their own lives rather than providing care to their mothers as they have done in the past. Indeed, prior research found that well-siblings expect to confront challenges in providing future care to siblings with mental illness due to concerns about meeting commitments to their own families, work, or school (Hatfield & Lefley, 2005). Other scholars (Cook et al., 1997) have contended that individual family members’ role transitions and life trajectories may affect the provision of caregiving for people with serious mental illness. Young adults who have a mother with mental illness may be anticipating typical developmental demands to be forthcoming in their own lives, such as getting married, having a family, and beginning a work, and may relegate their intentions to provide future care to their mothers. Research and theory has suggested that contemplating these future tasks is a normative part of emerging adulthood (Arnett, 2006). It is possible that young adults’ reports of lower levels of future intentions to provide care to mothers with mental illness may be
a reflection of their plans to get their own lives “on track” with regard to normative social timetables.

**Psychological Adjustment**

The second goal of the present study was to assess the extent to which perceived levels of connectedness and the nature of exchange within the young adult-mother relationship play a role in the research-established association between having a mother with mental illness and psychological adjustment difficulties. Consistent with much prior research (Abraham & Stein, 2010; Erlenmeyer-Kimling et al., 1997; Ingraham et al., 1995; Parnas et al., 1993) which has found young adult children of people with serious mental illness experience more psychological difficulties, the present study findings indicated that those with mothers with mental illness reported more psychological symptoms and lower overall psychological well-being than their peers without mothers with mental illness.

Results of the present study also indicated that reports of experiencing mother-child role reversal as a child or adolescent mediated the association between maternal mental illness and self-reported psychological symptoms. This finding suggests that it is not simply having a mother with mental illness that contributes to psychological symptoms, as the direct effect of maternal mental illness was not significant in the present study mediation analysis. Rather, it is the developmentally-inappropriate experience of a one-sided nature of exchange that occurs more when young adults have a mother with mental illness, which may serve as a mechanism and accounts for variance in reported psychological symptoms. From a life course perspective, this suggests that having a mother with mental illness is more likely to yield a disruption of the typical life stage expectations for the social role of child and the social role of mother and that this, in turn, is associated with adverse psychological consequences for young adult children.
This is consistent with prior research which has asserted that those who experience role reversal as children or adolescents are at greater risk for psychological difficulties in adulthood (Hooper & Wallace, 2010; Wells & Jones 1996, 2000). This is also consistent prior research on family members of people with serious mental illness which indicates there can be adverse psychological consequences for those who are not “on track” with regard to typical social expectations (Pickett et al., 1994; Stein & Wemmerus, 2001).

In the present study, a history of reported role reversal was more common among those with a mother with mental illness. Theoretical discussions of role reversal typically rely upon attachment, psychodynamic, and family structural theories to explain how and why role reversal occurs (Chase, 1999 for a brief, yet comprehensive, review). Generally, attachment theories posit that parents’ experience of insecure attachment to their own parents serves as a precursor to parent-child role reversal (Bowlby, 1977). Psychodynamic theories suggest a failure to master the separation-individuation phase of development (Mahler, 1968) and lack of the ability to successfully differentiate oneself from others (Boszormenyi-Nagy & Spark, 1973) yield diffuse boundaries between themselves and their children and set the stage for role reversal to occur. Family structural theories imply that “the site of pathology” is not necessarily within one individual, but in the pattern of family interactions which lacks boundary definition between parent and child (Minuchin, 1976).

Despite the merit of these theories, perspectives that take into consideration broader social systems as possible “sites of pathology” are rarely considered when explaining role reversal. Chase (1999) argues that theoretical explanations and research that involve larger the social context and social systemic issues are needed to better explain and more thoroughly understand role reversal. The findings of the present study indicate role reversal is more
common among those young adults with mothers with mental illness. In keeping with Chase’s assertion and from a broader social systems perspective, it may be that a lack of support and resources for mothers with mental illness, rather than an inherent deficit in the mothers themselves, may lead these mothers to develop dysfunctional interaction patterns in which they unwittingly rely on their children. Prior research does suggest that mothers with mental illness lack social support. Specifically, prior research indicates that mothers with mental illness are often single and live alone with their minor children (Mowbray, Oyserman, Bybee, MacFarlane, & Rueda-Riedle, 2001). A lack of social support has also been found to be associated with greater parenting stress for mothers with mental illness (Kahng, Oyserman, Bybee, & Mowbray, 2007). Additionally, poorer parenting by mothers with mental illness has been found to be associated with poorer psychological adjustment in young adult children (Mowbray & Mowbray, 2006). Research is needed to understand if and how increased social support among mothers with mental illness is associated with less parent-child role reversal. It is plausible that mothers who have adequate support may experience less parenting stress and be less likely to rely on their children in developmentally inappropriate ways. In turn, increased social support for mothers with mental illness may be associated with less parent-child role reversal.

The mediation analysis examining reported young adult-mother relationship factors as possible mediators of the association between maternal mental illness and young adults’ reported overall psychological well-being was not significant. Thus, felt obligation, affection, role reversal, and reciprocity did not emerge as mechanisms by which maternal mental illness is associated with perceived lower psychological well-being. In addition, after controlling for the significant unique effects of parental divorce and older age being associated with poorer psychological well-being, there was no significant direct effect for maternal mental illness on
overall perceived psychological well-being. This finding underscores the importance of assessing individual factors, such as age, as well as family context factors, such as parents’ marital status, when examining psychological well-being among young adults. The finding of parental divorce being associated with poorer psychological well-being is consistent with much prior research which found parental divorce is associated with less life satisfaction (see Amato & Keith, 1991, for a meta-analysis). In addition, although the measure of the psychological well-being used in present study did not capture the various facets known to be encompassed by the broad construct of psychological well-being (Ryff & Singer, 2006), the finding of increasing age being associated with poorer psychological well-being is consistent with prior research which has documented that some aspects of psychological well-being decline with age (Ryff & Singer, 2008).

The overall findings of the mediation analysis of the association between maternal mental illness and perceived psychological well-being are particularly interesting in comparison with the mediation analysis statistically predicting psychological symptoms. Role reversal was the only mediator of the association between maternal mental illness and perceived psychological symptoms. However, there were no significant mediators of the association between maternal mental illness and perceived psychological well-being and only main effects for age and parents’ marital status emerged. These findings speak to the importance of considering both “positive” (i.e., overall psychological well-being) and “negative” (i.e., psychological symptoms) indicators of psychological adjustment when assessing this construct. In the present study, the association between psychological symptoms and psychological well-being was moderate and there were different correlates within the mediation analyses for psychological adjustment and psychological well-being. Consistent with research and theory (Diener & Emmons, 1984;
Watson & Tellegen, 1985; Watson, Weise, Vaidya, & Tellegen, 1999), this suggests that although positive psychological experiences and negative psychological experiences are related, they are not necessarily opposite poles of a single construct. Hence, it is possible to experience both psychological symptoms and psychological well-being simultaneously. Furthermore, the results of the mediation analyses in the present study are consistent with other research which has demonstrated that the pathways by which individuals experience positive and negative psychological experiences can be different (Gruenewald, Mroczek, Ryff, & Singer, 2008).

Collectively, the two mediation analyses examining the role of young adult-mother relationship factors in the association between maternal mental illness and psychological adjustment indicated that most aspects of the young adult-mother relationship factors did not account for the association between maternal mental illness and lower psychological adjustment. Although young adults with mothers with mental illness reported less affection, less felt obligation, and less communication reciprocity in their relationships with their mothers as compared to their peers without mothers with mental illness, none of these aspects of the young adult-mother relationship were found to be mediators of the association between maternal mental illness and psychological adjustment. Thus, reported levels of current relationship quality did not serve as mechanisms associated with higher or lower levels of self-reported psychological adjustment. Prior research has indicated that positive aspects of social relationships are associated with fewer psychological adjustment difficulties for young adults whose mothers have mental illness (Abraham & Stein, 2010; Williams & Corrigan, 1992). Additionally, previous research in community samples has demonstrated that closer parent-young adult relationships are associated with better psychological adjustment for young adults (Boutelle et al., 2009; Roberts & Bengtson, 1996; van Wel et al., 2002). These findings are generally consistent with bivariate
correlational findings of the present study, as bivariate correlations in the entire sample between the relationship factors (affection, felt obligation, reciprocity, and role reversal) and psychological adjustment (psychological well-being and symptoms) are associated in the expected direction. Higher levels of reported affection, felt obligation, reciprocity and lower levels of role reversal were generally associated with higher self-reported psychological adjustment.

The present study differed from prior studies on the young adult children of people with mental illness in that it assessed the associations among maternal mental health status, young adult-mother relationship factors, and young adults’ reported psychological adjustment through mediation analyses. In general perceived aspects of the young adult-mother relationship were not found to be mediators of the association between maternal mental illness and young adults reported psychological adjustment. Future meditational analyses will likely be helpful in better understanding what factors might account for the known association between maternal mental illness and psychological adjustment difficulties. Certainly, prior studies have suggested that for individuals with parents with mental illness social relationships with the parent without mental illness (Abraham & Stein, 2010) and general amount and quality of one’s social support network (Williams & Corrigan, 1992) are associated with young adults’ psychological adjustment. It may be the case that these social relationships play a mediator role in the association between maternal mental illness and psychological adjustment. One hypothesized mediation model might be that those who have mothers with mental illness are more socially isolated than their peers without mothers with mental illness, which may in turn, be associated with poorer psychological adjustment. Given the present study finding that reported role reversal, a historical factor of the young adult-mother relationship, accounted for some of the association between maternal mental
When mom has a serious mental illness, it may be important to consider other historical factors in the young adult-mother relationship as possible mediators. For example, it is possible that mothers with mental illness have greater challenges performing adequate parenting than mothers without mental illness and that these difficulties in parenting are in turn associated with subsequent poorer psychological adjustment in young adult children. Most likely there are multiple factors that serve as partial mediators of the association between maternal mental illness and young adults’ psychological adjustment. Future research is needed to move beyond the documentation of the association between parental mental illness and poorer psychological adjustment to a better understanding of the mechanisms which can account for some of this association.

**Personal Growth**

A third goal of the present study was to assess whether aspects of the young adult-mother relationship were associated with young adults’ experience of stress-related personal growth. Findings indicated none of the assessed aspects of the young adult-mother relationship, specifically felt obligation, affection, role reversal, or reciprocity, were associated with stress-related personal growth. This finding is in contrast to prior research and theory which has asserted social support can play a role in facilitating personal growth in those who cope with stressful circumstances (McMillen, 2004; Park & Cohen, 2004). It may be the case that social support and relationships from peers or family members beside the mothers with mental illness facilitate personal growth for these young adults. Alternatively, it could be that other processes are primarily responsible for promoting stress-related growth in these young adults. For example, the process of meaning making, or attempting to cope and make sense of one’s difficult situation, has been shown to facilitate stress related growth in those with cancer (Lee, Cohen,
Edgar, Laizner, & Gagnon, 2004; Park, Edmonson, Fenster, & Blank, 2008). Research is needed to examine whether meaning making facilitates growth for the young adult children with mothers with mental illness.

Although the measured aspects of the young adult-mother relationship were not associated with personal growth, it is important to call attention to the fact that young adults reported, on average, “some” personal growth associated with having a mother with mental illness. The present study was the first quantitative inquiry regarding personal growth among young adult children of mothers with mental illness. The finding of personal growth presence is consistent with qualitative research that suggests growth among adult children of people with mental illness (Kinsella et al., 1996; Marsh & Dickens, 1997; Williams, 1998) and quantitative research that indicates growth among other family members of people with mental illness (Chen & Greenberg, 2004; Smith et al., 2007).

Limitations

Although the results of the present study are compelling, they are preliminary and the limits of the present study warrant some discussion. The composition and size of the sample is a central limitation of the present study. All participants in the present study were undergraduate students and the experience of these young adults may not generalize to young adults who are not college students. The experiences of young adults with mothers with mental illness, in particular, may differ as a function of whether young adults are college students or not. Given that having a mental illness is typically (bidirectionally) associated with a lack of socioeconomic resources (Muntaner, Borrell, & Chung, 2007), young adults with mothers with mental illness who are in college may come from families that have access to more financial resources and may not be representative of the total population of young adults affected by maternal mental illness.
Young adults who have mothers with mental illness and are attending college could also differ from their peers who have mothers with mental illness but do not attend college in that they may have had more opportunities to separate from their mothers and pursue their own futures. Arguably, young adults who have a mother with mental illness but are pursuing a college education may experience their relationships with their mothers differently, have different levels of psychological adjustment, provide a different level of care to their mothers, and experience a different level of personal growth as compared to young adults who are not pursuing a college education.

Additionally, in the present study most participants who reported having a mother with mental illness were Caucasian and reported having a mother with depression. These young adults’ experiences may not accurately reflect the experiences of those who are of other racial or ethnic backgrounds or have mothers with other serious mental illnesses. Finally, the size of the sample in the present study, especially the number of young adults with mothers with serious mental illness, may have made it difficult to detect statistically significant results in certain analyses. The sample size in the present study is comparable, with the exception of epidemiological research, to sample sizes in other empirical research (Abraham & Stein, 2010; Mowbray & Mowbray, 2006; Williams & Corrigan, 1992) that has examined the young adult children of people with serious mental illness. However, studies in larger, more representative samples are needed to best understand the experiences of young adults with parents with serious mental illness and more fully develop this line of research.

Reliance on young adults’ reports of their mothers’ mental illness is another limitation of the present study. Although prior studies (Abraham & Stein, 2010; Williams & Corrigan, 1992) have used similar methodology, young adults’ perceptions or knowledge of their mothers’
psychiatric diagnosis and psychiatric diagnostic history may not be accurate. Verification of
diagnostic information from mothers themselves or mental health records would certainly
strengthen future studies. Yet, despite this limitation, young adults’ phenomenological
experience of self-identifying as having a mother with mental illness is meaningful in that it
represents how they view themselves and their personal experience.

The use of a dichotomous, categorical measure to operationally define maternal mental
illness also limits the study. Scholars and clinicians have argued for dimensional classification
of mental health and illness rather than categorical classification (Helzer, Wittchen, Krueger, &
Kraemer, 2008; Okasha, 2009), as it is considered a more realistic appraisal of human
experience. However, currently the accepted psychiatric diagnostic system (i.e., Diagnostic and
Statistical Manual- IV-TR; American Psychiatric Association, 2000) is categorical. Statistically,
dichotomous variables also reduce power in regression analyses as compared to continuous
variables. Future research that assesses varying degrees of maternal mental illness would
increase the power in statistical analyses. Assessing maternal mental illness as a continuous
variable could also provide a more nuanced perspective on the experiences of young adults as a
function of their mother’s degree of severity of mental illness.

Finally, the cross-sectional nature of this research makes it impossible to infer causality
among the variables. Although this is true for all of the analyses, particular caution must be used
when interpreting the mediation model predicting psychological adjustment as mediation models
specifically examine proposed mechanisms of causality (Preacher & Hayes, 2008). In the
present study it can only be stated that the proposed mediation model predicting psychological
symptoms “fits” the data and definitive conclusions regarding causality cannot be drawn.
Longitudinal research that compares those with parents with mental illness to those without is
needed to best understand how aspects of parent-child relationships can impact young adult children’s psychological adjustment and parental caregiving.

**Directions for Future Research**

The present study is a preliminary step toward a better understanding of young adults who cope with maternal mental illness. In general, the present study suggested that aspects of the young-adult mother relationship play a role in motivating caregiving and young adults’ psychological symptoms for young adults with and without mothers with mental illness. Findings of the present study also indicated young adults who have mothers with mental illness experience lower levels of felt obligation, affection, and reciprocity and higher levels of role reversal in their relationships with their mothers as compared to their peers without mothers with mental illness. Further research is needed to ascertain whether these are consistent findings, as the present study is one of the first to examine the relationship between young adults and their mothers with mental illness.

Continued empirical research on the young adult children of people with serious mental illness is needed to gain an appreciation of these young adults’ provision of care for their parents. The results of the present study suggested that obligation to mothers was the primary motivator for these young adults’ to enact caregiving behaviors for their mothers. Additional studies should examine how obligation and caregiving impact young adults, not only in terms of their psychological symptoms but in terms of other areas of psychosocial functioning, such as education, employment, and relationships. Qualitative inquiry regarding how these young adults conceptualize their current provision of caregiving and future caregiving intentions for their mothers would yield a broader and more nuanced appreciation for the multitude of factors that influence young adults’ decisions to provide caregiving and their perceptions of how it impacts
them. It will also be important for future studies to assess parents’ perspectives on the caregiving their young adult children provide for them. Ultimately, research in this vein will allow researchers to gain a more holistic picture of families impacted by parental mental illness.

Findings of the present study also indicated young adults report similar levels of caregiving regardless of maternal mental health status. Caregiving provided by young adults of parents without mental illness is an area of study that has been largely neglected. The benefits and drawbacks to young adults acting as caregivers for elderly or disabled family members have only recently been considered by researchers (Shifren, 2009). Research is needed to understand the extent to which parental caregiving impacts relationships or young adults’ psychosocial functioning. Additional studies in this area will be important in determining what types of caregiving arrangements are beneficial for both young adults and their parents.

The present study indicated role reversal was a mediator of the well-known association between maternal mental illness and psychological symptoms. Future study is needed regarding the contexts in which role reversal is most likely to occur for the children of mothers with mental illness. Other family members’ support of mothers with mental illness and the social networks of mothers should be examined in future research in order to determine if greater levels of social support of mothers are associated with less parent-child role reversal. Future research would also do well to ascertain whether other aspects of the young adult-mother relationship, young adults relationships with other family members or relatives, and social support from peers may serve as mechanisms associated with higher or lower levels of psychological adjustment.

Although qualitative research has demonstrated personal growth occurs among the young adult children of people with serious mental illness, the present study was the first to empirically investigate these young adults’ personal growth experiences. Future research is needed to
understand what, specifically, facilitates personal growth among these young adults. Study of how the experience of personal growth impacts these young adults will also be important in appreciating whether personal growth is associated with increased psychosocial functioning.

In general, research on young adult children who cope with parental mental illness should include those who cope with paternal mental illness as well as maternal mental illness. Prior research has indicated that children are differentially impacted as a function of whether mothers or fathers have mental illness (Phares & Compass, 1992). The adoption of a life course perspective may be particularly appropriate for family research on serious mental illness. A life course framework takes into consideration the differential social role expectations and norms for mothers as compared to fathers as well as the unique relationship patterns that are common to the young adult-mother as compared to the young adult-father bond. The use of life course perspectives can add to the present body of research on the young adult children of people with serious mental illness by appreciating the societal and relationship context in which parental mental illness occurs.

Implications for Clinical and Community Practice

Although additional research in this area is needed to draw more definitive conclusions, the findings of the present study yield some implications for clinical and community practice. Psychotherapists and other clinicians who work with the young adult children of mothers with mental illness may find it helpful to assess the extent to which these young adults experienced role reversal, as this experience in particular may be associated with increased psychological symptoms. Practitioners would also do well to assess the extent to which these young adults may have experienced personal growth as a result of coping with maternal mental illness. Traditionally, research has adopted a deficit-focused view of the young adult children of people
with mental illness by classifying them as “at risk” for psychiatric conditions. However, qualitative research indicates that those with a parent with mental illness are able to identify strengths and growth as a result of their difficult experiences (Kinsella et al., 1996). The present study further demonstrated empirically that personal growth is relevant to these young adults. Clinicians who are sensitive to the presence of this experience may better able to facilitate growth in these young adults.

The present study also yields implications for clinical work with mothers with mental illness. Results of the present study suggest a link between role reversal and psychological symptoms for young adults of mothers with mental illness. Clinicians’ attention to their female clients’ social role as a mother may be a possible way to reduce parent-child role reversal. Research has indicated the social role of parent, particularly mother (Mowbray et al., 2001), is often ignored by social service agencies (Diaz-Canjea & Johnson, 2004; Glynn, Cohen, Dixon, & Niv, 2006), as the focus of psychiatric treatment is on the reduction of psychological symptoms in the “identified patient.” It would likely be of benefit to the children of mothers with mental illness if clinicians provided psychoeducation regarding the possible effects of role reversal. Clinicians may also be helpful by aiding these mothers in establishing sources of support beyond their young and adolescent children.

In addition to implications for therapy, the present study provides some direction for community practitioners. In contrast with traditional clinical psychology, community psychology focuses on prevention of mental health difficulties as well as systems-level interventions to address problems once they do occur (Rappaport, 1977). In addition to interventions tailored to individual mothers with mental illness, systems-level interventions aimed at the prevention of role reversal may be beneficial. Peer support groups are known to
benefit people with serious mental illness (Davidson, Chinman, Kloos, Weingarten, Stayer, & Tebes, 1999; Pistrang, Barker, & Humphreys, 2008). Support groups specifically for mothers with mental illness may aid in increasing support for mothers and perhaps reducing parent-child role reversal. Researchers have previously noted the importance of increasing access to resources, such as safe housing, employment, and affordable childcare for mothers with mental illness (Nicholson & Henry, 2003). More access to resources for mothers with mental illness may also be important in reducing their reliance on their children for support.

Systems-level interventions aimed at the young adult children of mothers with mental illness could also be valuable. Research has indicated family members of people with mental illness have found benefit from groups that provide education and support regarding a family members’ mental illness (Lucksted, Stewart, & Forbes, 2008; Pickett-Schenk, Cook, Steigman, Lippincott, Bennett, & Grey, 2006). Benefits identified by family members included more effective coping and problem solving, greater acceptance, less stress and depression, and improved interpersonal relations with others and the family member with mental illness (Lucksted et al., 2008; Pickett-Schenk et al., 2006). Group interventions designed specifically to address the needs of young adults who share the experience of having a mother with mental illness may be helpful in increasing personal growth, reducing psychological symptoms, and improving the young adult-mother relationship.

Conclusion

The present study is a preliminary examination of how aspects of the young adult-mother relationship are associated with young adults’ self-reported provision of caregiving and psychological adjustment for young adults with and without mothers with mental illness. The present study was also among the first to quantitatively examine personal growth among young
adults with mothers with mental illness. Given the preliminary nature of the study, future studies are needed to identify which aspects of the young adult-mother relationship reliably correlate with young adults’ provision of caregiving and psychological adjustment. Additional research on correlates of personal growth among young adults with mothers with mental illness is also needed to best understand how to facilitate the personal growth process.

Despite the preliminary nature of the present study, it is a necessary first step in better understanding the lives of young adults who cope with maternal mental illness. For too long research has focused primarily on documenting the psychological adjustment difficulties of these young adults. Continued research with a broader scope that looks beyond these young adults’ psychological adjustment is needed to gain a more holistic appreciation of the lives of young adults who cope with parental mental illness. A thorough appreciation of the challenges, strengths, circumstances, and relationships of young adults who cope with parental mental illness is a necessary foundation on which meaningful clinical and community interventions can be built to promote wellness in these young adults’ lives.
REFERENCES


APPENDIX A.

RECRUITMENT SCRIPT FOR YOUNG ADULTS WITH MOMS WITH MENTAL ILLNESS

Hello, my name is Kristen Abraham. I am a doctoral candidate in Clinical Psychology at Bowling Green State University. For my dissertation, I am completing a research project to better understand the experiences of young adults who have a mother with mental health issues, such as major depression, bipolar disorder, or schizophrenia. Young adults who are between 18 and 30 years of age AND have a mother with a serious mental illness are invited to participate in this research. This research was approved by the Human Subjects Review Board at Bowling Green State University (Human Subjects Review Board approval # H09D199GX2) by (Human Subjects Review Board APPROVAL FROM LOCAL INSTITUTION).

Participation in this study involves completing an online questionnaire at a computer of your convenience. I estimate that it will take you about 45-60 minutes to complete this survey. The anticipated risks to you as a result of participation in this study are no greater than those normally encountered in daily life. For your participation in this study, you will have the option of being entered into a raffle to win one of four $50 visa check cards.

Your participation in this research will contribute to researchers’ understanding of the experiences of young adults whose mothers who have serious mental illness.

Please go to the following website to participate:

Sincerely,

Kristen

Kristen Abraham, M.A.
Doctoral Student, Clinical Psychology
Bowling Green State University
Bowling Green, OH
kabraha@bgsu.edu
Hello, my name is Kristen Abraham. I am a doctoral student in Clinical Psychology at Bowling Green State University. For my dissertation, I am completing a research project to better understand young adults’ relationships with their mothers. All undergraduates who are between 18 and 30 years of age AND whose mother does not have a mental illness are invited to participate in this research.

This research was approved by the Human Subjects Review Board at Bowling Green State University (Human Subjects Review Board approval number) and by (Human Subjects Review Board APPROVAL FROM LOCAL INSTITUTION).

Participation in this study involves completing an online questionnaire at a computer of your convenience. I estimate that it will take you about 45-60 minutes to complete this survey. The anticipated risks to you as a result of participation in this study are no greater than those normally encountered in daily life. For your participation in this study, you will have the option of being entered into a raffle to win one of four $50 visa check cards.

Your participation in this research will contribute to researchers’ understanding of the mother-young adult relationship.

Please go to the following website to participate:

Sincerely,

Kristen

Kristen Abraham, M.A.
Doctoral Student, Clinical Psychology
Bowling Green State University
Bowling Green, OH
kabraha@bgsu.edu
APPENDIX C.
DEMOGRAPHIC INFORMATION

1. What is your gender? (circle one)  M  F

2. What is your age? _________

3. What is your current academic status?
   Freshman  Sophomore  Junior  Senior

4. What is your college major? ___________________________________

5. What is your ethnicity?
   □ African American
   □ Caucasian
   □ Hispanic
   □ Asian
   □ Pacific Islander
   □ American Indian
   □ African
   □ Middle Eastern
   □ Biracial
   □ Other - Please Specify ___________________________________

6. What is your parents’ marital status:
   □ Married
   □ Separated/Divorced
   □ Mother Deceased
   □ Father Deceased
   □ Both Parents Deceased

7. How far do you currently live from your mother?
   □ I live with my mother
   □ 0-10 miles apart
   □ 10-20 miles apart
   □ 20-30 miles apart
   □ 30-40 miles apart
   □ 40-50 miles apart
   □ 50-60 miles apart
   □ 60-70 miles apart
   □ 70-80 miles apart
   □ 80-90 miles apart
   □ 90-100 miles apart
APPENDIX D.
MATERNAL MENTAL HEALTH STATUS

8. Has your mother ever had a problem with drinking? Yes No
9. Has your father ever had a problem with drinking? Yes No
10. Has your mother ever had a problem with drugs? Yes No
11. Has your father ever had a problem with drugs? Yes No

12. Has your mother been diagnosed with a mental illness? Yes No
   If so, what is your mother’s diagnosis?
   ___Schizophrenia
   ___Schizoaffective Disorder
   ___Bipolar Disorder
   ___Major Depression
   ___Other, please specify ___________________

13. Who diagnosed your mother with a mental illness?
   ___Family Doctor
   ___Psychiatrist, Psychologist, Therapist or Counselor
   ___I don’t know
   ___Other, please specify ___________________

14. How old was your mother when she was diagnosed with a mental illness?
   ___I don’t know
   Additional responses were in a dropdown box and will range from 1 to 70 years of age

15. Has your mother ever been prescribed medications for her mental illness? Yes No

16. How many times has your mother been hospitalized for mental health problems?
   Responses were in a dropdown box and will range from 0 to 10 and will include the response option “more than 10.”

17. Has your mother ever attempted suicide? Yes No

18. How old were you when your mother was diagnosed with a mental illness?
   ___I don’t know
   ___She was diagnosed before I was born
   Additional responses will be in a dropdown box and will range from 0 to 30 years of age.

19. Has your father been diagnosed with a mental illness? Yes No
   If so, what is your father’s diagnosis?
   ___Schizophrenia
   ___Schizoaffective Disorder
   ___Bipolar Disorder
   ___Major Depression
   ___Other, please specify ___________________
APPENDIX E.
PERCEPTION OF PARENTAL RECIPROCITY SCALE- MATERNAL VERSION
(Wintre, Yaffe, & Crowley, 1995)

Please rate the extent to which you agree or disagree with each of the following items.

0 1 2 3 4 5
Strongly Disagree  Strongly Agree

1. My mother gives me a lot more space than she did before.
2. I often feel that my mother is talking 'at' me and not with me.*
3. My mother and I can enjoy each other's company and participate in shared activities.
4. I feel that my mother is approachable to discuss problems within our family.
5. My mother is comfortable expressing her doubts and fears with me.
6. Mutual respect is a term that I can use to describe my relationship with my mother.
7. I am able to be myself with my mother.
8. I am usually very cautious about what I say to my mother.*
9. When I try to share my concerns with my mother, her response usually makes me sorry I began the conversation.*
10. I can communicate as well with my mother as I can with my friends.

My mother and I can meaningfully discuss the following issues:
11. politics
12. my relationship with a significant other
13. career decisions
14. religion
15. sexual relations
16. university/college decisions
17. personal views on femininity/masculinity

*Reverse-scored
APPENDIX F.  
POSITIVE AFFECT INDEX (Bengston & Schrader, 1982)

These questions ask about your current relationship with your mother. Please indicate the response that most accurately describes how you feel about your mother or how you think your mother feels at the present time.

Not at all = 1  
Not much = 2  
Some = 3  
Pretty much = 4  
Very much = 5  
Extremely = 6

1. How much do you understand your mother?  
2. How well do you trust your mother?  
3. How fair do you feel you are toward your mother?  
4. How much do you respect your mother?  
5. How much affection do you have toward your mother?
APPENDIX G.
FELT OBLIGATION MEASURE (Stein, 1992)

When it comes to their parents, many adults tell us that they sometimes feel they ought to say or do certain things and not other things because they are dealing with their parents. Some people talk about it as a “need”. For example, they say they need to talk to their parents regularly whether they have something new to say or not, because it is important to keep in touch. Other people talk about it like they “should” keep in touch because they sometimes feel badly if they don’t.

Here is a list of things people sometimes tell us they “need to” or “should” say or do in their relationship with their parents. For each item, use the following scale to indicate how often you feel you “need to” or “should” say and do the following things in your relationship with your mother.

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Visit on holidays.</td>
</tr>
<tr>
<td>2.</td>
<td>Send cards for special occasions.</td>
</tr>
<tr>
<td>3.</td>
<td>Give her gifts for special occasions.</td>
</tr>
<tr>
<td>4.</td>
<td>Do things to make her proud of you.</td>
</tr>
<tr>
<td>5.</td>
<td>Do what she suggests.</td>
</tr>
<tr>
<td>6.</td>
<td>Maintain regular contact.</td>
</tr>
<tr>
<td>7.</td>
<td>Talk about personal things.</td>
</tr>
<tr>
<td>8.</td>
<td>Do her favors.</td>
</tr>
<tr>
<td>10.</td>
<td>Talk about your boy/girl friend.</td>
</tr>
<tr>
<td>11.</td>
<td>Give as much or more than you receive.</td>
</tr>
<tr>
<td>12.</td>
<td>Tell her things that she wants to hear.</td>
</tr>
<tr>
<td>13.</td>
<td>Get the family together for special occasions.</td>
</tr>
<tr>
<td>14.</td>
<td>Return favors that she does for you.</td>
</tr>
<tr>
<td>15.</td>
<td>Talk about other family members.</td>
</tr>
<tr>
<td>16.</td>
<td>Get as much or more than you give.</td>
</tr>
<tr>
<td>17.</td>
<td>Do things to please her.</td>
</tr>
<tr>
<td>18.</td>
<td>Talk about your children.</td>
</tr>
<tr>
<td>19.</td>
<td>Let her take care of you.</td>
</tr>
<tr>
<td>20.</td>
<td>Give her grandchildren.</td>
</tr>
<tr>
<td>21.</td>
<td>Talk about your own problems.</td>
</tr>
<tr>
<td>22.</td>
<td>Not ask her for financial help.</td>
</tr>
<tr>
<td>23.</td>
<td>Tell her that you love her.</td>
</tr>
<tr>
<td>24.</td>
<td>Take care of her in her old age.</td>
</tr>
<tr>
<td>25.</td>
<td>Be different from the way she is.</td>
</tr>
<tr>
<td>27.</td>
<td>Be your own person when the two of you are together.</td>
</tr>
<tr>
<td>28.</td>
<td>Offer her your advice and help.</td>
</tr>
<tr>
<td>29.</td>
<td>Loan her things she may need.</td>
</tr>
<tr>
<td>30.</td>
<td>Make her as happy as you can.</td>
</tr>
<tr>
<td>31.</td>
<td>Keep the giving and receiving as equal as you can in the relationship.</td>
</tr>
<tr>
<td>32.</td>
<td>Talk mostly about her problems.</td>
</tr>
<tr>
<td>33.</td>
<td>Borrow things from her.</td>
</tr>
<tr>
<td>34.</td>
<td>Make sure she sees her grandchildren.</td>
</tr>
</tbody>
</table>

In your relationship with your mother, how often do you feel that you “need to” or “should”:
APPENDIX H.
PARENT-CHILD ROLE REVERSAL: RELATIONSHIP WITH PARENTS SCALE-
MOTHER VERSION
(Alexander, 2003)

The following questions concern your relationship with your mother when you were a child and adolescent. Using the scale that follows, indicate which response best answers each question.

1 Strongly Disagree
2 Somewhat Disagree
3 Uncertain
4 Somewhat Agree
5 Strongly Agree

When I was young…

1. My mother seemed overwhelmed with taking care of the house.
2. My mother seemed overwhelmed with dealing with a family.
3. My mother relied on me to tell her what to do.
4. My mother relied on me for advice.
5. My mother didn’t think I loved her enough.
6. My mother expected me to take her side in an argument.
7. I felt bad about leaving my mother to go and play with friends.
8. My mother was jealous when I began to date.
9. My mother depended on me for emotional support.
10. I tried to protect my mother from my father.
11. I felt responsible for how my mother felt.
12. If I hurt myself, I worried more about my mother’s reaction than about myself.
13. My mother confided in me more than she did in anyone else.
14. My mother kept me up at night when she wanted company or needed someone to talk to.
15. My mother expected me to keep her company.
16. My mother acted more my age than hers.
17. My mother enjoyed my friends more than her own.
18. I was often preoccupied with understanding my mother’s moods.
19. My mother expected me to know what she was feeling.
20. I knew what my mother wanted better than she did herself.
21. I seemed to be able to read my mother’s mind.
APPENDIX I.
CURRENT CAREGIVING SCALE (Jewell & Stein, 2002)

Please think about how much help you may or may not have provided to your mother in certain areas. Please indicate how much you have assisted your mother in the past year.

1  None
2  Rarely
3  Sometimes
4  Frequently

In the past year, I have assisted my mother by:

1. Doing household tasks like cleaning, laundry, preparing meals, etc.
2. Providing rides or assistance with transportation
3. Shopping for groceries, clothes, or other basic needs
4. Giving money, or helping to manage financial matters
5. Providing emotional support or talking to her about her problems
6. Helping when she was sick or in a crisis
7. Giving her gifts or presents
8. Helping her deal with the symptoms of her illness*
9. Coordinating family visits or taking her out
10. Arranging services for her, like dental or doctor appointments, or acting as a coordinator with medical or other professionals

* Item for young adults with mothers without mental illness was modified to read “Helping her deal with any health problems.”
APPENDIX J.
FUTURE CAREGIVING INTENTIONS (Jewell & Stein, 2002)

Listed below are a number of statements concerning whether you intend to help your mother in certain areas of her life at some point in the future. Please indicate the extent to which you agree or disagree with each statement.

1 Strongly Disagree
2 Disagree
3 Neutral
4 Agree
5 Strongly Agree

1. I intend to help my mother with emotional support sometime in the future.
2. I intend to help my mother with basic needs (for example, household tasks, shopping, transportation) sometime in the future.
3. I intend to help my mother with financial assistance sometime in the future.
4. I intend to help my mother with symptom management sometime in the future.*
5. I intend to help my mother by arranging for supportive services sometime in the future.

* Item for young adults with mothers without mental illness was modified to read: “I intend to help my mother with maintaining her health sometime in the future.”
APPENDIX K.
SCHWARTZ OUTCOMES SCALE-10 (Blais et al., 1999)

Below are 10 statements about you and your life that help us see how you feel you are doing. Please respond to each statement by circling the response number that best fits how you have generally been over the last seven days (1 week). There are no right or wrong responses and it is important that your responses reflect how you feel you are doing. Often the first answer that comes to mind is best. Thank you for your thought effort. Please be sure to respond to each statement.

1. Given my current physical condition, I am satisfied with what I can do.
   0  1  2  3  4  5  6
   Never  All of the time or nearly all of the time

2. I have confidence in my ability to sustain important relationships.
   0  1  2  3  4  5  6
   Never  All of the time or nearly all of the time

3. I feel hopeful about my future.
   0  1  2  3  4  5
   Never  All of the time or nearly all of the time

4. I am often interested and excited about things in my life.
   0  1  2  3  4  5  6
   Never  All of the time or nearly all of the time

5. I am able to have fun.
   0  1  2  3  4  5  6
   Never  All of the time or nearly all of the time

6. I am generally satisfied with my psychological health.
   0  1  2  3  4  5  6
   Never  All of the time or nearly all of the time

7. I am able to forgive myself for my failures
   0  1  2  3  4  5  6
   Never  All of the time or nearly all of the time

8. My life is progressing according to my expectations.
   0  1  2  3  4  5  6
   Never  All of the time or nearly all of the time

9. I am able to handle conflicts with others.
   0  1  2  3  4  5  6
   Never  All of the time or nearly all of the time

10. I have peace of mind.
    0  1  2  3  4  5  6
    Never  All of the time or nearly all of the time
APPENDIX L.
STRESS RELATED PERSONAL GROWTH SCALE
(Pargament et al., 2000; Park et al., 1996)

Please answer the following questions with regard to your mother’s mental illness.

0 = Not at All
1 = Somewhat
2 = A Great Deal

Because of my mom’s mental illness...

1. I learned to be nicer to others
2. I feel freer to make my own decisions
3. I learned that I have something of value to teach others about life
4. I learned to be myself and not try to be what others want me to be
5. I learned to work through problems and not just give up
6. I learned to find more meaning in life
7. I learned how to reach out and help others
8. I learned to be a more confident person
9. I learned to listen more carefully when others talk to me
10. I learned to be open to new information and ideas
11. I learned to communicate more honestly with others
12. I learned that I want to have some impact on the world
13. I learned that it’s OK to ask others for help
14. I learned to stand up for my personal rights
15. I learned that there are more people who care about me than I thought
Table 1  *Constructs and Measures Relevant to the Young Adult-Mother Relationship*

<table>
<thead>
<tr>
<th>Broad Relationship Construct</th>
<th>Definition</th>
<th>Specific Construct and Measures</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature of Exchange</td>
<td>Describes the extent to which support and communication in the relationship between mother and young adult children are mutually given and received.</td>
<td>Reciprocity-Perception of Parental Reciprocity Scale-Maternal Version (Wintre, Yaffe, &amp; Crowley, 1995)</td>
<td>Describes a relationship that is mutually communicative, where both parties give and receive caring and communicate relatively equally. Illustrates connectedness between mothers and young adult children as well as developmentally appropriate independence.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Role reversal-Relationship with Parents Scale-Mother Version (Alexander, 2003)</td>
<td>Describes a relationship between mothers and their children where children, as youngsters, assumed a greater responsibility for caring for and supporting their mothers than is normative. Illustrates a developmentally inappropriate “one-sided” relationship where mother’s needs are primary.</td>
</tr>
<tr>
<td>Connectedness</td>
<td>Describes the ongoing nature of the relationship between mothers and young adult children.</td>
<td>Affection-Positive Affect Index (Bengston &amp; Schrader, 1982) Felt obligation- Felt Obligation Measure (Stein, 1992)</td>
<td>Describes the emotional experience young adults feel toward mothers. Illustrates the feelings of understanding, trust, and fairness young adult children hold for their mothers.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Describes the obligatory nature of young adults’ thoughts and feelings toward their mothers, due to a sense of indebtedness. Highlights context-specific negotiated obligations young adults feel toward their mothers.</td>
</tr>
<tr>
<td>Overarching Construct</td>
<td>Definition</td>
<td>Measures</td>
<td>Definition</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------</td>
<td>----------</td>
<td>------------</td>
</tr>
<tr>
<td>Caregiving</td>
<td>Describes instrumental and emotional caregiving provided to mothers by their young adult children.</td>
<td>Current Caregiving-Scale (Jewell &amp; Stein, 2002)</td>
<td>Describes the frequency of young adults’ provision of instrumental and emotional support to their mothers in the past year. Represents the actual behaviors performed by young adults.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Future Caregiving Intentions-</td>
<td>Illustrates young adults’ intention to provide instrumental and emotional support to their mothers at some point in the future. Represents young adults’ intent to perform specific behaviors.</td>
</tr>
<tr>
<td>Psychological</td>
<td>Describes the current state of young adults’ psychological adjustment.</td>
<td>Psychological Symptoms- Brief Symptom Inventory (Derogatis, &amp; Melisaratos, 1983)</td>
<td>Describes a broad range of mental health symptoms experienced by young adults in the past week. Higher levels of psychological symptoms are indicative of poorer psychological adjustment.</td>
</tr>
<tr>
<td>Adjustment</td>
<td></td>
<td>Psychological Well-being- Schwartz Outcomes Scale-10 (Blais et al., 1999)</td>
<td>Describes young adults’ global psychological well-being in the past week. Higher levels of global psychological well-being are indicative of better psychological health.</td>
</tr>
<tr>
<td>Personal Growth</td>
<td>Describes the current state of young adults’ personal growth as a result of a stressful experience.</td>
<td>Stress Related Personal Growth- Stress Related Personal Growth Scale (Pargament et al., 2000; Park et al., 1996)</td>
<td>Describes young adults’ experience of personal growth as a result of having a mother with serious mental illness. Illustrates a dimension of psychological experience distinct from traditional measures of psychological adjustment. Higher levels indicate a greater degree of personal growth.</td>
</tr>
</tbody>
</table>
Table 3

*Participants’ Demographic and Family Information*

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>Frequency (Percent)</th>
<th>Family Variable</th>
<th>Frequency (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Gender</td>
<td>Parents’ Marital Status</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>22 (19)</td>
<td>Married</td>
<td>70 (60)</td>
</tr>
<tr>
<td>Female</td>
<td>94 (81)</td>
<td>Divorced/Separated</td>
<td>46 (40)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td>Maternal Mental Illness</td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>106 (91)</td>
<td>Present</td>
<td>52 (45)</td>
</tr>
<tr>
<td>People of Color</td>
<td>10 (9)</td>
<td>Absent</td>
<td>64 (55)</td>
</tr>
<tr>
<td>Year in College</td>
<td></td>
<td>Maternal Substance Abuse</td>
<td></td>
</tr>
<tr>
<td>Freshman</td>
<td>62 (53)</td>
<td>Present</td>
<td>22 (19)</td>
</tr>
<tr>
<td>Sophomore</td>
<td>25 (22)</td>
<td>Absent</td>
<td>94 (81)</td>
</tr>
<tr>
<td>Junior</td>
<td>9 (8)</td>
<td>Distance Lives from Mother</td>
<td></td>
</tr>
<tr>
<td>Senior</td>
<td>17 (15)</td>
<td>70 miles away or less</td>
<td>55 (47)</td>
</tr>
<tr>
<td>Other</td>
<td>3 (3)</td>
<td>More than 70 miles away</td>
<td>61 (53)</td>
</tr>
<tr>
<td>Mean (SD)</td>
<td></td>
<td>Age</td>
<td>19.79 (2.34)</td>
</tr>
</tbody>
</table>

*Note. N = 116*
Table 4

**Young Adults’ Reports of Descriptive Information about Maternal Mental Illness**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency (Percent)</th>
<th>Variable</th>
<th>Frequency (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diagnosis</strong></td>
<td></td>
<td><strong>Timing of Diagnosis</strong></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>28 (54)</td>
<td>Before young adult born</td>
<td>8 (15)</td>
</tr>
<tr>
<td>Bipolar Disorder</td>
<td>18 (35)</td>
<td>After young adult born</td>
<td>30 (58)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>3 (6)</td>
<td>“I don’t know”</td>
<td>14 (27)</td>
</tr>
<tr>
<td>Schizoaffective Disorder</td>
<td>1 (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2 (4)</td>
<td>Age of young adult at time of diagnosis&lt;sup&gt;a&lt;/sup&gt;</td>
<td>10.50 (5.44)</td>
</tr>
<tr>
<td><strong>Diagnostician</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Health Professional</td>
<td>19 (37)</td>
<td></td>
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</tr>
<tr>
<td>Family Doctor</td>
<td>6 (12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“I don’t know”</td>
<td>27 (52)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Prescribed Medication</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>44 (85)</td>
<td>No</td>
<td>42 (81)</td>
</tr>
<tr>
<td>No</td>
<td>8 (15)</td>
<td>No response</td>
<td>2 (4)</td>
</tr>
</tbody>
</table>

*Note.* n = 52

<sup>a</sup> Includes only participants who reported their mothers were diagnosed after their birth (n = 30)

<sup>b</sup> Two participants did not report number of psychiatric hospitalizations (n = 50)
Table 5

Constructs and Descriptive Statistics for Study Measures

<table>
<thead>
<tr>
<th>Construct</th>
<th>Measure</th>
<th>Mean (SD)</th>
<th>Observed Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reciprocity in young adult-mother relationship</td>
<td>Parental Perception of Reciprocity Scale- Mother version</td>
<td>3.14 (1.20)</td>
<td>.29-5.00</td>
</tr>
<tr>
<td>Affection young adults currently feel toward their mothers</td>
<td>Positive Affect Index- items tapping young adults’ affection</td>
<td>4.62 (1.27)</td>
<td>1.20-6.00</td>
</tr>
<tr>
<td>Felt obligation young adults feel to perform actions in their relationship with their mother</td>
<td>Felt Obligation Measure- mother version</td>
<td>3.56 (.76)</td>
<td>1.32-5.00</td>
</tr>
<tr>
<td>Parent-child role reversal- young adults’ retrospective account of role reversal in their relationship with their mother</td>
<td>Relationship with Parents Scale- mother version</td>
<td>2.37 (.84)</td>
<td>1.00-5.00</td>
</tr>
<tr>
<td>Current provision of caregiving by young adults to mothers</td>
<td>Current Caregiving Scale</td>
<td>2.57 (.64)</td>
<td>1.00-4.00</td>
</tr>
<tr>
<td>Intentions of young adults to provide future care to mothers</td>
<td>Future Caregiving Intentions Scale</td>
<td>3.74 (.88)</td>
<td>1.00-5.00</td>
</tr>
<tr>
<td>Psychological symptoms</td>
<td>Brief Symptom Inventory- General Severity Index</td>
<td>.86 (.77)</td>
<td>0-3.42</td>
</tr>
<tr>
<td>Psychological well-being</td>
<td>Schwartz Outcomes Scale</td>
<td>4.24 (1.19)</td>
<td>1.00-6.00</td>
</tr>
<tr>
<td>Stress Related Growth</td>
<td>Stress Related Growth Scale&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.25 (.49)</td>
<td>0-2.00</td>
</tr>
</tbody>
</table>

*Only participants with mothers with mental illness (n = 52) responded to this measure*
### Table 6

*Pearson Bivariate Correlation Matrix of Study Variables*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
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<th>13</th>
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<tbody>
<tr>
<td>Age</td>
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<tr>
<td>Maternal Substance Use</td>
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<td>-.22**</td>
<td>.27**</td>
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<td>-.49**</td>
<td>-.44**</td>
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<tr>
<td>Felt Obligation</td>
<td>-.31**</td>
<td>.19*</td>
<td>-.28**</td>
<td>-.30**</td>
<td>.19*</td>
<td>.67**</td>
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<tr>
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<td>-.11</td>
<td>.38**</td>
<td>.26**</td>
<td>-.38*</td>
<td>-.34**</td>
<td>-.17</td>
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<td>.85**</td>
<td>.65**</td>
<td>-.34**</td>
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</tr>
<tr>
<td>Current Caregiving</td>
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<td>.08</td>
<td>.01</td>
<td>.02</td>
<td>-.14</td>
<td>.13</td>
<td>.36**</td>
<td>.27**</td>
<td>.19*</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Future Caregiving Intent</td>
<td>-.18</td>
<td>.14</td>
<td>-.32**</td>
<td>-.19*</td>
<td>.08</td>
<td>.43**</td>
<td>.45**</td>
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<td>.38**</td>
<td>.47**</td>
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<tr>
<td>Psychological Symptoms</td>
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<td>-.13</td>
<td>.32**</td>
<td>.29**</td>
<td>-.32**</td>
<td>-.32**</td>
<td>-.09</td>
<td>.48**</td>
<td>-.29**</td>
<td>.21*</td>
<td>-.03</td>
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<tr>
<td>Psychological Well-being</td>
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<td>.08</td>
<td>-.25**</td>
<td>-.21*</td>
<td>.34**</td>
<td>.33**</td>
<td>.27**</td>
<td>-.20*</td>
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<td>-.02</td>
<td>.09</td>
<td>-.59**</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* $N = 116$

** $p < .01$, * $p < .05$
Table 7

Independent Samples t-tests: Differences on Study Measures as a Function of Maternal Mental Health Status

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mother with Mental Illness (n = 52) Mean (SD)</th>
<th>Mother without Mental Illness (n = 64) Mean (SD)</th>
<th>Independent Samples T-test</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Perception of Reciprocity Scale</td>
<td>2.53 (.15)</td>
<td>3.63 (1.01)</td>
<td>( t(114) = 5.49, p &lt; .001 )</td>
<td>1.02</td>
</tr>
<tr>
<td>Positive Affect Index</td>
<td>3.94 (1.37)</td>
<td>5.17 (.85)</td>
<td>( t(81.26) = 5.65, p &lt; .001 )</td>
<td>1.08</td>
</tr>
<tr>
<td>Felt Obligation Measure</td>
<td>3.32 (.81)</td>
<td>3.75 (.67)</td>
<td>( t(114) = 3.10, p &lt; .01 )</td>
<td>.57</td>
</tr>
<tr>
<td>Relationship with Parents Scale (role reversal)</td>
<td>2.72 (.76)</td>
<td>2.09 (.79)</td>
<td>( t(114) = -4.36, p &lt; .001 )</td>
<td>.82</td>
</tr>
<tr>
<td>Current Caregiving Scale</td>
<td>2.58 (.70)</td>
<td>2.57 (.60)</td>
<td>( t(114) = -1.15, p &gt; .05 )</td>
<td>.03</td>
</tr>
<tr>
<td>Future Caregiving Intentions Scale</td>
<td>3.43 (.92)</td>
<td>3.99 (.78)</td>
<td>( t(114) = 3.55, p = .001 )</td>
<td>.66</td>
</tr>
<tr>
<td>Brief Symptom Inventory- General Severity Index</td>
<td>1.13 (.86)</td>
<td>.64 (.61)</td>
<td>( t(89.23) = -3.43, p = .001 )</td>
<td>.65</td>
</tr>
<tr>
<td>Schwartz Outcomes Scale (psychological well-being)</td>
<td>3.91 (1.26)</td>
<td>4.50 (1.06)</td>
<td>( t(114) = 2.76, p &lt; .01 )</td>
<td>.51</td>
</tr>
</tbody>
</table>

*Note.* Cohen’s d effect-size magnitudes: \( d = .2 \) (small), \( d = .5 \) (medium), \( d = .8 \) (large).

*Degrees of freedom adjusted for non-homogeneity of variance between subsamples.*
Table 8

Pearson Bivariate Correlations among Study Measures as a Function of Maternal Psychological Status

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
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</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>-----</td>
<td>.04</td>
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<td>.08</td>
<td>-.13</td>
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<td>-.13</td>
<td>-.04</td>
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<td>-.07</td>
<td>.03</td>
<td>-.31*</td>
</tr>
<tr>
<td>2. Gender</td>
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<td>-----</td>
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<td>-.21</td>
<td>.07</td>
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<td>-.01</td>
<td>.17</td>
<td>-.01</td>
<td>.06</td>
<td>.19</td>
<td>-.09</td>
</tr>
<tr>
<td>3. Maternal Hospitalizations</td>
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<td>.10</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>4. Maternal Substance Use</td>
<td>.00</td>
<td>-.31*</td>
<td>.38**</td>
<td>-----</td>
<td>-.05</td>
<td>-.17</td>
<td>-.17</td>
<td>.24</td>
<td>-.03</td>
<td>.02</td>
<td>.03</td>
<td>.16</td>
<td>-.09</td>
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<td>5. Parental Martial Status</td>
<td>-.08</td>
<td>-.03</td>
<td>-.22</td>
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<td>-----</td>
<td>.15</td>
<td>-.01</td>
<td>-.36**</td>
<td>.05</td>
<td>-.23</td>
<td>-.02</td>
<td>-.20</td>
<td>.27*</td>
</tr>
<tr>
<td>6. Affection</td>
<td>-.29*</td>
<td>.09</td>
<td>-.21</td>
<td>-.46**</td>
<td>.40**</td>
<td>-----</td>
<td>.67**</td>
<td>-.20</td>
<td>.78**</td>
<td>.07</td>
<td>.25*</td>
<td>-.17</td>
<td>.15</td>
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<td>7. Felt Obligation</td>
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<td>-.06</td>
<td>-.29*</td>
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<td>.57**</td>
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<td>.25*</td>
<td>-.08</td>
<td>.22</td>
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<tr>
<td>8. Role Reversal</td>
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<td>.15</td>
<td>-.26</td>
<td>-.20</td>
<td>-.08</td>
<td>-----</td>
<td>-.18</td>
<td>.38**</td>
<td>.26*</td>
<td>.30*</td>
<td>-.02</td>
</tr>
<tr>
<td>9. Reciprocity</td>
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<td>-.39**</td>
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<td>.84**</td>
<td>.64**</td>
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<td>.06</td>
<td>.18</td>
<td>-.12</td>
<td>.14</td>
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<td>10. Current Caregiving</td>
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<td>.01</td>
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<td>.22</td>
<td>.52**</td>
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<td>.38**</td>
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<td>.37**</td>
<td>.29*</td>
<td>.05</td>
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<td>12. Psychological Symptoms</td>
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<td>-.24</td>
<td>.06</td>
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<td>.16</td>
<td>.01</td>
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<td>-.46**</td>
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<td>-.20</td>
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<td>.32*</td>
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<td>.21</td>
<td>-.06</td>
<td>.00</td>
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<td>.04</td>
<td>.10</td>
<td>.12</td>
<td>.31*</td>
<td>-.17</td>
<td>.22</td>
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</tbody>
</table>

Note. Correlations for young adults with mothers with serious mental illness (n = 52) are below the diagonal and correlations for young adults with mothers without mental illness (n = 64) are above the diagonal.

a Only participants with mothers with mental illness responded to this variable and two participants omitted this item (n = 50).
b Only participants with mothers with mental illness responded to this measure (n = 52).

**p < .01, * p < .05
### Hierarchical Regression Analyses Predicting Current Caregiving

<table>
<thead>
<tr>
<th>Variable</th>
<th>Current Caregiving Young Adults with Mothers with Mental Illness ($n = 50$)</th>
<th>Current Caregiving Young Adults with Mothers without Mental Illness ($n = 64$)</th>
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<td></td>
<td>$B$</td>
<td>$SE$</td>
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<tr>
<td>Age</td>
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<td>0.04</td>
</tr>
<tr>
<td>Steps 1 and 2</td>
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<td>0.02</td>
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<tr>
<td>Gender</td>
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<td>0.24</td>
</tr>
<tr>
<td>Age</td>
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<td>0.04</td>
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<td>0.05</td>
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<td>Steps 1, 2, and 3</td>
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<td>0.21</td>
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<td>0.05</td>
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<tr>
<td>Positive Affect Index</td>
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</tr>
<tr>
<td>Reciprocity</td>
<td>0.23</td>
<td>0.15</td>
</tr>
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</table>

$^a$ Two participants with mothers with mental illness did not report their mother’s number of hospitalizations and listwise deletion was used to exclude them from this analysis.

$^b$ Maternal psychiatric hospitalizations were not assessed in the group of young adults who reported mothers without mental illness. This variable was not entered for those whose mothers do not have mental illness.

*p < .05; ** p < .01
Table 10

Hierarchical Regression Analyses Predicting Future Caregiving Intentions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Future Caregiving Young Adults with Mothers with Mental Illness (n = 50)</th>
<th>Future Caregiving Young Adults with Mothers without Mental Illness (n = 64)</th>
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<td>SE B</td>
</tr>
<tr>
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<td>Gender</td>
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<td>Age</td>
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<td>.05</td>
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<tr>
<td>Steps 1 and 2</td>
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<td>.05</td>
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<td>Maternal Substance Abuse</td>
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<td>Parents Marital Status</td>
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<td>.27</td>
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<tr>
<td>Maternal Hospitalizations^b</td>
<td>.07</td>
<td>.07</td>
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<tr>
<td>Steps 1, 2, and 3</td>
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<tr>
<td>Gender</td>
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<td>.29</td>
</tr>
<tr>
<td>Age</td>
<td>-.01</td>
<td>.05</td>
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<tr>
<td>Maternal Substance Abuse</td>
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<td>.33</td>
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<td>Maternal Hospitalizations^b</td>
<td>.07</td>
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<tr>
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<td>.09</td>
<td>.17</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>-.08</td>
<td>.21</td>
</tr>
</tbody>
</table>

^a Two participants with mothers with mental illness did not report their mother’s number of hospitalizations and listwise deletion was used to exclude them from this analysis

^b Maternal psychiatric hospitalizations were not assessed in the group of young adults who reported mothers without mental illness. This variable was not entered for those whose mothers do not have mental illness.

*p < .05; **p < .01; †p = .054
<table>
<thead>
<tr>
<th>Variable</th>
<th>Current Caregiving</th>
<th>Future Caregiving</th>
</tr>
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<td></td>
<td>B</td>
<td>SE B</td>
</tr>
<tr>
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<tr>
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<tr>
<td>Gender</td>
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<td>.15</td>
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<tr>
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<td>.02</td>
<td>.16</td>
</tr>
<tr>
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<td>.16</td>
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<td>Positive Affect Index</td>
<td>.00</td>
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<tr>
<td>Role Reversal</td>
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<td>.08</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>.17</td>
<td>.09</td>
</tr>
<tr>
<td>Steps 1 and 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.02</td>
<td>.02</td>
</tr>
<tr>
<td>Gender</td>
<td>.03</td>
<td>.15</td>
</tr>
<tr>
<td>Maternal Substance Abuse</td>
<td>.05</td>
<td>.16</td>
</tr>
<tr>
<td>Parents Marital Status</td>
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<td>.13</td>
</tr>
<tr>
<td>Positive Affect Index</td>
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<td>.09</td>
</tr>
<tr>
<td>Role Reversal</td>
<td>.24</td>
<td>.07</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>.11</td>
<td>.09</td>
</tr>
<tr>
<td>Maternal Mental Illness</td>
<td>-.01</td>
<td>.13</td>
</tr>
<tr>
<td>Felt Obligation</td>
<td>.34</td>
<td>.10</td>
</tr>
<tr>
<td>Steps 1, 2, and 3</td>
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<td></td>
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<tr>
<td>Age</td>
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<td>.02</td>
</tr>
<tr>
<td>Gender</td>
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<td>.14</td>
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<tr>
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<td>.15</td>
</tr>
<tr>
<td>Parents Marital Status</td>
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<td>.13</td>
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<tr>
<td>Positive Affect Index</td>
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<td>.09</td>
</tr>
<tr>
<td>Role Reversal</td>
<td>.23</td>
<td>.07</td>
</tr>
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<td>Reciprocity</td>
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<td>Felt Obligation</td>
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<td>Interaction:</td>
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<tr>
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<td>.15</td>
</tr>
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</table>

*Note. N = 116*

*p < .05; **p < .01; ***p < .001; †p < .06.
### Table 12

*Indirect Effects of Maternal Mental Illness on Psychological Symptoms through Young Adult-Mother Relationship Factors*

<table>
<thead>
<tr>
<th>Indirect Effect</th>
<th>Point Estimate</th>
<th>Product of Coefficients</th>
<th>Bootstrapping BCa Confidence Intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Total Indirect Effect</td>
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<td>.0108</td>
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<td>.0726</td>
<td>-.1097</td>
<td>.2934</td>
</tr>
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<td>Felt Obligation</td>
<td>-.0437</td>
<td>-.1550</td>
<td>.0122</td>
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<tr>
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<td>.1303</td>
<td>.0355</td>
<td>.3301</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>.0269</td>
<td>-.1430</td>
<td>.1873</td>
</tr>
</tbody>
</table>
Table 13

*Full Hierarchical Regression Model Predicting Psychological Symptoms*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-.09</td>
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<td>-.05</td>
</tr>
<tr>
<td>Age</td>
<td>.01</td>
<td>.03</td>
<td>.02</td>
</tr>
<tr>
<td>Maternal Substance Abuse</td>
<td>.23</td>
<td>.18</td>
<td>.12</td>
</tr>
<tr>
<td>Parents Marital Status</td>
<td>-.15</td>
<td>.15</td>
<td>-.10</td>
</tr>
<tr>
<td>Maternal Mental Illness</td>
<td>.11</td>
<td>.15</td>
<td>.07</td>
</tr>
<tr>
<td>Positive Affect Index</td>
<td>-.08</td>
<td>.11</td>
<td>-.13</td>
</tr>
<tr>
<td>Felt Obligation</td>
<td>.19</td>
<td>.12</td>
<td>.19</td>
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<tr>
<td>Role Reversal</td>
<td>.32</td>
<td>.09</td>
<td>.34***</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>-.04</td>
<td>.10</td>
<td>-.06</td>
</tr>
</tbody>
</table>

*Notes. N = 116; Full model statistics: F(9, 106) = 5.12, p < .00001, R² = .30, Adj.R² = .24*
Table 14

*Indirect Effects of Maternal Mental Illness on Psychological Well-being through Young Adult-Mother Relationship Factors*

<table>
<thead>
<tr>
<th>Indirect Effect</th>
<th>Point Estimate</th>
<th>Bootstrapping BCa Confidence Intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Product of Coefficients</td>
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<tr>
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<td>Felt Obligation</td>
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<td>-.2009</td>
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<td>Role Reversal</td>
<td>-.0050</td>
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</tr>
<tr>
<td>Reciprocity</td>
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<td>-.2078</td>
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</table>
Table 15

*Full Hierarchical Regression Model Predicting Psychological Well-being*

<table>
<thead>
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<th>Variable</th>
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<th>$\beta$</th>
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<td>.05</td>
<td>-.19*</td>
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<td>-.05</td>
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<td>.24*</td>
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<td>.09</td>
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<td>Reciprocity</td>
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</table>

*Notes. N = 116; Full model statistics: $F(9, 106) = 3.09, p < .01, R^2 = .21, Adj.R^2 = .14*
Table 16

*Hierarchical Regression Predicting Personal Growth*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>β</th>
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<th>Adj. R²</th>
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<tr>
<td><strong>Steps 1 and 2</strong></td>
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<td>.02</td>
<td>-.17</td>
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<td>Gender</td>
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<td>-.38*</td>
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<td>Maternal Hospitalizations</td>
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</tr>
</tbody>
</table>

*Note. N = 50*
Figure 1. Hypothesized Mediation Model: The Role of Relationship Factors in the Association between Maternal Mental Illness and Psychological Adjustment

1a. Total Effect of Maternal Mental Illness on Young Adults’ Psychological Adjustment

Maternal Mental Illness (X) → Psychological Adjustment (Y)

1b. Effect of Maternal Mental Illness on Young Adults’ Psychological Adjustment through the proposed Indirect Effect (Mediator) of Young Adult-Mother Relationship Factors

Maternal Mental Illness (X) → Young Adult-Mother Relationship Factors (M) → Psychological Adjustment (Y)

1c. Effect of Maternal Mental Illness on Young Adults’ Psychological Adjustment through the proposed specific Indirect Effects (Mediators) of Affection, Felt Obligation, Role Reversal and Reciprocity

Maternal Mental Illness (X) → Affection → Felt Obligation → Role Reversal → Reciprocity → Psychological Adjustment (Y)
Figure 2. Mediator Model: Effect of Maternal Mental Illness on Psychological Symptoms through Relationship Factors

Note. Path values represent unstandardized regression coefficients. Covariate values represent the unstandardized regression coefficients for the covariate effects on psychological symptoms. *p < .05. **p < .01.
Figure 3. Mediator Model: Effect of Maternal Mental Illness on Psychological Well-being through Relationship Factors

Note. Path values represent unstandardized regression coefficients. Covariate values represent the unstandardized regression coefficients for the covariate effects on psychological well-being. *p < .05. **p < .01.